Tradable Energy Saving Certificates (ESC) in The Netherlands - *considerations & possible design*

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Outline

- *Our WhC projects - introducing CEA*
- Policy Background
- Existing policy instruments
- Specific Dutch design considerations & solutions
- Discussion topics

CEA & WhC

- Mid-size private Dutch Consultancy firm in Delft
  - Policy consultation and research, multidisciplinary approach
  - 2 daughter companies:
    - BOOM-Delft: sustainable spatial planning
    - EBM-consult in Arnhem: energy efficient design in the build environment, EPBD, building physics.
  - Over 45 consultants in total
- 25 years of experience in National & Local EE & RES policy.
- Recent international work for EU, IEA on local climate policy, TRECs & emissions trading.
- Spring 2005: feasibility study for a Dutch ESC-system
- Currently: study on specific design aspects of a Dutch ESC-system

Policy background

- Dutch energy saving policy serves three goals:
  - Security of supply
  - Economy
  - Environment (CO_2, NO_x, fine particles)
- Energy efficiency rate is too low:
  - Yearly energy efficiency improvement rate is 1% (0.7% autonomous, 0.3% due to policy)
  - Should be 1.5% / year
  - Political debate: towards 2% yearly or more...
  - EE & ES directive: 1%, 1.5% or more yearly?

Existing EE policy instruments (1)

Past & present...

- 1990-2000 MAP: voluntary energy saving programmes of energy companies
- Subsidies
- Energy Performance Audits for existing building stock
- Energy tax
- Tax deduction schemes
- Environmental permits including “energy management obligation”
- Labelling schemes
- Energy Performance Standards for new buildings

Existing EE policy instruments (2)

SWOT analysis:

- Subsidies: Effective, but tend to overspend and reward free riders
- EPA: high informational value, but do not guarantee effective results
- Energy in environmental permits: potentially effective, but in practice too complex & demanding for local authorities
- Energy tax: ineffective, due to low price-elasticity of consumer energy use
- Tax deduction: effective for larger companies (but costly)

Conclusion: large (cost-efficient!) energy saving potential remains untapped!

Need for an effective & efficient instrument...

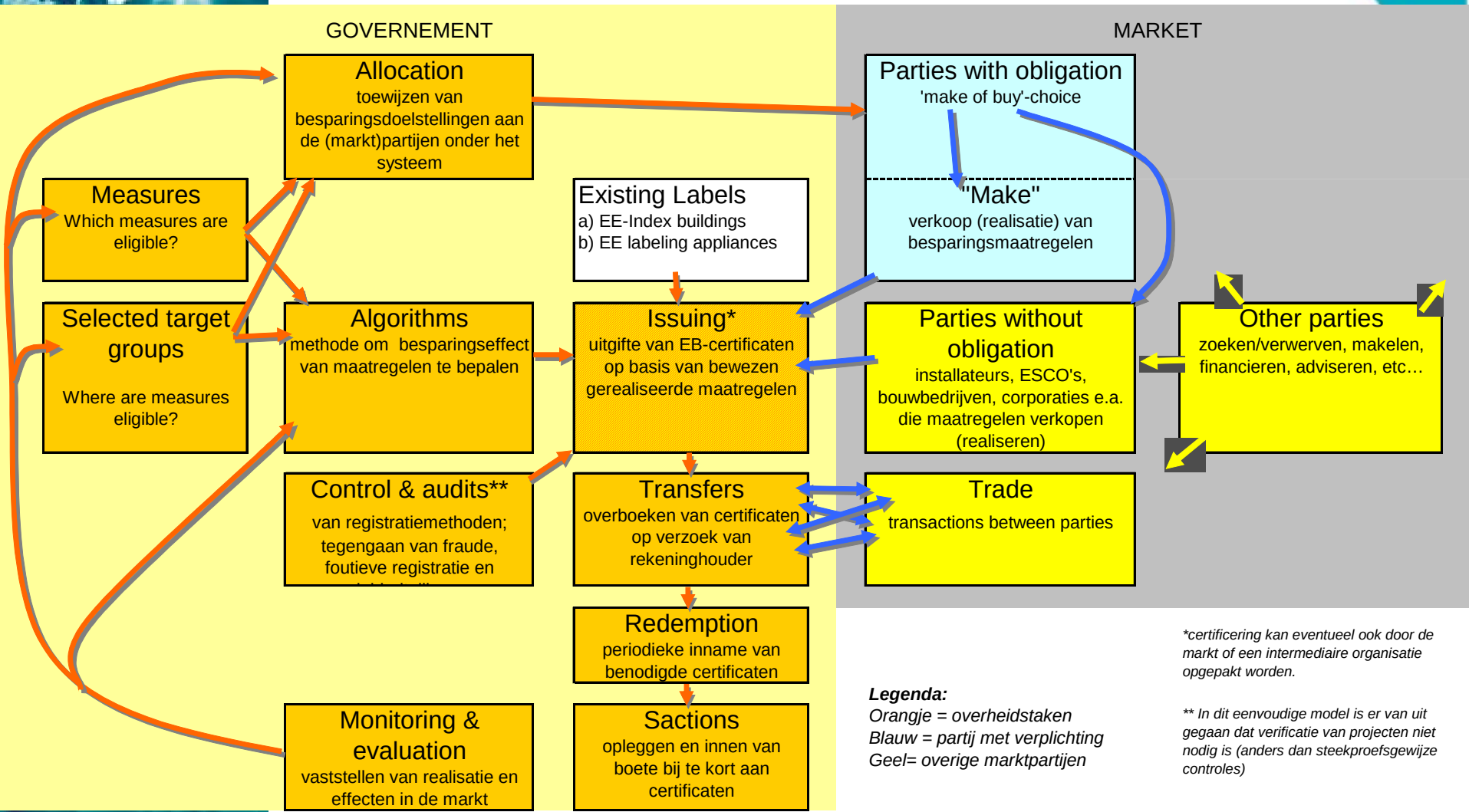
Advantages of EBC

- guaranteed energy saving results
- market based instrument leading to lowest cost solutions
- requires no large government budgets
- connects to existing market activities
- can work together with other policy instruments
- can deliver easy energy services to consumers
- helps new industries to develop (ESCO's, TPF, EPA)
- passes costs to energy users: "polluter pays principle"
- contributes to EE&ES directive

Disadvantages of EBC

- Perceived as a burden to obliged parties
- Potentially high transaction cost
- Potentially a lot of free riders (what to do with the BAU-deadweight?)

Overall design



Legenda:
Orangje = overheidstaken
Blauw = partij met verplichting
Geel= overige marktpartijen

**certificering kan eventueel ook door de markt of een intermediaire organisatie opgepakt worden.*

*** In dit eenvoudige model is er van uit gegaan dat verificatie van projecten niet nodig is (anders dan steekproefsgewijze controles)*

Characteristics of the intended Dutch Scheme (1)

- Duration: 2008-2012
- Aim: 60-90 PJ ‘additional savings’
- Target groups: dwellings & tertiary sector (existing building stock)
- Eligible measures:
  - all measures contributing to an improved energy performance of buildings (?EI)
  - Selected other efficiency measures…
    - not already compulsory
    - with still a small market share or small penetration
  - Anyone can propose new measures

Characteristics of the intended Dutch Scheme (2)

- Obliged party: to be decided.
  Probably: energy supply companies.
- Target proportional to energy delivered in target groups.
- Banking and borrowing allowed.
- Non-obliged parties allowed to create certificates

Characteristics of the intended Dutch Scheme (3)

- Deemed savings approach based on a realistic ‘energy saving value’
  - E.g. corrections for rebound, effective life span of measures, misuse, etc.
- Certification preferably based on
  - “existing” EPBD energy-efficiency indexes (? EI-approach)
  - existing energy-efficiency labels for appliances (labels better than the ones with high market share)

Characteristics of the intended Dutch Scheme (4)

To enhance market confidence:

- Preferably long time *certainty* about targets
  - E.g. 3 compliance periods of 3, 5 and 5 years
  - Mechanisms for adjusting targets for coming compliance periods should be know in advance (e.g. corrections for energy prices)
- *Predictable* development of eligibility and value of measures
  - 1 or 2-yearly updates of assigned “energy saving value” of ?EI and individual measures
  - E.g. when a measure reaches a specific market share or penetration level it will be no longer eligible or be assigned a lower “energy saving value”

Characteristics of the intended Dutch Scheme (5)

To minimize costs:

- Register & certificates electronic & web-based
- Use existing energy efficiency “proof” (EPBD-EI and efficiency labels)
- Using existing EPBD tools and software to provide EI and ? EI calculation
- Thresholds for certification
  - Either based on a minimum energy saving value or on a minimum number of measures (e.g. per 50 dwellings with improved EI; or per 1000 efficient dryers sold)
- Electronic proof of sales allowed
- No consumer involvement with ESC.
  ESC stays ‘behind the counter’.

Market opportunities

- Housing companies executing strategic stock management already did a lot of EPA's; ready to take off...
- Local schemes to improve housing stock and reduce overall housing costs
- Dormant potentials form voluntary agreements and environmental permit assessments
- Insulators, installers, contractors, mortgage - resellers, etc. eager to hunt for 'overdue maintenance'
- Green mortgage or green finance schemes available but scarcely used
- ..... etcetera, etcetera

Discussion topics…

- Obligation with energy distribution- or energy supply companies?
- How to cope with the BAU-deadweight?
  Are "free riders" a blessing in disguise?
- Can ?EI be a valid input to value energy savings *in practice*?
- Will the link with EPBD work out?
- *Transaction costs do not exist!*

Links & resources

“Energy Report 2005: Now for later”

www.minez.nl/content.jsp?objectid=32881

CEA ESC feasibility study (Dutch): **www.cea.nl**

English summary:

www.cea.nl/sa_files/Summary_Feasibility_Dutch_WhCscheme_june2005.pdf

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