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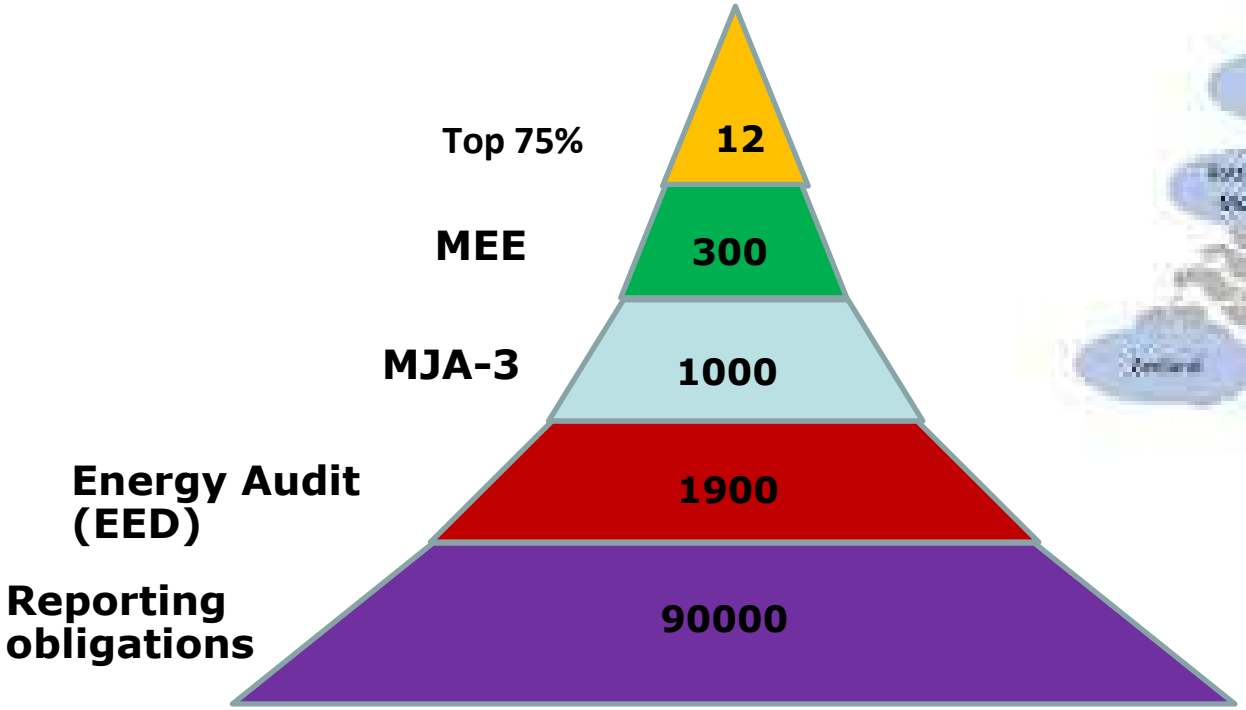
Kenniscentrum en belangenbehartiger
van zakelijke energie- en watergebruikers

MIDDEN? FRONT!

MIDDEN conference 2021 “Industry in transition”
Gertjan Lankhorst, 30 november 2021

Target groups industry



MIDDEN so far

- Important and timely initiative
- Common knowledge database essential
- Impressive network
- Good cooperation researchers and industry

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MIDDEN so far *(results)*

- **Impressive number of studies**
  - many sectors covered
  - more difficult in highly concentrated sectors (refineries, fertilizer, steel)
- **Important data base**
- **Useful source for modelling**
- **Instrument design and calibration/calculation**
- **Increased cooperation research institutes and industry**
- **More trust**

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What else is needed?

Industry is dependent on other sectors – system approach imperative

Examples:

- **Electrical boiler can only be subsidized for limited number of hours, for lack of green power**
- **Electrification is hampered by missing infrastructure**

What else is needed?

Only levies and subsidies will not solve the puzzle - current economic models are not sufficient

- **Cluster Energy Strategies were formulated**
- **Bundled in MIEK (multi annual programme infrastructure energy and climate)**
- **Plans were evaluated by PBL, TNO, RVO:**
  - Robust plans, CO2-reduction target 2030 can be met
  - Industrial power demand triples: from 43 TWh (2020) to 128 TWh (2030)

Unprecedented infrastructure task – so far not included in the models

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What else is needed?

Innovation

- **Focus on short term targets (2030) implies the risk that R&D budgets will be drawn away to high TRL-levels (8,9), at the expense of levels 3-7**
- **Most reductions until 2030 come from technologies that are already on the market.**
- **In 2050 half of the reductions will come from technologies that are currently at the demo or prototype phase**

(source: IEA Net Zero by 2050 – a roadmap for the global energy sector)

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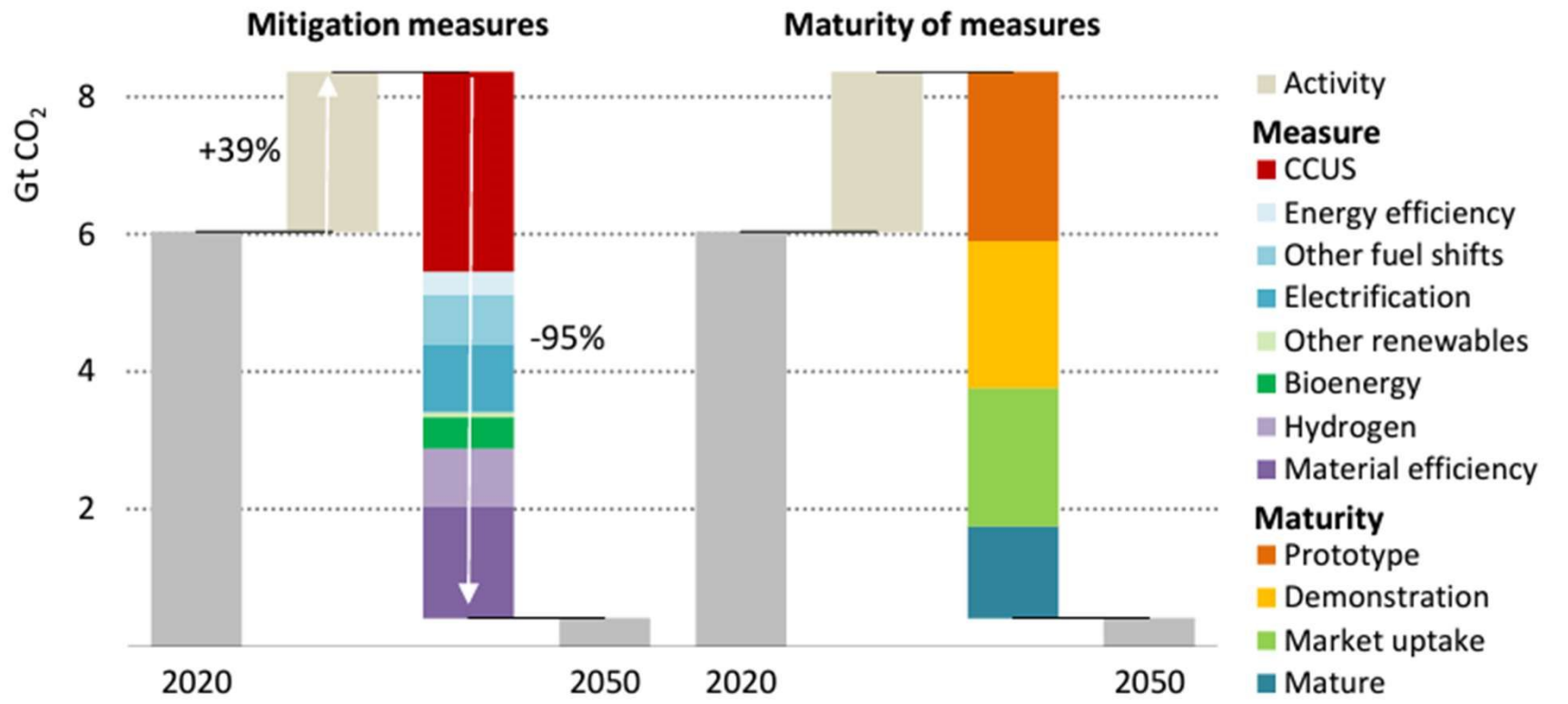
Figure 3.16 ▷ Global CO_2 emissions in heavy industry and reductions by mitigation measure and technology maturity category in the NZE



An array of measures reduces emissions in heavy industry,

We need a long term target, with logical intermediate goals

- For heavy industry, the year 2050 is just one investment cycle away
- Lifetimes of blast furnaces and cement kilns are around 40 years (refurbishment after 25 years)
- The critical window of opportunity from now to 2030 should not be missed

Long term masterplan important

- A long term emissions reduction programme (2050) could provide certainty that next wave of investment in capacity additions will feature near-zero emissions technology
- Plan should be fairly a-political, flexible, fair and transparant
- This will encourage private sector procurement

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To do

- Keep MIDDEN up to date
- Look more into the system dependencies
- Merge MIDDEN results into a long term masterplan
- Outreach: Combine the good work with for example PVI (Platform Verduurzaming Industrie) and Project 6-25

Keep MIDDEN in FRONT: Firm Results Of Notable Teamwork

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Thank you for your attention