

# Can the German 2030 renewables target be reached without subsidies - and what contribution could end-of-subsidy plants make?

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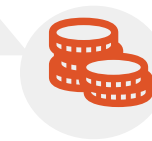
# Reaching the 2030 65% target and phasing out renewables subsidies by 2030 is a key trade-off in the EEG

Security of supply



Target  
trade-offs  
German  
Energy  
Transition

Reaching climate targets



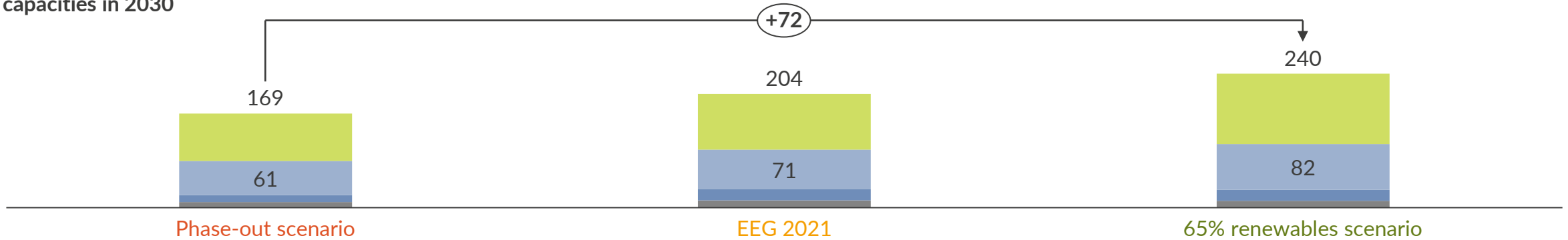
Cost-efficiency

*“Reaching the 2030 65% Renewables target and Net Zero in 2050”*

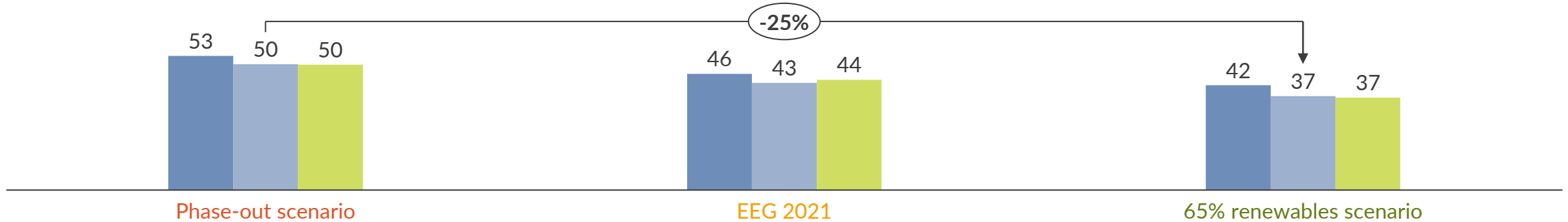
*“Phasing out subsidies by 2027 and shifting to market-driven build-out”*

# Germany will miss the 65% renewables target by 72 GW, if subsidies are phased out by 2027

RES capacities in 2030  
GW



Capture prices in 2030  
EUR/MWh (2019 real)



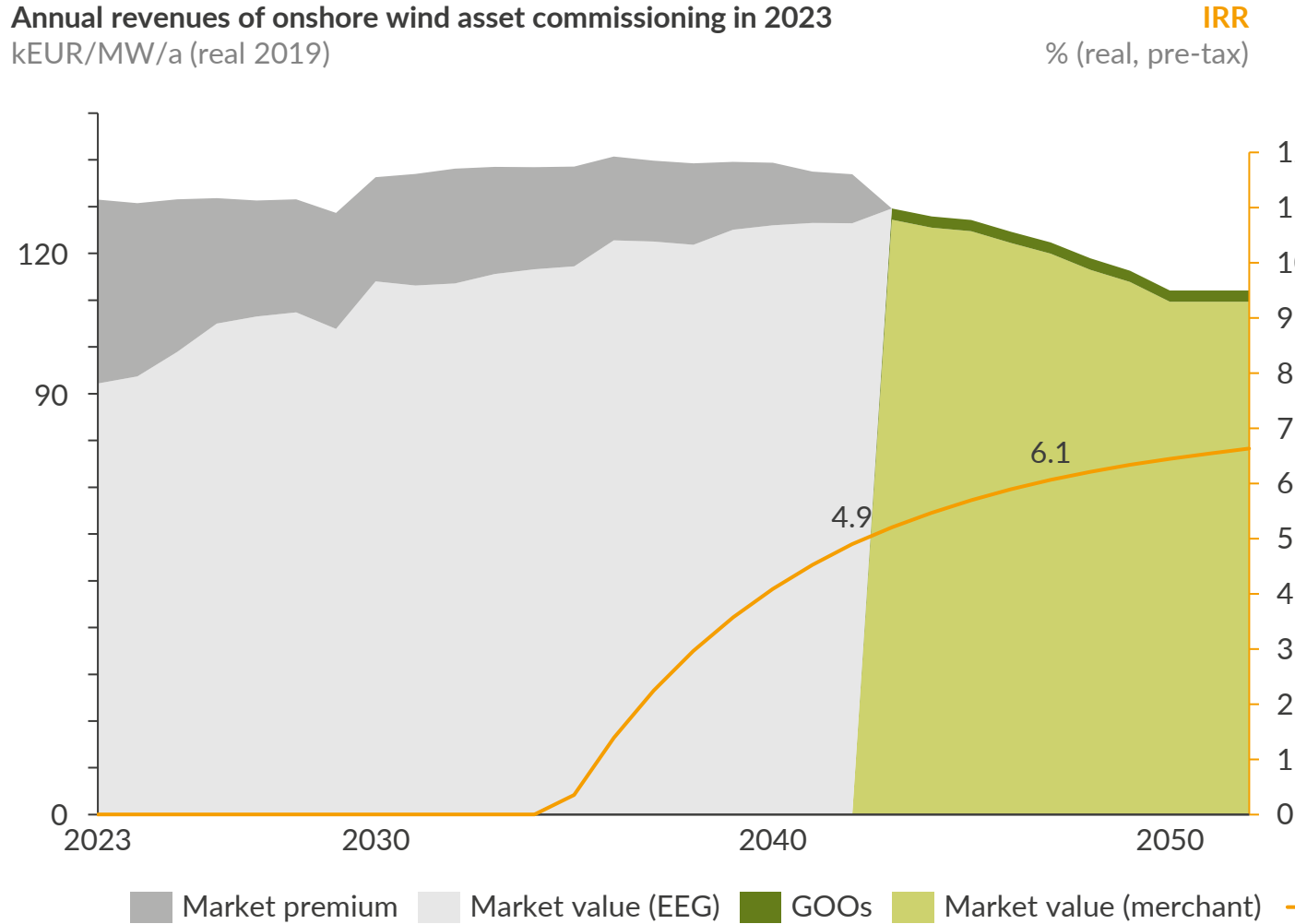
RES share  
in demand  
%



■ Solar PV 
 ■ Onshore wind 
 ■ Offshore wind 
 ■ Other RES

# Power market revenues are expected to increase during lifetime of new wind assets, but IRR does not reach merchant risk hurdle rate

Annual revenues of onshore wind asset commissioning in 2023  
kEUR/MW/a (real 2019)



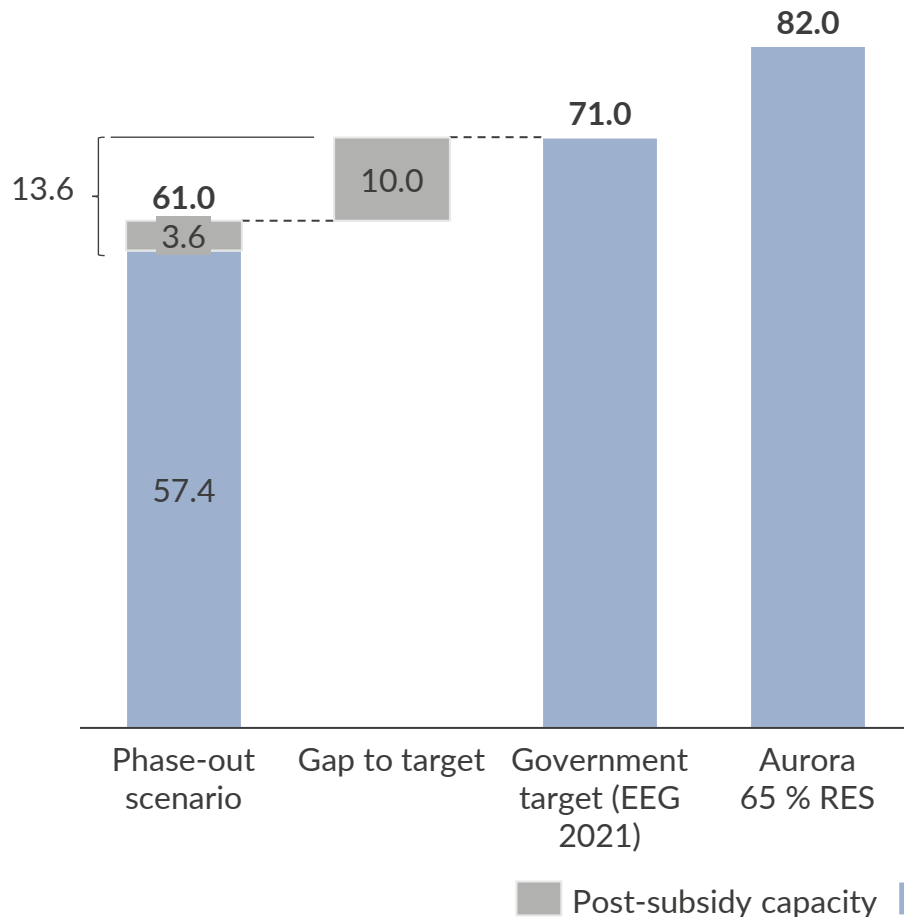
Hurdle rate (WACC) depending on revenue stream

Revenue stream	Leverage	Cost of debt	Cost of equity	Resulting WACC
Fully merchant	25%	3.50%	11%	~9%
10-year PPA	60%	2.30%	8.50%	~5%
EEG-based	80%	1.30%	6%	~2%

# To fully bridge gap to government EEG target, post-subsidy wind assets would have to reach lifetime of 28 years

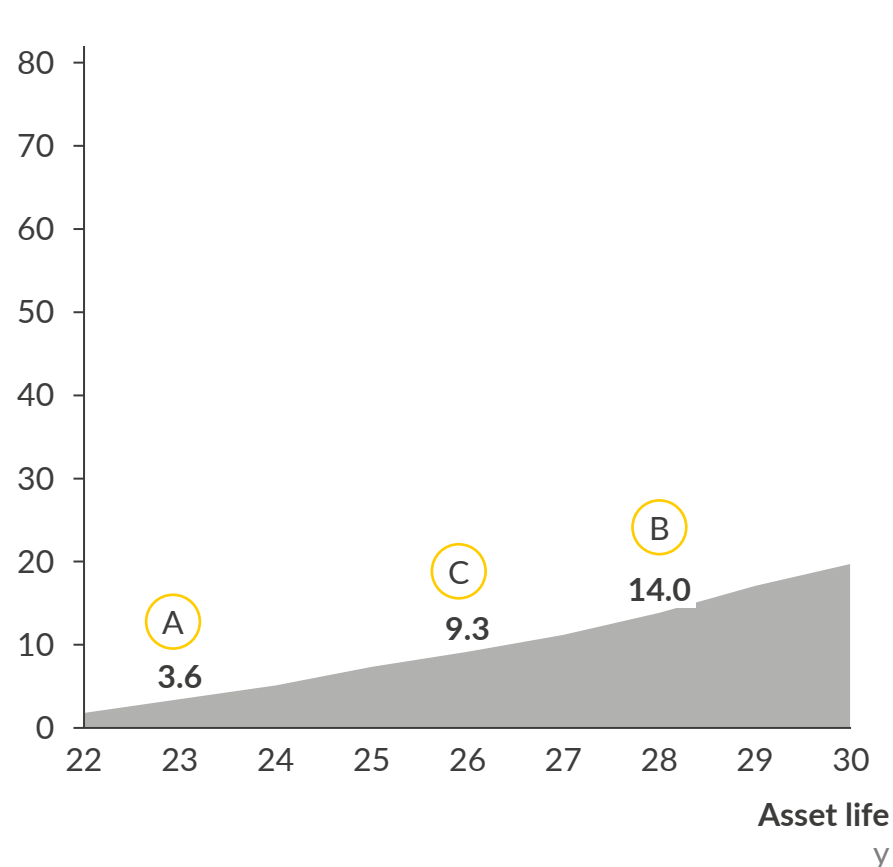
Phase-out scenario leaves gap of 10 GW to gov. target:

Onshore wind capacity in 2030  
GW



To fully bridge this gap, 28y lifetime would be required:

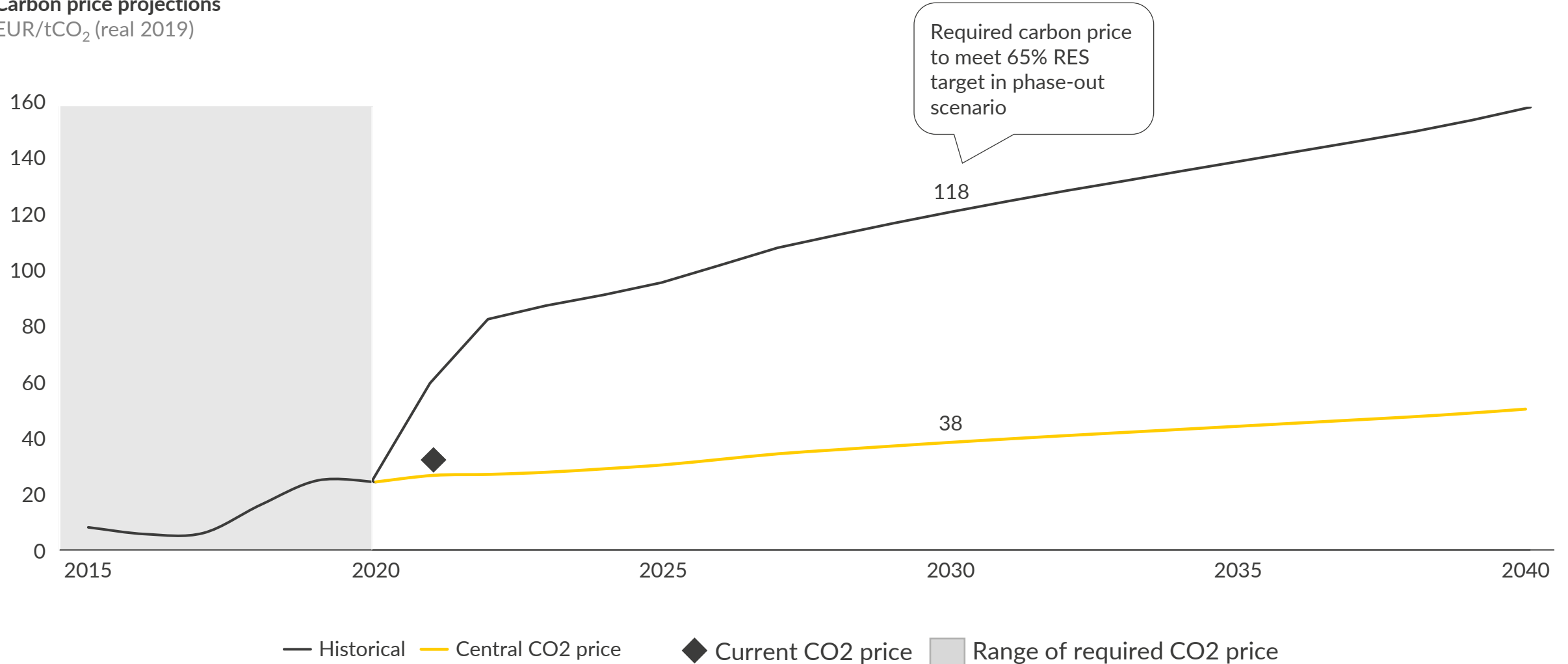
Post-subsidy onshore wind capacity in 2030  
GW



- (A) The phase-out scenario conservatively assumes a onshore wind asset lifetime of 23 years, i.e. 2 years of post-subsidy life
- (B) To fully reach the 2030 capacity target without subsidies, an average lifetime of 28 years would be required
- (C) This is unlikely: for older assets, 26 years is commonly seen as maximum lifespan
  - The 65 % renewable target is even further out of reach: post-subsidy assets alone can not reach it

# To reach 65 % RES target without subsidies, a higher carbon price of 118 EUR/t would be required

Carbon price projections  
EUR/tCO<sub>2</sub> (real 2019)



# Is it possible to reconcile German renewables targets with a subsidy phase-out in 2027?

 Can Germany reach its climate targets...

 ... while phasing out subsidies by 2027?

- 1** Reaching the 2030 RES target and phasing-out subsidies by 2027 is very unlikely given the current EEG and market prospective
- 2** Post-subsidy assets can bring us closer to the RES capacity target while phasing out subsidies – but based on current life-expectancy they can't fully bridge the gap
- 3** Policy makers can incentivise higher CO<sub>2</sub> prices, however a CO<sub>2</sub> price of 118 EUR/tonne in 2030 would be necessary to reconcile a subsidy phase-out and reach 65% RES generation target