



Agentschap NL
Ministerie van Economische Zaken

Monitoring of Climate Change programmes in the Netherlands

Combining top-down and
bottom-up data

June 9th, 2010
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Contents

Introduction NL Agency, NL Energy and Climate Change

Monitoring

- Interdepartmental programme 'Clean & Efficient'
- Three level monitoring

Built environment as example

- Top-down approach
- Bottom-up approach



‘Clean & Efficient’ programme (“Schoon & Zuinig”)

Goals

1. To cut emissions of greenhouse gases by 30 % in 2020 compared to 1990 levels;
2. To double the rate of yearly energy efficiency improvement from 1 to 2 % in the coming years;
3. To reach a share of renewable energy of 20 % by 2020

Organisational structure

- Interdepartmental programme
- 88 activities
- Coordinating programme department



Monitoring

Monitoring as tool for

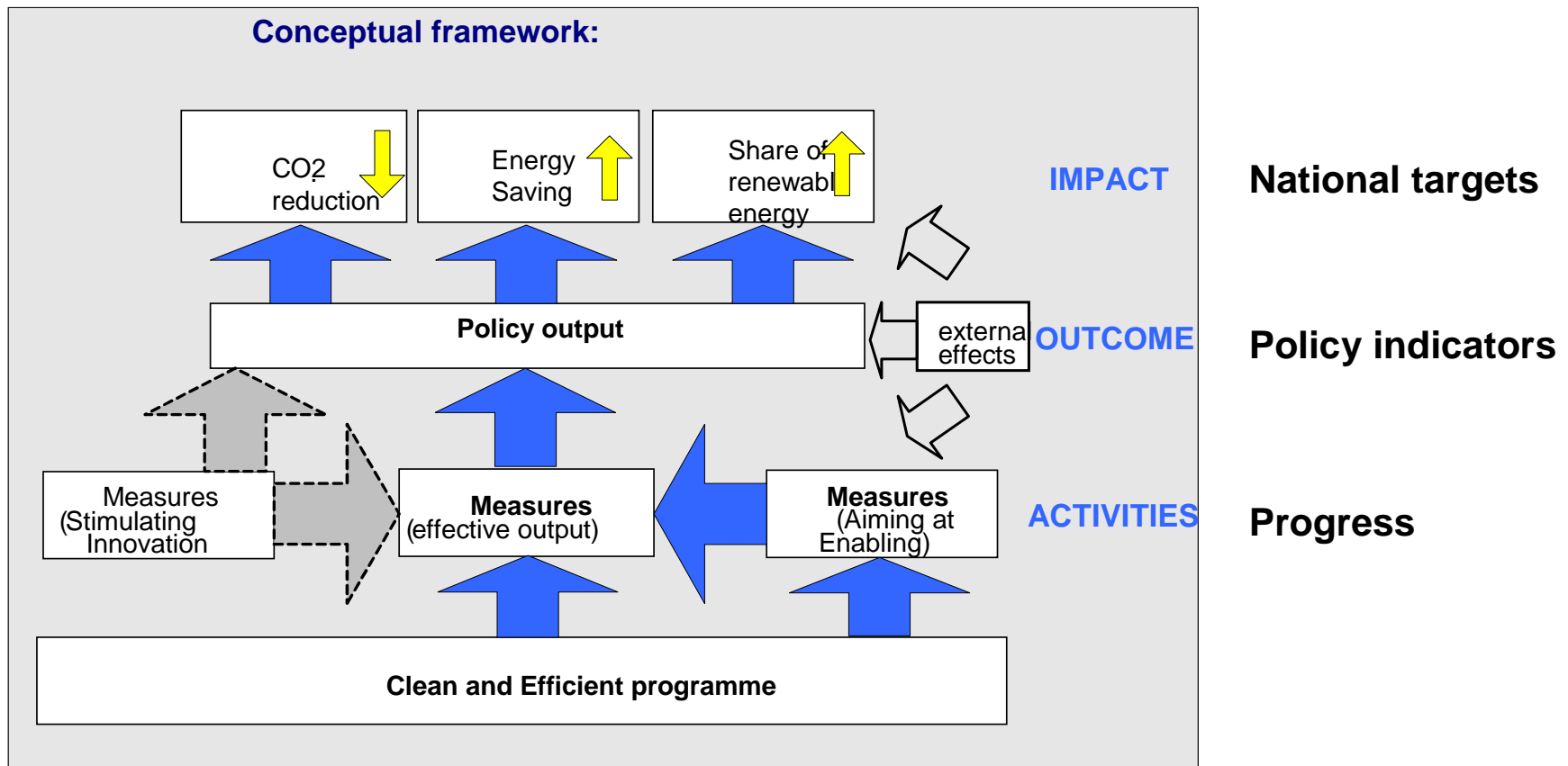
1. Improving programme activities
2. Annual reporting to Parliament

Monitor implemented by

- NL Agency and
- ECN, Energy research Centre of the Netherlands



Monitoring on three levels





Monitoring: built environment as example

National level: 3 target indicators

- › CO₂ reduction
- › Energy saving (energy efficiency)
- › Increase of renewable energy

Policy level indicators

- › Existing buildings: buildings with substantial energy efficiency improvement (500.000 in 2011, 3.2 million in 2020, 100 PJ a year in 2020)
- › New buildings: improvement of energy performance (25% in 2011 and 50% in 2015, energy neutral buildings in 2020)
- › Number of existing houses with renewable energy options (100.000 in 2011)



Top-down monitoring

SAWEC model by ECN

Advantages

- Efficient
- consistent

Disadvantages top-down:

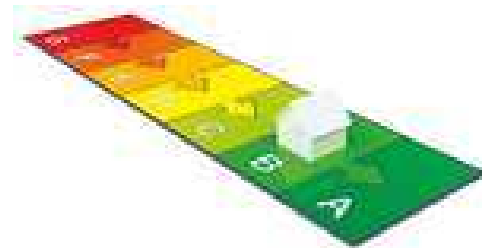
- Data available with a 2-year time lag
- The model does not include all relevant variables
(autonomous development, financial crisis)



Bottom-up monitoring

Energy performance certificates for buildings

- National database with 1,6 million certificates
- Mainly social housing sector
- Possible data source in the future





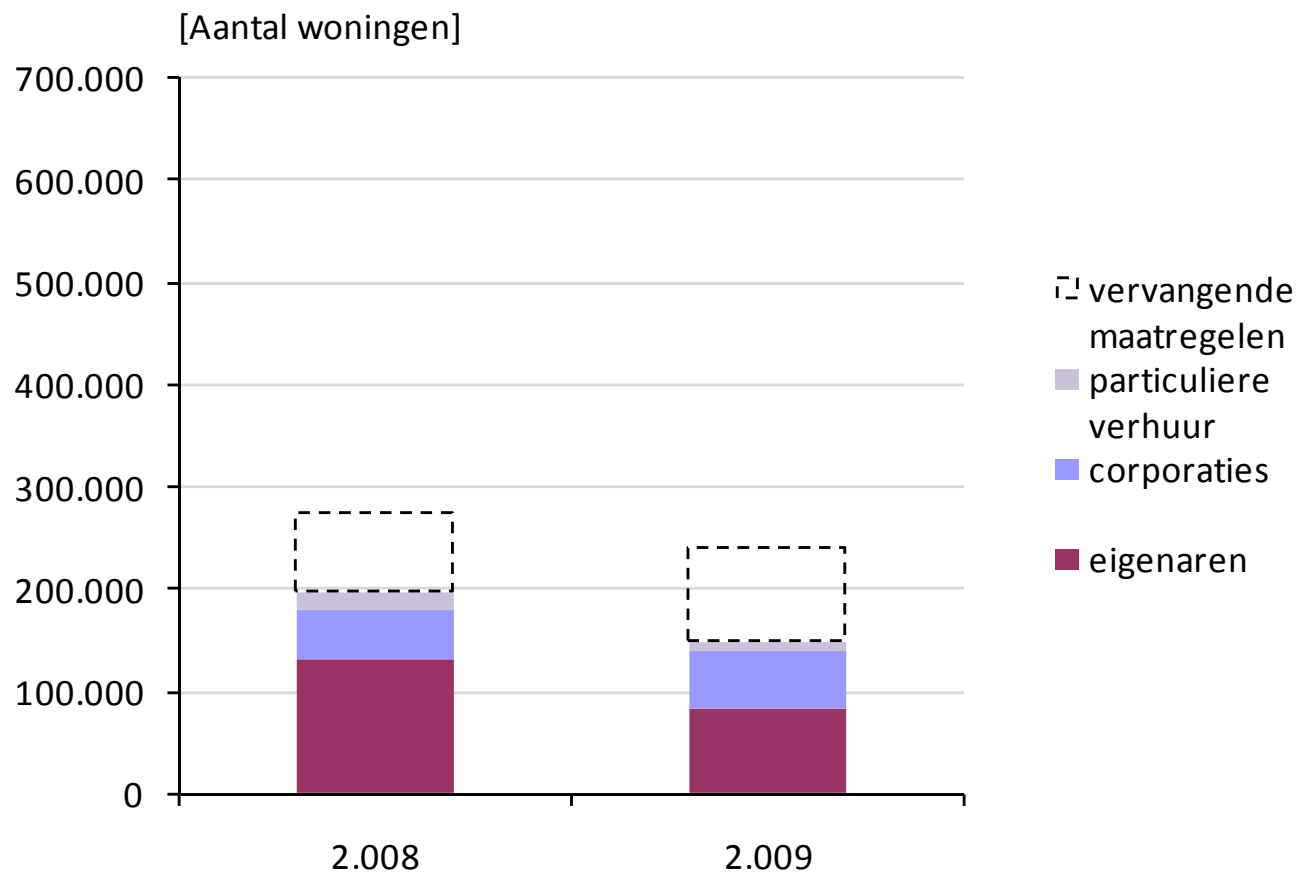
Bottom-up monitoring

Existing buildings

- Sector approach
- Several surveys amongst different target groups
- Other benefits: lots of additional information about incentives and barriers
- Risk: technical topic for a survey



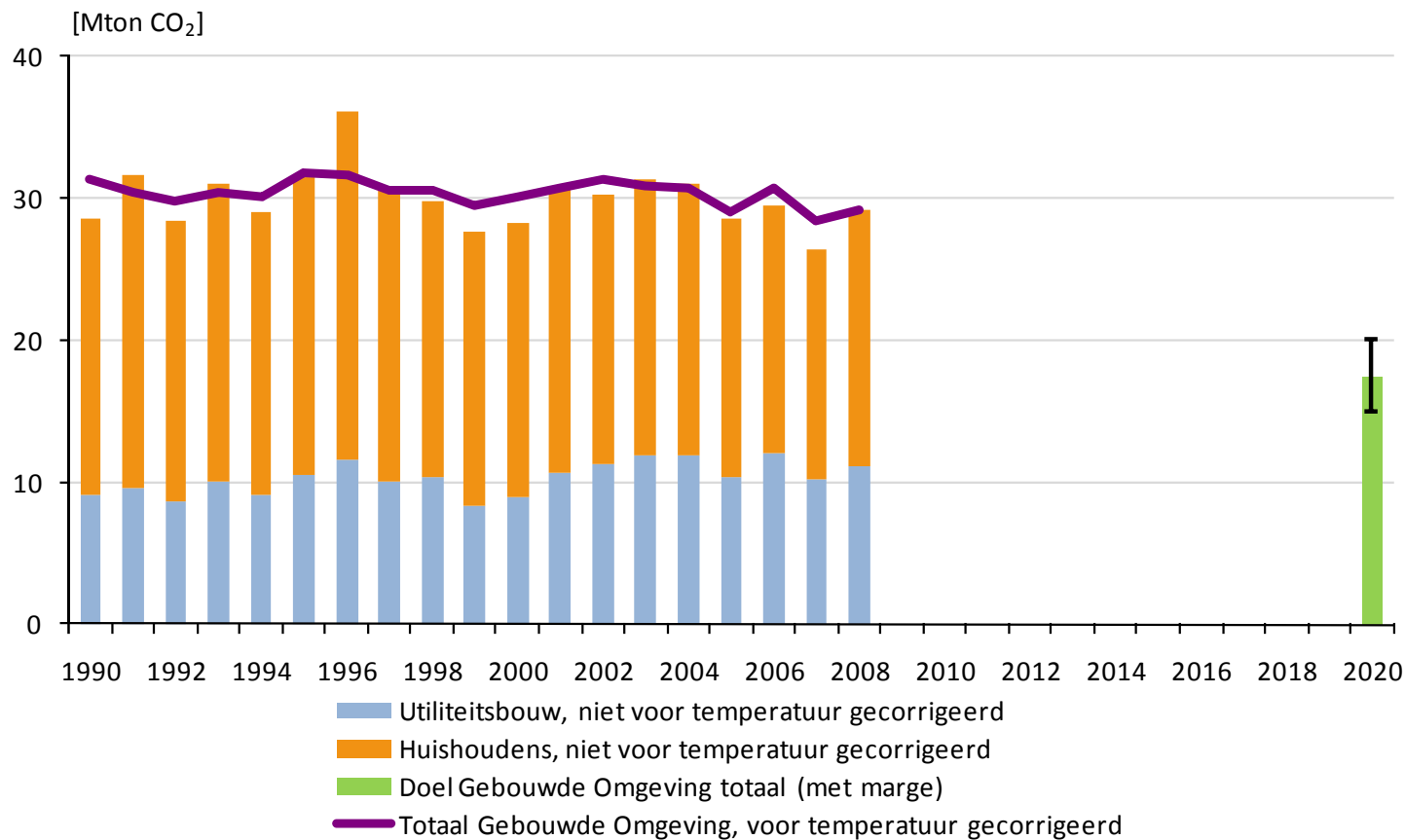
Example monitoring bottom up





Example monitoring: top down

Source ECN





Monitoring renewable energy

- Autonomous development and additional results
- Bottom-up approach by using the results of the governments' financial support schemes
- Risk free riders



Conclusion

In the Netherlands the built environment is monitored bottom up

- Takes less time before data is available
- Possibility to acquire information on several levels,
 1. Activities
 2. Programmes
 3. National targets