



Webcast series 'State of Tax'

# Energy Transition

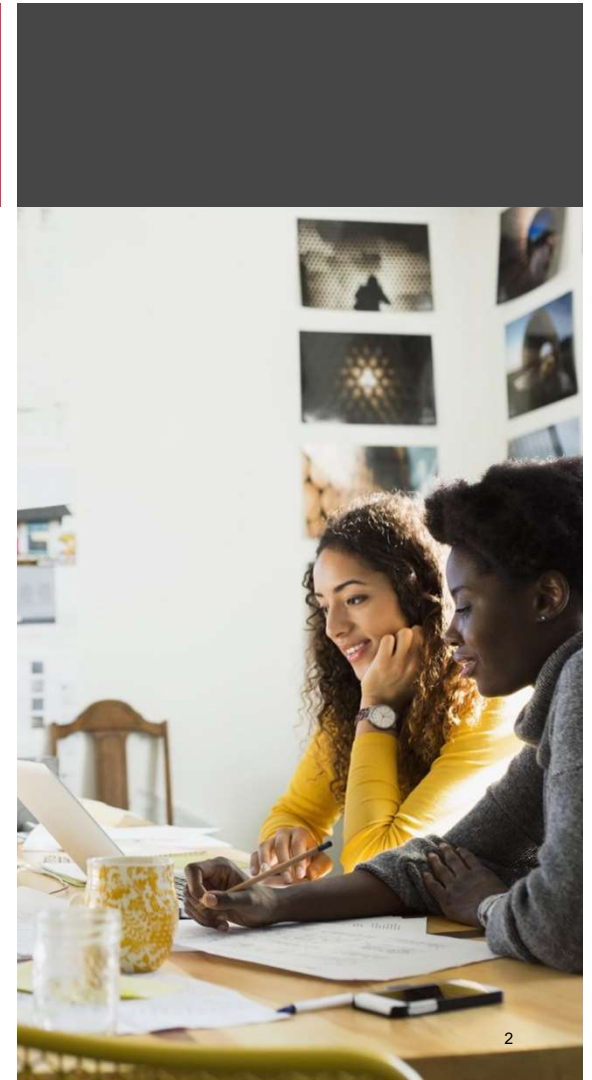
EU and NL developments



Presentation **PwC Energy Tax Team**  
30 September 2020

# Introduction

- Webinar works best via Google Chrome
- The button '**[Chat]**' allows you to ask a live question via chat
- Any other questions via your PwC advisor or fill in the form on [pwc.nl](https://pwc.nl)
- Polls during live viewing
- The webcast and slides will become available afterwards (only PE points when viewing live)
- Evaluation form after the webcast



# Here with you today

## Introduction speakers

- Chris Winkelman (host) - Tax lead Energy utilities and resources
- Niels Muller - Energy Transition and sustainability specialist
- Mohammed Azouagh - CIT and Incentives expert
- Sander Borremans - Indirect Tax and Energy Taxes expert



# Agenda

1. Introduction
2. What to expect in Europe?
3. What to expect in the Netherlands?
4. Case study
5. Q&A and closing remarks

# Introduction

“Energy transition is a radical shift in the **energy system** from an existing model to a new paradigm. It is **complex** and goes beyond only the replacement of one source of fuel with another.”

*Fattouh, B., Poudineh, R. & West, R. Energy Transit (2019)*

“The energy transition encompasses technological, societal, cultural, economic and environmental aspects hence the transition outcome will be the result of an interaction of technology, institutions, society and agents.



# Introduction

## Energy transition causes drastic changes to both Energy and non-Energy companies

1

### **Transformation of incumbents in the Energy industry**

2

### **Establishment and growth of renewables and green tech players**

The total energy value chain is changing by new players many of which are using digital technology to offer innovative solutions

3

### **Increasing focus on sustainability in (energy intensive) industries**

Next to the effects on Energy industry players, the energy transition will have a major effect on other (energy intensive) industries such as chemical companies, steel producers, consumer and industrial products groups

4

### **Converging industries**

Developments as new infrastructure, electric transport, (local) renewable energy production and further digitalisation result in a further convergence between the energy industry and a number of other industries. In light of the substantial CAPEX intensive nature of the energy transition, the finance industry is very important

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The background of the slide is a photograph of the European Union flag, which is a blue field with twelve yellow stars arranged in a circle. The flag is shown waving on a flagpole against a clear blue sky with some light clouds. A semi-transparent red rectangular box is overlaid on the left side of the image, containing the text.

What to expect  
in Europe?



# EU Green Deal



“


“By next summer, we will revise all of our climate and energy legislation to make it “fit for 55”. We will enhance emission trading, boost renewable energy, improve energy efficiency, reform energy taxation.”

**Ursula von der Leyen**  
President for the European Commission

# EU Green Deal

## ENVIRONMENT

### No More Business as Usual: Green Deal Needed in Europe's Recovery

 Published 4 days ago on September 18, 2020

The EU's green deal is a colossal exercise in greenwashing

*Yanis Varoufakis and David Adler*

The Pandemic's Economic Crisis  
Calls for a Green Recovery

EU risks a green deal backlash; call  
for common standards; a 'carbon-  
positive' challenge

EU executive wants tougher 2030  
climate goals and billions in green  
bonds

## GREEN DEAL

**EU's chance to be world's biggest  
green-bond issuer**

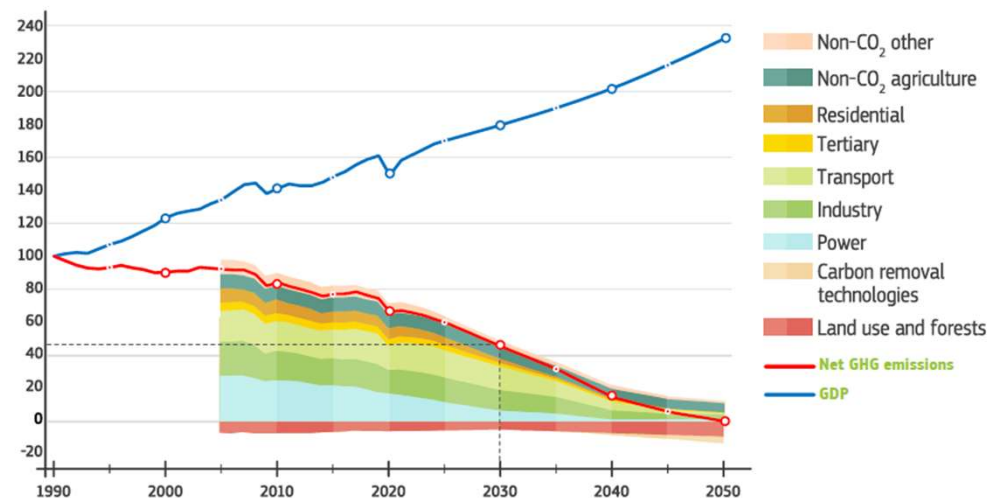
**Timmermans hoopt Haagse CO<sub>2</sub>-  
heffing overbodig te kunnen maken**

# EU Green Deal

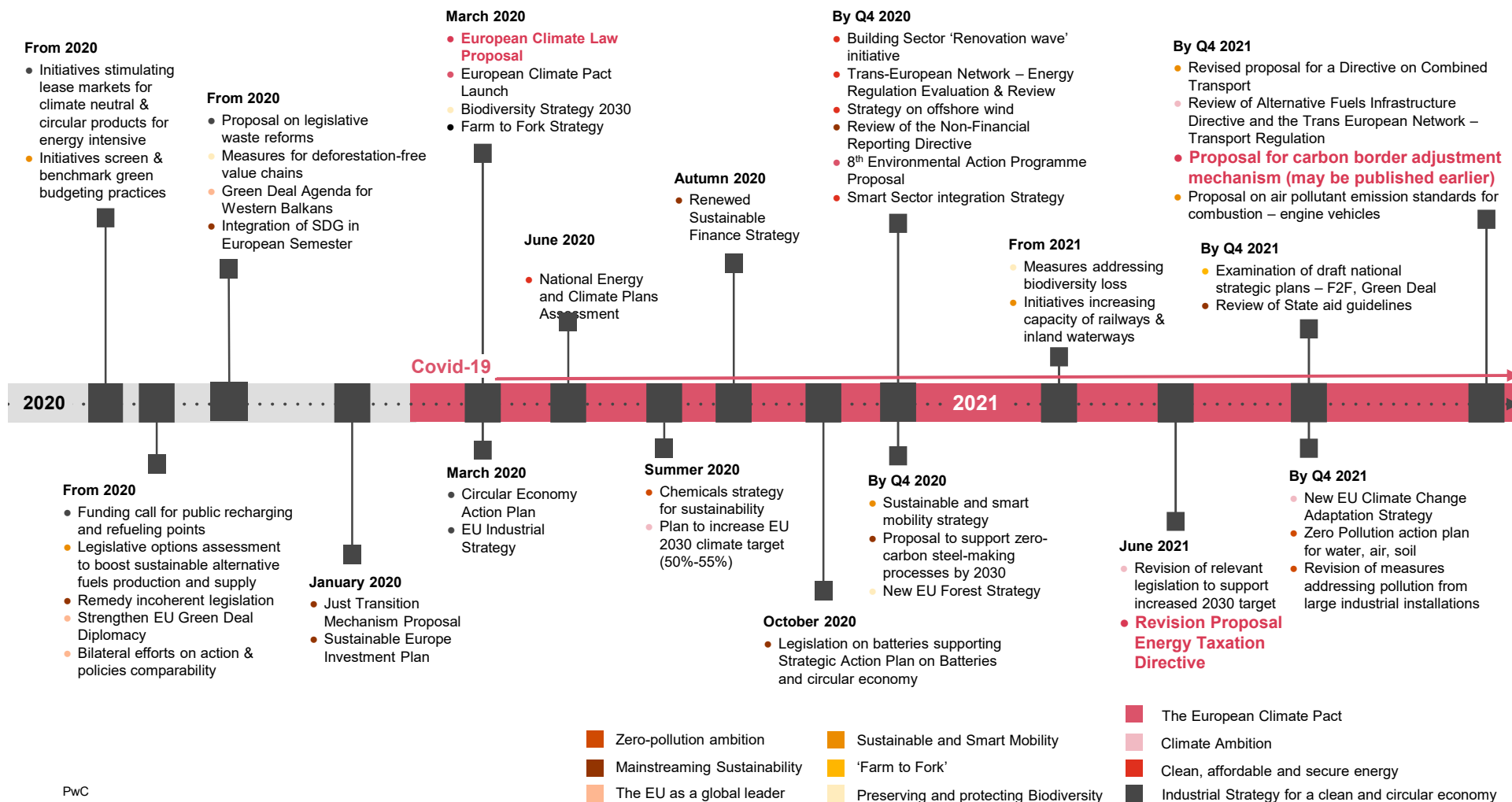
## Overview EU Green Deal

- Paris Climate Agreement
- EU Green Deal
  - 55% reduction CO<sub>2</sub> emissions by 2030
  - 95% reduction CO<sub>2</sub> emissions by 2050
- Focus mainly on largest carbon emitters, being power production sector, industry and transport

EU's pathway to climate neutrality, 1990-2050

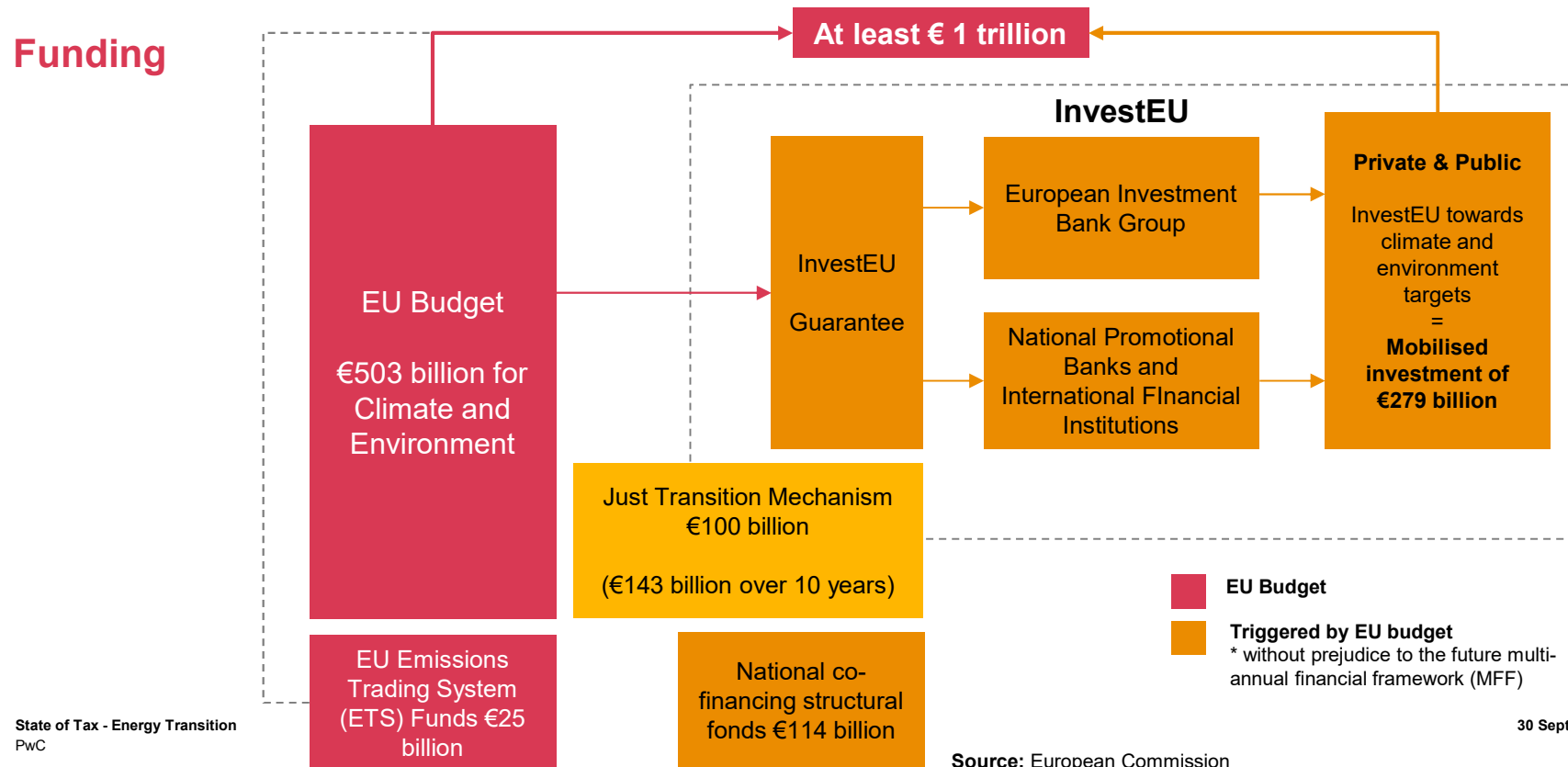


Source: European Commission



# EU Green Deal

## Funding



# EU Green Deal - overview main instruments

## Incentives

- Just Transition Mechanism
- Horizon Europe
- EU Innovation Fund
- *Connecting Europe Facility (CEF)*
- EIB soft loans / funding

## Regulatory

- Proposal 'Climate Law'
- Revision regulatory framework for energy infrastructure
- Review/revision Non-Financial Reporting
- Review/revisions relevant State Aid Guidelines

## Taxes

- Revision of EU Emission Trade System (EU ETS)
- Revision of Energy Tax Directive (ETD)
- Carbon Border Adjustment Mechanism (CBAM)
- Plastic "tax"



# EU tax framework



# EU Emission Trading System

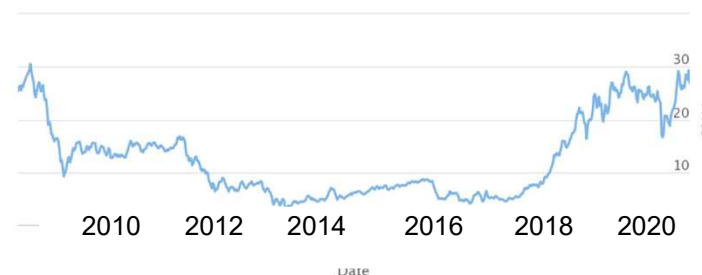
## What and why?

- Carbon market instrument applying to large emitters in the EU area
- Not sufficiently effective due to many exemptions / free allowances resulting low price emission allowances
- Recent changes have stabilised price around €25-30

## Application

- Industrial installations, power stations and airlines in scope
- 'Cap and trade' principle: annual reduction in the number of emission allowances by 1.74% increasing the price CO2 p/t
- Companies receive or buy emission allowances, which they can trade

EU ETS Price development (2010 - 2020)





# Revision EU Emission Trading System

## Announcement State of the Union - revision phase IV (2021 / 2023-2030)

- Reduction rate free allowances set on at least 2.2% (and even higher in first year)
- Expanding scope to emission from maritime, buildings and road transport sectors
- Less exemptions / exceptions
- Less free allowances for aviation industry

## Tax impact

- Remuneration (internal) trading desk
- TP and VAT elements in case of transfer of emission rights

### Roadmap

Feedback period  
03 July 2020 - 28 August 2020

FEEDBACK: CLOSED

### Upcoming

#### Public consultation

Consultation period  
Third quarter 2020

FEEDBACK: UPCOMING

#### Commission adoption

Planned for  
Second quarter 2021

FEEDBACK: UPCOMING

#### Entering into force

1 January 2021 (increase reduction rate)  
1 January 2023 (expanding scope etc)

# Revision Energy Tax Directive (ETD)

## What and why?

- Binding framework for taxation of fuel and electricity within the EU - basis for national law
- Aim of revision is to tackle three main flaws:
  - Ongoing use of fossil fuel subsidies / exemptions in EU MS
  - Lack of alignment between the ETD and other EU policies (e.g. EU ETS Scheme)
  - ETD minimum tax rates have lost their effect

## What to expect

- EC is considering a number of policy options:
  - Minimum rates, based on content and GHG emissions
  - Sectoral tax differentiation
  - Amended product coverage

## Tax impact

- National energy tax laws will have to be aligned in line with updated ETD
- Currently a standstill for broader reform of energy taxes in the Netherlands, new ETD long awaited

## In preparation

### Roadmap

Feedback period  
04 March 2020 - 01 April 2020

FEEDBACK: CLOSED

### Public consultation

Feedback period  
22 July 2020 - **14 October 2020**

FEEDBACK: OPEN

## Upcoming

### Commission adoption

Planned for  
Second quarter 2021

FEEDBACK: UPCOMING

### Entering into force

(expected) 1 January 2023

# Carbon Border Adjustment Mechanism

## What and why?

- Levy on imported goods from outside the EU based on their carbon content
- Avoidance of 'carbon leakage' via countries that have less strict climate policies in place or replacing EU products by more carbon-intensive imports

## What to expect?

- Alternatives currently under review of the EC
  - Carbon tax on selected products
  - New carbon customs duty or tax on imports
  - Extension of the EU ETS to imports
- Use of EU ETS Benchmark to determine carbon content of products
- Many other items still to be determined (see next slide)

### In preparation

#### Roadmap

Feedback period  
04 March 2020 - 01 April 2020

FEEDBACK: CLOSED

#### Public consultation

Feedback period  
22 July 2020 - **28 October 2020**

FEEDBACK: OPEN

### Upcoming

#### Commission adoption

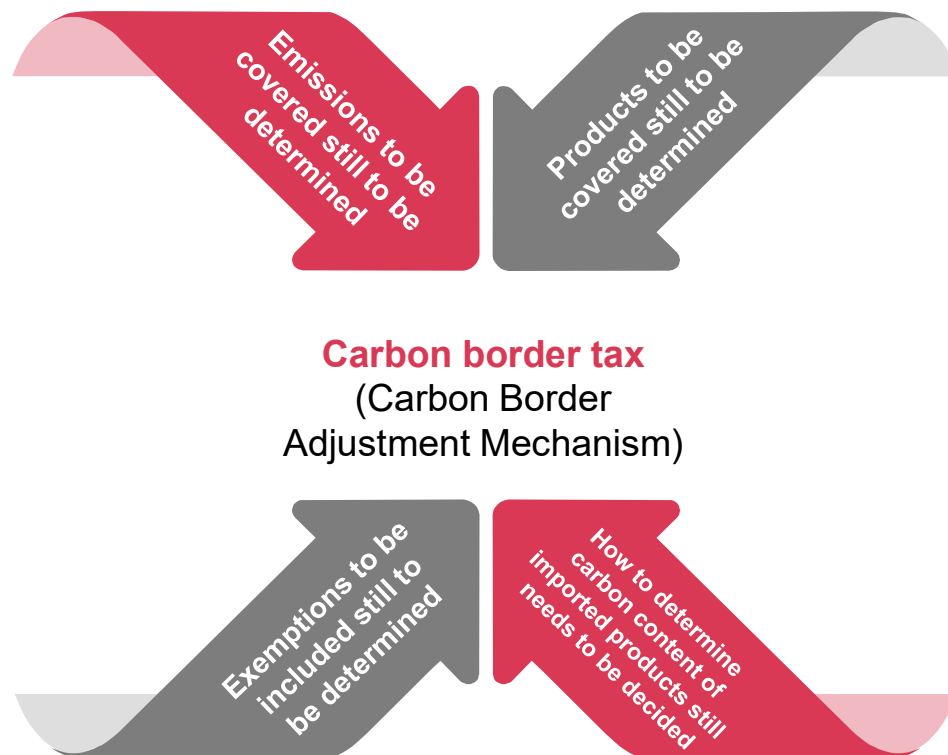
Planned for  
Second quarter 2021

FEEDBACK: UPCOMING

### Entering into force

(expected) 1 January 2023

# Carbon Border Adjustment Mechanism



## Carbon border tax (Carbon Border Adjustment Mechanism)

### In preparation

#### Roadmap

Feedback period  
04 March 2020 - 01 April 2020

FEEDBACK: CLOSED

#### Public consultation

Feedback period  
22 July 2020 - 28 October 2020

FEEDBACK: OPEN

### Upcoming

#### Commission adoption

Planned for  
Second quarter 2021

FEEDBACK: UPCOMING

### Entering into force

(expected) 1 January 2023

# Carbon Border Adjustment Mechanism

## Legal implications

- Validity of the measures under WTO rules and regulations
- Revision of the EU ETD to admit introduction of a carbon tax on selected products or a tax on imports
- How to fit into the existing EU ETS Scheme

## Challenges / threats foreseen

- Another disruption of global trade system
  - Impact to customs tariffs
  - Increased protectionism
- Financial Challenges that may be felt further down value chain
  - Cut profits on imported goods
- Competitive landscape can drastically change
- Validity of the measures under WTO rules

### In preparation

#### Roadmap

Feedback period  
04 March 2020 - 01 April 2020

FEEDBACK: CLOSED

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### Upcoming

#### Commission adoption

Planned for  
Second quarter 2021

FEEDBACK: UPCOMING

### Entering into force

(expected) 1 January 2023

# Carbon Border Adjustment Mechanism

## Course of action for companies

- Main sectors affected are energy, material and base material for industrial purposes. Also other sectors may be affected
- Start lobby process to influence legislative process and content, e.g. by participating in consultation process, etc.
- Investigate whether base materials / semi finished goods can be obtained from less emitting countries or technologies
- Exporting companies to the EU should measure their carbon footprint and investigate whether this can be improved
- Companies relying on importation of goods should also measure their carbon footprint in order to determine what may be at stake
- Run initial simulations to determine impact

## In preparation

### Roadmap

Feedback period  
04 March 2020 - 01 April 2020

FEEDBACK: CLOSED

### Public consultation

Feedback period  
22 July 2020 - 28 October 2020

FEEDBACK: OPEN

## Upcoming

### Commission adoption

Planned for  
Second quarter 2021

FEEDBACK: UPCOMING

## Entering into force

(Expected) 1 January 2023

# Plastic “tax”

## What and why?

- €0.80 per kg levy on non-recycled plastic packaging waste, to be paid by Member States into the EU budget
- The “tax” will be introduced as of 1 January 2021
- Effectively only a financing tool, Member States are not obliged to levy a local tax
- Aim: reduce level of plastic use and intensive reuse and recycling

## Shortcomings

- The proposal does not include a specific tax for users/producers to make actual reduction a reality
- Instead of a tax on the weight of non-recycled plastic packaging waste, a tax on new, virgin primary plastics in packaging seems to be more effective

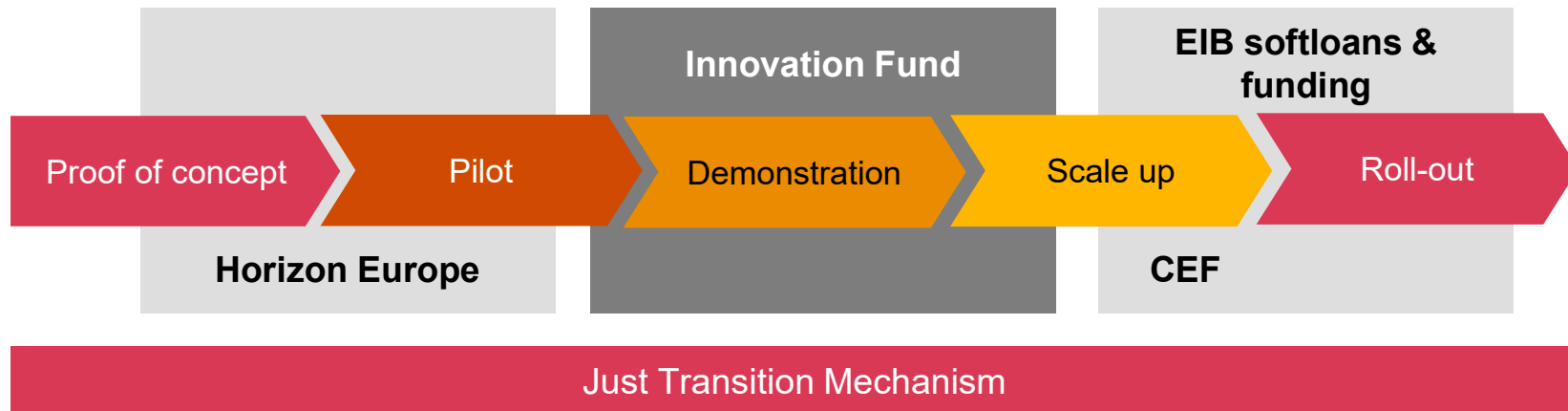




EU Incentives



# Incentives - overview main EU incentives along the project life cycle



# Horizon Europe

## What and why?

- €100 bn programme
- Shift from technological research to open innovation / market uptake (low in TRL)
- Main relevant conditions:
  - Public / private collaboration within innovative value chain (3 different EU MS's)
  - Typical duration of EU funded innovation projects (2 to 4 years)
  - Average amount of EU funding is €5m to €25m
- Uncertainty on how budget will be allocated but expected that at least 30% is for decarbonisation projects
- Average funding rate of project between 40-70% for private companies and 100% for non-profit organizations

## When?

- The first two year work programmes will be published per Q1/Q2 2021
- Programme duration: 2021-2027

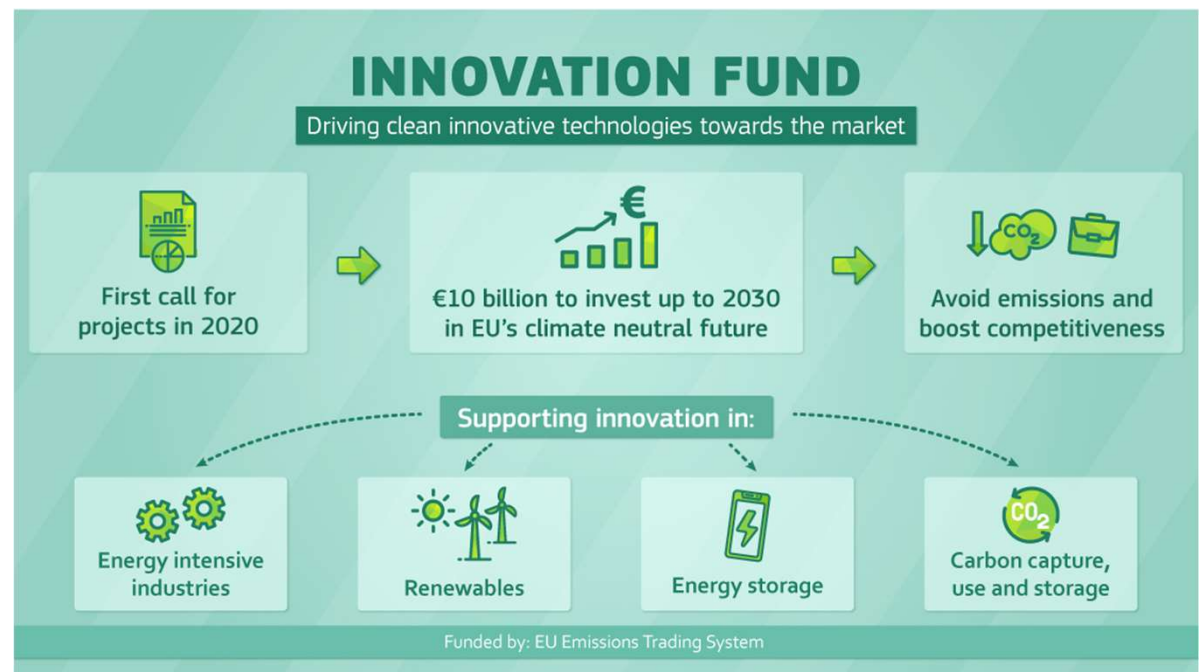
# EU Innovation Fund

## What and why?

- € 10bn programme (2020-2030)
- Annual tenders until 2030
- Demonstration of innovative low-carbon technologies
- Funded by EU ETS revenues

## Application and timing

- Application via EC
- Two-phase application process
  - Expression of interest
  - Full application
- Deadline first phase 29 October 2020 (budget € 1bn)



Source: European Commission

# Other EU incentives / instruments

## Connecting Europe Facility Energy (CEF)

- EU grant for cross border projects tackling bottlenecks in energy (and transport) infrastructure
- Multi billion fund applicable to projects high in TRL

## Important Projects of Common Interest (IPCEI)

- Allows individual EU MS to support specific projects / technologies with additional funding within the EU State Aid Framework

## European Investment Bank Soft Loans and Funding

- Soft loans for investments high in TRL, whereby loan can be converted into cash funding

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# What to expect in the Netherlands?

# What to expect in the Netherlands?

## NL Developments

- Netherlands has committed to Paris Climate agreement
- Dutch Climate Agreement signed mid 2019 includes 49% reduction target by 2030
- National Climate Law implemented
- Urgenda Judgement
- Increased EU reduction target of 55%?

# Netherlands - overview main instruments

## Tax incentives

- EIA, MIA/Vamil
- R&D credit (Dutch: WBSO)
- Innovation box

## Cash incentives

- SDE++
- Topsector Energy programs
  - Demonstration Energy (DEI+)
  - Renewable Energy (HER+)
  - Mission Driven R&D (MOOI)
  - Accelerated Climate Investment Industry (ACII)

## Taxation

- National carbon taxation (CO2 levy)
- Energy Tax and sustainable energy surcharge (ODE)
- *Minimum CO2 price electricity generation*



# CO2 levy for industry

## What and why?

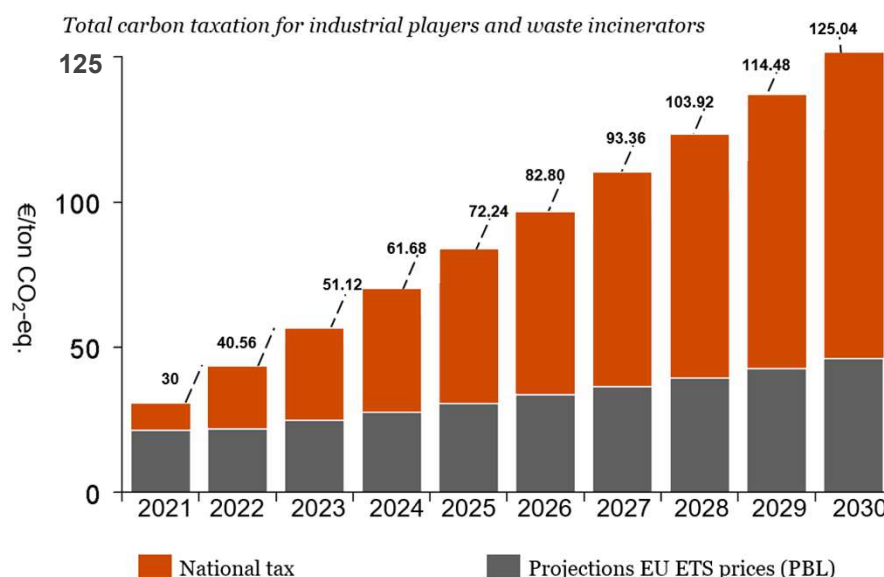
- Dutch National Climate Agreement
- National Carbon Tax above EU-ETS price => minimum price
- To be introduced in 2021 for industrial production and waste incineration (235 companies)
- Aim to reduce 14.3Mton CO2 emissions of industry



# CO2 levy for industry

## Application

- **Tax payers:** EU ETS producers + waste incinerators + N2O
- **Tax rate:** from €30 per 2021 to €125 per 2030, minus ETS price
- **Tax base:** emissions (CO2, NO2) during a year (“industriële jaarvracht”) -/- granted and acquired dispensation rights
- Dispensation rights will be reduced annually up to 2030 (by annually decreasing reduction factor)
- Companies effectively will start paying taxes in 2024 due to volume of dispensation rights
- Dispensation rights can be traded/carried forward



# CO<sub>2</sub> levy for industry

Calculation  
dispensation rights  
(i.e. exempt  
emissions)

=

Actual production  
(i.e. emission)

×

EU ETS  
Benchmark

×

Reduction factor

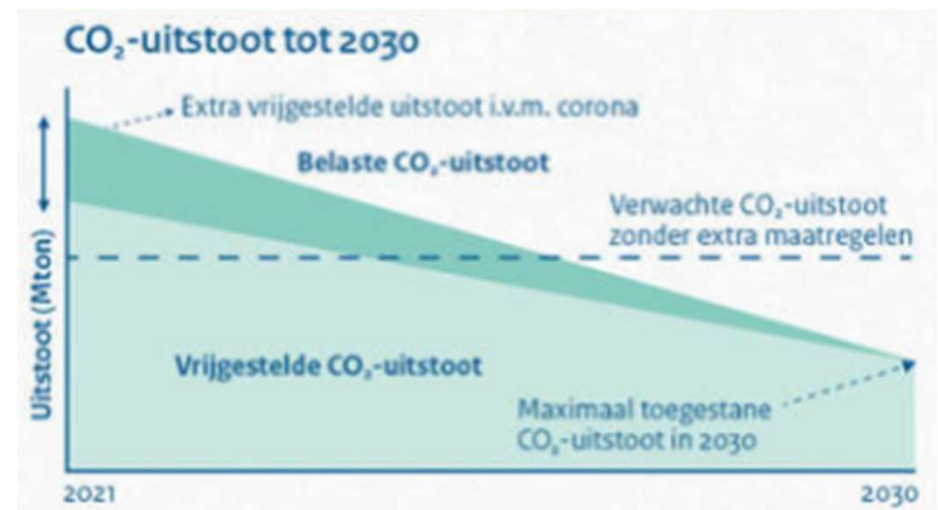
- Product benchmark (52)
- Heat benchmark
- Fuel benchmark
- Process emission approach (97%; 2014-2018)

Annual decreases  
annually  
From 1.21% in 2020  
to 0.69% after 2030

# CO<sub>2</sub> levy for industry

## Impact / critics

- What about expansion of EU ETS scheme?
- Risk of carbon leakage
  - Subsidies play important role
- Unilateral vs at EU level
- Uncertainties in policy structure must be removed as quickly as possible
- More research is needed into whether subsidies are sufficient



# Energy tax - some basic background

- Dutch energy tax law is based on a European Directive
- Supply of electricity and/or natural gas via a connection to an end-user
- Degressive tax rates (4 brackets)
- Suppliers file energy tax returns and pay energy tax to the authorities
- Next to energy tax, a sustainable energy surcharge (ODE) is due for financing the SDE++, same brackets apply
- Numerous exemptions apply, e.g. when generating electricity

# Energy tax and sustainable energy surcharge - Budget Day

## Energy tax

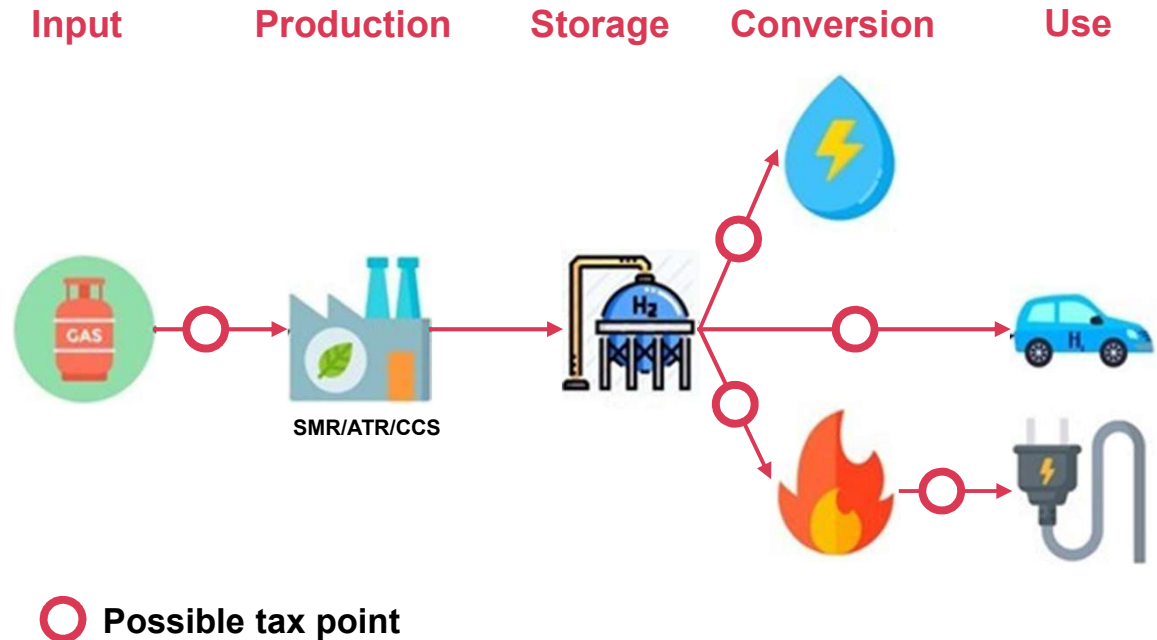
- 'Postcoderoosregeling' abolished and converted into subsidy
- Extension low energy tax rates for public EV charging points
- Low energy tax rate for shore power installations

## Sustainable energy surcharge

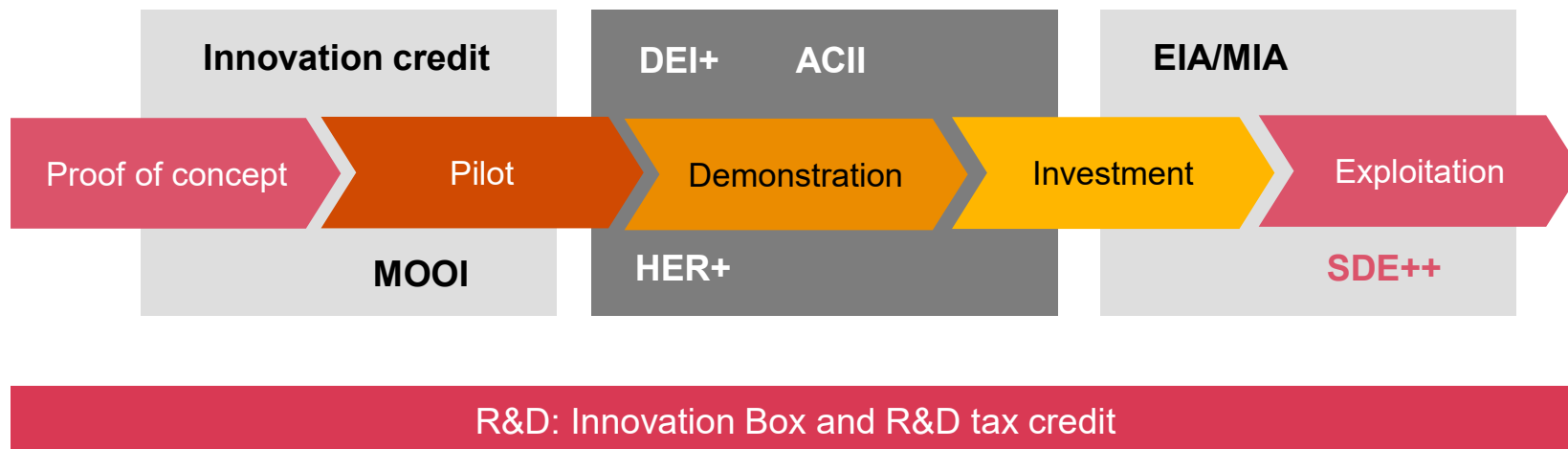
- Tariff increase to finance SDE++
- Shift contribution to large consumers
- Compensation energy costs for certain sectors

# Energy tax - current challenges

- Double taxation of electricity storage
- Generation - (multiple) WOZ-objects
- Application of exemptions, e.g. for hydrogen



# Incentives - overview main NL incentives along the project life cycle





# Subsidy Sustainable Energy Transition (SDE++)

## What and why?

- Subsidy is paid by the revenues from the ODE (“opslag duurzame energie”)
- Most important subsidy instrument for coming 10 years in the Netherlands
- Subsidy instrument has a unique character in Europe (exploitation subsidy)
- *Categories*
  - Scope broadened to stimulation of sustainable energy production and CO2-reduction techniques
    - renewable electricity, heat/CHP and gas
    - low-carbon heat (e.g. waste heat, industrial heat pump)
    - low-carbon production (e.g. CCS, hydrogen)
- *Opening round and budget*
  - 24 November 2020 - 17 December 2020
  - € 5bn

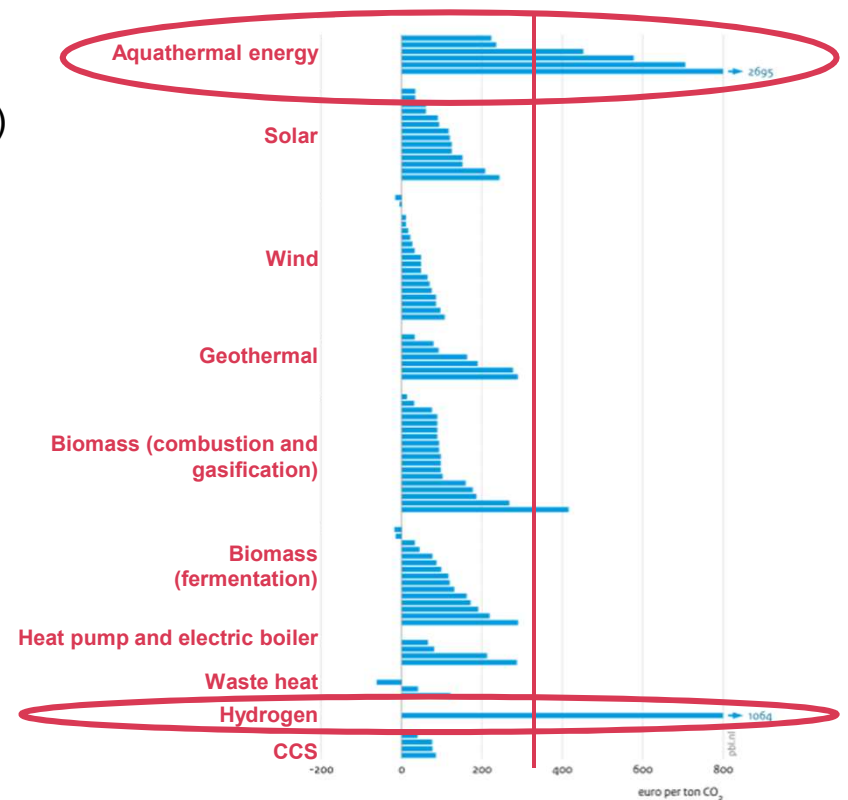
# SDE++

## System of SDE++

- Subsidy for 'unprofitable top' (in Dutch: *onrendabele top*)
- Most efficient techniques first
  - Ranking by subsidy requirement per tonne of CO<sub>2</sub>
  - 4 phases: 65 - 80 - 180 - 300
  - Maximum subsidy intensity of €300 per tonne CO<sub>2</sub>

## Critics

- Focus on short term cost efficiency
- More attention needed for subsidies relating to cost reduction of emission reducing technologies
- One integral budget ceiling for all categories (without sub-ceilings)



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The background of the slide is a photograph of a large stack of intermodal containers. The containers are arranged in a grid-like pattern, with most being a vibrant blue. Interspersed among the blue containers are several red ones, creating a rhythmic pattern of color. The lighting is bright, casting soft shadows and highlighting the corrugated texture of the metal surfaces.

# Case study

# Case study - Transport

## Anonymous

### What and why

- Int. Transport BV is engaged in the import and export of semi-finished products and raw materials. The focus of the activities is in Europe, where the imported goods from outside the EU are loaded from the cargo ships to trucks and delivered to b2b customers.
- The fleet of Int. Transport BV is recorded on the balance sheet of the Dutch BV. The main fuel used for the trucks and ships is diesel.
- Int. Transport BV has the ambition to electrify at least 25% of its fleet by 2023. The ships will be equipped with electric motors and batteries in the size of shipping containers. The trucks will be also equipped with electric motors and batteries. In addition, Int. Transport BV will form a partnership with other transport companies to set up a high capacity charging infrastructure network in Europe for EV trucks.

**Name:** Int. Transport BV

**Sector:** Maritime and road transport

**Employees:** 300

**Locations:** NLD and RoW

**Emissions (2018):** ~ 0.9 Mton

### Impact upcoming legislation / opportunities

- In light of the upcoming amended EU legislation, it is likely that Int. Transport BV will fall under the suggested broadened scope of the EU ETS (potentially both for its road and maritime activities). If this would be the case, another question is whether this will also result in taxation under the Dutch CO2 levy.
- Although Int. Transport BV will not be directly affected, the proposed CBAM may have an impact to the activities / value chain of Int. Transport BV's clients (e.g. reducing carbon emissions in the production process, investigate other areas in the value chain with a lower CO2 footprint, etc.).
- As Int. Transport BV will invest in sustainability (i.e. electrification), it is very likely that NL and EU subsidies are available which could significantly reduce the CapEx of these investments.



# Case study - Chemical industry

## PwC Speelveldtoets

### What and why

- Dow has a so-called integrated site where three crackers process naphtha and LPG into ethylene, propylene, butadiene and benzene. These substances are largely used in other production processes on the site.
- The cracking process has a high emission intensity, where most of the greenhouse gases are released. Two of the crackers are relatively old, which means that the emissions from the cracking process are on average above the EU ETS benchmark. Dow is 4th largest GHG emitters in the Netherlands.
- PwC performed impact assessment of NL CO2 levy on Dow's business in the Netherlands.

### Conclusion / financial impact

- Expected financial impact is large given the high emission intensity, the limited transmission capability and emission reduction opportunities.
- Ability to win subsidies or trade emission rights is very uncertain and the mitigating effects upon the introduction of the new policies are limited.
- Resulting financial impact may possibly influence the long-term investment decisions by Dow.
- Total remittance for the national levy over the period 2021-2030 seems to be significant.

**Name:** Dow Benelux B.V.

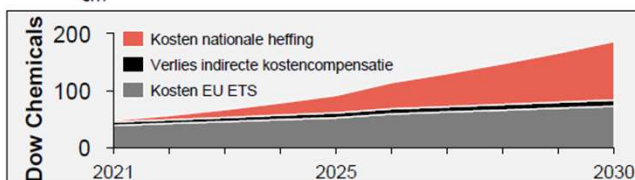
**Sector:** Petrochemical

**Employees:** 3200

**Locations:** Terneuzen & Delfzijl

**Emissions (2018):** ~4.1 Mton

Ontwikkeling kosten op basis van middelhoge nationale heffing  
€m



Vergelijking verwachte EBITDA in 2030 – o.b.v. veranderend beleid met lage, middelhoge, en hoge nationale heffing



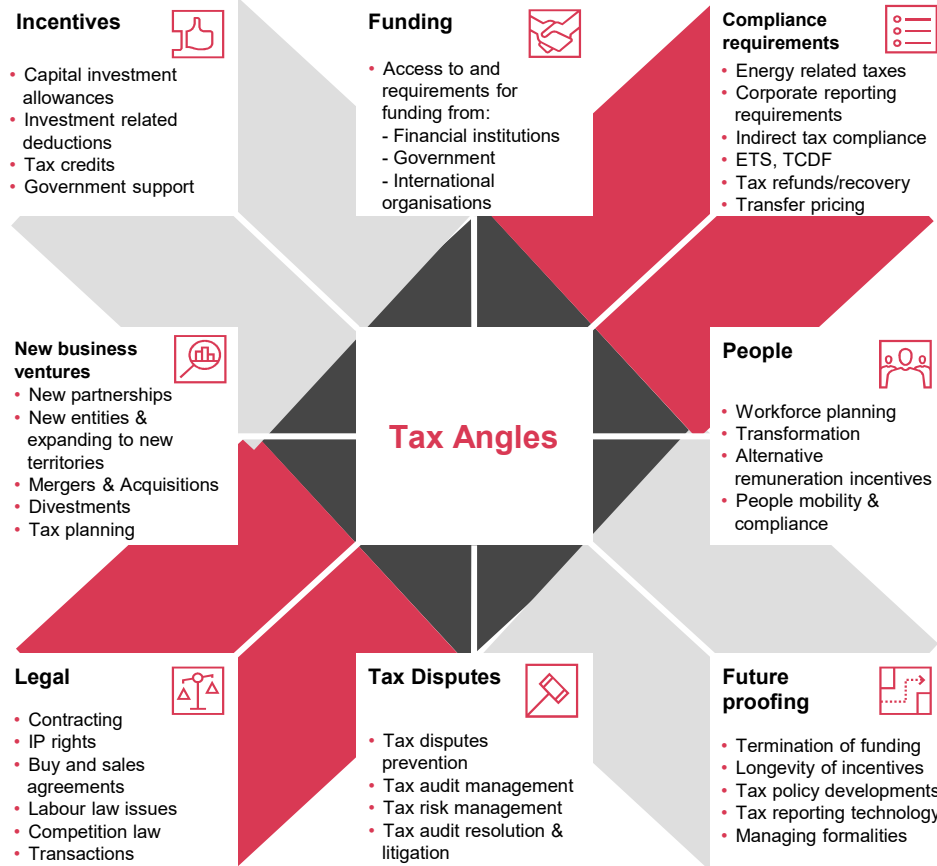
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# Overview tax angles

## Tax Angles





## Q&A and closing remarks

- Questions?
- View this webcast at a later stage
- Stay up to date: register for our PwC Tax Newsletter on [pwc.nl](https://www.pwc.nl)
- More about [Energy Transition and Taxation](#) and take the survey online
- Please fill in the evaluation form



# Evaluation

- How would you rate this webinar on a scale from 1 to 10?
- The content was relevant. (Totally agree/Agree/Neutral/Disagree/Totally disagree)
- Do you have any suggestions and/or comments?
- Do you have specific questions and would you like us to contact you?



# Thank you

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