

Assessing the Potential Impact of the CO₂ Performance Ladder on CO₂ Emission Reduction

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The CO₂ Performance Ladder; a New Green Procurement Scheme

The aim of this research is to assess the potential impact of the CO₂ Performance Ladder on CO₂ emission reduction. The CO₂ Performance Ladder is a new green procurement scheme that has been adopted by several public authorities in the Netherlands; it is a staged certification scheme for energy and CO₂ management. The achieved certification level gives companies a certain competitive advantage in contract awarding procedures.

Participating Companies

The scheme has been widely adopted by companies in the construction industry. Other types of companies in the supply chain of the commissioning parties, such as consultancy companies, also participate. Currently, more than 190 companies participate in the scheme.

CO₂ Emission from Companies in the CO₂ Performance Ladder

The total CO₂ emissions reported in 2010 from 171 companies in the scheme amount to 1.7 Mtonnes CO₂ and are broken down into scope 1 (71%), scope 2 (15%) and scope 3 emissions (14%). Around 20% of the certificate holders are responsible for almost 80% of the total emissions reported. The aggregate CO₂ emissions covered by the scheme correspond to almost 1% of national greenhouse gas emissions in the Netherlands. Since the introduction of the scheme the total CO₂ emissions have decreased substantially. Nevertheless, these emission reductions should be interpreted with caution since emission reductions are dominated by a few companies and are affected to a large extent by economic activity.

Companies Set Various Types of Targets With Varying Ambition Levels

Companies participating in the scheme have set different types of CO₂ emission reduction targets, such as a) volume targets for CO₂ emission reduction, b) CO₂ emission reduction targets measured against full time equivalents (FTE), c) CO₂ emission reduction targets measured against € turnover or other type of targets. The ambition level of these targets and the time frame within which the targets must be achieved may vary considerably among the firms.

The Potential Impact on CO₂ Emission Reduction

The projected impact of these targets on CO₂ emissions is in the range of a 0.5% - 1.3% absolute emission reduction per year, with a most likely value of 1.1%. CO₂ emissions must be reduced by at least 1.4% per year from 2010 onwards to reach the CO₂ emission ceiling for all non-ETS sectors, including the construction industry, in 2020. The CO₂ Performance Ladder can therefore make a substantial contribution to achieving the CO₂ emission reductions for non-ETS sectors in the Netherlands up to 2020.



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Introduction

- The CO₂ Performance Ladder is a staged certification scheme that is used in public procurement procedures
- Introduced by ProRail in 2009 and now managed by the Independent Foundation for Climate Friendly Procurement and Business (SKAO)
- The objective of this research is to assess the potential impact of the CO₂ PL on CO₂ emission reduction

How does the CO₂ Performance Ladder work?

- The CO₂PL awards energy efficient behaviour of companies participating in tendering procedures

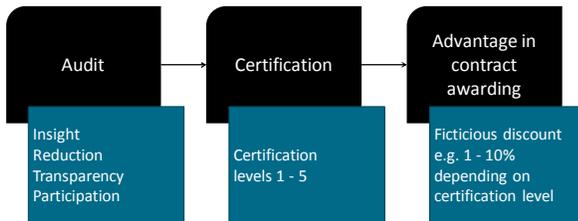


Figure 1: Rationale of the CO₂PL

Participants

- CO₂PL has more than 200 certificate holders; growth rate is 20 new certificates per quarter
- Majority of the firms belong to construction industry (60%) and consultancy sector (13%)
- Middle sized companies certified at level 3 are the most dominant segment (20%)

Reported CO₂ emissions and reductions



Figure 2: Reported CO₂ emissions under CO₂PL in 2010 in scope 1, 2 and 3

- 170 firms emit more than 1.7 Mton CO₂
- 20% of the firms cover 80% of the emissions
- More than half of the CO₂ emissions in construction industry sector (scope 1 and 2) are covered

Key findings

- CO₂PL covers around 1% of the national CO₂ emissions in the Netherlands
- The potential impact on CO₂ emission reduction is in the range of 0.5% – 1.3%/a, with a most likely value of 1.1%/a
- The CO₂PL can make a substantial contribution to reaching CO₂ emission targets

- CO₂ emissions have decreased by 7% in one year
- Emission reductions in scope 1 and 3 are dominated by individual firms

Various target types...

- Firms must formulate SMART quantitative reduction targets

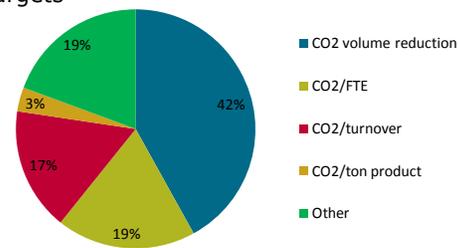


Figure 3: Various target types used by firms in the CO₂PL

... with varying ambition levels

- Targets must be significant and comparable

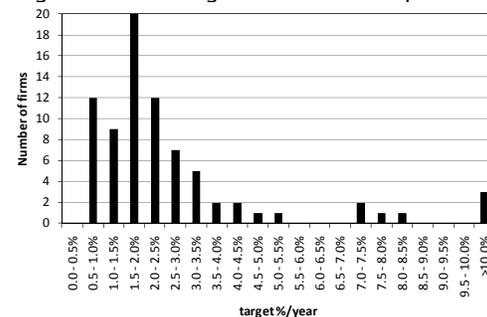


Figure 4: Histogram of volume targets for CO₂ emission reduction

The potential impact of the CO₂PL

target type	ambition level	projected absolute impact of the target
CO ₂	-2,1%	-2,1%
		BAU ¹
CO ₂ /hour	-2,3%	-1,7%
		BAU ³
CO ₂ /€ turnover	-1,9%	1,1%
total		-1,1%

Table 1: Ambition level and projected absolute impact of various target types per year

1 - BAU growth of the production volume in constant prices is 1.3%/a
2 - FTE growth rate 0.7%/a
3 - BAU growth of the production volume in current prices is 3.0%/a

- CO₂ emissions must be reduced by at least 1.4%/a from 2010 onwards to reach the CO₂ emission ceiling for all non-ETS sectors in 2020 in the Netherlands