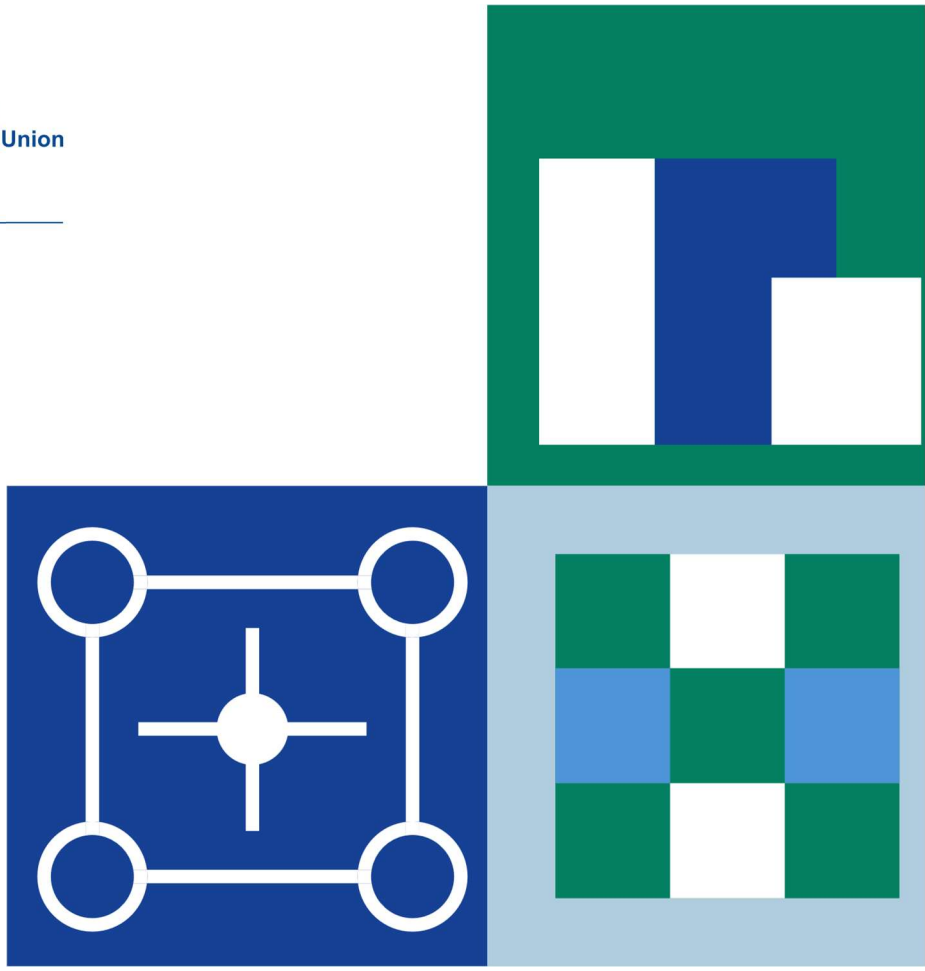
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Co-funded by the European Union

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GETTING STARTED WITH CO_2 PRICING

A practical guide for Dutch public authorities

Action Plan for public authorities in the Netherlands

July 2026

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Introduction

Getting started with carbon pricing

Addressing climate change calls for decisions that deliver benefits not just today, but over the long term. Carbon pricing can help public authorities factor the wider societal costs of emissions into policies, projects and public procurement, making sustainable options easier to identify and choose.

This document is designed to help Dutch local authorities take their first steps towards introducing carbon pricing. Developed as part of the European Interreg DeCarb-Pro DeCarb-Pro[1]. It provides practical guidance for public authorities considering how carbon pricing could be put into practice.

We guide you through the main considerations for implementing carbon pricing successfully, providing a clear roadmap for organisations at the start of their journey. The document provides a foundation for introducing carbon pricing within your organisation, while recognising that the approach you take will depend on your ambitions, organisational structure and local context.

If you would like to learn more about how carbon pricing can be applied in practice, or discuss what it could mean for your organisation, please contact the DeCarb-Pro project team at decarb-pro@klimaatverbond.nl or contact the authors.

Gemeente Amsterdam

Erik Thijssing (E.Theissing@amsterdam.nl)

Groene Metropoolregio Arnhem-Nijmegen

Michiel van der Hagen (michiel.van.der.hagen@gmr.nl)

Stichting Klimaatvriendelijk Aanbesteden & Ondernemen

Thijs Wentink (thijs.wentink@skao.nl)

Klimaatverbond Nederland

Maya Verlinden (maya.verlinden@klimaatverbond.nl)

[1] More information on the project can be found here: DeCarb-Pro

Steps to start with CO2 pricing

1. Getting started: understanding carbon pricing in procurement

At its core, carbon pricing is a simple concept: it puts a financial value on greenhouse gas emissions. The principle is that emissions are not cost-free: they contribute to climate change and create costs for society. By putting a price on those emissions, these wider costs become visible and can be considered alongside direct financial costs. This creates an incentive to reduce emissions and can make lower-carbon options more attractive.

Applying this principle in procurement does not necessarily require complex calculations or new datasets. Much of the information needed for a basic assessment is already available, allowing procurement teams to start with relatively simple examples and build their experience from there. The schoolyard example below shows how even a straightforward calculation can change the comparison between two otherwise similarly priced options.

Example: workshop on new or reused paving

During a DeCarb-Pro workshop, participants explored a real-life procurement choice: repaving an existing schoolyard. The direct cost of reusing the existing paving was approximately the same as buying new paving. Looking only at the purchase price, the choice seemed obvious: “If new costs the same as reused, of course we’ll go for new paving stones. Who wouldn’t?”

The picture changed when the climate impact was given a financial value. Using available existing data and a simple calculation, participants found that the climate costs of new paving were around €30,000 higher than those of reusing the existing materials.

The exercise demonstrates the practical value of carbon pricing: it makes costs that would otherwise remain invisible part of the decision, providing a more complete basis for comparing procurement options.

2. Laying the groundwork: policies on carbon pricing

Before introducing carbon pricing into procurement, it is important to understand what is already in place. This chapter looks at the existing policies and legislation that provide the framework for carbon pricing and greener public procurement in the Netherlands. Starting here ensures you build on existing requirements and initiatives, rather than developing an approach from scratch.

Through the National Plan for Socially Responsible Commissioning and Procurement, the Dutch government has committed to using sustainable procurement as an effective instrument to help reduce CO_2 emissions, environmental impacts and the use of raw materials, create an inclusive labor market, and address harmful impacts on people and the environment in international supply chains. The Manifesto for Socially Responsible Commissioning and MVOI has already brought together 129 parties[2]. Following its success, the Manifesto was recently extended by five years, until 2030.

Paris Agreement

The Paris Agreement is the first truly global agreement to tackle the climate crisis. In 2015, 195 countries and the European Union agreed on an overarching framework to keep global warming well below two degrees Celsius, while pursuing efforts to limit it to 1.5°C. Countries agreed to reduce their emissions through national climate action plans. Governments must submit updated plans every five years, with increasingly ambitious targets.

To meet the 2°C target by 2050, Dutch CO_2 emissions will need to fall by approximately 85–95% compared with 1990 levels. For the 1.5°C target, this would require an emissions reduction of more than 100%.[3]

The Paris Agreement recognises the crucial role of carbon pricing in achieving climate goals, but does not elaborate on how it should be applied.

ETS2

The European Union will introduce the new emissions trading system for buildings and road transport (ETS2) on 1 January 2028. This represents a one-year delay from the originally planned start date of 2027. ETS2 covers CO_2 emissions from fuels used in buildings, road transport and other sectors. Research by the Netherlands Environmental Assessment Agency (PBL) on the effects states that the prices of petrol, diesel and natural gas will increase as a result. Although pricing is an essential component of effective climate policy, the instrument also involves risks.

For municipalities, a direct implication is that they will also pay for CO_2 emissions from fuels used in their own buildings and vehicle fleets, insofar as renewable energy is not purchased and electric vehicles are not used. Other implications for municipalities relate to supporting vulnerable households, for example through the deployment of energy-saving “fix teams” and the renovation of rented homes.

Variation in applied CO2-prices

There are significant differences in the levels of internal CO_2 -prices used by government authorities. key factor is the underlying methodology: marginal abatement costs, efficient CO_2 prices based on prevention costs, or the social cost of carbon (SCC) based on climate damages. These approaches are related but serve different purposes.

Marginal Abatement Costs (MAC): This approach estimates the additional cost of reducing one more tonne of CO_2. MAC estimates are commonly used in carbon pricing, often focusing on specific sectors, technologies or emission reduction measures. They help identify the most cost-effective reduction opportunities and assess which CO_2 price would be needed to incentivize further emission reductions. MAC also underpins the economic rationale of carbon pricing mechanisms such as the EU Emissions Trading System (EU ETS). In an ideal, cost-efficient market, the carbon price aligns with marginal abatement costs.

[2] PIANOo. (2023). *Manifest Maatschappelijk Verantwoord Opdrachtgeven en Inkopen 2022–2025* (pp. 3-9). https://www.pianoo.nl/sites/default/files/media/documents/2023-06/Manifest%20Maatschapplijk%20Verantwoord%20Opdrachtgeven%20en%20Inkopen%202022-2025-V2.pdf
[3] https://www.pbl.nl/publicaties/wat-betekent-het-parijsakkoord-voor-het-nederlands-langetermijn-klimaatbeleid

Efficient CO_2 prices (prevention costs): This closely related approach is commonly used for social cost-benefit analyses (MKBA) in the Netherlands, and well described by the Netherlands Environmental Assessment Agency (PBL) in their 2025 Welfare and Living Environment Outlook (WLO)[4]. It derives efficient CO_2 prices from the costs of achieving different greenhouse gas reduction targets or scenarios. The efficient CO_2 price varies per scenario, as it depends on the pace at which CO_2 reductions are achieved. Unlike MAC estimates for individual measures or sectors, these prices represent the economy-wide shadow price of achieving the reduction target under each scenario. An efficient CO_2 price can be used to determine whether a policy or project contributes cost-effectively to achieving the greenhouse gas reduction target, for example in social cost-benefit analyses (in Dutch: MKBA). For 2025, these prices range from €94 to €274 per tonne of CO_2.

Social Cost of Carbon (SCC): Unlike the two prevention-cost approaches, the SCC estimates the monetary value of the future societal damage caused by emitting one additional tonne of CO_2. Klimaatverbond Nederland applied this approach in its advice to the Province of Utrecht, recommending a minimum price of €875 per tonne in its 2023 report *Rekening houden met de toekomst*. Drawing on updated research by the German Environment Agency (Umweltbundesamt), the Province of Utrecht subsequently increased its internal CO_2 price to €1,175 per tonne in 2026. Separately, Umweltbundesamt published an updated damage-cost estimate of €990 per tonne for emissions in 2025, assuming equal weighting of the welfare of present and future generations.[5]

In sum, the key distinction is that marginal abatement costs estimate the cost of reducing additional CO_2 emissions, while efficient CO_2 prices reflect the cost of achieving a specific climate target. The Social Cost of Carbon, by contrast, estimates the societal damage caused by CO_2 emissions. Comparing the costs of reducing emissions (MAC) with the damage they cause (SCC) can help determine how ambitious climate targets should be. Once a target is established, the efficient CO_2 price reflects the marginal cost of achieving it.

CSRD

The Corporate Sustainability Reporting Directive (CSRD) is a European directive requiring companies to be transparent about the impact of their business activities on sustainability issues.[6]

The CSRD is not currently mandatory for local authorities, but it can be used as a framework for sustainability reporting; see, for example, the Guide to Sustainability Reporting and Accountability for Local and Regional Authorities (VNG Guide , 2024). Local authorities may also encounter CSRD requirements because their suppliers need information from them: in that case, public authorities form part of the supplier's value chain.

Local authorities can use the CSRD, other sustainability reporting frameworks, or carbon management systems such as the CO_2 Performance Ladder to gain insight into their impact on nature and society. Carbon impact is an important part of this; see also step F.1 of the in-depth DeCarb-Pro strategy on integrating CO2 pricing in public procurement. For the next step—actually reducing the organisation's CO_2 emissions—carbon pricing can help.

[4] https://www.wlo2025.nl/system/files/document/2025-07/cpb-pbl-2025-toekomstverkenning-wlo-efficiente-co2-prijzen-5916.pdf
[5] Greenhouse Gas Emissions | Umweltbundesamt
[6] https://www.rvo.nl/onderwerpen/csrd

3. Exploring the options: tools and methods for carbon pricing

Before applying carbon pricing in procurement, it is useful to understand the tools and methods already available and how they can support different types of decisions. Examples from across North-West Europe have been compiled in the CO_2 Pricing Inventory[7], providing an overview of existing approaches and practical applications. This chapter builds on that overview by taking a closer look at tools and methods that are particularly relevant in the Dutch context, helping organisations identify approaches that could work in practice.

In the Netherlands, two instruments are used to account for the societal costs of CO_2 emissions and for sustainability objectives:

1. Shadow pricing in internal decision-making

Two different methods are used to incorporate shadow prices into internal decision-making, based either on prevention costs or on a Social Cost-Benefit Analysis (SCBA). The Province of Utrecht, for example, carries out SCBAs for infrastructure projects. (See p. 26 of the CO2_pricing_inventory)

2. Environmental Cost Indicator (MKI)

The Environmental Cost Indicator (MKI) is a shadow price used to quantify the negative environmental impacts of a product. The MKI is used, for example, by the Municipality of Amsterdam.

Available instruments for taking CO_2 performance into account in procurement in the Netherlands include:

Instrument 1 – Using the CO_2 Performance Ladder in procurement

The CO_2 Performance Ladder is a straightforward and effective instrument that stimulates CO_2 reduction and innovation. It helps public authorities procure sustainably and achieve significant climate impact by giving sustainable companies an award advantage. It functions both as a procurement instrument and as a carbon management system.

Certified organisations receive an award advantage during the evaluation stage of procurement procedures. A certificate on the Ladder gives organisations a concrete competitive advantage during procurement. The higher the level at which an organisation performs on the CO_2 Performance Ladder in a tender, the greater the award advantage. The contracting authority determines the award advantage available at each level of the Ladder.

The CO_2 Performance Ladder is used in procurement by more than 300 contracting authorities in the Netherlands, and more than 8,000 companies are certified on the CO_2 Performance Ladder. For examples, see: Blog, nieuws en projecten - CO_2-prestatieladder

Instrument 2 – Using the MKI in procurement

The MKI can also be used in procurement. The Environmental Cost Indicator (MKI) is a method for calculating environmental impacts in civil engineering and infrastructure projects. It provides a standardised calculation method that allows the total environmental impact of a product or project to be assessed and compared objectively. Environmental costs are calculated in the same way by all parties. The result expresses environmental costs in euros (€MKI). These represent the costs required to remedy or compensate for the negative environmental effects of a product, process or project. The lower the MKI, the more sustainable the product or project. By incorporating the MKI into the procurement process, for example as an award criterion, environmental impact becomes measurable and comparable.

A maximum permitted ECI/MKI value can be included as a tender requirement and incorporated into the final contract, including contractual penalties if the ECI/MKI differs from the value offered by the contractor. To define the scope clearly, the contracting authority (the municipality) can include a reference ECI/MKI calculation with the tender documents. All tenderers must use the same scope in their ECI/MKI calculation. National regulation is expected from 2027 to make the use of environmental performance requirements or the MKI as an award criterion

[7] CO_2 Pricing Inventory

mandatory under the "steering MKI" approach. See pp. 32–33 of the in-depth DeCarb-Pro strategy on integrating CO2 pricing in public procurement.

Instrument 3 – Using an internal price for CO_2 emissions

An internal price for CO_2 emissions can serve as a guide for sustainable investments. The purpose of an internal carbon price is to provide insight into the societal costs of an investment. This enables decisions to be based not only on financial costs but also on societal costs.

The internal carbon price is used to understand the costs associated with emitting CO_2 but is not yet used to generate actual financial cash flows. It is an instrument that provides decision-makers with information so that options can be compared effectively.

4. Building on existing networks: finding opportunities for cooperation

Introducing CO_2 pricing is easier and more effective when Local Authorities can build on the knowledge and experience of others. Cooperation with national networks, public bodies and sector organisations provides access to expertise and existing approaches, reduces duplication, and creates opportunities to test and develop CO_2 pricing collaboratively while supporting more consistent implementation.

The Netherlands has several networks in which public authorities exchange knowledge and experience on carbon pricing. There are also frontrunners among local and regional authorities in the field of carbon pricing. When an organisation is considering getting started, it is valuable to draw on this existing knowledge and expertise.
These networks have already built considerable experience in developing and applying carbon pricing in policy and procurement. By connecting with these initiatives, organisations can learn from practical examples, exchange experiences and obtain support for taking the first steps within their own organisation. Relevant networks and organisations include:

Networks:

- PIANOo
- Community of Practice on carbon pricing (Klimaatverbond Nederland and the Province of Utrecht). A programme involving frontrunner public authorities focused on: (a) harmonising and standardising carbon prices and carbon-pricing tools, including underlying principles and calculation methods; and (b) how carbon pricing is applied to investments, purchasing and procurement. This programme is coordinated with the Community of Practice.
  Participants include the Province of Utrecht, Municipality of Amsterdam, Municipality of The Hague and Arnhem-Nijmegen Green Metropolitan Region.
- Urban Agenda Partnership – Sustainable Procurement (Municipality of Haarlem)

Frontrunners:

- DeCarb-Pro partners: Municipality of Amsterdam, Arnhem-Nijmegen Green Metropolitan Region, HIER, Klimaatverbond Nederland
- Province of Utrecht
- Province of North Holland
- Municipality of Enschede
- Municipality of The Hague
- Amstel, Gooi and Vecht Water Authority
- Dutch Water Authorities
- Private-sector organisations such as ASR (Hoe maak je CO_2 écht onderdeel van je besluitvorming?), AkzoNobel, Unilever, Shell (https://klimaatverbond.nl/ons-werk/co2-beprijzing/de-praktijk/)

5. Learning from practical examples

The concept of carbon pricing is now clear, as are the relevant policy frameworks, tools, methods, networks and frontrunners in the Netherlands. The next step is implementation within the organisation itself.

The following 3 practical examples from the Netherlands will show different steps that can be taken.

Understanding Scope 1, 2 and 3 emissions

The Municipality of Arnhem was the first municipality in the Netherlands to achieve certification at level 5 of the CO_2 Performance Ladder (now level 2 under the revised system). To achieve this, the municipality developed a klimaatplan setting out its agreed targets for the coming years. The climate plan also includes value-chain analyses. These analyses give Arnhem insight into its Scope 3 emissions alongside its Scope 1 and 2 emissions. Every six months, Arnhem determines its carbon footprint and reports on progress, including an assessment of whether it is on track to meet its targets.

Procurement using qualitative criteria: how the Municipality of Amsterdam uses the CO_2 Performance Ladder in tenders

Each year, Amsterdam uses the CO_2 Performance Ladder as an award criterion in hundreds of procurement procedures. In this way, the Ladder contributes to achieving the municipality's climate ambitions. Organisations certified on the Ladder not only actively work to reduce CO_2 emissions but, through the award advantage, also have a greater chance of winning municipal contracts. Procurement adviser Gabriël Meijer explains how Amsterdam does this and the benefits of sustainable procurement using the Ladder:

How the Municipality of Amsterdam uses the CO_2 Performance Ladder in procurement

Formal recognition of the price of emissions: the Province of Utrecht example

Social Cost-Benefit Analyses with a high carbon price

In the Netherlands, Social Cost-Benefit Analysis (SCBA) - maatschappelijke kosten-batenanalyse (MKBA) - is a well-established method for supporting decision-making by national, regional and local authorities. SCBAs are often carried out for infrastructure or spatial development projects. The purpose of an SCBA is to analyse the broader societal benefits and costs of different scenarios, ranging from impacts on accessibility and travel time to effects on air quality and greenhouse gas emissions.

Low CO_2 prices in SCBAs

The Province of Utrecht carries out SCBAs for infrastructure projects. Questions were raised in the Provincial Council about the level of the carbon price used in SCBAs, which appeared relatively low—at the time €20–€80 per tonne of CO_2 equivalent—compared with higher price levels available in the literature. This led the provincial executive to decide to review the carbon price used in SCBAs. The Province commissioned Klimaatverbond to develop recommendations for a new carbon price, taking into account several aspects: a price level consistent with the 1.5°C target, future developments, a comprehensive description of different carbon-pricing approaches, and the impact of particular choices on the final price level.

Klimaatverbond produced an extensive report based on scientific and government publications and interviews with provincial staff. This resulted in a recommendation of a carbon price of €875 per tonne for 2022, increasing linearly to almost €980 in 2050. Applying a 25% risk premium for future uncertainties would bring the carbon price to €1,175 per tonne of CO_2.

Key choices in determining the price level

The first important choice concerned the overall approach: either prevention costs, which consider only what is required to achieve mitigation targets, or social costs, which also take into account the damage caused by carbon emissions and their impacts on the environment and society. Because the Province of Utrecht applies the price explicitly in relation to the societal costs and benefits of particular developments, the social-cost approach was considered the appropriate choice. Within this approach, Klimaatverbond chose to use the model of the German Environment Agency (Umweltbundesamt) as its basis.

The second important choice concerned how the welfare of current generations should be weighed against that of future generations: either prioritising the welfare of current generations or treating both generations equally. The recommendation was to treat current and future generations equally, based on the principle of intergenerational equity.

The third important issue concerned so-called tipping points, which are not included in the German model. Tipping points are critical thresholds in global ecosystems that can further accelerate climate change. One example is thawing permafrost as temperatures rise, resulting in large methane emissions that cause further warming.

Given the significant risks associated with these tipping points and the scientific literature on the subject, the recommendation was to add a 25% risk premium to the price level in the German model. Together, these choices resulted in the final recommended price of €875 per tonne of CO_2 equivalent.

Recommendation and application

The recommendation also proposed updating the carbon price every two years to ensure it remains current. The Province adopted both elements of the recommendation.

This carbon price is currently used only in SCBAs. The Province of Utrecht and Klimaatverbond are currently exploring how carbon pricing can also be integrated into other levels and processes of decision-making, including purchasing and procurement.

Examples

Want to read more practical application of CO2 pricing in the Netherlands? Including different ways of applying CO_2 considerations in both policy and implementation as well as different price levels which can exist alongside each other, and when to use which? Download the DeCarb-Pro publication here: From insight to consideration

6. Next steps: using the DeCarb-Pro strategy

Carbon pricing can be applied in different ways and at different points within an organisation. It is important to recognise that the costs of CO_2 emissions can be incorporated into decisions at any stage of a project. The earlier this is done, the greater the potential impact on reducing CO_2 emissions.

When can carbon pricing be applied?

The overview below is taken from the **DeCarb-Pro Strategy**, an in-depth guide that sets out a structured, step-by-step approach to integrating CO_2 pricing into public procurement. The strategy presents CO_2 pricing as a strategic tool for reducing greenhouse gas emissions and steering public investment towards climate neutrality. It takes local authorities through the full process, from establishing the necessary organisational foundations to practical implementation in procurement procedures and contract management. Together, these steps form a coherent pathway for embedding CO_2 pricing across the different stages of municipal decision-making and procurement. The overview can be used to identify a suitable starting point, depending on two key questions:

- What is your role in the organisation?
- Where within the organisation is there energy and willingness to get started?

> **DeCarb-Pro strategy**
>
> Want to dive deeper into how to introduce CO2 pricing in your organisation? Download the complete DeCarb-Pro strategy here: DeCarb-Pro_Strategy.pdf

How do you choose a starting point?

Depending on the answers, choose a starting point in the framework. The ultimate aim is to apply carbon pricing throughout all stages of the process. This strengthens the incentive to reduce CO_2 emissions and makes climate policy more effective.

