A landscape photograph showing a green field in the foreground, a transmission tower on the left, and power lines stretching across the sky. The sun is setting in the distance, creating a bright glow and lens flare. The sky is a mix of blue and orange.

“What does greenhouse gas reduction and renewable target-compliant mean for the grid?”

Antina Sander, Renewables Grid Initiative

Who is talking

Focus of TSOs:

“We need to build up the power system without delay while minimising impacts on nature and people.”

Focus of NGOs:

“We need to grow renewable energy much faster to reach our climate targets while ensuring an environmentally sensitive development of the power system.”

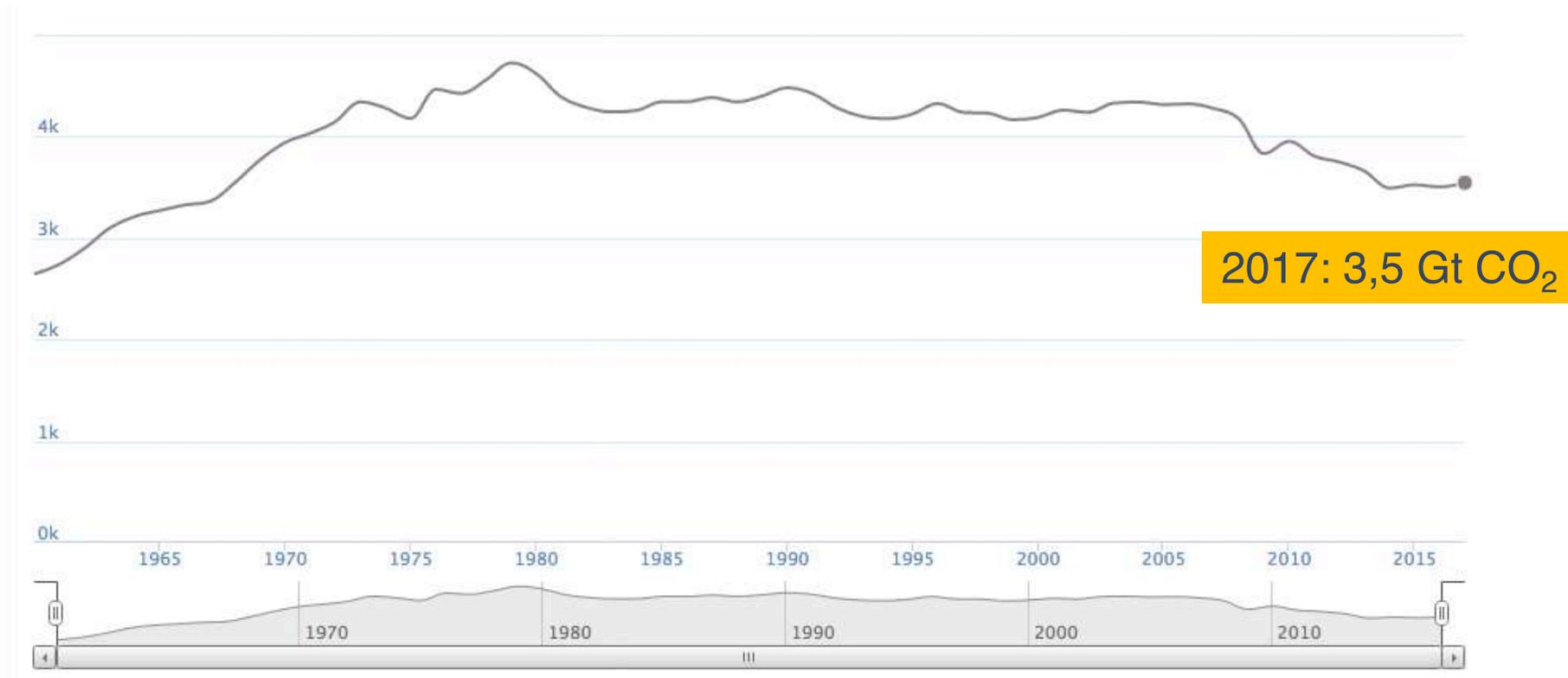


“We want a grid built in time that supports the further steady growth of renewables while respecting environmental objectives and people's concerns.”

Not a lot of carbon budget left for EU-28

- Global budget for 2018 – 2100: **570 GtCO₂**
- EU-28 share* based on
 - population: **38,78 GtCO₂**
 - Equity: **29,39 GtCO₂**
- Global Carbon Budget based on
 - IPCC Special Report
 - Global Mean Surface Temperature: 1,5 Degree Celsius
 - 66% Probability

EU-28 still adds about 3,5 Gt CO₂ per year



At this pace 10 years of budget left!

We have to move a lot faster

CAN Europe

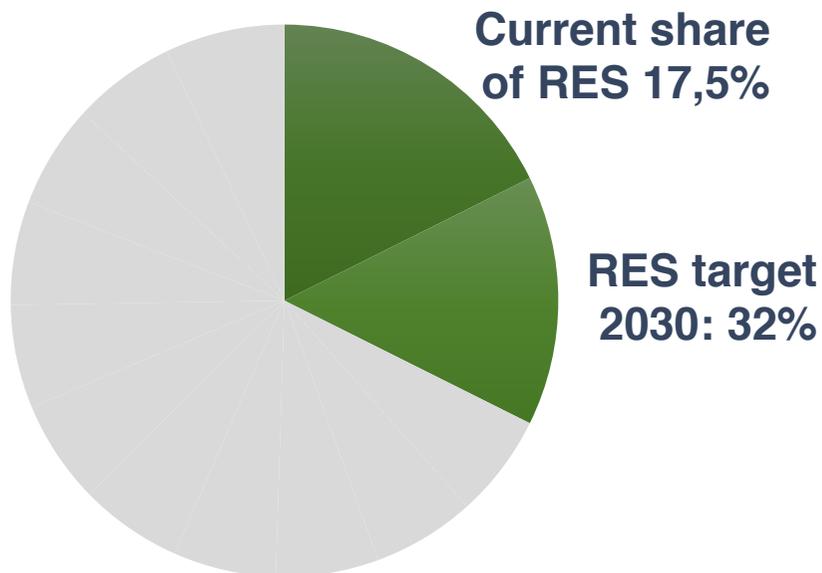
- 80-95% GHG emissions reduction target is outdated
- Net zero by 2040

European Green Deal (excerpt)

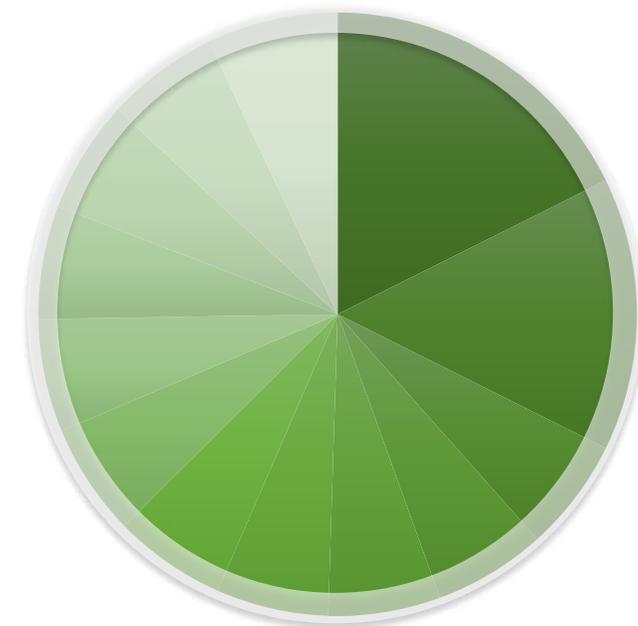
- EU NDC* from 40% to 50%-55% GHG emissions reductions by 2030
- Energy market: integrated, interconnected and with consumer focus
- Energy system „largely based on renewables“, increased connectivity and energy storage
- Facilitate the smart integration of electricity, heating, transport and industry sectors
- Scale up investments in clean energy (Sustainable Energy Investment Plan)

RES targets have to increase – there is a long way to go

Current final energy consumption and RES



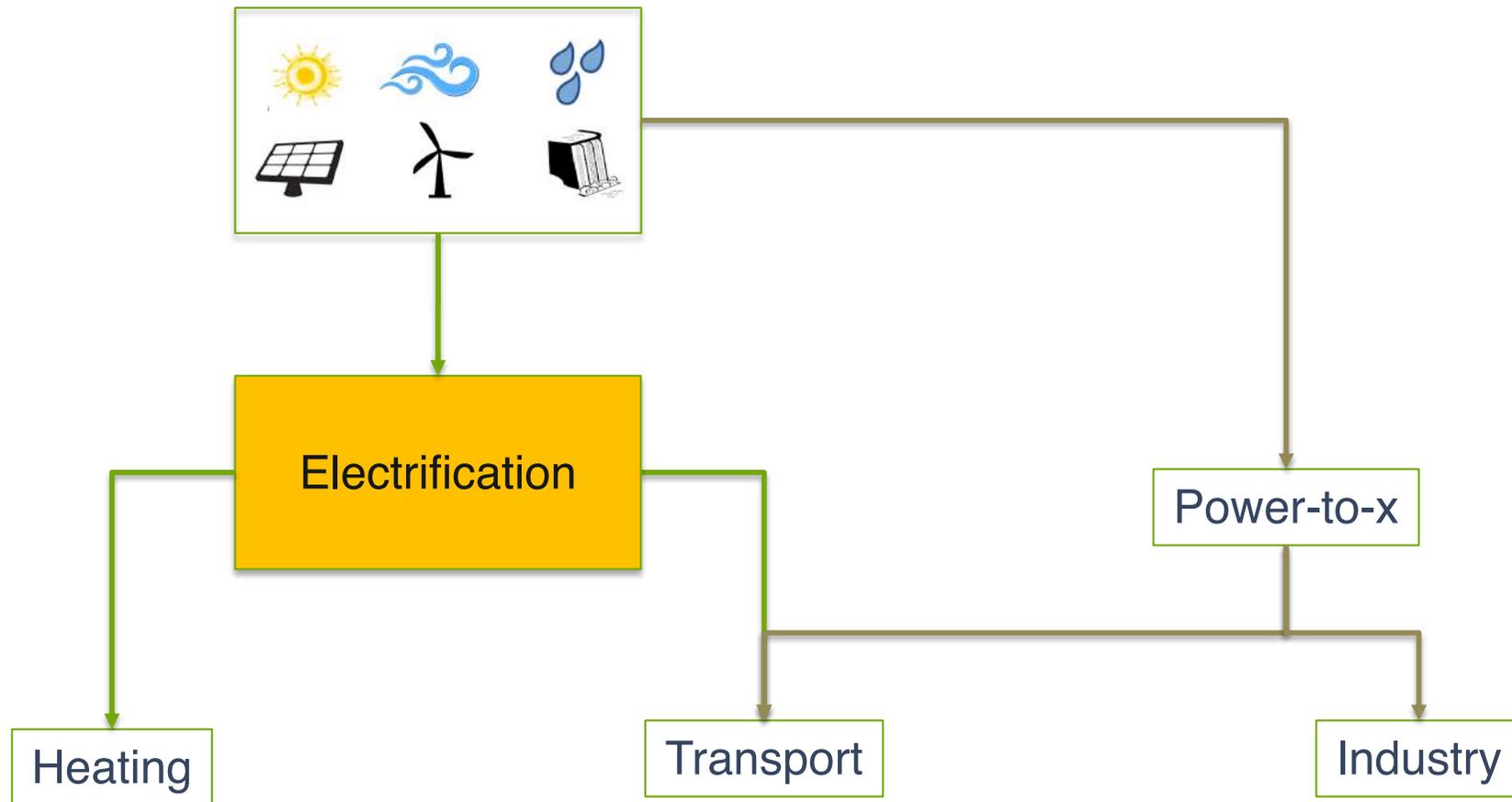
Future final energy consumption and RES?



■ → □ Increasing shares of RES

→ We need to be faster in reducing greenhouse gases and increasing RES

Larger shares of RES via electrification and sector coupling/integration



→ We need to fully embrace electrification

We need to understand what this means for the grid

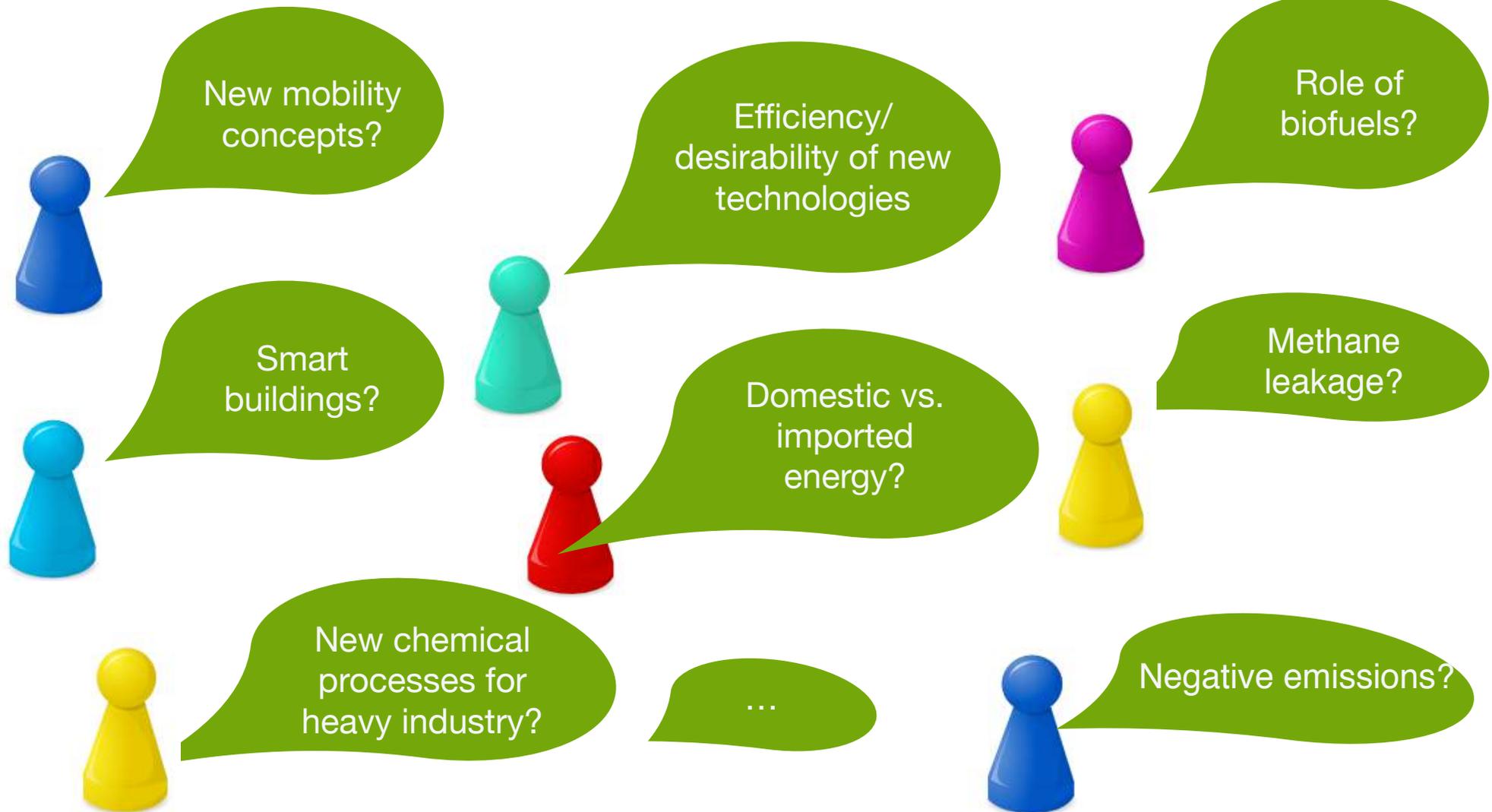


What if the future energy system has much more RES, is fully coupled, smart, decentralised...???



If we don't get this right..... people will not respect results here

Building a solid scenario requires many types of proficiencies



PAC project for solid input and a legitimate scenario

PAC: Paris Agreement compatible scenarios for energy infrastructure

Project partners



150/140 European NGO members



80 members covering industry, intergovernmental orgs, NGOs, academia, and governments.



22 European TSOs and NGOs

... and their respective stakeholder networks

Special stakeholders

ENTSO-E **ENTSOG**

Core tasks

- Scrutinize/advising TYNDP scenarios for Paris compatibility
- Provide feedback on likely and desirable 'futures' that should be reflected by TYNDP scenarios
- Develop a own scenario supported by broad civil society base
- Learn how to collaborate as a multi-stakeholder network on scenario development

→ We need to collaborate **ACROSS SECTORS AND ACROSS SOCIETY** in a different way to get it done

What does greenhouse gas reduction and renewable target-compliant mean for the grid

→ We need to be faster in reducing greenhouse gases and increasing RES

→ We need to fully embrace electrification

→ We need to collaborate **ACROSS SECTORS AND ACROSS SOCIETY** in a different way to get it done

Thank you!



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