AN INTEGRATED ENERGY AND INDUSTRY POLICY

POLICIES TO ENHANCE ENERGY EFFICIENCY IN THE EU INDUSTRY SECTOR

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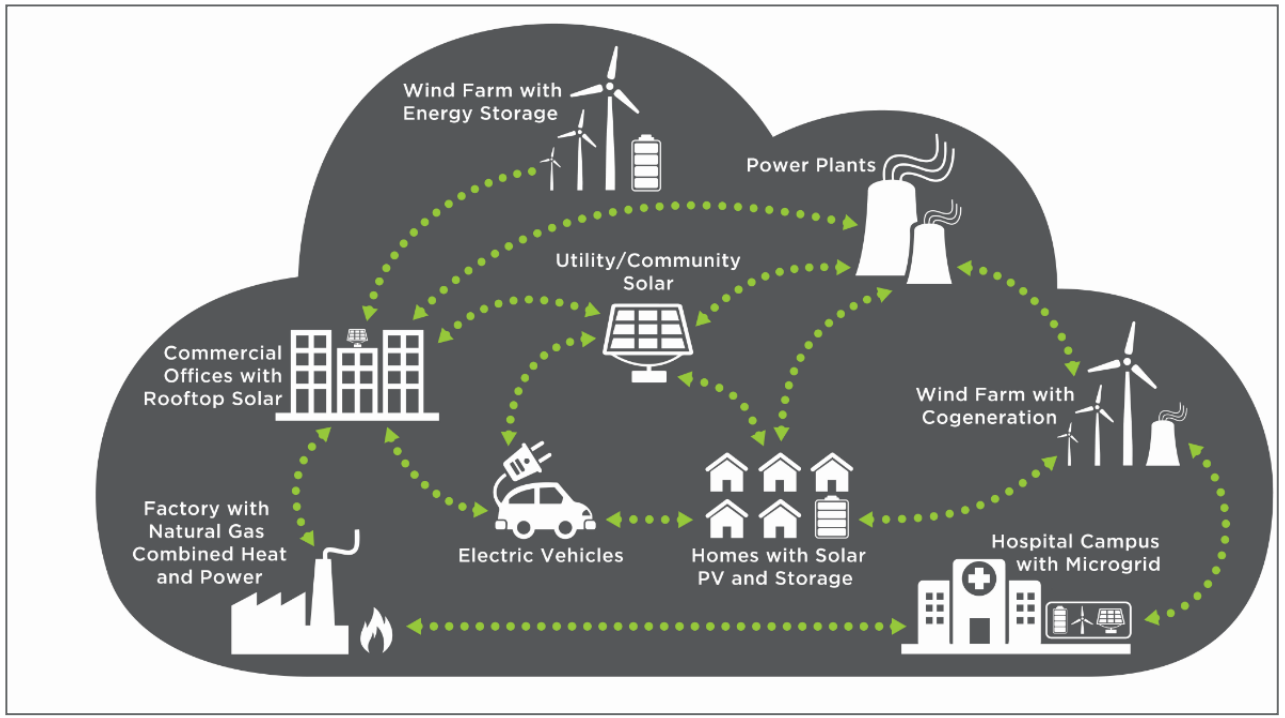
ECEEE

NAVIGANT

PRESENTATION IS BASED ON SEVERAL ECOFYS/NAVIGANT PROJECTS

- Further Development of EU Energy Efficiency Policies (2014-2017) on behalf of the German Environment Agency (UBA)
- Energy Efficiency Watch (EEW3) Project (2015-2017) on behalf of the European Commission, EASME
- Integrated Industry Policy for a Successful Energy Transition (2017-2018) on behalf of the European Climate Foundation (ECF)
- Development of a Climate Protection Program (2017-2019) on behalf of the German Federal Ministry for Economic Affairs and Energy (BMWi)
- Energy Transition in the Industry: Potentials, Costs and Interactions with the Energy Sector (2017-2021)) on behalf of the German Federal Ministry for Economic Affairs and Energy (BMWi)

THE ENERGY SYSTEM OF THE FUTURE IS COMPLEX AND REQUIRES GOOD COLLABORATION AMONG VARIOUS ACTORS



Source: Navigant

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INDUSTRY AND ENERGY EFFICIENCY POLICY HAVE TO BE ADDRESSED SIMULTANEOUSLY

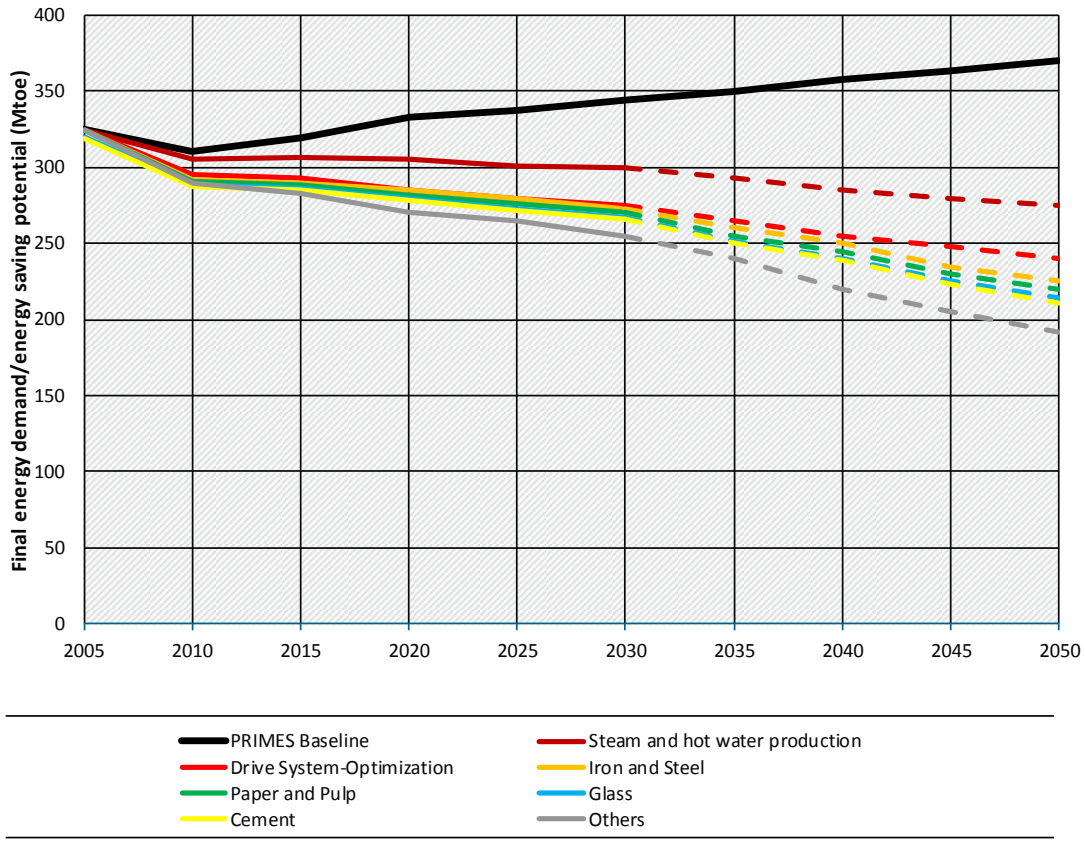
Safeguarding jobs and competitiveness

Promoting technological innovation and market entry of products

Managing dynamic processes of structural change

THE INDUSTRY SECTOR STILL HAS LARGE ENERGY SAVING POTENTIALS UNTIL 2050

Final energy demand and energy saving potentials in the EU-27 until 2050



Quelle: Own illustration based on Fraunhofer ISI (2012)

Overarching transformation pathways for the industry sector include:

- Expansion and increase of energy efficiency in cross-sector technologies
- Energetic optimization of industrial processes
- Energy carrier substitution (incl. PtX)
- Expansion and increase of material efficiency / material substitution
- Process changes / substitution of processes
- *Possibly: CCS, CCU*

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THE POLICY MIX NEEDS TO SUPPORT THE TRANSFORMATION PATHWAYS AT EU AND NATIONAL LEVEL

- Policies need to:
  - Increase resource efficiency
  - Incentivize circular economy practices
  - Incentivize replacement of technologies/ plants with highly efficient ones
  - Strengthen R&D incl. market launch of technologies
  - Promote digitalization
  - Incentivize phase out of fossil fuels
  - Address sector coupling

- Most aspects are cross-sectoral, therefore the EU has to set the framework, Member States implement policies according to local circumstances

A CONDUCIVE FRAMEWORK HELPS TO ALIGN ENERGY EFFICIENCY POLICIES IN THE INDUSTRY SECTOR

Conducive framework		
Strategy	**Institutional anchorage and financing**	**Reduction of market distortions**
• Energy efficiency strategy	• European and regional energy agencies • Obligation systems • Energy efficiency funds • Support for the market for energy services (build up infrastructures, qualify actors, ease development of products)	• Price Control: Energy/CO_2-tax • Quantity Control: Emissions Trading

Note: Table shows options for a policy bundle

A COMBINATION OF STRENGTHENED EXISTING AND NEW INSTRUMENTS IS NEEDED

Specific Instruments				
Regulatory instruments	**Information and consulting**	**Investment promotion**	**Capacity Building and cross-linking**	**Research and Development**
• Minimum energy performance requirements for technologies and plants • Basic obligation under the Immission control law • Mandatory implementation of selected measures from energy audits • Obligatory continuation of energy management systems	• Exchange of good practice examples • Lighthouse projects • Industry specific information (Benchmarking database) • Standards for energy consulting	• Subsidies • Economic incentives combined with energy efficiency measures • Voluntary agreements combined with economic incentives	• Energy efficiency networks	• R&D and demonstration projects • Support for market entry • EU-ETS innovation fund

Note: Table shows options for a policy bundle
Black: existing measures
Green: strengthend/new instruments

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RECOMMENDATIONS FOR EU-LEVEL (I)

Conducive framework

- Harmonization of existing strategies with consideration of energy efficiency aspects
- Energy tax reform

Regulatory instruments

- Energy Efficiency Directive (2012/27 / EU), Art. 8: Energy audits and energy management systems
  - Obligation to implement selected measures (e.g. based on amortization and financial criteria), timetable for implementation measures, uniform monitoring, sanctions in case of non-compliance,
  - Extension to SMEs

RECOMMENDATIONS FOR EU-LEVEL (II)

Information and consulting

- Development of energy efficiency benchmarks for industry sectors (database for standardization, best practice exchange, indication for subsidy level)

Capacity Building

- Requirement for MS to support company networks
- Concretization and commitment to strategic measures
  - Minimum standards for the training of energy professionals and for the certification of energy consultants
  - Energy consulting programs mandatory for all sectors

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