

A photograph of a man and a young child in a kitchen setting. The man, with a beard and wearing a beige sweater, is leaning over a table. The child, with blonde hair and wearing a brown and white striped shirt, is sitting at the table. They are both looking at a small cardboard model of a house with solar panels on its roof. To the right of the child is a larger cardboard model of a wind turbine. The background shows a kitchen with a sink, a potted plant, and various kitchen items on the counter.

Nationaal Plan Energiesysteem Actualisatie 2026

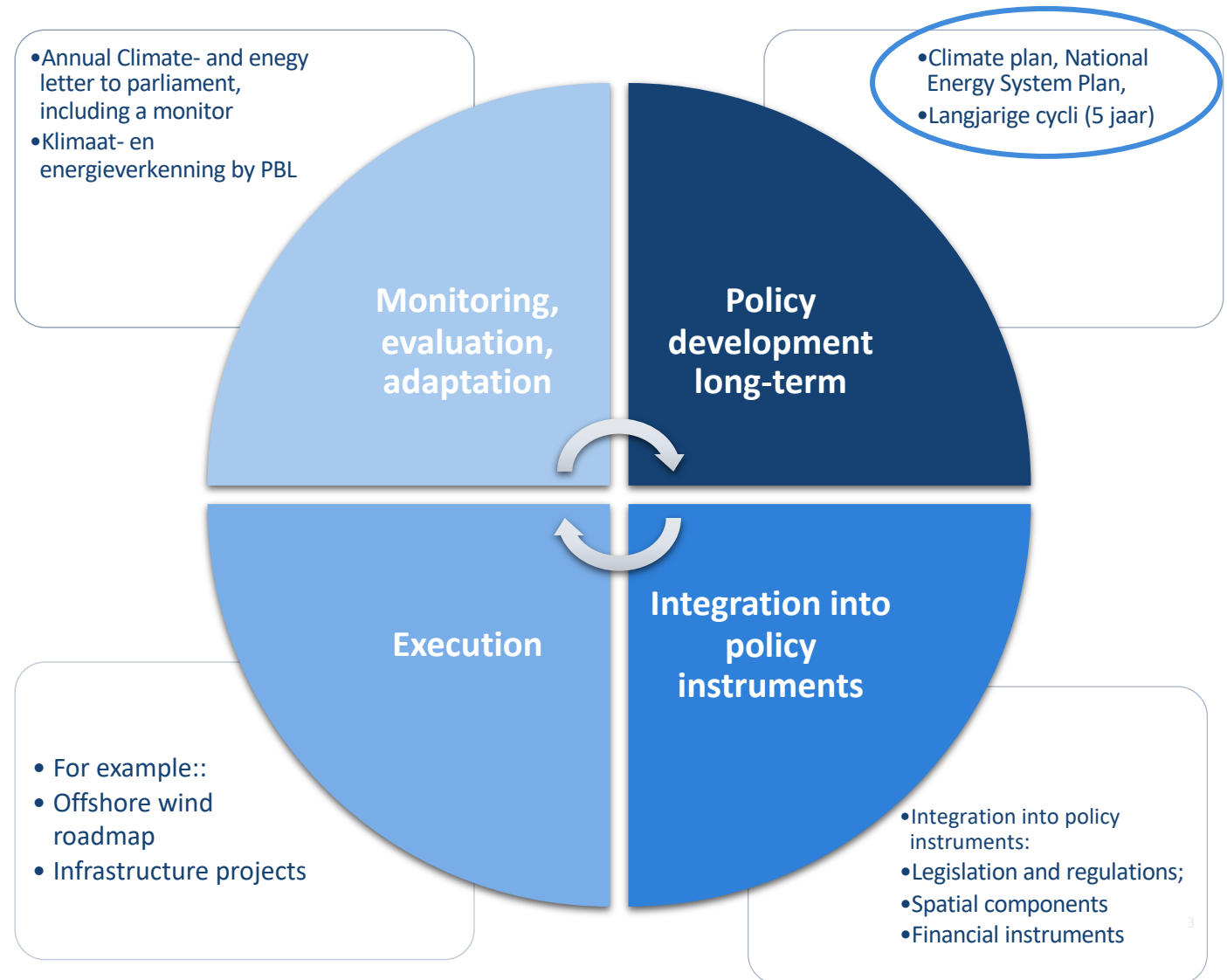


Agenda

- 1 What is the Dutch National Plan for the Energysystem?
- 2 Main messages
- 3 Overall picture for 2040
- 4 Focus on industry, electricity and hydrogen development

What is the Dutch National Plan for the Energysystem (NPE)

- > The NPE is the long-term vision and strategy for the Dutch energy system until 2050.
- > Every couple of years it is being updated
- > Annual monitoring and reporting via the Climate and Energy letter to parliament, the monitor and the Climate and Energy Outlook (KEV) by the Dutch Environmental Assessment Agency (PBL)



Why did we update the NPE this year?

Rationale for the update



- > Geopolitical developments; importance of resilience



- > EU 2040 policy, such as the 2040 climate target



- > Insights into markets, prices, and technology (e.g., hydrogen)



- > Implementation bottlenecks, such as grid congestion



- > Desire to strengthen governance of the transition



- > A clearer medium-term path: focus on 2040 instead of 2050

What are the main messages of the NPE 2026?



- Maintaining an **ambitious yet realistic course**



- Maximum focus on **implementation and tackling grid congestion**



- **Electricity** will play a much larger role in the future, while molecules remain essential



- **Sustainable demand creation** is prioritized

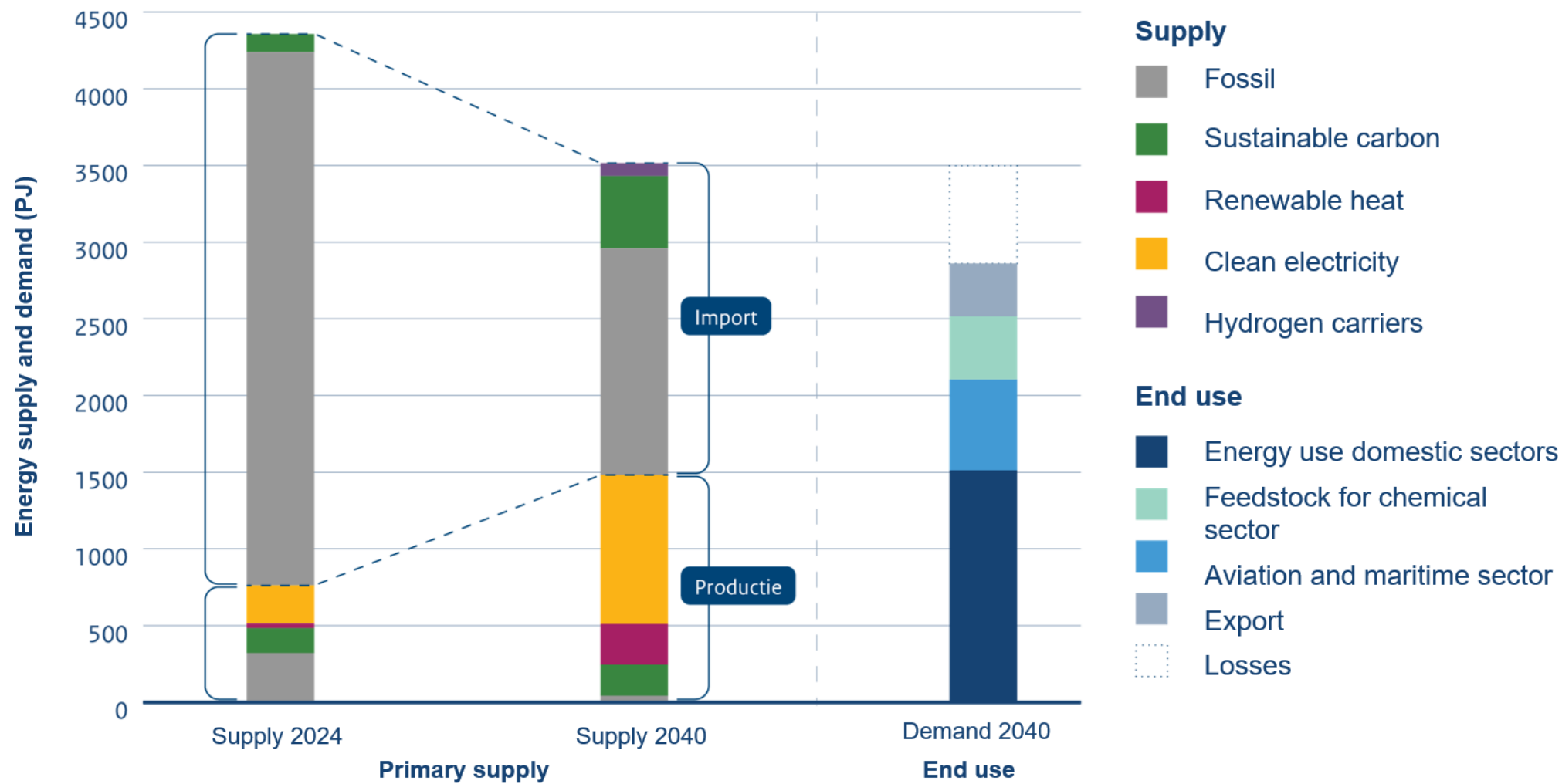


- **Resilience** and greater energy independence is a prerequisite

Thematic focus of this NPE

1. International context, including neighboring countries
2. **Refining of energy demand based on the industry's future outlook** and changing mobility patterns
3. **Re-evaluating and elaborating the electricity supply chain**
4. **Re-evaluating the development pathway for hydrogen** (renewable and low-carbon)
5. Further exploring the use of sustainable carbon
6. Responsible phase-out of fossil fuels
7. Role of CCS in the energy system
8. Decentralized development, including collective heat and decentralized generation
9. Strengthening system governance, including integrated infrastructure planning
10. Energy system costs

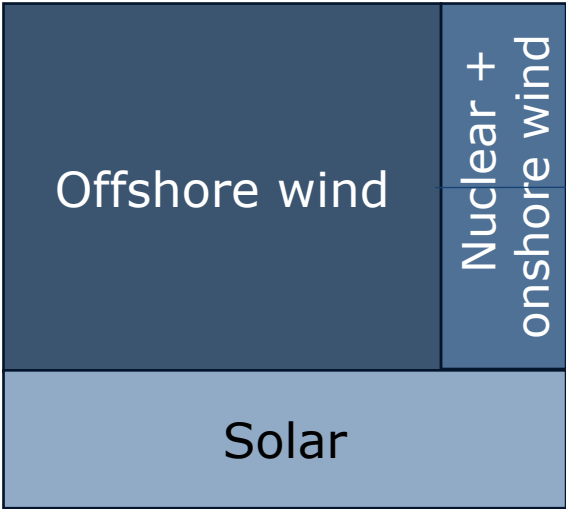
NPE 2026: Energy mix changes rapidly; more electricity, more efficiency and less fossil



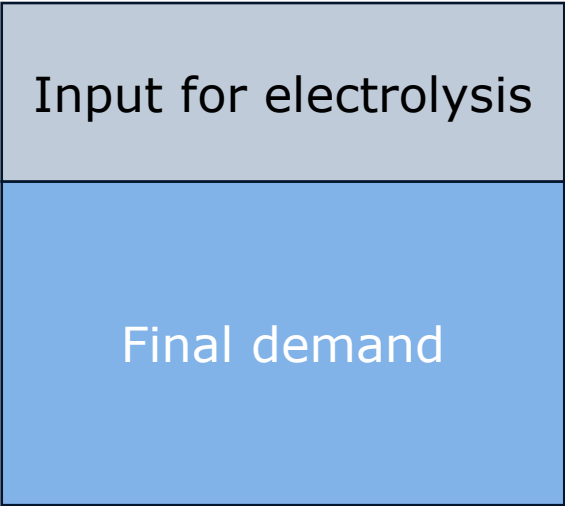
NPE 2026 vs NPE 2023: less electricity and hydrogen, more CCS and import intermediates

NPE 2023

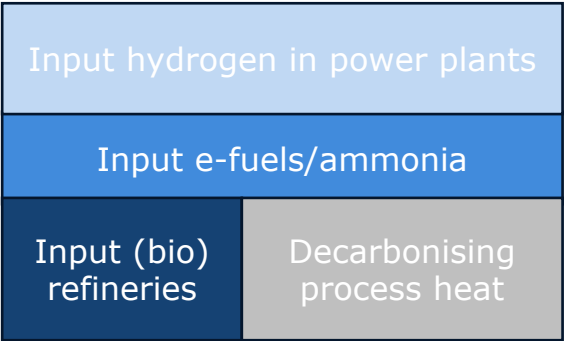
Elektricity supply



Elektricity demand



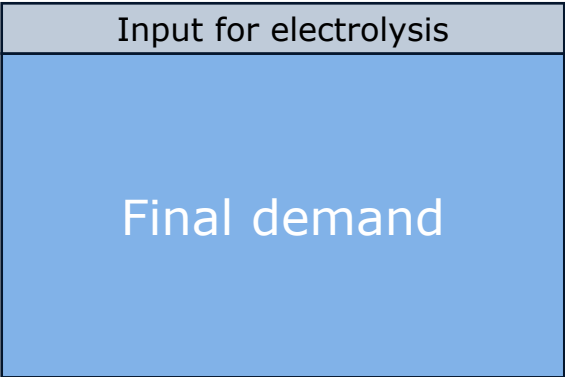
Hydrogen demand



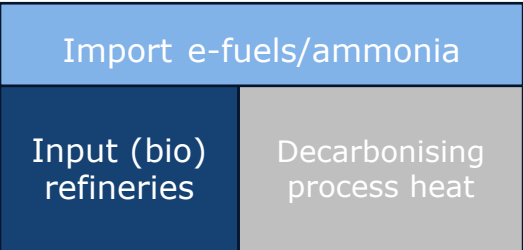
NPE 2026



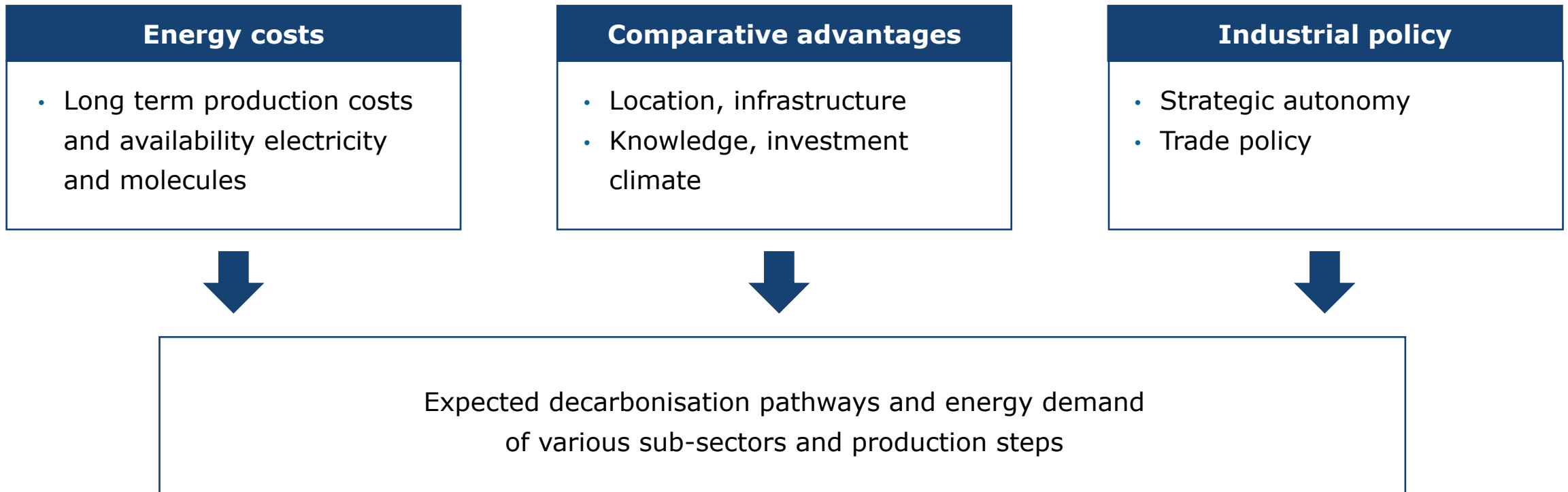
Input for electrolysis



Import e-fuels/ammonia



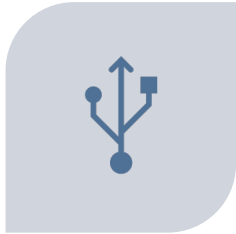
NPE2026: industry demand in 2040



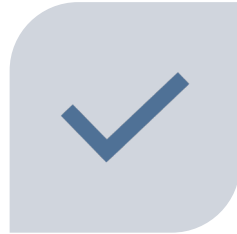
NPE2026: New insights for future industry energy demand

- › In the 2030s: **More electrification of heat demand** in energy-intensive industry
- › **Bigger role of CCS** (especially in the short term) compared to renewable hydrogen, for example in the steel sector and in the chemical sector
- › In the 2040s: **more import of sustainable energy carriers**, like e-methanol and ammonia, and some energy-intensive industry processes will decrease.
- › **Smaller and more specific role of renewable hydrogen**, especially as feedstock for the chemical sector and for fuel upgrading (much like today)
- › This trend is expected to apply to neighbouring countries too, resulting in a **lower demand for gaseous hydrogen** than previously anticipated

NPE2026: Electricity



ELECTRIFICATION =
PRIORITY:
~10 TWH/YEAR,
~50% OF FINAL END
USE IN 2040



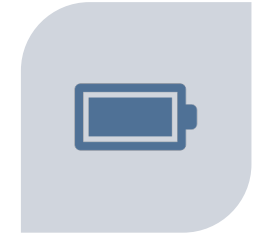
TACKLING GRID
CONGESTION IS A
PRIORITY



30-40 GW OFFSHORE
WIND, 12-14
ONSHORE,
75-95 GW SOLAR,
2,7-3,7 GW NUCLEAR
IN 2040

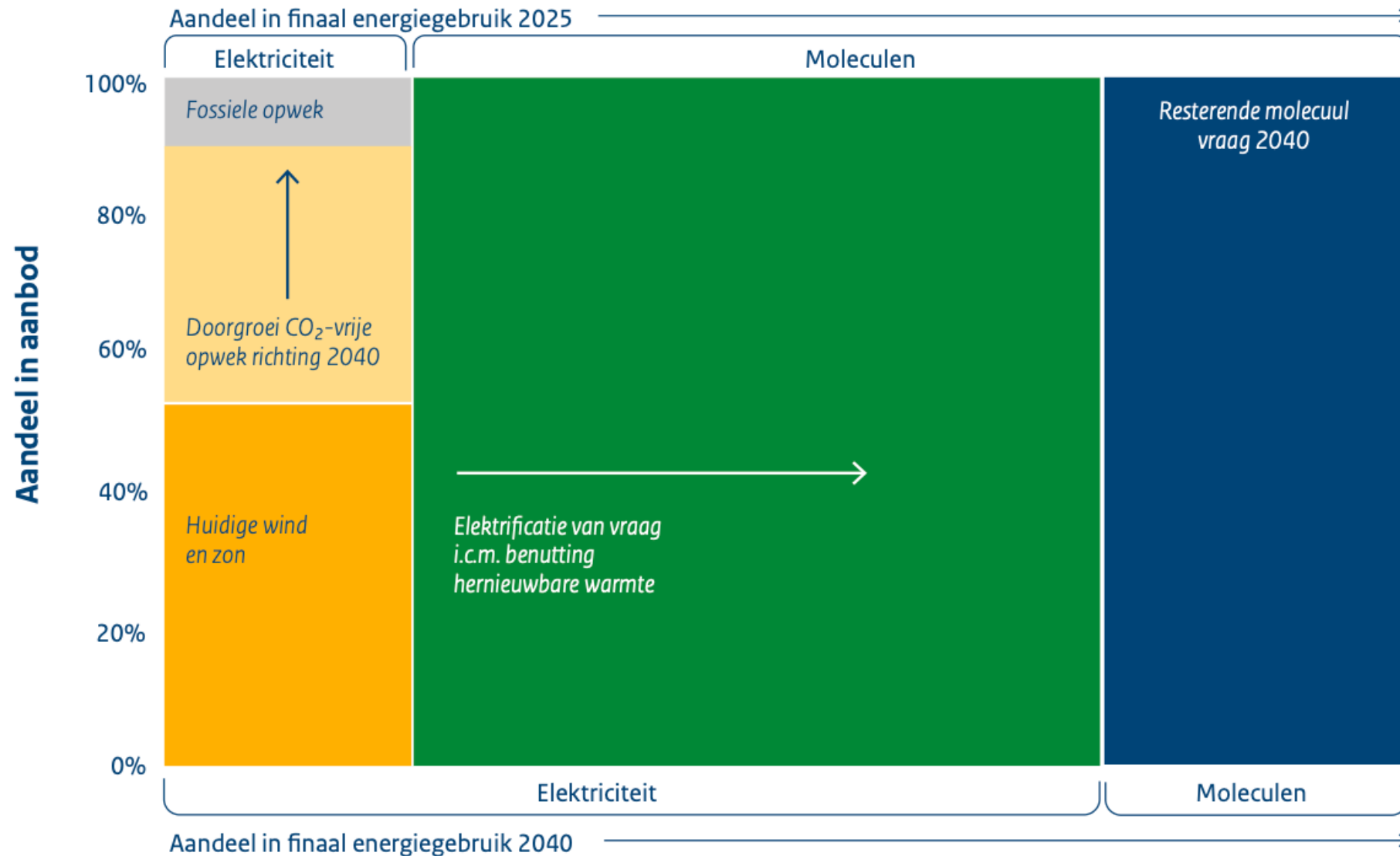


DECARBONISATION
DISPATCHABLE
CAPACITY IN THE
LONG TERM

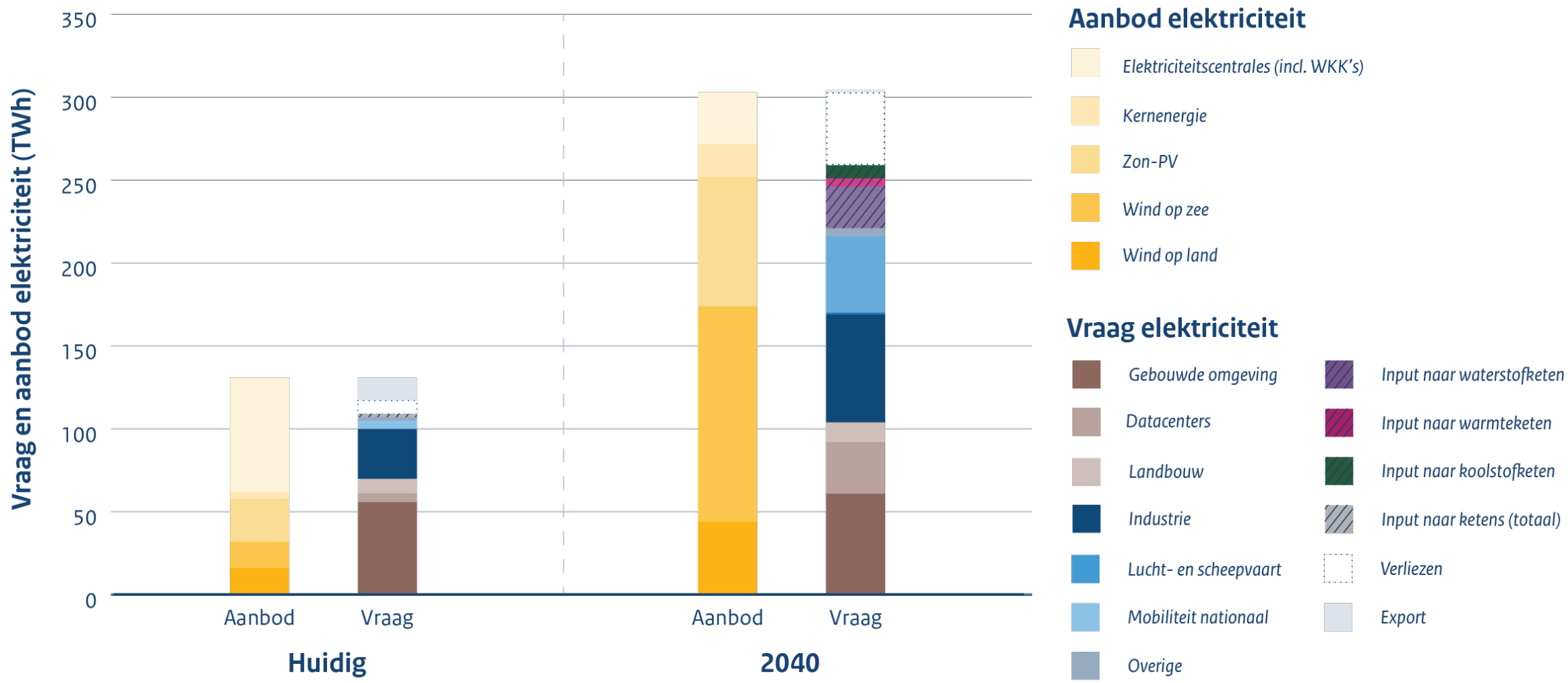


SIGNIFICANT
GROWTH IN
FLEXIBILITY, INCL. 110
GWH / 28 GW OF
BATTERIES BY 2040

NPE 2026: Challenge focusses on replacing fossils in other sectors rather than in current electricity production



NPE 2026: Rapid growth electricity demand and supply.



NPE 2026: Hydrogen still expected to play key role but outlook for 2040 is less aggressive than in NPE 2023.



CERTAINTY OF DEMAND
THROUGH LONG-TERM
COMMITMENTS FOR
RENEWABLE HYDROGEN



REALIZATION OF THE
NATIONAL HYDROGEN
TRANSPORT NETWORK
AND 4 TWH H₂ STORAGE

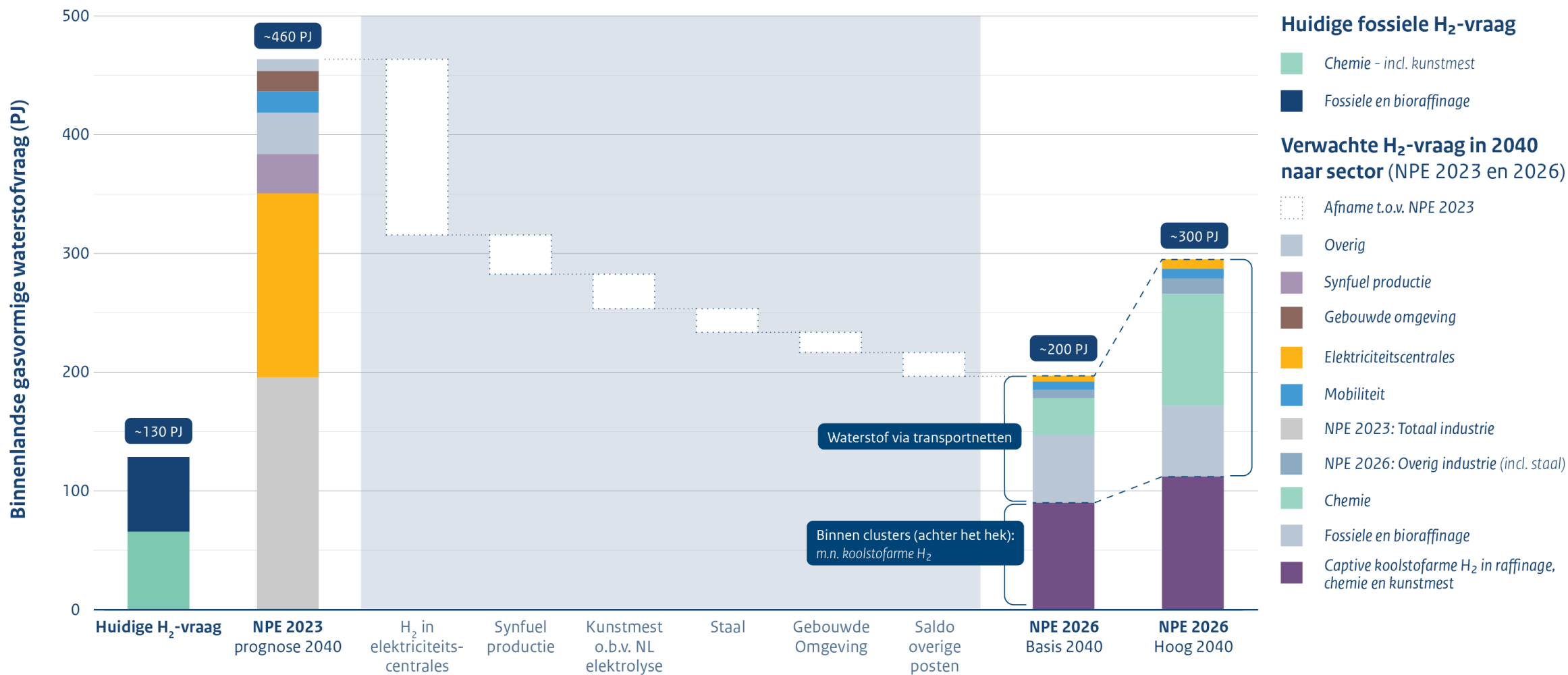


SCALING UP TO 3 – 4 GW
OF ELECTROLYSIS
CAPACITY BY 2035

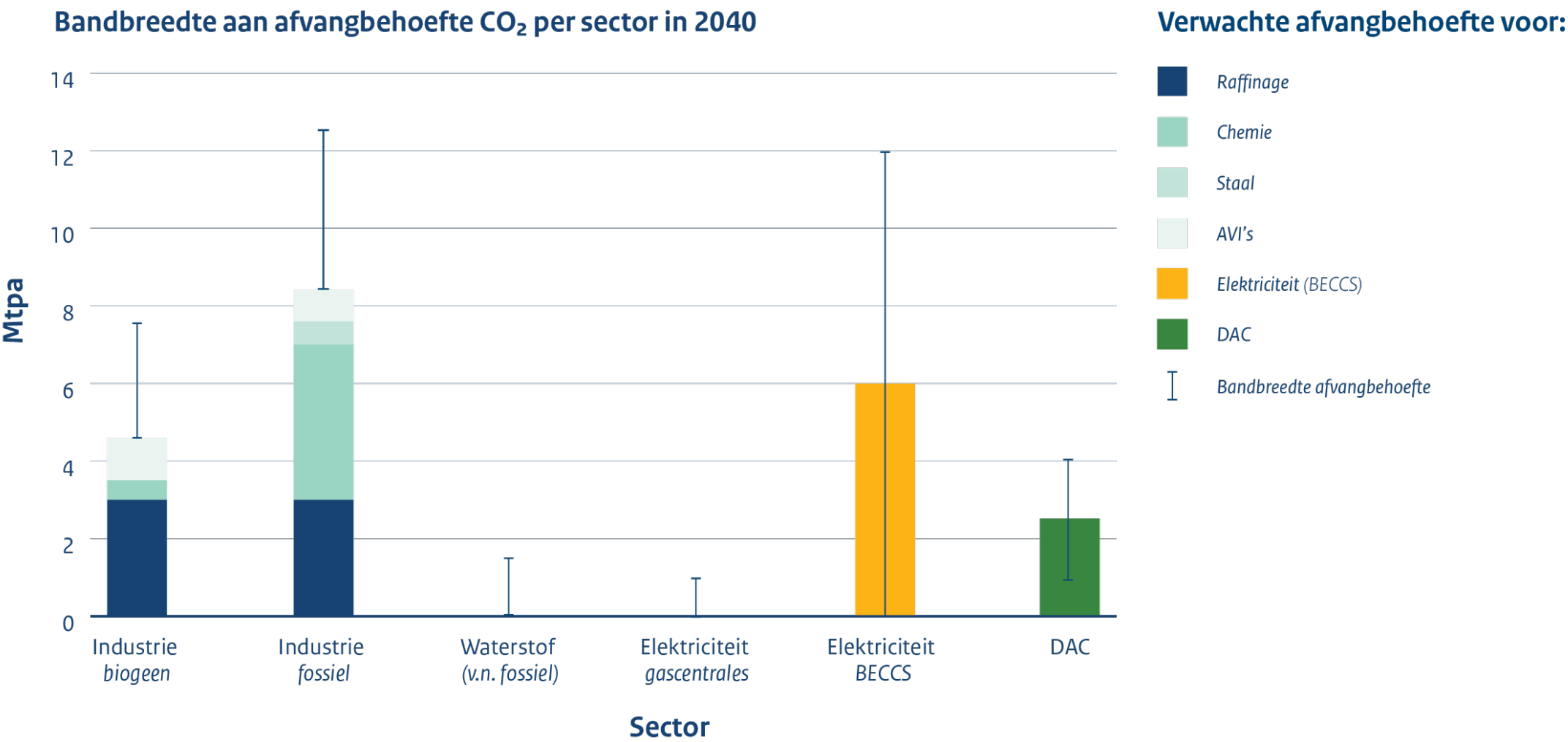


HARNESSING THE
POTENTIAL OF LOW-
CARBON HYDROGEN FOR
RAPID CO₂ REDUCTION

NPE 2026: Hydrogen still expected to play key role but outlook for 2040 is less aggressive than in NPE 2023.



NPE 2026: CCS essential for industry and negative emissions





Full NPE available via QR-code (in Dutch only, English translation available soon)

