



# Supply Chain Challenges from a customer perspective

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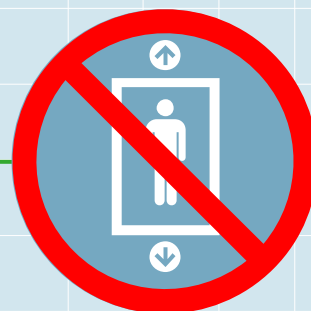
# A moment for safety

Samen zorgen we voor een veilige werkomgeving waarbij we leren van fouten en het delen van ideeën, zorgen en vragen vanzelfsprekend is.

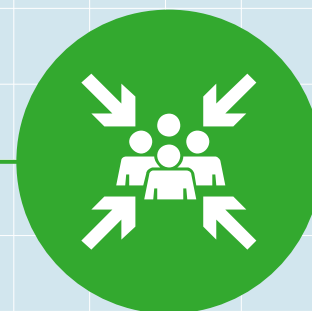
Daarnaast vragen we aandacht voor de volgende veiligheidsmaatregelen in geval van een ontruiming van het pand



Volg de aangegeven vluchtroute



Gebruik de trap in plaats van de lift



Ga naar het verzamelpunt



Volg aanwijzingen bedrijfshulpverlener

# Agenda

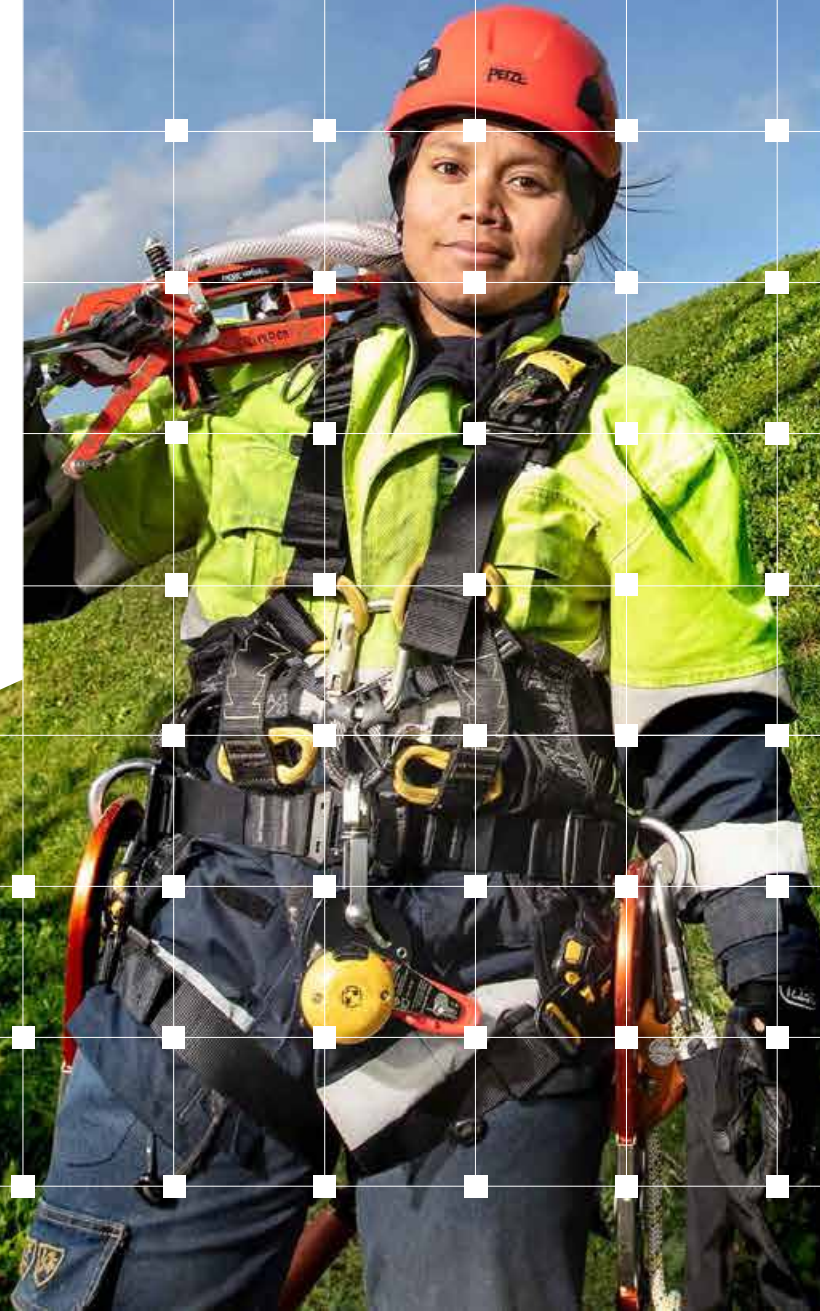
Who is Roel Snel?

What is TenneT and the EU-team?

Our challenges

Our solutions

# Who is Roel Snel?



# Who is Roel Snel

- Lead European Legal Affairs Onshore at TenneT
- Specialized in procurement and contracting law



# The European Legal Team



# The European Legal Affairs team

- responsible for all procurement and contracting law matters
- is a crossborder team (GE/NL)
- consists of approx. 25 highly specialized German and Dutch legal counsels
- somewhat deceiving name; we do not deal with energy law topics in our team

# Who is TenneT?





# A grid operator's tasks

## Main tasks

### Transmission services

Ensure a robust and efficient high-voltage grid



### Market facilitation

Facilitate an efficient and stable electricity market



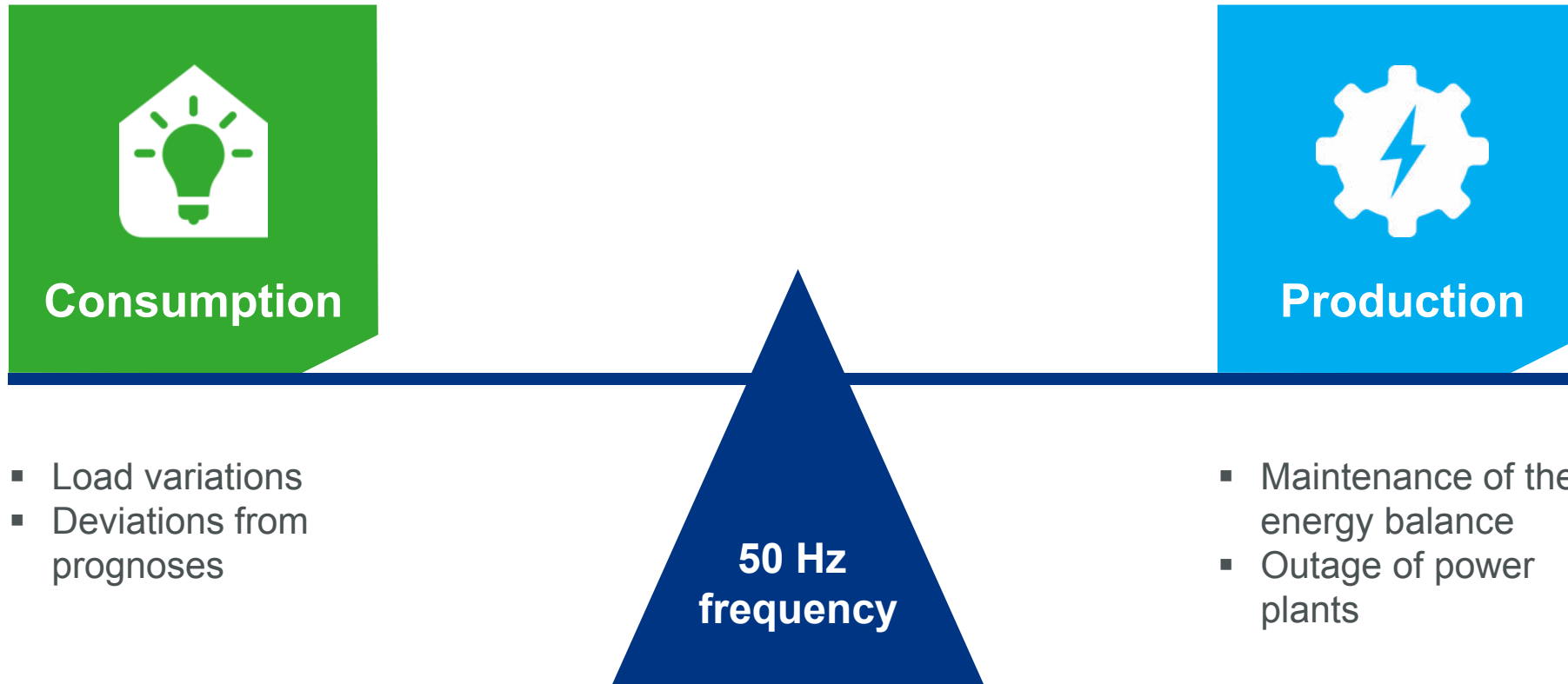
### System services

Maintain the balance of electricity, 24/7

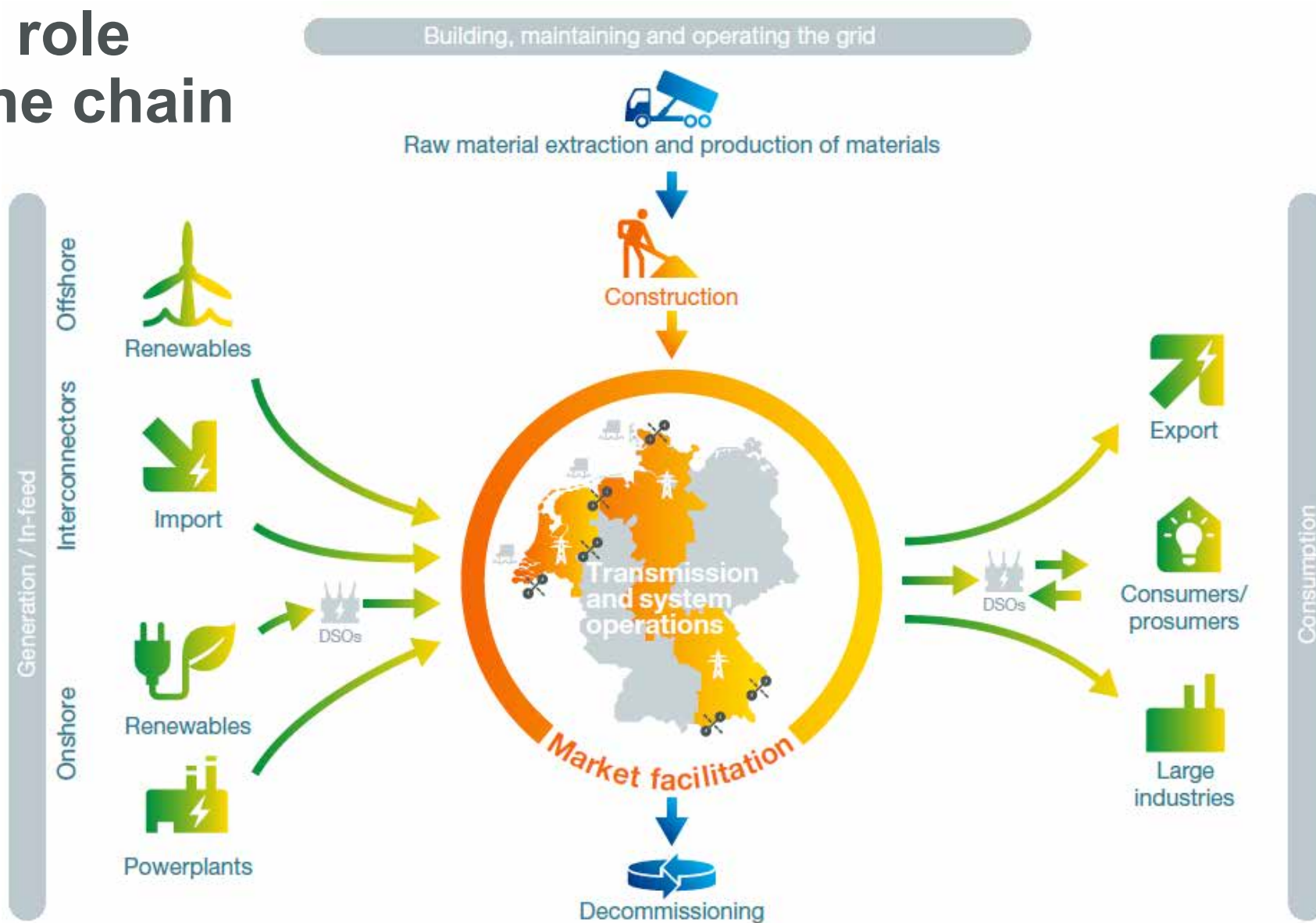


# Maintaining the balance

Maintenance of the energy balance: the amount of electricity produced must always exactly match the amount of electricity consumed.



# Our role in the chain



# TenneT at a glance (1/3)

## 2021



Workforce

**6,620**

Employees



EBIT

**801**

EUR million



Assets

**32**

EUR billion



Investments in 2021

**3.9**

EUR billion



Grid

**99,99%**

Availability



Grid length

**24,500**

Km



Dutch State

**100%**

Shareholder



Footprint

**69%**

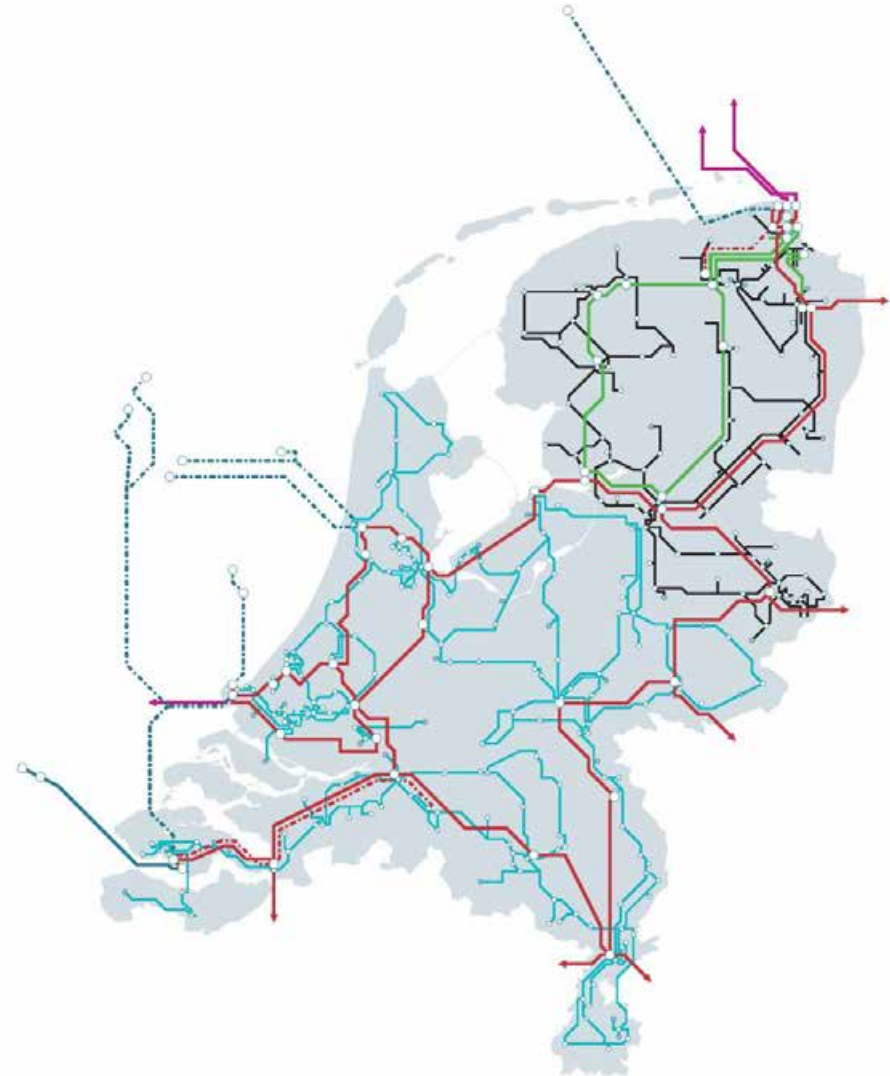
Greened

# TenneT at a glance (2/3)

## The Netherlands

### ■ Facts & figures

- Employees  
3,210
- Assets  
EUR 9,651 billion
- Total grid length  
10,959 km
- Transformer substations  
339
- Number of end-users  
17 million

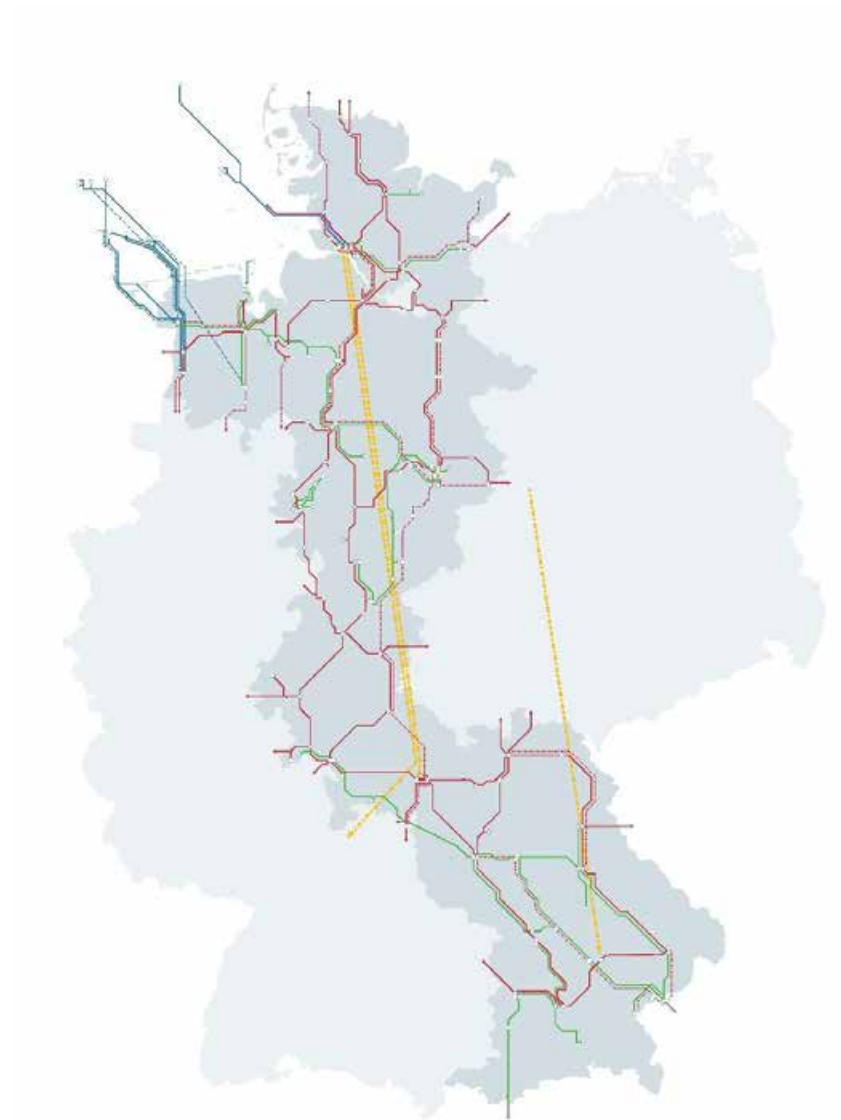


# TenneT at a glance (3/3)

## Germany

### ■ Facts & figures

- Employees  
3,410
- Assets  
EUR 12,525 billion
- Total grid length  
13,559 km
- Transformer substations  
136
- Number of end-users  
25 million



# TenneT is regulated

The regulator's main task is to ensure that TenneT does not spend more than is required for the performance of its tasks and obligations. This means that the permitted grid tariffs must be a reflection of the efficient costs for the construction, operation and maintenance of the transmission grid.

## Regulators for TenneT

- Netherlands:  
Authority for Consumers & Markets (ACM)
- Germany:  
Federal Network Agency (BNetzA)



# TenneT is an economic operator as meant in 2014/25/EU

Therefore TenneT is – of course – obliged to follow the rules following the directive – SektVO / Aanbestedingswet 2012 and to procure its contracts





# TenneT challenges (or some of them)

# What the Energy transition needs



Large scale  
grid expansion



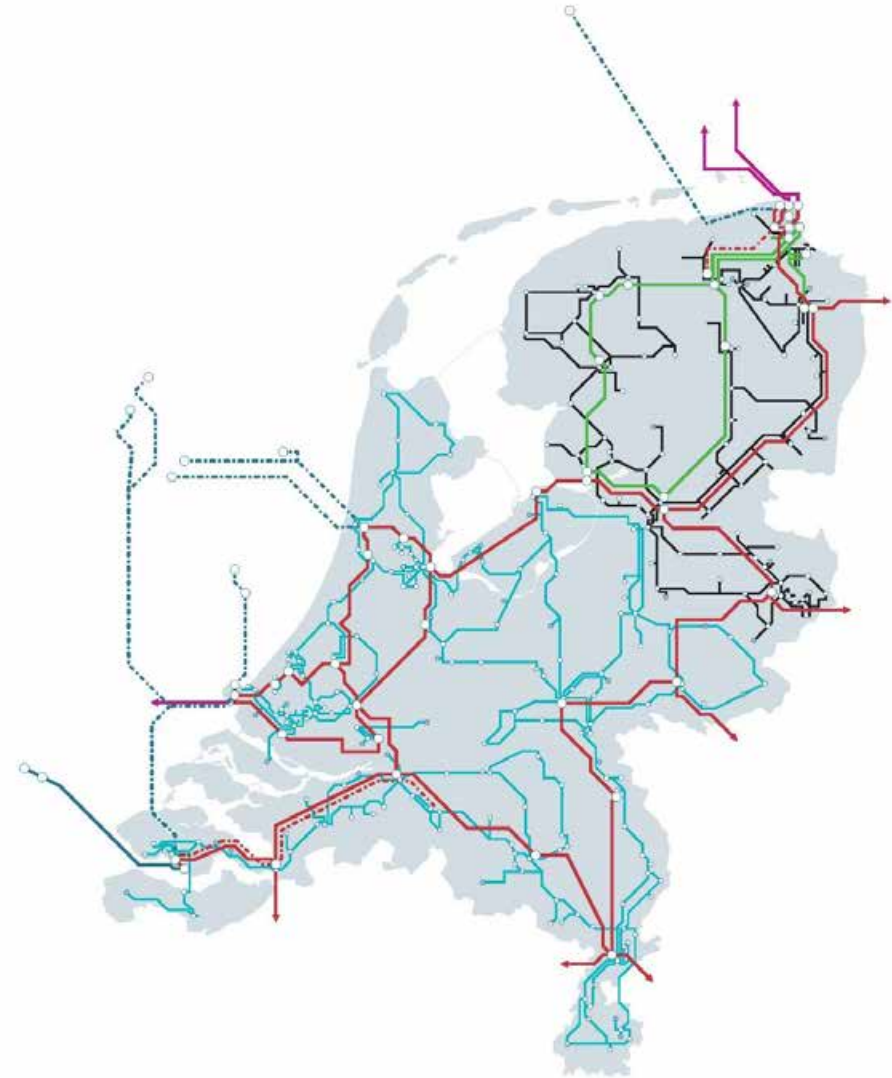
Innovation &  
digitalisation



System  
Integration

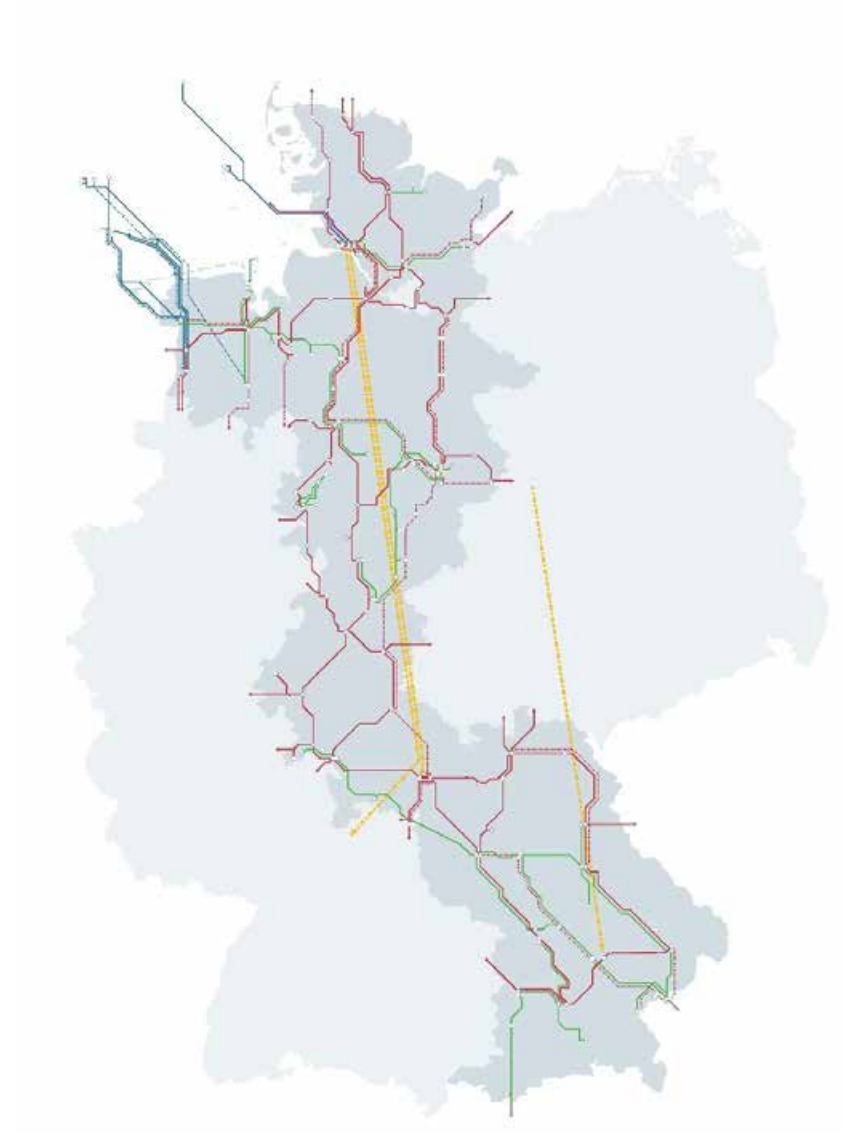
# Onshore grid expansion The Netherlands

- Key projects onshore:
  - Zuid-West 380 kV Oost
  - Zuid-West 380 kV West
  - Noord-West 380 kV
  - Increase capacity of national 380 kV ring



# Onshore grid expansion Germany

- Some 2.000 km of new connections planned:  
15 large-scale onshore projects and hundreds of smaller projects
- Wind energy to be transported from the north of Germany to the south
- SuedLink:  
With 800 km and 2 x 2 GW the largest DC connection in Germany (in cooperation with TransnetBW)
- SuedOstLink:  
2 x 2 GW DC connection (in cooperation with 50Hertz)



# Offshore grid connections The Netherlands

10,9 GW  
in 2030

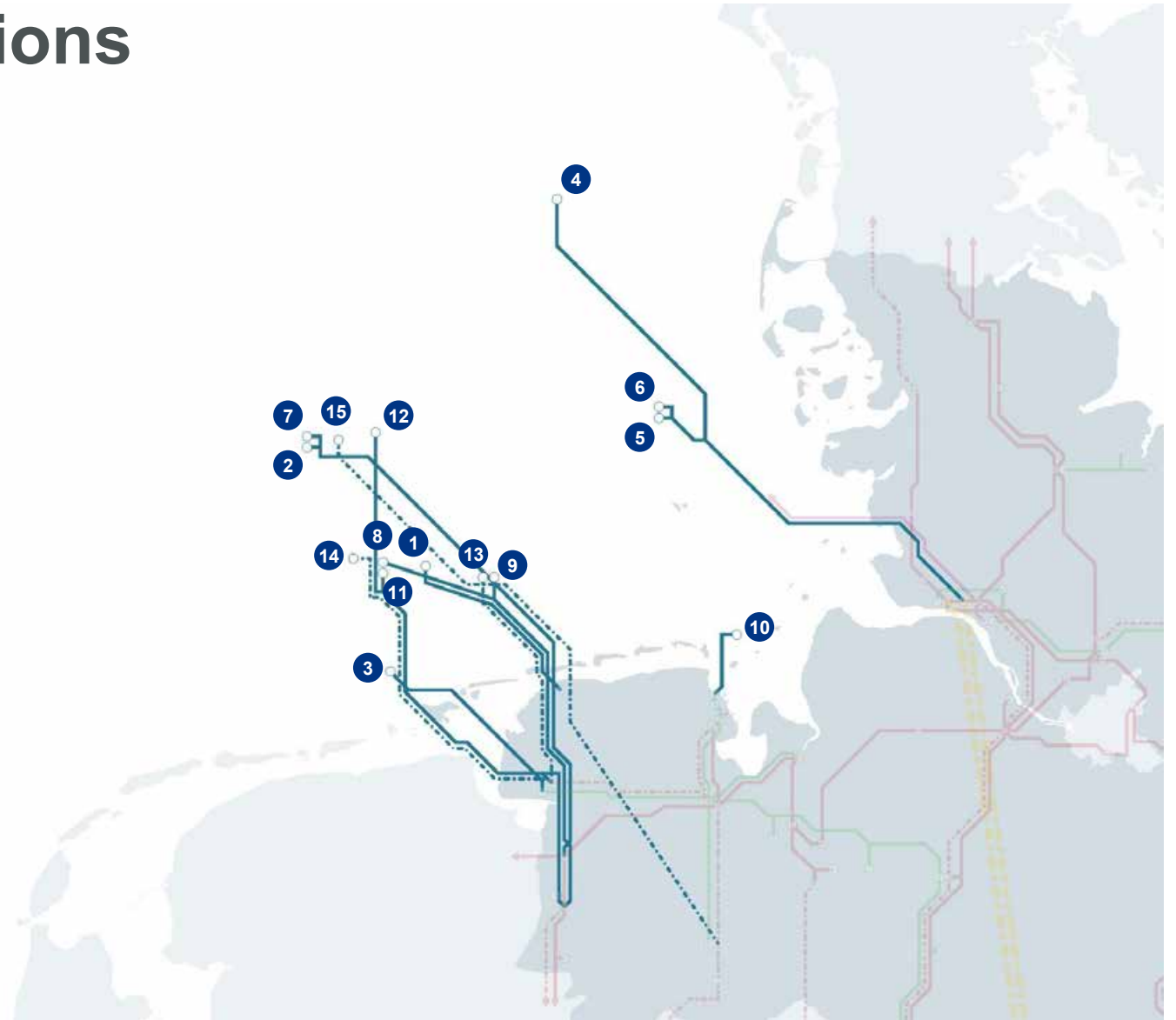
1	Borssele Alpha	700	MW (AC)	2019
2	Borssele Beta	700	MW (AC)	2020
3	Hollandse Kust (zuid) Alpha	700	MW (AC)	2022
4	Hollandse Kust (zuid) Beta	700	MW (AC)	2022
5	Hollandse Kust (noord)	700	MW (AC)	2023
6	Hollandse Kust (west Alpha)	700	MW (AC)	2024
7	Hollandse Kust (west Beta)	700	MW (AC)	2026
8	IJmuiden Ver Alpha	2.000	MW (DC)	2028
9	IJmuiden Ver Beta	2.000	MW (DC)	2029
10	IJmuiden Ver Gamma	2.000	MW (DC)	2030
11	PAWOZ-Eemshaven	4.700	MW	2030/2031



# Offshore grid connections Germany

9,8 GW  
in 2025

1	alpha ventus	62 MW	2009
2	BorWin1	400 MW	2010
3	Riffgat	113 MW	2014
4	SylWin1	864 MW	2015
5	HelWin1	576 MW	2015
6	HelWin2	690 MW	2015
7	BorWin2	800 MW	2015
8	DolWin1	800 MW	2015
9	DolWin2	916 MW	2016
10	Nordergründe	111 MW	2017
11	DolWin3	900 MW	2018
12	BorWin3	900 MW	2019
13	DolWin6	900 MW	2023
14	DolWin5	900 MW	2025
15	BorWin5	900 MW	2025



# The challenge of great uncertainty / disrupted supply chains



# Disrupted supply chains

- Markets for raw materials, disrupted as a result of:
  - Covid19
  - Ukraine war
  - Run for raw materials, increased need/wish to become fossil free
- Fast increasing prices
- Delayed delivery times



# Our legal solutions



# Our solutions

- First and foremost not (only) a contractual problem
- Acknowledging that in the present volatile environment no contract clause will solve all problems in all situations
- picture of reality vs. adaptive contract => leaving room
- 'soft' agreements on how to deal with each other in changing environment
- What did we do:
  - In existing contracts;
  - In new tenders;
  - With regard to Russian parties.

# Existing contracts ('reactive' approach)

- Category buyers get in touch with largest / w.r.t. certain raw materials most affected contractors (e.g. suppliers for steel)
- Contractors address if and when affected by the current supply chain challenges (Ukraine/Corona influenced)
- We expect the contractor to:
  - be able to substantiate the 'force majeure' claim (including the chain of causality between event and damage) and be transparent;
  - give insights in the reasonable mitigating measures already taken (which we expect from any supplier without extra payment) and considered.
- TenneT promises:
  - not to stick to formalities, but look into practical problem;
  - act in good faith and take a reasonable and fair approach.

# New contracts/tenders (1/3)

- Need from market to get clarity on the approach of TenneT
- Goals:
  - No blank cheque
  - Fair and reasonable (partnership)
  - Explainable to regulators and general public
- Model clauses developed and adapted on the subject of 'force majeure', price escalation as well as a uniform 'goodwill-clause' for certain critical commodities (from a certain / proven price increase on the market, TenneT participates in the additional costs).
- Use of 'soft' agreements - e.g. partnership agreements or alliancing models or in order to ensure our demand for the future and to implement projects in a timely manner.

# New contracts/tenders (2/3)

- Whereas: (...) / in German contracts as part of 'force majeure' clause.
- Parties are aware of the Ukraine war and the uncertainty this entails for the fulfillment of the parties' obligations under the agreement. Parties will approach each other amicably and reasonably in that context.
- TenneT explicitly stated in the Tender that contractor has to **include** any **foreseeable** additional costs for consequences/measures related to Ukraine war, based on the situation of the war and regulations at the date of submission, in its tender. Any **additional consequences** for the fulfillment of obligations under the contract as a result of the Ukraine war will be determined and agreed between the parties **on a case-by-case basis**. This will be done in accordance with the provisions of the agreement, the law and jurisprudence, taking into account all facts and circumstances. It will in all reasonableness be determined which solution is chosen and what the consequences of the chosen solution are in terms of costs, duration or method of implementation and for whose account these consequences are. This also means that TenneT does not exclude in advance that the Ukraine war could establish unforeseen circumstances.
- ✓ Acknowledgment that the Ukraine war and Corona are known in time of conclusion of the contract, but **may** still lead to a force 'majeure event' in the future. However, the supplier must prove **reasonable measures** in order to maintain its performance (e.g. check other possible subcontractors who do not export from Shanghai).

# New contracts/tenders (3/3)

## Price increase clause

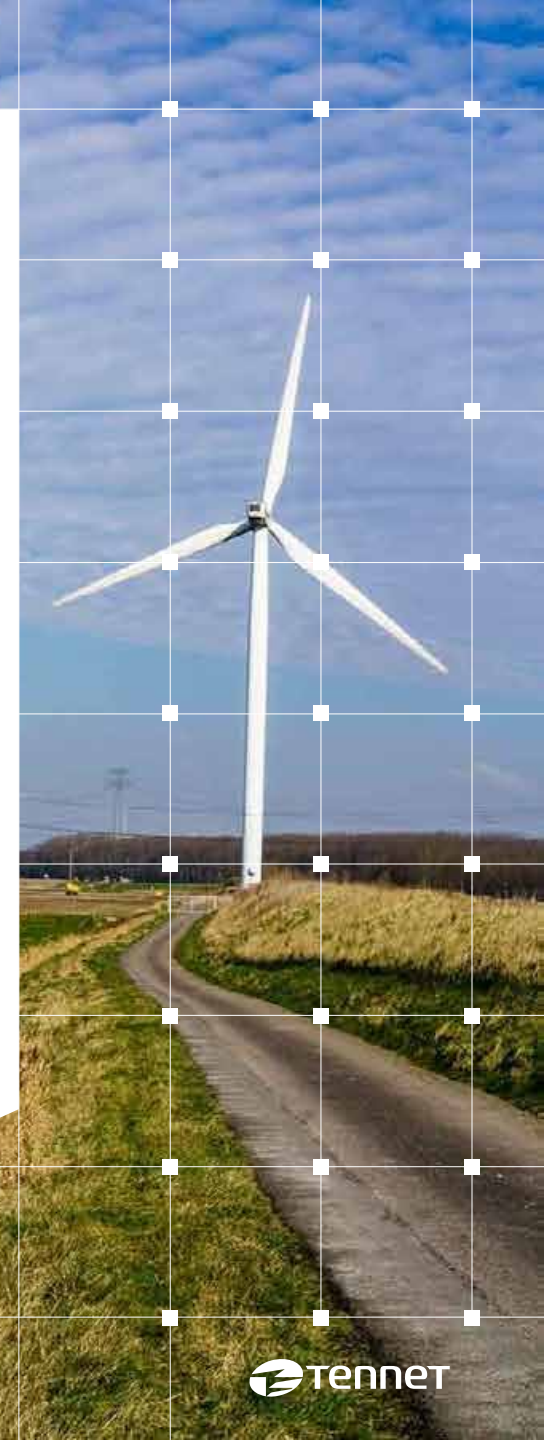
- We are (still) developing price clauses to further aid the dialogues we have with our suppliers.
- Goal is:
  - Objectify the baseline – equality and transparency
  - Have a good reference of an index clause for specific materials
  - No uncertainty on outcome for suppliers (and TenneT).
- Challenges:
  - What is 'base'?
  - How to go about strategic behavior of suppliers?
  - How to ensure equal treatment when the wishes of suppliers differ greatly?

# Russian (related) parties

- TenneT is no longer allowed to award new orders or concessions to Russian parties.
- TenneT adheres to the sanctions. Therefore:
  - Supply chain management regularly **checks** (and/or hires an agency to check / uses a special software) the supply base for – possible – Russian involvement;
  - **In existing contracts** we send our suppliers a general letter with regard to the sanction package and its consequences;
  - In (new) **tenders** we ask our suppliers to sign the self-declaration developed, in order to make sure they are aware of and comply with the sanctions.

TenneT is een toonaangevende Europese netbeheerder (Transmission System Operator, TSO). Wij zetten ons in voor een veilige en betrouwbare elektriciteitsvoorziening, 24 uur per dag en 365 dagen per jaar. Daarbij stimuleren we de energietransitie met als doel een duurzame, betrouwbare en betaalbare energietoekomst. Als eerste grensoverschrijdende TSO ontwerpen, bouwen, onderhouden en exploiteren we 23.900 kilometer aan hoogspanningsverbindingen in Nederland en grote delen van Duitsland, en faciliteren we de Europese energiemarkt via de 16 interconnectoren met onze buurlanden. Met een omzet van 4,5 miljard euro en een totale activawaarde van 27 miljard euro zijn we een van de grootste investeerders in nationale en internationale elektriciteitsnetten, zowel onshore als offshore. Elke dag stellen onze 5.700 medewerkers alles in het werk om tegemoet te komen aan de behoeften van de samenleving door het tonen van eigenaarschap, moed en verbinding. Samen zorgen we ervoor dat meer dan 42 miljoen eindgebruikers op een stabiele elektriciteitsvoorziening kunnen rekenen.

Lighting the way ahead together.





# Disclaimer

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