Bundesministerium
für Wirtschaft
und Energie

Innovation and industrial policy

International Research Network for Low Carbon Societies
9th Meeting, Warwick University, UK

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Paris Agreement:

- Facilitative Dialogue 2018
- NDCs in 2020

National Energy- and Climate Protection Plans (NECPs):

- Strategies and measures by 1st January 2019 as a response to the COM-proposal

(National) Climate Action Plan 2050:

- Decided by government coalition in 2013
- finalised 14 Nov 2016
- Additional measures in 2018

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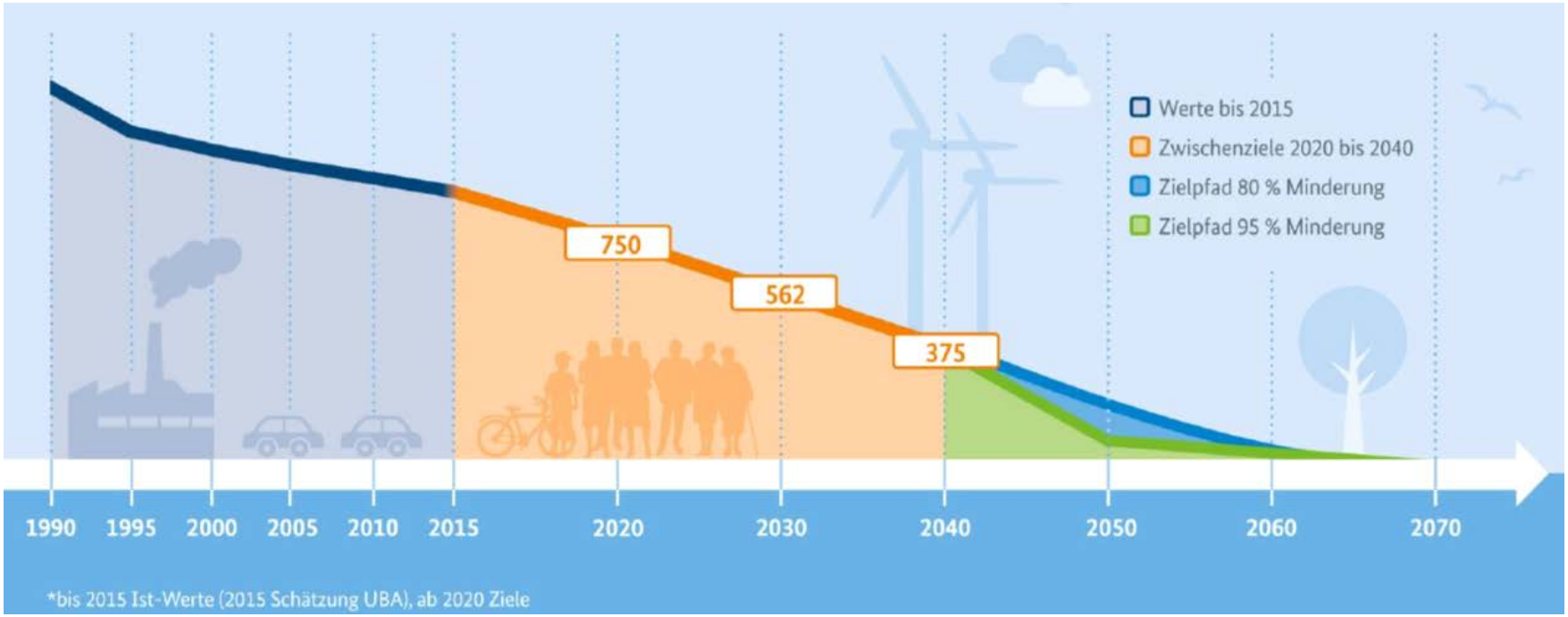
Germany on the way to GHG neutrality

GHG Emissions (mn. tons CO_2)



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Sectoral targets according to Climate Action Plan 2050

	Emissions 1990 (mn tons CO2)	Emissions 2014 (mn tons CO2)	Emissions 2030 (mn tons CO2)	Emissions reduction 1990 / 2030
Energy	466	358	175 - 183	62 - 61%
Buildings	209	119	70 - 72	67 - 66%
Traffic	163	160	95 - 98	42 - 40%
Industry	283	181	140 - 143	51 - 49%
Farming	88	72	58 - 61	34 - 31%
Others	39	12	5	87%
Total	**1248**	**902**	**543 - 562**	**56 - 55%**

Status of Climate Action Plan 2050

- Impact Assessment for sectoral targets initiated by Ministry of Environment
- Preparation of additional measures for 2018 discussion including impact assessment on the basis of proposals of sector leading ministries
- Updating Climate Action Plan 2050
  end of 2019 / early 2020 in line with the Paris Agreement (FD 2018)

Planning and preparation of measures in the industrial sector

- Lead by Fed. Ministry for Economic Affairs and Energy (BMWi)
    1. Stakeholder dialogue 26th June 2017
    2. Stakeholder dialogue 8th September 2017
- Exchange on studies, decarbonisation approaches, ideas (crosscutting, specific) since June 2017 ongoing
- Explore and discuss potential limits (physical/chemical, political [other countries involved], acceptance, clearing or licensing procedures)
- Cost of concrete measures and raodmaps

GOAL: Well informed discussion and decision making in 2018

Currently discussed questions

(1) ETS is the European main emissions reductions measure (reduction of 900mn. certificates, -1.74% -> -2.2% p.a.). What additional measures are needed?

(2) Efficiency potentials, substitution necessities and limitations?

(3) Which CO_2- reducing technologies can currently be used under which technical, economic and social aspects? What are the potentials and what are the cost of various stages of development? How sure is it, that these technologies will be applied (avoid unnecessary search processes)? What are the interactions with other sectors?

(4) Where is need to change legal frameworks to apply certain technologies?

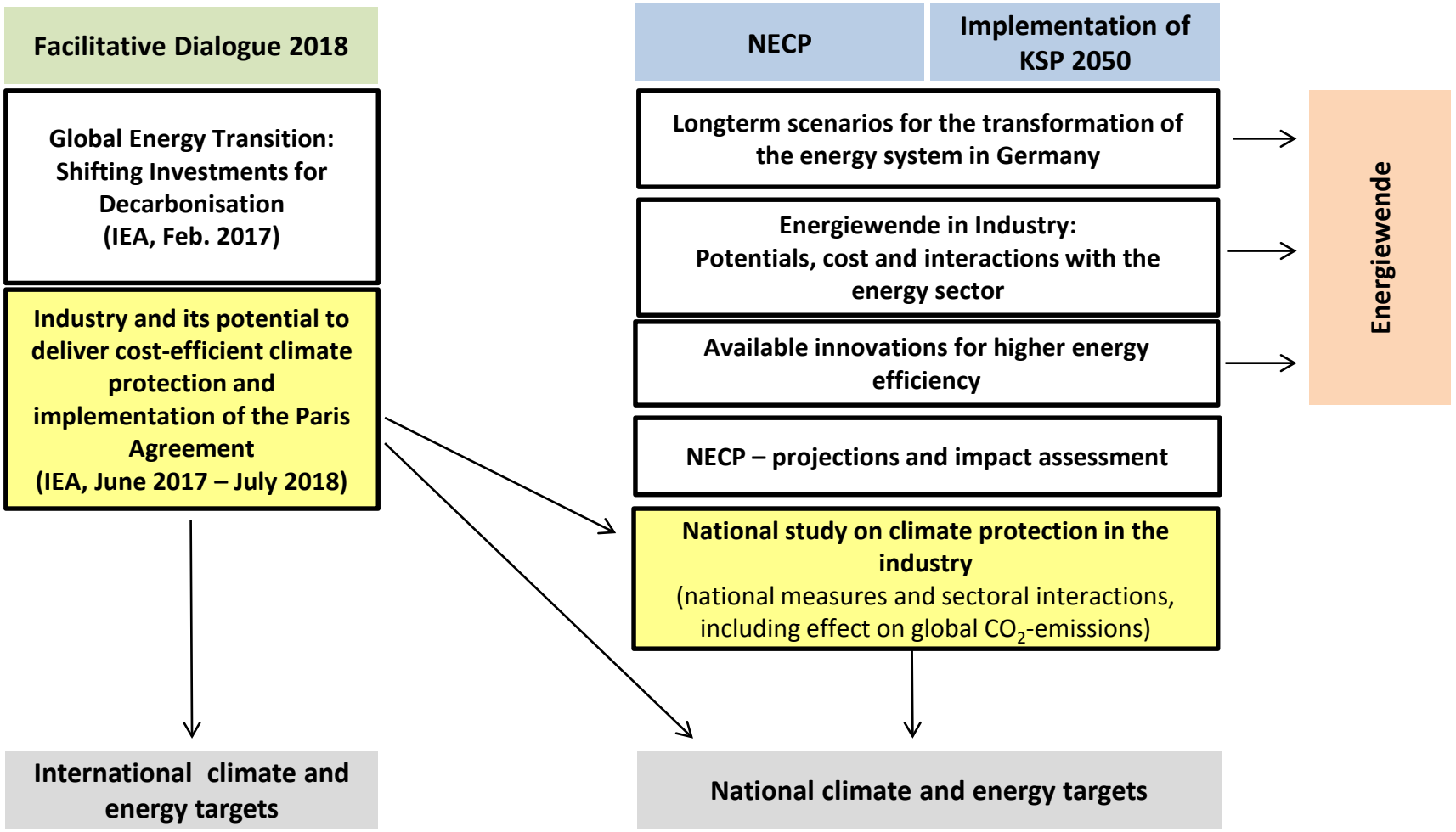
(5) How can competitiveness be ensured?

Data and information collection

- Informations on emissions
  - National, EU, world
  - Sectoral and subsectoral
  - Process emissions / energy related emissions

- Description and quantification of interactions amongst sectors and subsectors, direct and chains, such as
  - Electricity and natural gas consumption
  - Grid and storage requirements
  - Raw materials demand
  - Land use (for renewables and biomass)

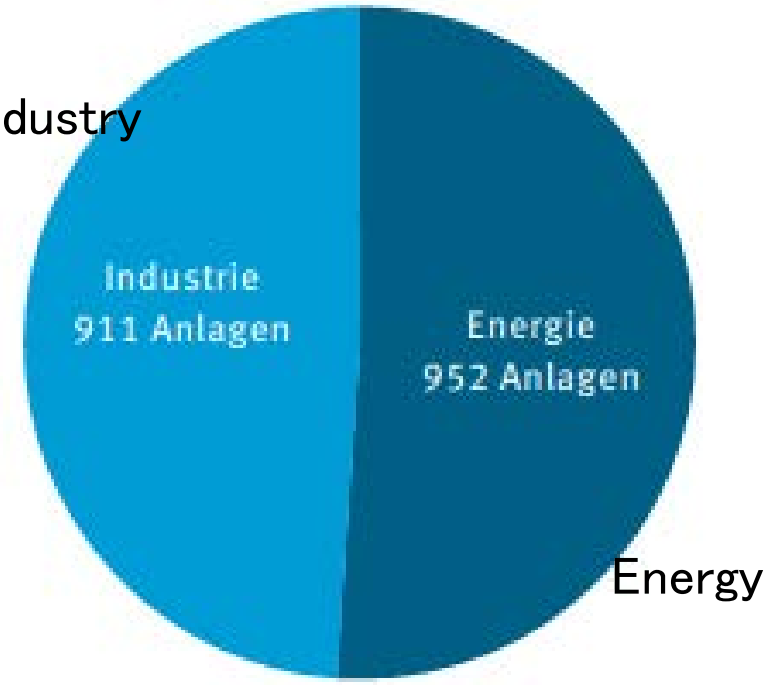
3. BMWi-Studies concerning industries



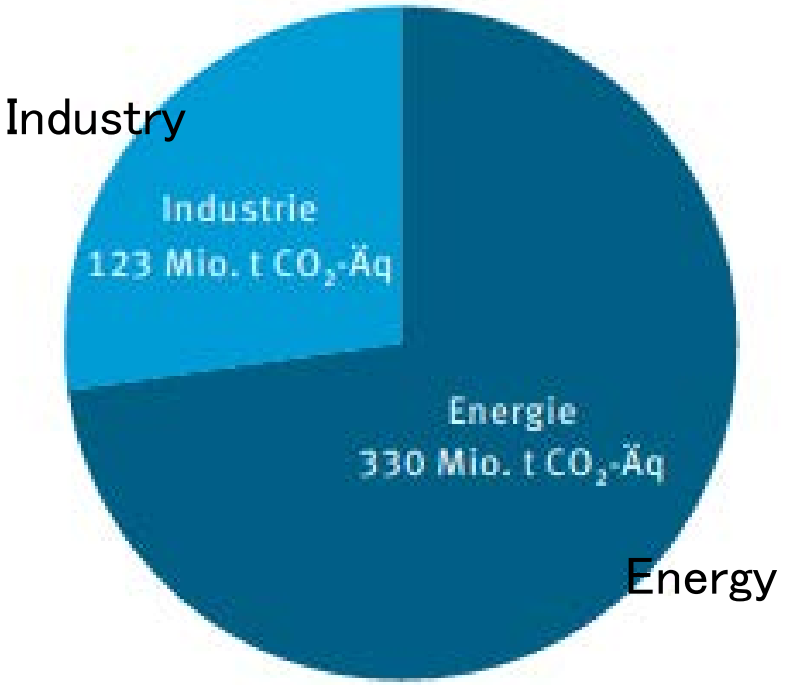
Emissions registered by EU ETS, Germany 2016

VET Report – Status 2nd May 2017

Number of installations



GHG emissions



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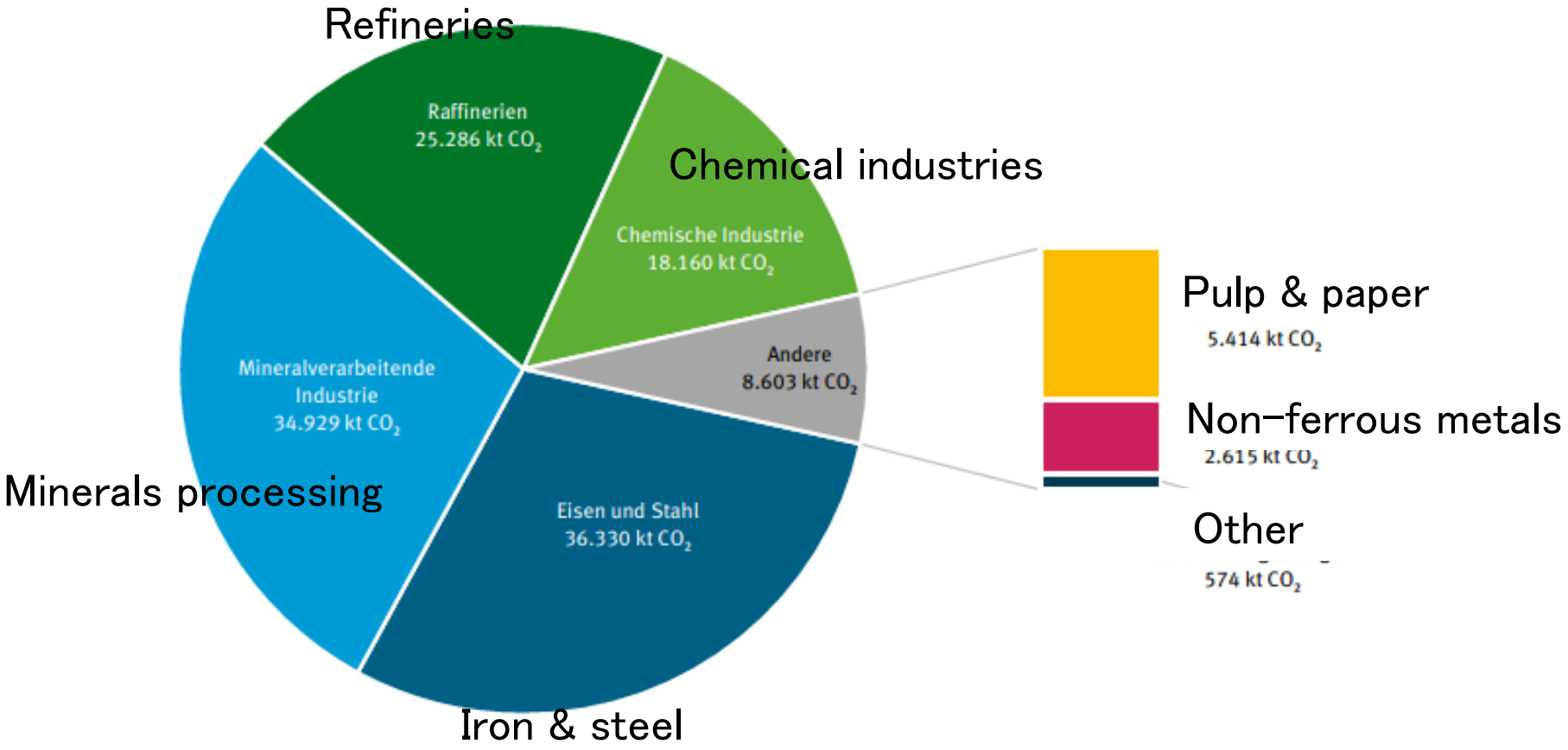

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Focus on …

- …chemical industries for base materials, iron and steel production, non-ferrous metals, pulp and paper, mineral processing, glas and ceramics as well as food production

- These sectors emit about 70% of industries

- Summary of studies: Technological reduction potential without substitution processes is about -20 %.
  What follows after?

8. Monitoring of measures

- Purpose:
  Always up-to-date overview on measures and options

- „in-house tool“ prepared for ad-hoc-valuation of measures with respect to emissions reductions, cost and interactions with other sectors (in particular electricity and natural gas).

Summary and Outlook

- Be in the position to have a good judgement on possible measures and next steps by mid 2018
- Get overview on cost, avoid 2nd generation stranded investment
- Understand consequences on industrial structures, competitiveness, labour, required skills
- Perspectives to be elaborated
    - Near term until 2030
    - Beyond 2030
    - Open questions to be addressed in the future
- Build ownership for successful implementation
- Elections 24th September may influence strategy and procedure

Thank you for your attention

We need good advice and foresight

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Stay in touch