

Update: Offshore Wind In Germany

Ronny Meyer, Managing director WAB

Windenergie Agentur WAB: Leading voice for the German Offshore Industry

Overview

- Founded **Februar 2002**
- Number of members: **350**
- Organisationsform: **registred society**
- Employees: **7**
- Financing: **membership fees
partly funded by
Federal State of
Bremen**

**Broad industry spectrum, covering full value
chain incl. maritime industry**



Door opener – ask us about partners!
WAB is a contact point for many partners in the region and beyond

The Agenda for today

- Update: Offshore wind energy in Germany
- Planned changes in the EEG (Renewable Energy Act)
- Public Affairs/ Campaigning tips



Offshore in Germany started ten years ago ...

- Setting the right political framework
- Ambitious targets

Phasen	Zeitraum	Mögliche Kapazität	Möglicher Stromertrag
1. Vorbereitungsphase	2001 - 2003	-- MW	-- TWh p.a.
2. Startphase (Erste Baustufen)	2003/4-2006	mindestens 500 MW	ca. 1,5 TWh p.a.
3. Erste Ausbauphase	2007-2010	2.000 - 3.000 MW	ca. 7 - 10 TWh p.a.
4. Weitere Ausbauphasen	2011-2030	20.000 - 25.000 MW	ca. 70 - 85 TWh p.a.

Strategie der Bundesregierung zur Windenergienutzung auf See

Im Rahmen der Nachhaltigkeitsstrategie
der Bundesregierung

Beteiligte Ressorts:

Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU, Federführung)
Bundesministerium für Wirtschaft und Technologie (BMWi)
Bundesministerium für Verkehr, Bau und Wohnungswesen (BMVBS)
Bundesministerium für Verbraucherschutz, Ernährung und Landwirtschaft (BMVEL)
Bundesministerium der Verteidigung (BMVg)
unter Beteiligung der Deutschen Energie-Agentur (dena)

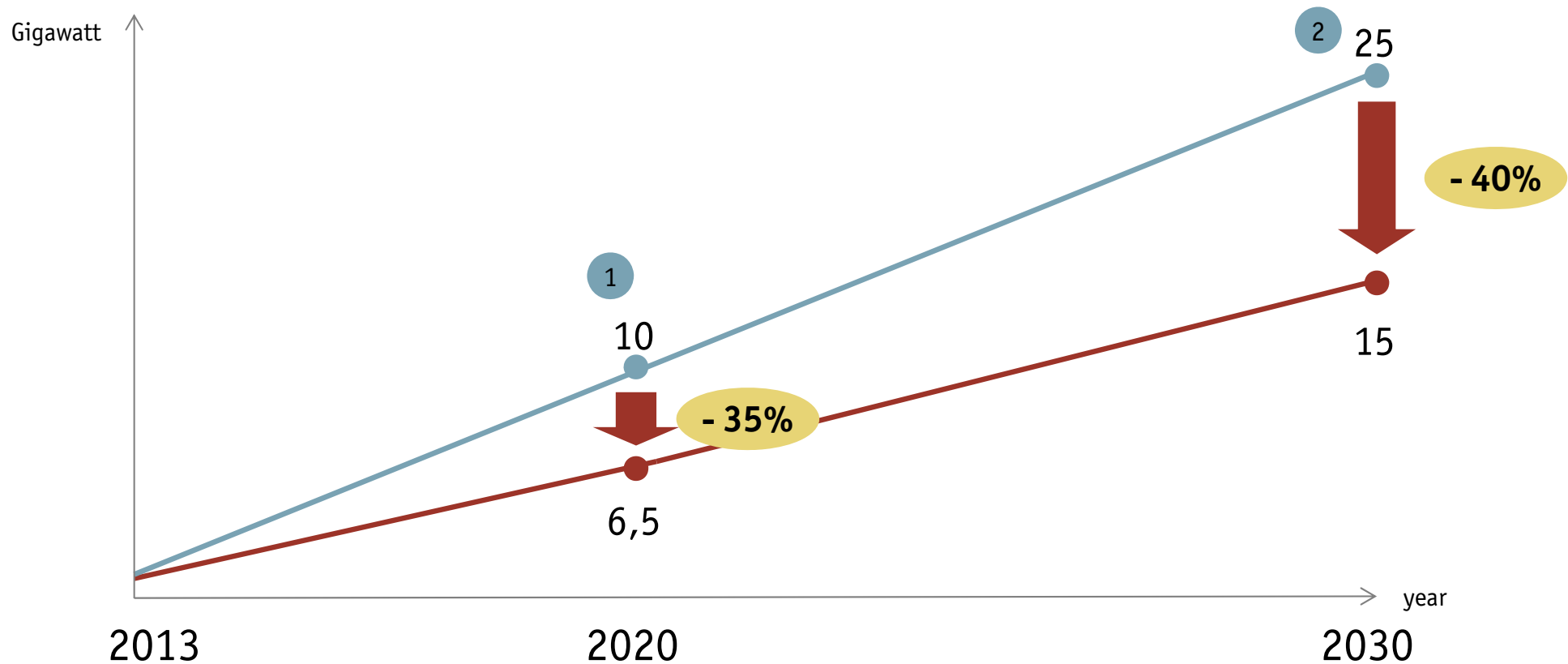
Stand: Januar 2002

10 GW till 2020 and 25 GW till 2030



... but the political targets was redefined after the elections

Offshore targets in Germany till 2020 and 2030



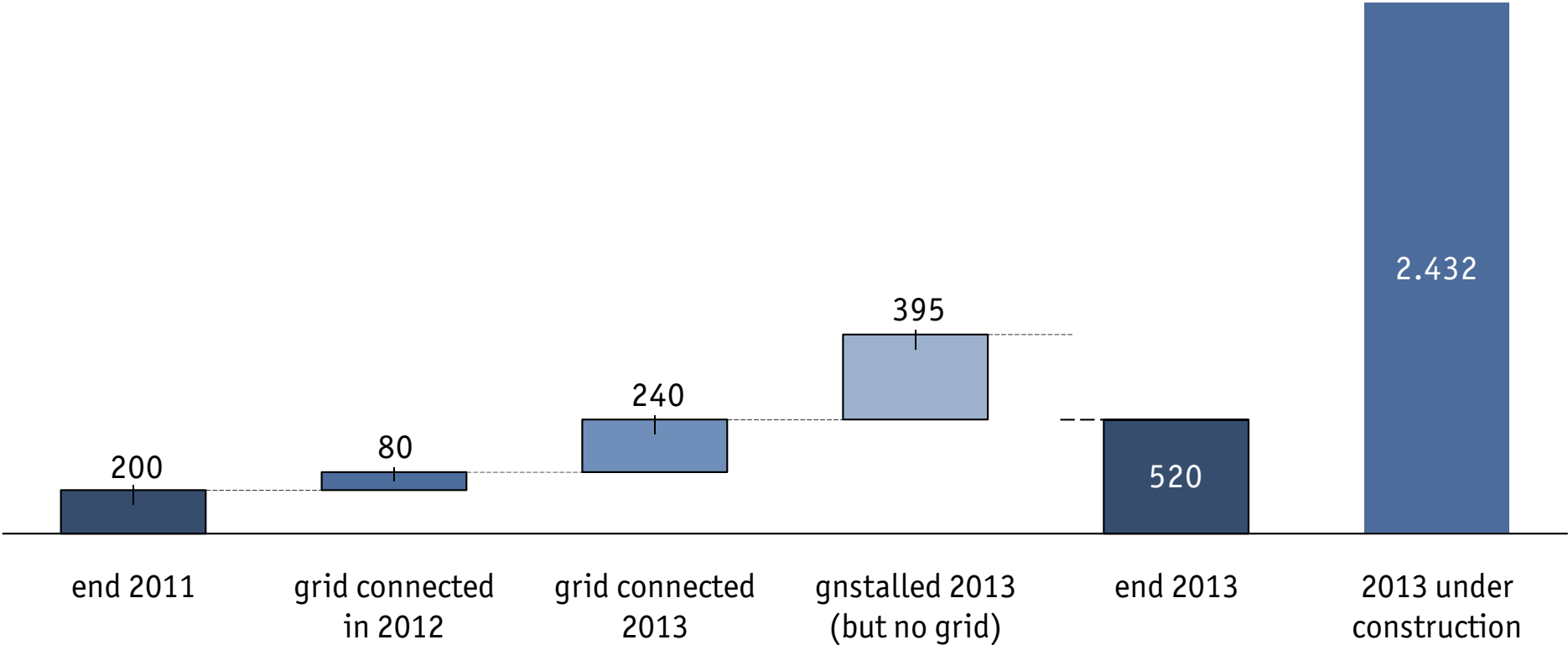
Around 3.8 GW in operation, under construction or start of construction





Offshore windenergy 2013 in Germany: Strong market growth

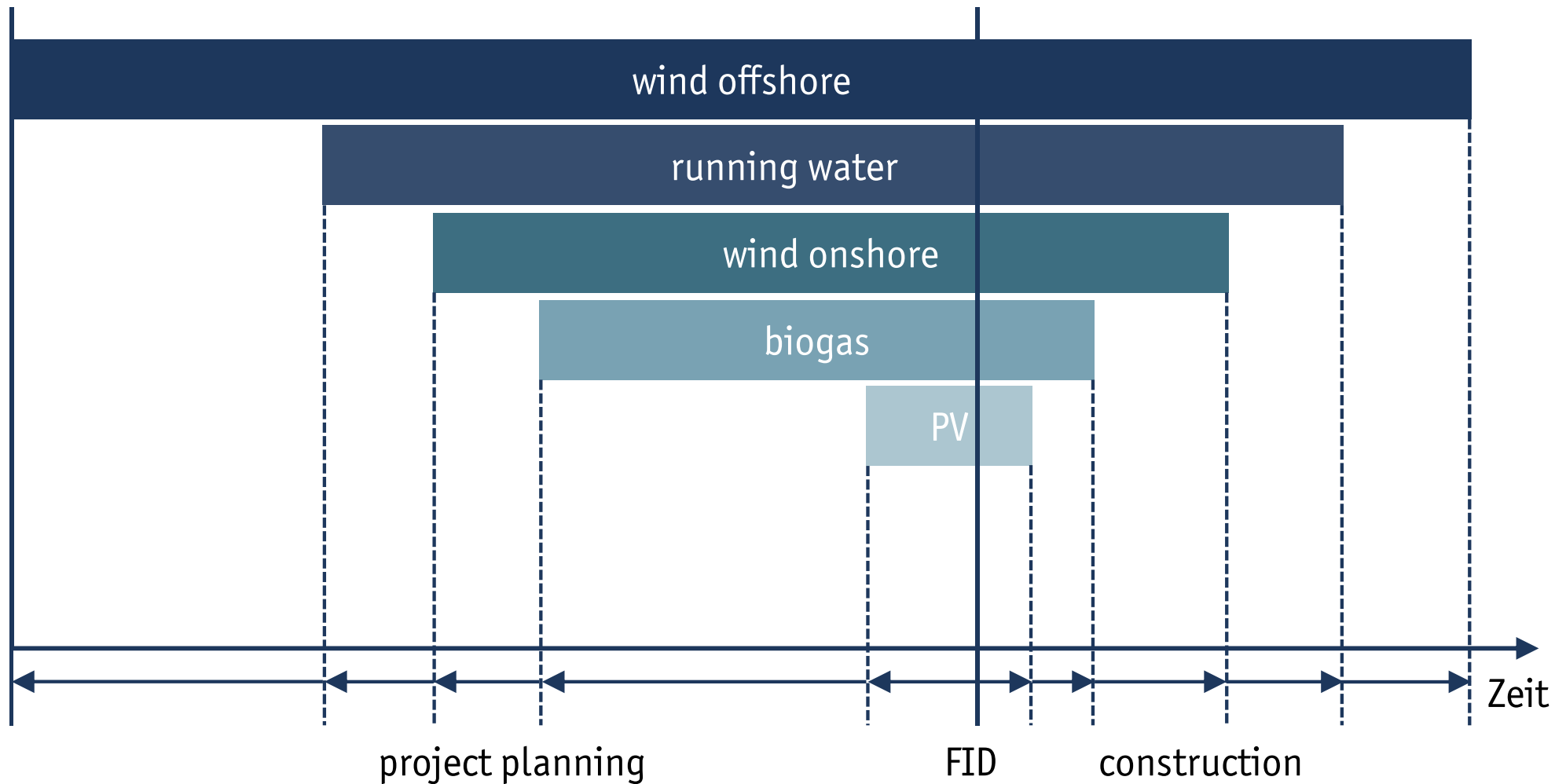
German offshore wind statistics 2013 (MW)



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Different FIDs for different renewable energy sources





Severe delays in grid connections



Delays!



North Sea

Greater distance to shore,
larger wind farms (clusters)
require HVDC-connections (<
120 km sea cable so far);

Baltic Sea

Shorter distance to shore
allow for standard AC-
connections (so far); grid
connections realised
within 30-35 months

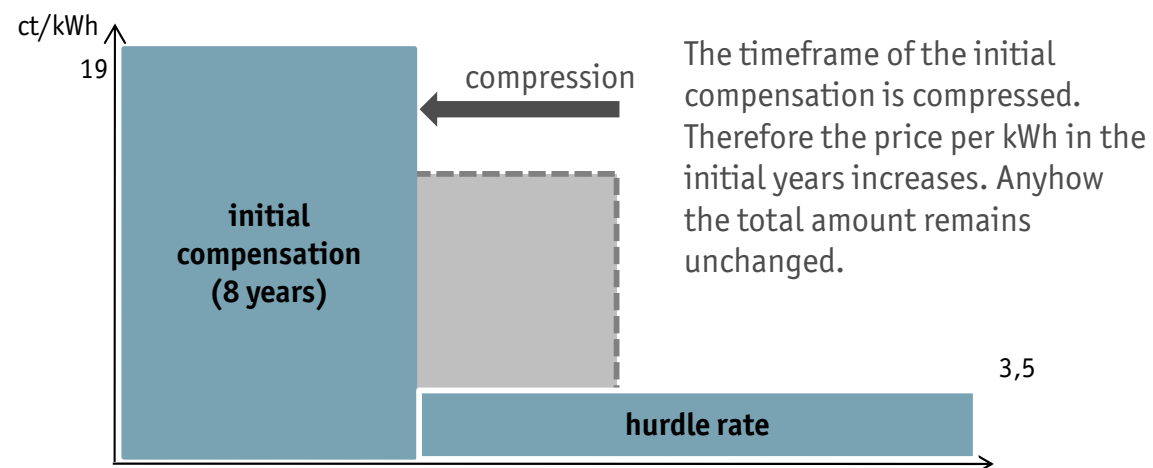
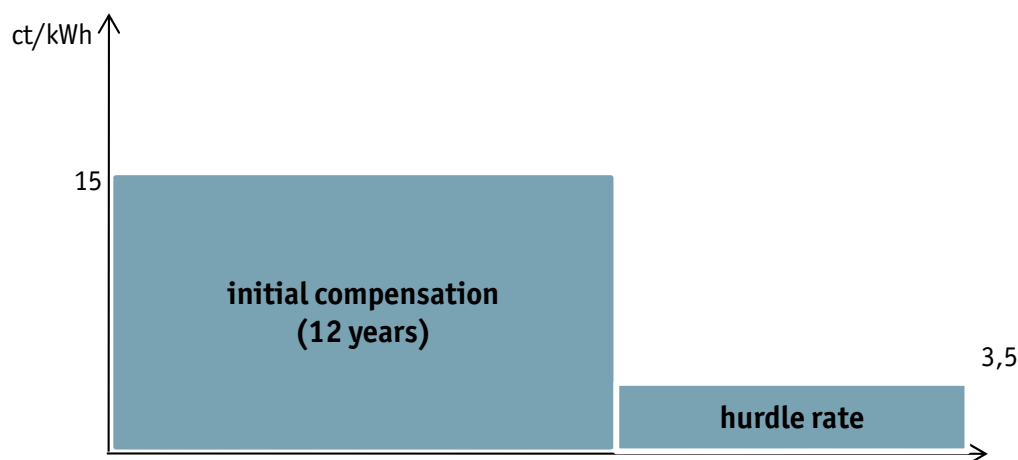
**TenneT - TSO in charge of North Sea connections –
difficulties to comply with legal requirements (financing
issues!)**

FIT for Offshore wind in Germany btw 15 and 19 ct/kWh depending on time frame (12 or 8 years) – for projects grid connected **till end 2017**

FIT of 15 ct/kWh for 12 years ...

OR

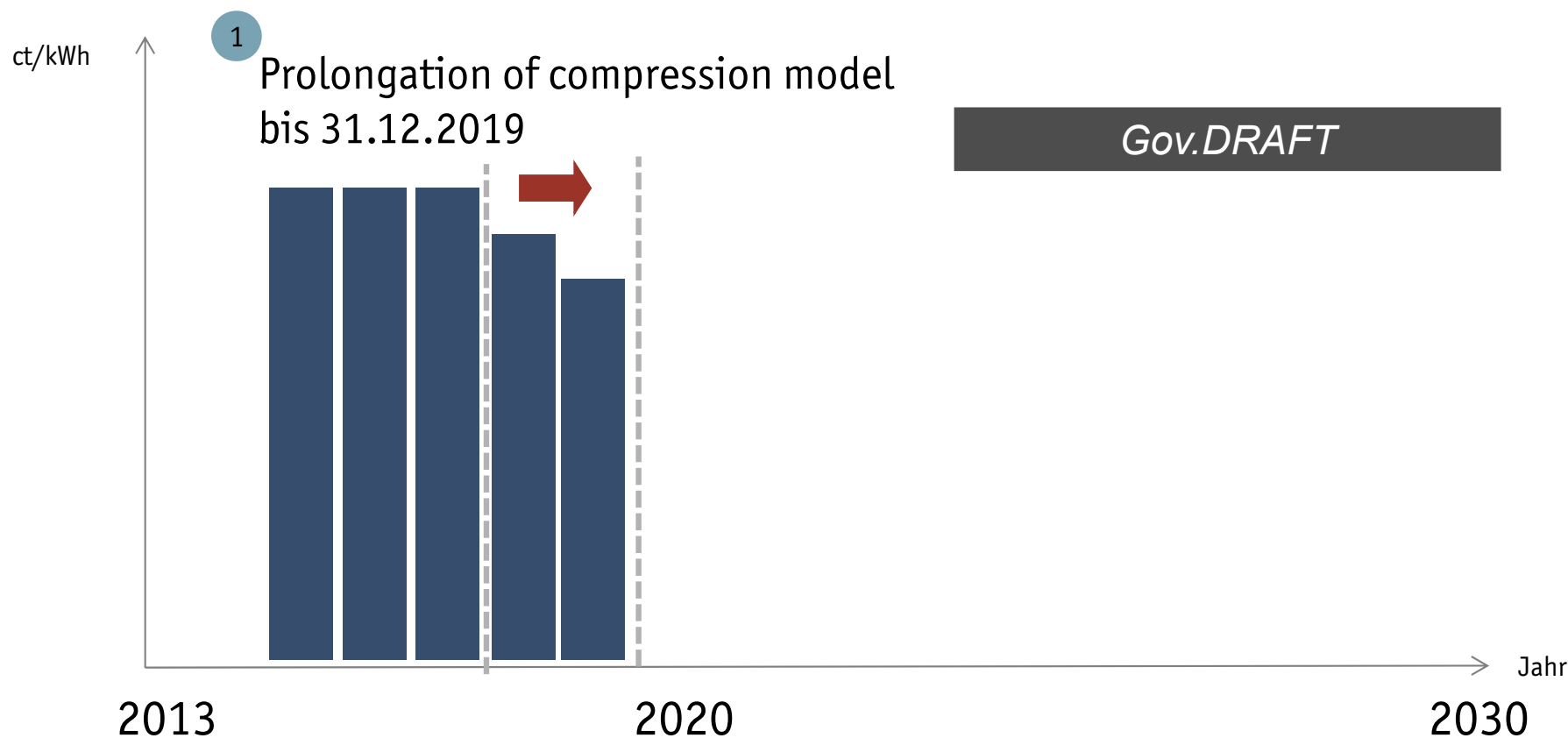
FIT of 19 ct/kWh for 8 years



Compression model increase IRR

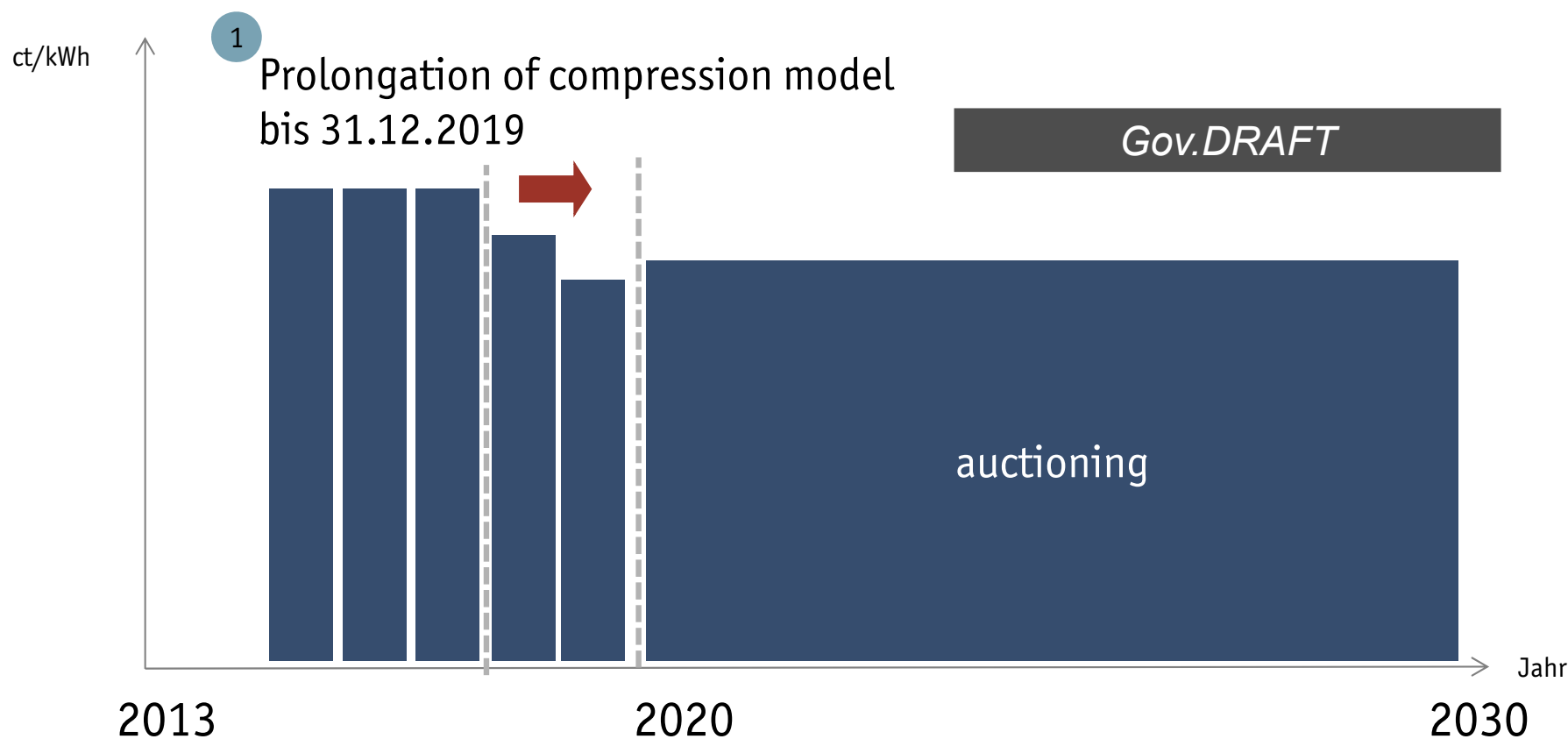
Because of delay of many projects (due to grid issues) prolongation of compression model till end of 2019 was granted by the government

Bec



Because of delay of many projects (due to grid issues) prolongation of compression model till end of 2019 was granted by the government

Auctioning after 2020



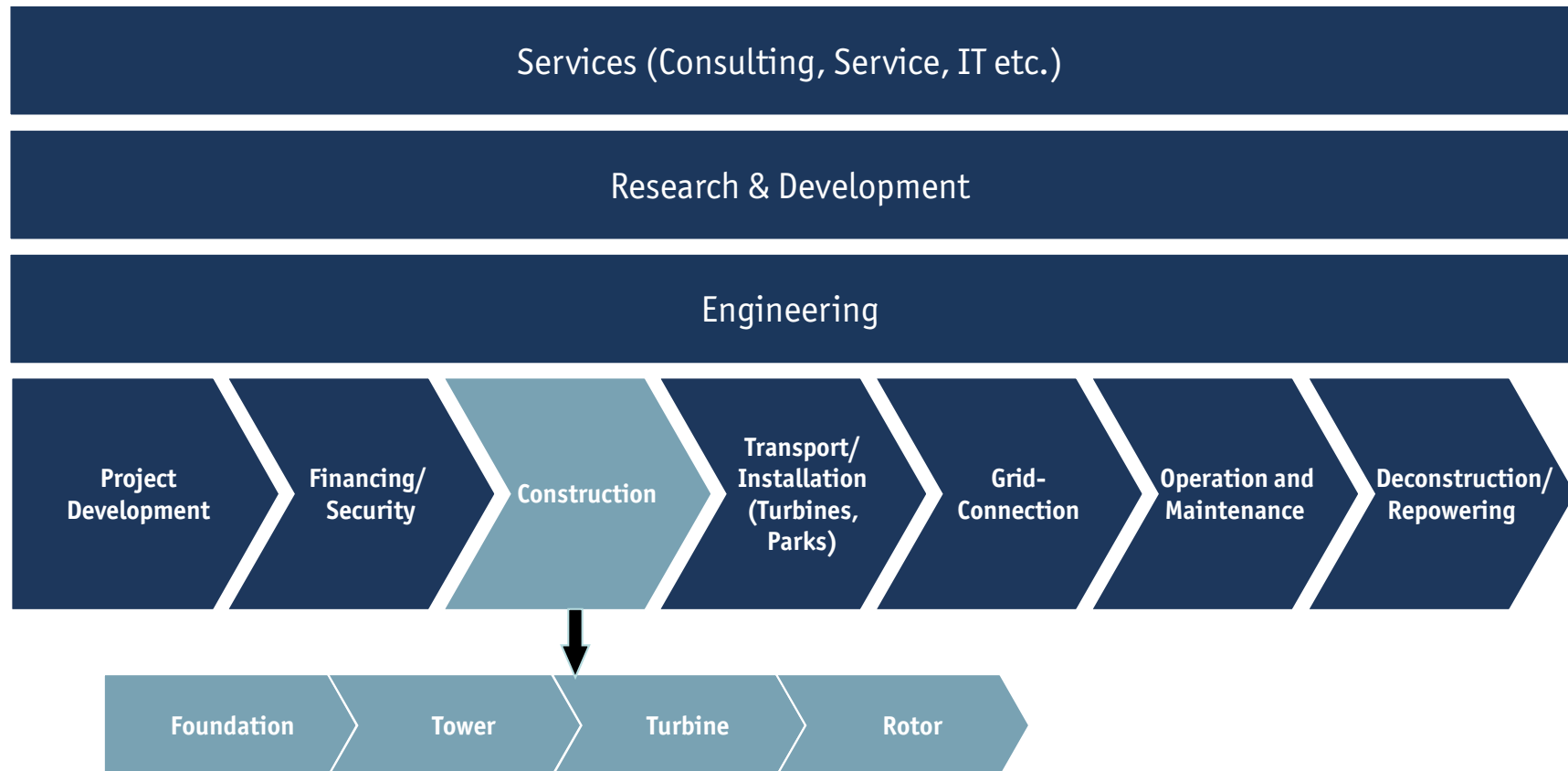
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Offshore wind energy: Not only energy policy

All parts of the Supply Chain can be found in Germany

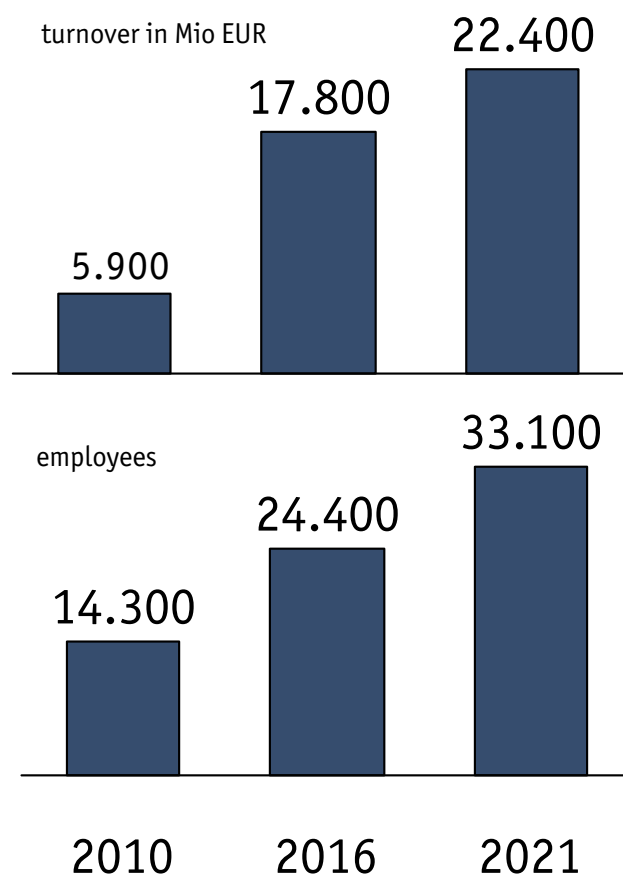




Offshore wind creates added value and employment

1

Offshore-Windindustry creates
turnover and employment



2

Offshore-Windindustry beneficial for
the whole country

distribution of turnover



3

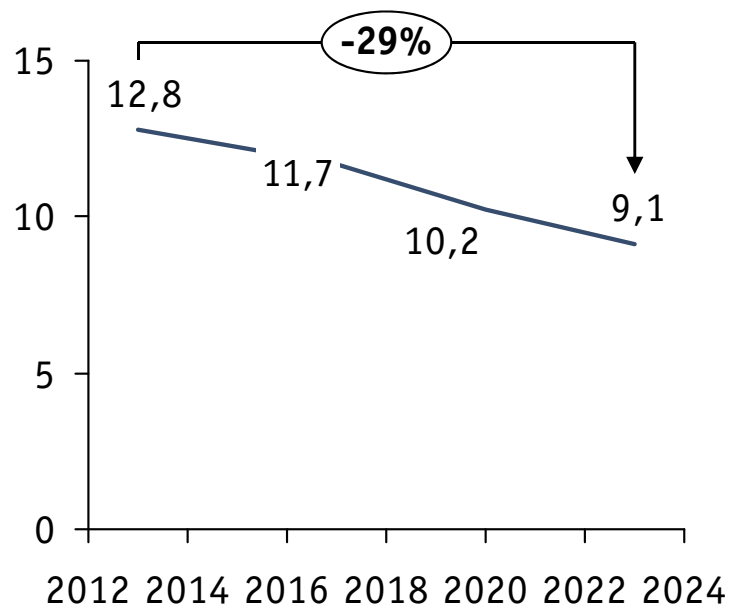
Offshore-Windindustry is
predominantly SME-Business

74%

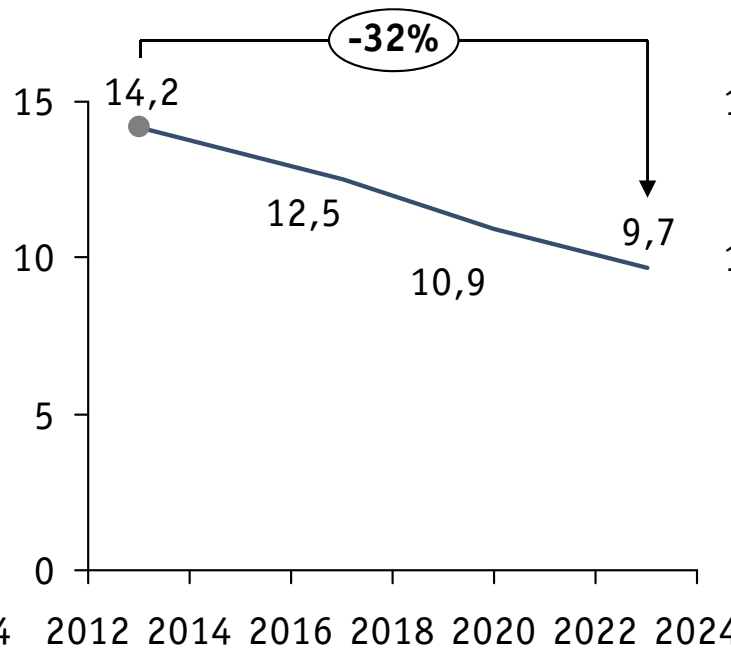
Costs for offshore wind will decrease in the next years

Overview of cost depression in the next ten years

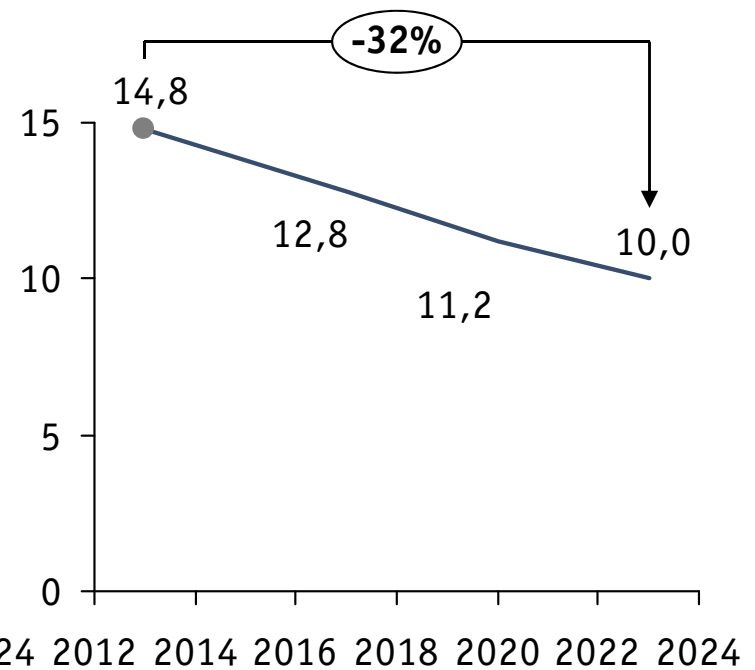
Windpark A



Windpark B



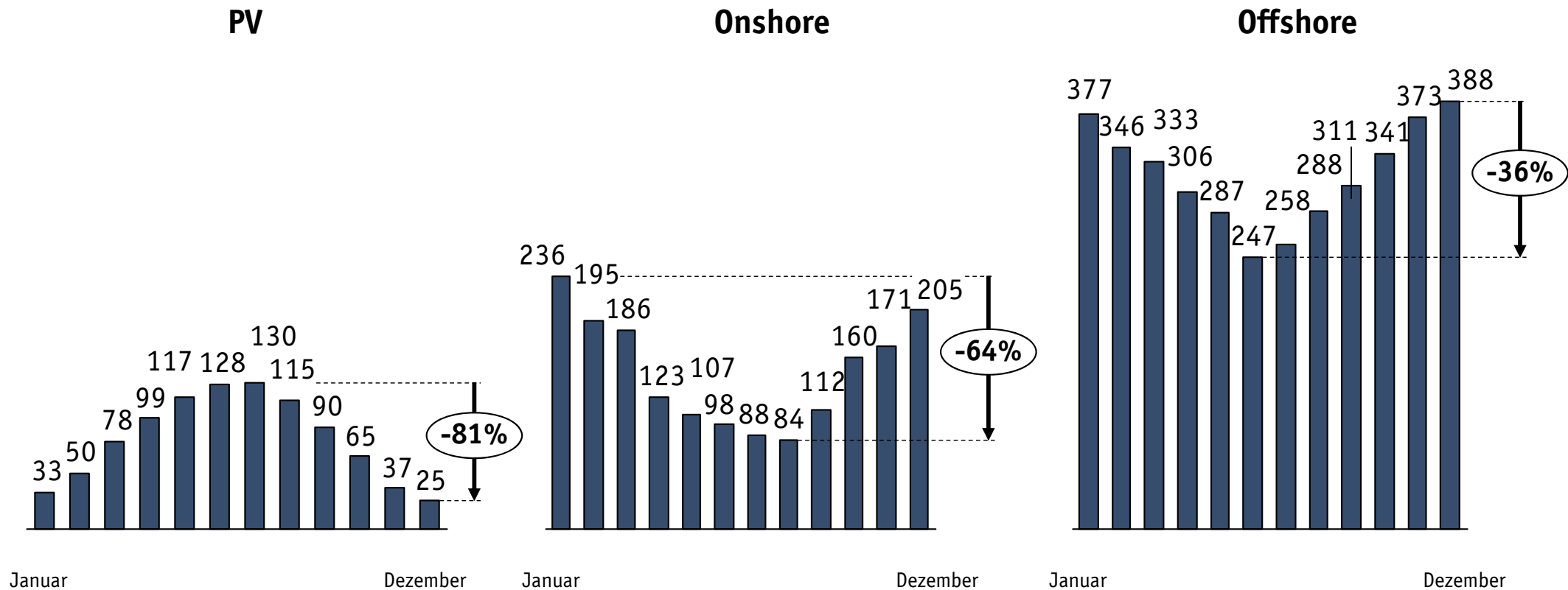
Windpark C



— Szenario 1 — 4 MW Baseline

Variability of full load hours for PV, onshore and offshore wind

Offshore wind has a balancing effect



Offshore wind decrease total cost of RE-power system

Summary

- Offshore wind in Germany is gaining speed
- Political support for offshore wind energy still strong in Germany
- FIT Offshore wind currently under revision
- Offshore wind creates added value and employment
- Costs for offshore wind will decrease
- Offshore wind has a balancing effect in the power system



Thank you for your attention

wab windenergie
agentur

