

Multiple Benefits of Energy Efficiency – The Netherlands

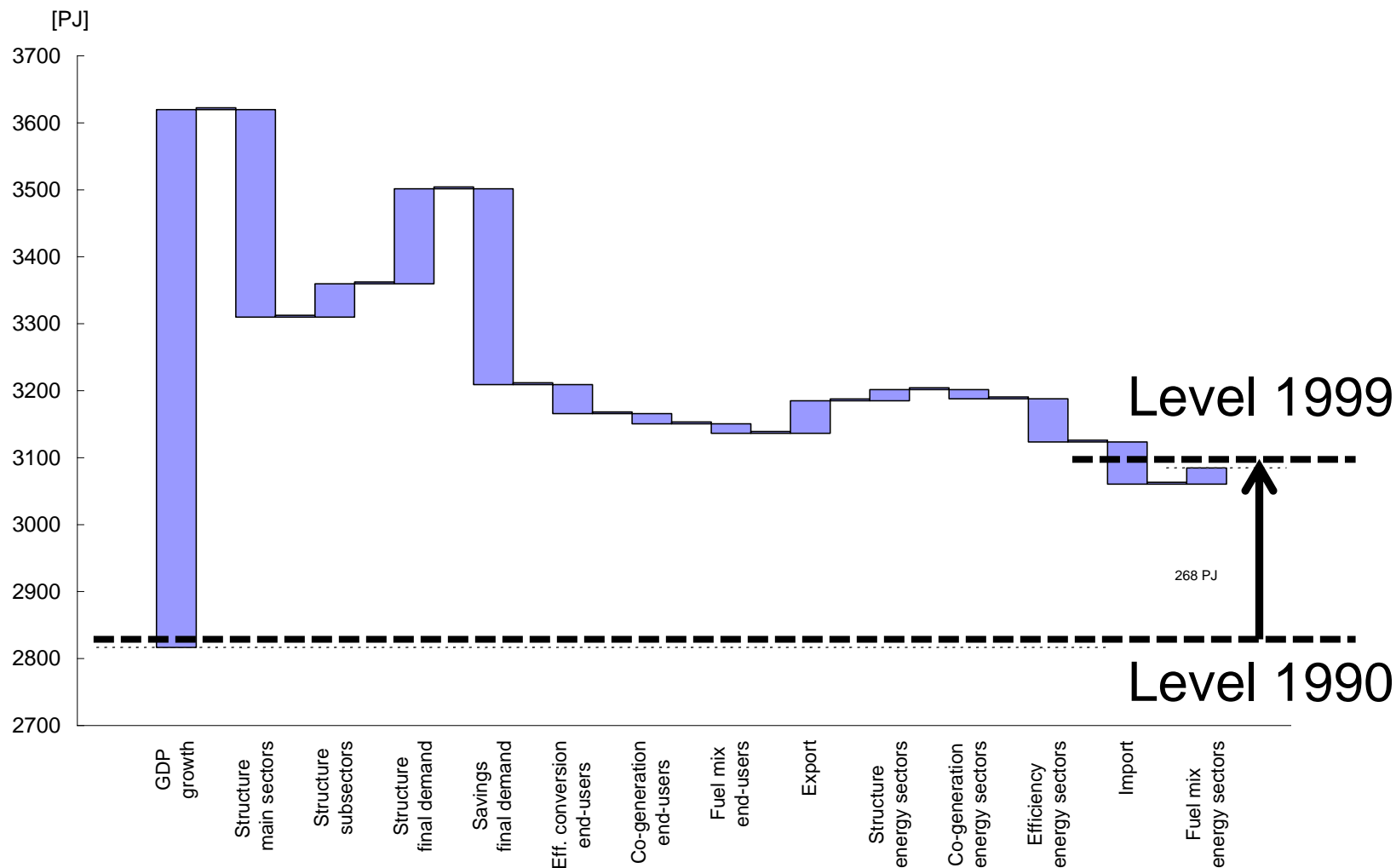
Joost Gerdes – IEA March 14th, 2012



How ECN monitors energy efficiency

- Focus on quantitative approach, top-down, total savings
- Scope: complete energy system, including primary energy
- Conversion sectors: power plants, CHP, refineries
- Uncertainty – total savings 1.1% +/- 0.3% – large because of large margins in year-to-year changes
- Decomposition into multiple driving factors

Decomposition into driving factors



How ECN monitors additional benefits of savings

- We monitor progress in **energy savings** and additional benefits of **CO₂ emission reduction**
- Long term agreements were also meant to improve **competitive** advantage; the results have been monitored
- **Environmental** benefits excluding greenhouse gases (National Emission Ceiling emissions): limited effect

Benefits mentioned by IEA not monitored

- Energy poverty: not relevant for NL because of the robust social security system
- Rebound effect: not monitored, we focus on realized savings. Rebound effect is hard to measure, also because of uncertainty. It may be less of an issue when energy prices rise.
- Job creation: has not been an important factor as unemployment is (expected to be) low in NL

Importance of the multiple benefit types

- Surprised to see no mention of the role of efficiency in climate target scenarios; in this case efficiency measures are a “no-brainer”. Looking at the past or non-EU countries?
- Most important benefits: greenhouse gas and contaminants emission reduction, reaching targets for renewables, increasing security of supply and R/P ratio, competitiveness
- Efficiency measures are among the most profitable measure types to achieve greenhouse gas reductions and/or a percentage renewables

Are additional benefits needed?

Cost of measures curve

