Welcome!

We will begin shortly...

Please mute your microphones

Write your questions in the Zoom Chat

SUPEERA

Energy Sufficiency and Efficiency in the Fit for 55 Context

Challenges & Opportunities for Clean Energy Research

SUPEERA

Agenda

Time	Session	Speaker
10:00	Introductory Remarks	***Rosita Zilli*** *- EERA, Senior Policy Officer*
10:05	Panel Discussion	*Moderator:* ***Ganna Gladkykh*** *- EERA, Clean Energy Transition Expert*
	• European Commission	***Radoš Horáček*** *- Team Leader – Energy Efficiency Policy Implementation and Analysis, DG ENER*
	• Permanent Representation of Italy to the European Union	***Wolfgang D'Innocenzo*** *- Energy Attaché*
	• EERA	***Yvonne Van Delft*** *– Coordinator of the Joint Programme Energy Efficiency in Industrial Processes*
	• GreenLab Skive	***Jakob Hebsgaard Mogensen*** *- Head of Business Development and interim Research Director*
11:05	Q&A Session	
11:25	Summary & Operational Conclusions	***Ivan Matejak*** *– EERA, SUPEERA Project Coordinator*

Introductory Remarks

Rosita Zilli, EERA

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What do you expect to primarily take out from this webinar?

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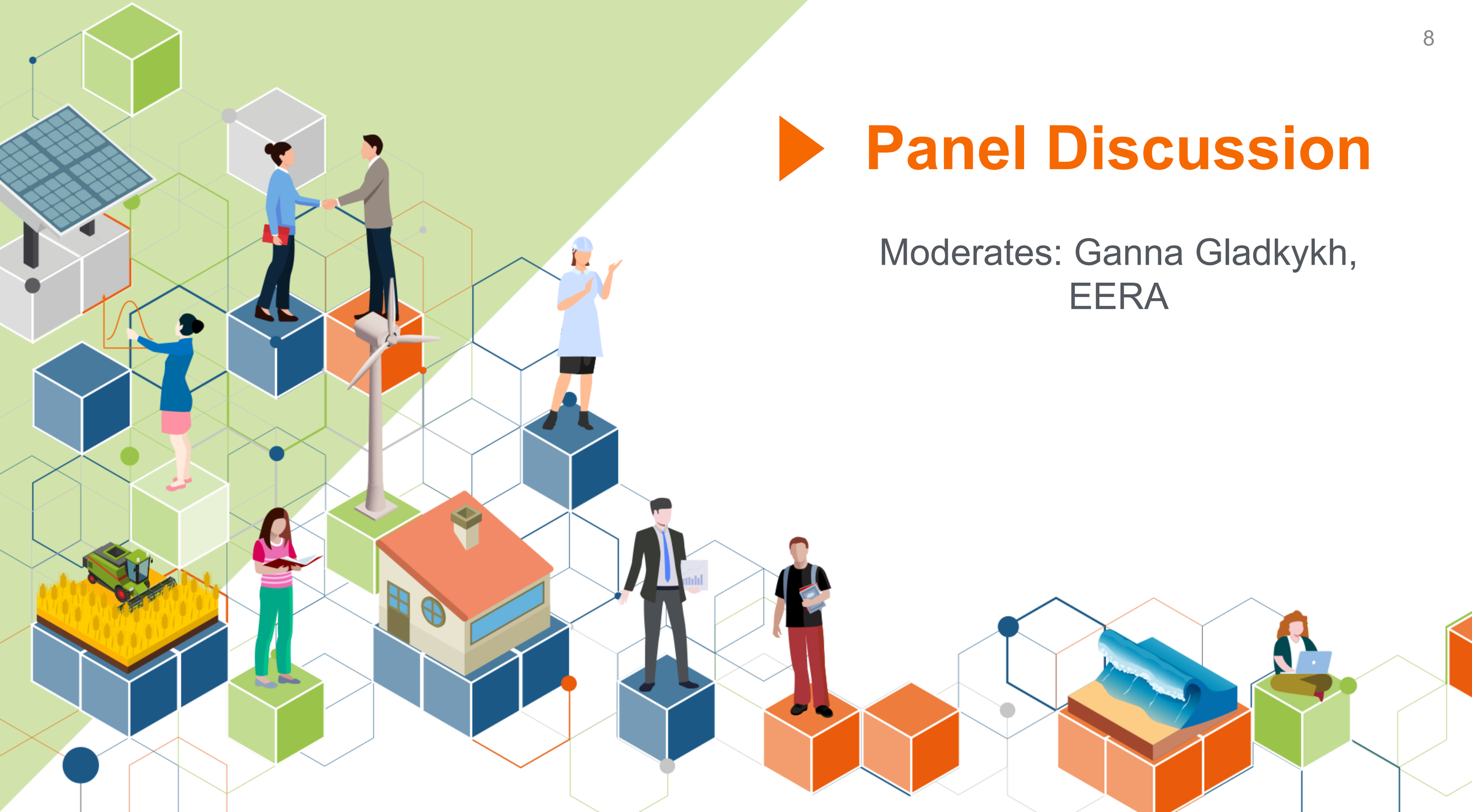

Panel Discussion

Moderates: Ganna Gladkykh, EERA

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Support to the coordination of national research and innovation programmes in areas of activity of the European Energy Research Alliance

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 949125.

Radoš Horáček

Team Leader – Energy Efficiency Policy Implementation and Analysis

European Commission, DG ENER

Fit for 55

Energy Efficiency Directive revision and energy sufficiency

SUPEERA webinar, 16.12.2021

Rados Horacek,
Energy Efficiency Unit, ENER.B2

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Chose one or more statements on the aim of energy sufficiency:

ⓘ Start presenting to display the poll results on this slide.

EU ambition & targets

National contributions

Nature	**Binding**	**Indicative** (no change)
Ambition	At least **-9%** reduction in energy consumption	Set by Member States taking into account the **benchmarks**, national circumstances and EU level of ambition
Baseline	Compared to the **Reference Scenario 2020** projections for 2030 (-36% for FEC and -39% for PEC compared to REF2007)	**NEW** Based on formula with 4 criteria: (i) fixed rate reduction; (ii) GDP per capita; (iii) energy intensity; (iv) cost-effective potential (PRIMES projections)
Scope	Primary **and** final energy consumption	Primary **and** final energy consumption (translated into PEC and FEC levels)

European Commission

Energy efficiency first principle

New Article 3 providing legal basis for application of the principle

Obligation for Member States to ensure that energy efficiency solutions are considered in **energy system** and **non-energy sectors** planning, policy and investment decisions

Verification of application in regulated areas

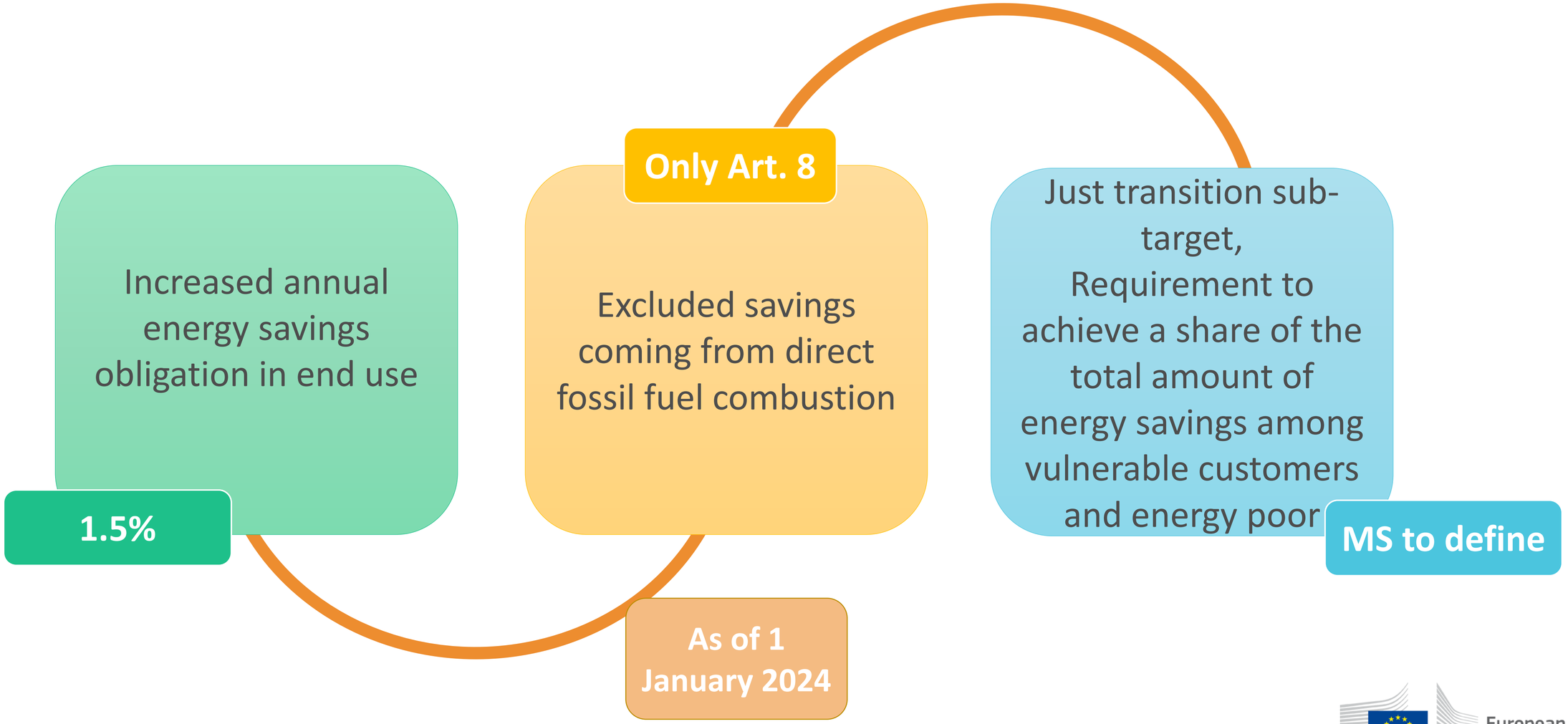
Requirements for Member States to develop and ensure application of appropriate cost-benefit assessment methodology

Monitoring by a dedicated entity

Reporting as part of the Governance Regulation

Supported with a dedicated recommendation and guidelines on application of the principle

Energy savings obligation – Article 8



European Commission

Exemplary role of public sector

Annual reduction of energy consumption of 1.7% in public sector (MS to select public bodies)

Annual renovation of 3% of useful floor area of public buildings above 250 m2, applicable to all public administration levels

Alternative approach removed

Requirement to take into account energy efficiency requirements and focus on EE1st in public procurement for all public administration levels

Consideration of circular economy aspects, GPP

Energy efficiency in industry

Energy management systems and energy audits

Art. 11

Implementation of an **energy management system** as a default obligation for large energy consumers (above 100TJ)

An **energy management system** or an **energy audit** for energy consumers (above 10TJ)

Quality checks required to ensure the validity and accuracy of energy audits

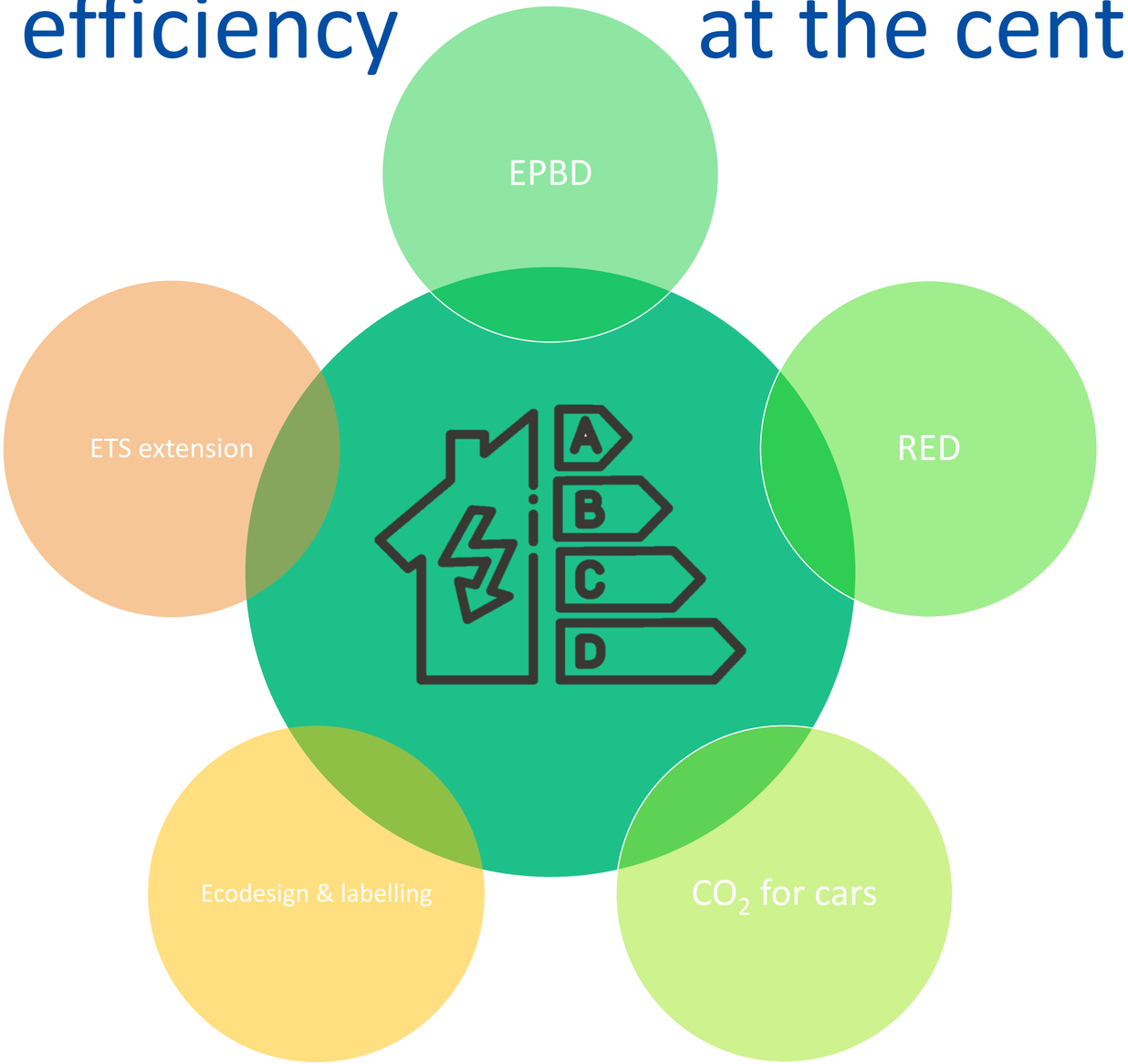
Data centres

Reporting for data centres with a significant energy consumption as of 2024

Requirement for reuse of waste heat from data centres and other installations

Art. 24

Energy efficiency at the centre



European Commission

What are the technological opportunities?

From the point of view of a policy maker?

Smart metering of energy use and energy saved

Use of big data for policy making and for product development

… and many others

European Commission

Where does energy sufficiency fit to?

Article 4 : EU targets and national contributions

Article 3 : Energy Efficiency First

Article 5 : 1.7% energy saved every year in public sector

Article 8 : energy savings measures

Energy efficiency is an option for the Member States

…examples…

European Commission

Thank you

Fit for 55 package: EU economy and society to meet climate ambitions (europa.eu)
Proposal for a directive on energy efficiency recast.pdf (europa.eu)

European Commission

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Wolfgang D'Innocenzo

Energy Attaché

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Yvonne Van Delft

Coordinator of the Joint Programme Energy Efficiency in Industrial Processes

EERA

Energy Efficiency in Industrial Processes

Is Industry Fit for 55?

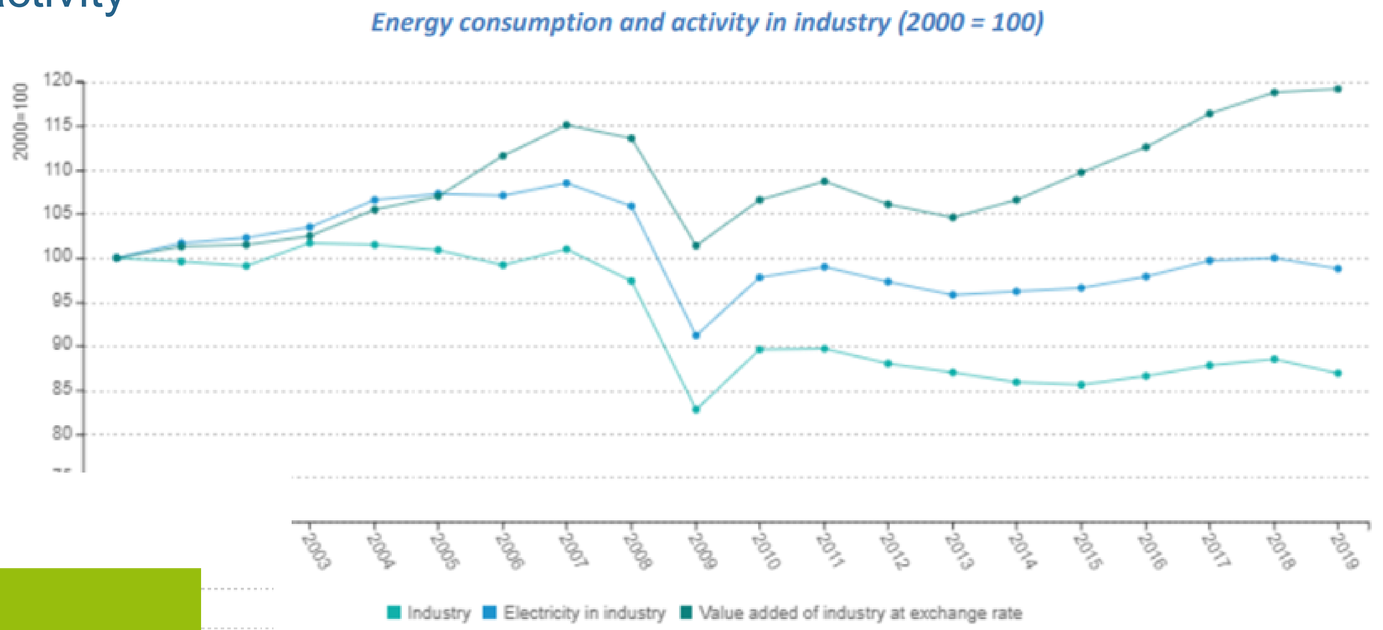
16 December 2021

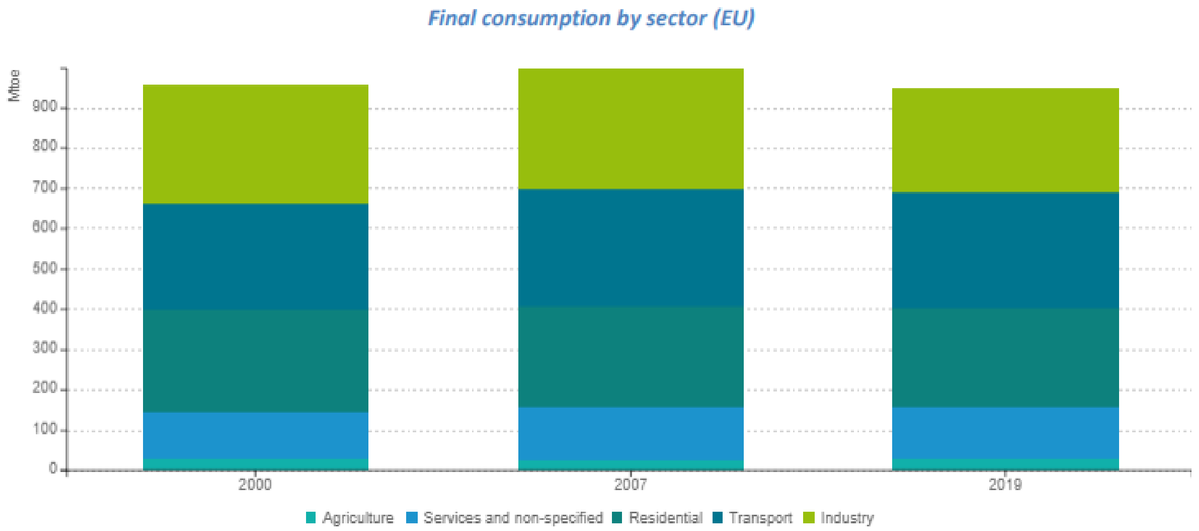
EERA
European Energy Research Alliance

Industrial share in final energy consumption is decreasing

Although there was a growth in industrial activity

- 13% lower industrial energy consumption in 2019



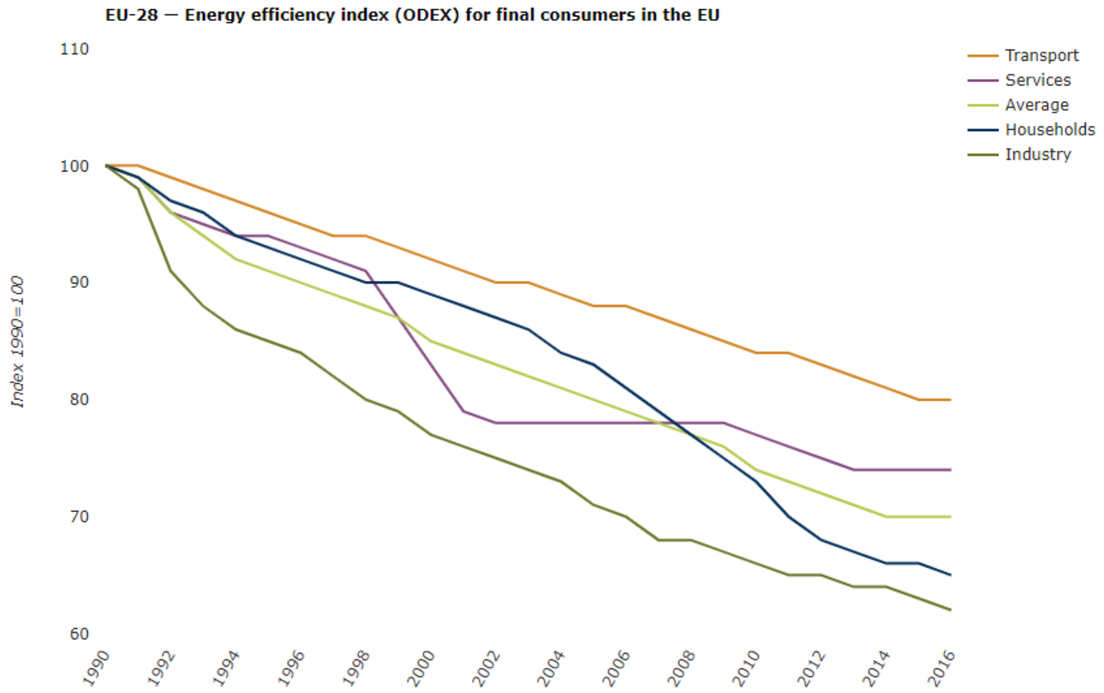


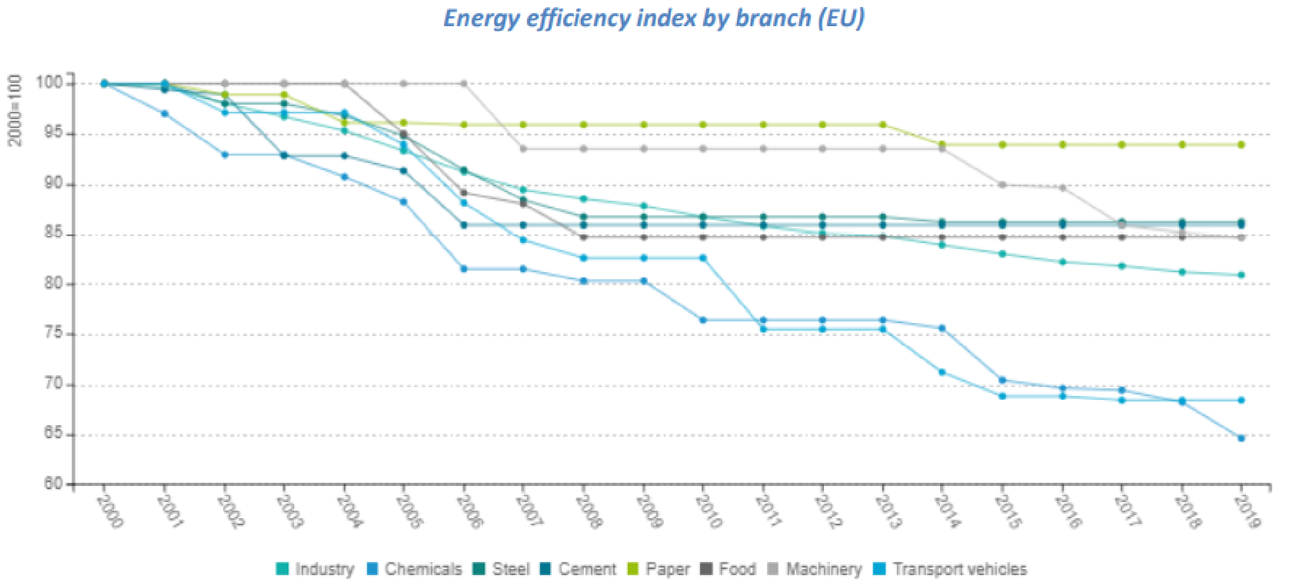
Source: ODYSSEE database

EERA European Energy Research Alliance

Slower energy efficiency progress in industry since 2007

Can we reach the Fit for 55 targets in 2030?





Source: ODYSSEE database

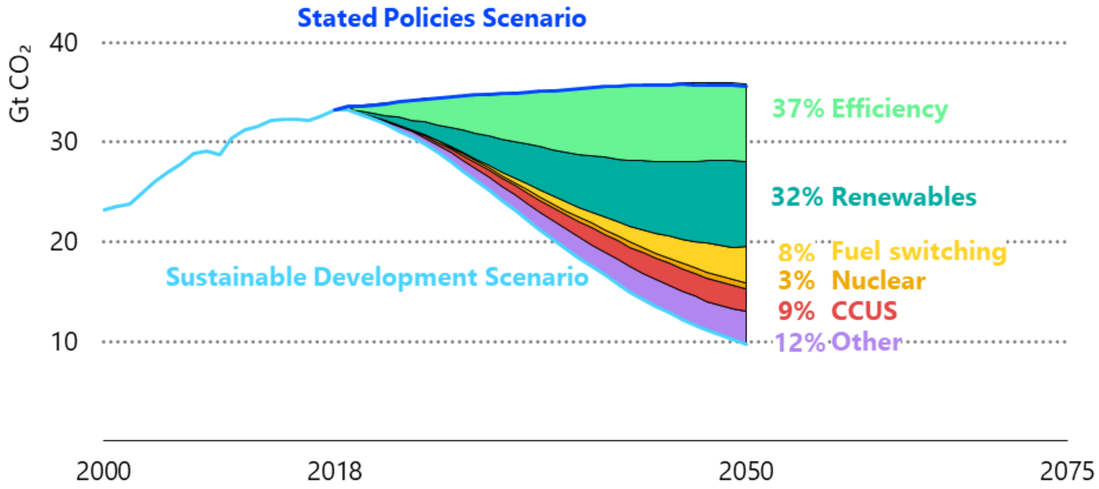
EERA European Energy Research Alliance

15% Global energy demand reduction in 2040

through implementation cost-effective energy efficiency opportunities available today

- Industry 29% share of future energy savings
- Light industry 70% potential industrial energy savings in 2040 (40% efficiency improvement), Iron and steel 25% efficiency improvement
- EU Energy Efficiency Directive:
- *Industry is one of the sectors that has achieved significant energy efficiency improvements over the last decade.* ***Nevertheless, cost-effective savings potenti still exist****. Heating and cooling consumes half of Union FEC, making it the biggest energy end-use sector. There remains much potential for reducing energy use in this sector, while still achieving the temperatures needed. Heating and cooling, therefore, plays a crucial role in the Union's ambition to transition into a clean and carbon-neutral economy by 2050. Furthermore, the possible* ***increase in industry's energy demand that may result from its decarbonisation****, particularly for energy intensive processes, should also be taken into account.*

Energy-Related CO2 Emissions and CO2 Emissions Reductions by Measure in IEA's Sustainable Development Scenario



Source: Global Commission for Urgent Action on Energy Efficiency

EERA European Energy Research Alliance

Industry should implement more energy efficient opportunities to compensate the extra energy demand from decarbonisation

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Jakob Hebsgaard Mogensen

Head of Business Development and interim Research Director

GreenLab Skive

GreenLab

Green & circular energy park – Technology enabler – National research facility

Jakob Hebsgaard Mogensen, Head of Business Development – GreenLab A/S, Skive, Denmark
JHMO@GreenLab.dk

December 2021

GENERATE

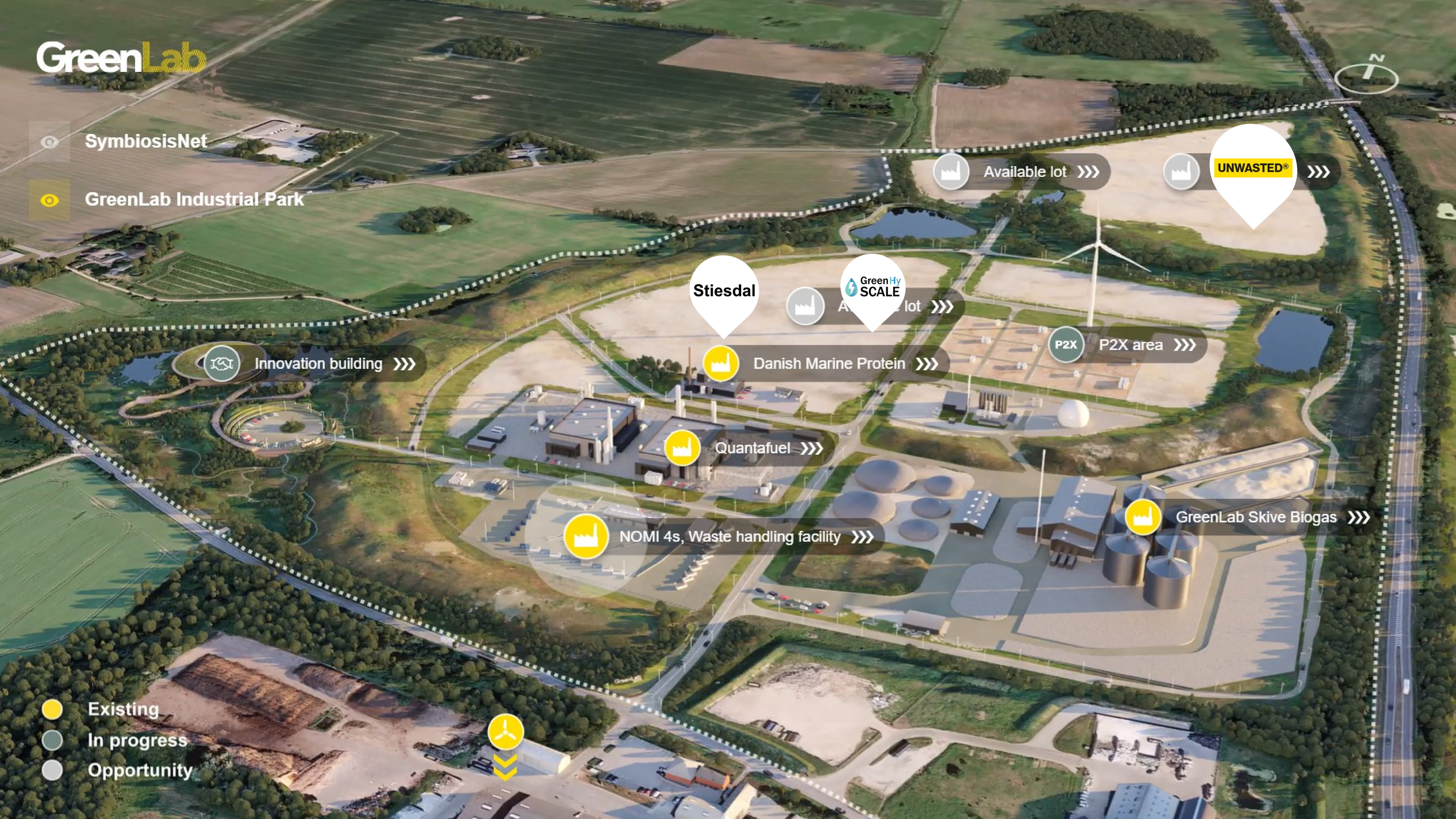
We generate sustainable energy for our partners

STORE

The green energy is stored in all its forms:
Electricity, heat, gas and electrofuels

SHARE

The SymbiosisNet™ is an intelligent grid of energy and data that lets our companies share their surplus


GreenLab
SymbiosisNet
GreenLab Industrial Park
Available lot
UNWASTED®
Stiesdal
GreenHy SCALE
Innovation building
Danish Marine Protein
P2X
P2X area
Quantafuel
NOMI 4s, Waste handling facility
GreenLab Skive Biogas
Existing
In progress
Opportunity


SHARE
SymbiosisNet™
Hydrogen
Oxygen
Electricity
Fiberboards
Biochar
Hydrogen
Methanol
Naphta
Oxygen
Amonia
Upgraded Biogas/Methane
Protein for animal food
Degassed manure
waste sorted for recycling
Electricity
Grass and biomass
Marine waste
Manure
Household waste
Electricity
GENERATE
STORE
CO2
Cardboard
Plastic
Hi-temp Heat
Low-temp Heat
SymbiosisNet
GreenLab Industrial Park
Existing
In progress
Opportunity

The GreenLab model – Efficient and Sufficient

The GreenLab Model enables

- Utilization of waste and loss
- Shared buffering and storage
- Support and balancing to local and national grid operators
- Sharing common facilities

A Greenlab model solves:

- Overall ambition of strengthening EU innovation, competitiveness and green transition / green growth frontrunner
- Challenges with fully exploiting renewable energy
- Energy efficiency, sector integration and circular economy
- Greening of industry, transportation and agriculture

Full exploitation of a GreenLab model calls for:

- Thinking in a coherent energy system – “energy as one”
- Creating common market incentives
- Investing in research, competences and scale up of technology


LET’S CREATE A POWER SHIFT!
GreenLab

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Do you think that a common CO2 emissions tax in the EU is an appropriate market incentive to reduce CO2 emissions?

17. december 2021

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Quiz

Moderates: Ganna Gladkykh, EERA

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I think that the Fit for 55 legislative package addresses well the issue of “de-siloing” energy policies

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I now have a clearer understanding of the difference between energy efficiency and energy sufficiency and their relevance for the energy transition process

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What do you think about the energy sufficiency concept in terms of its policy relevance?

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Q&A Session

Conclusions

Ivan Matejak, EERA


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