

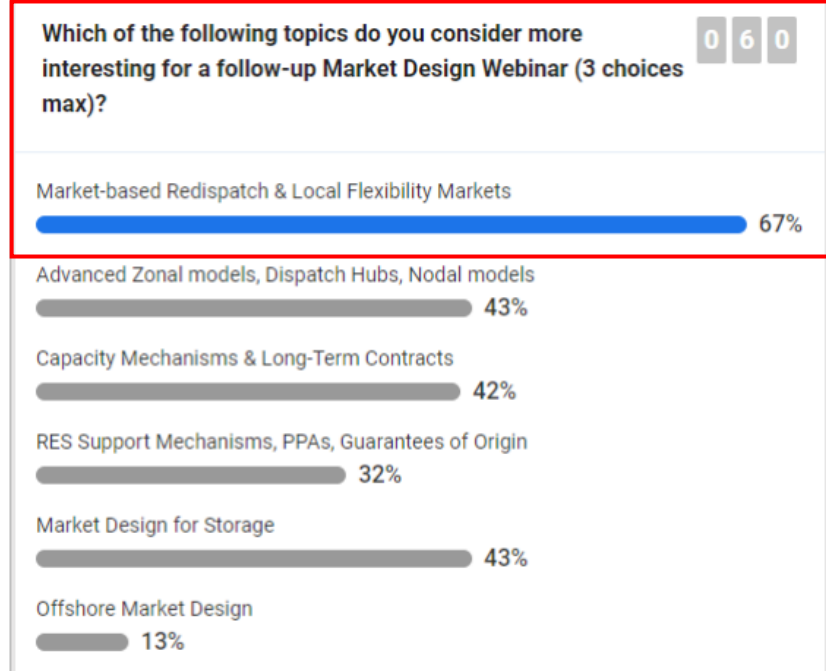
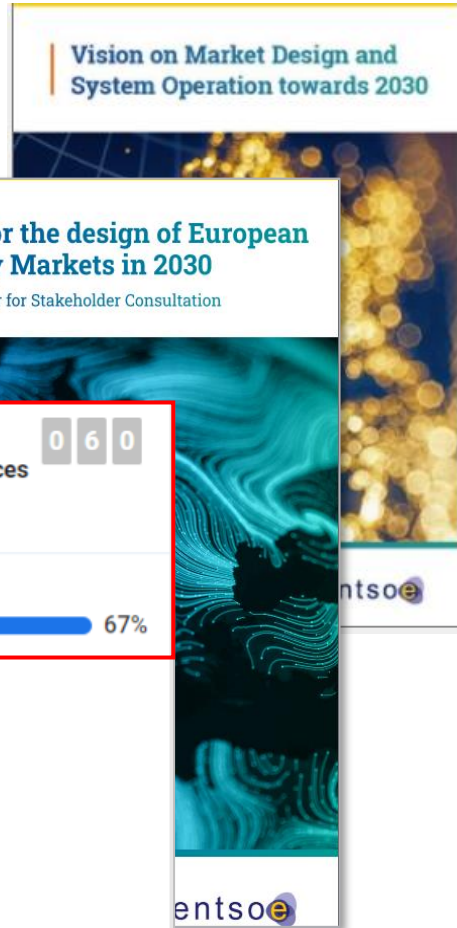
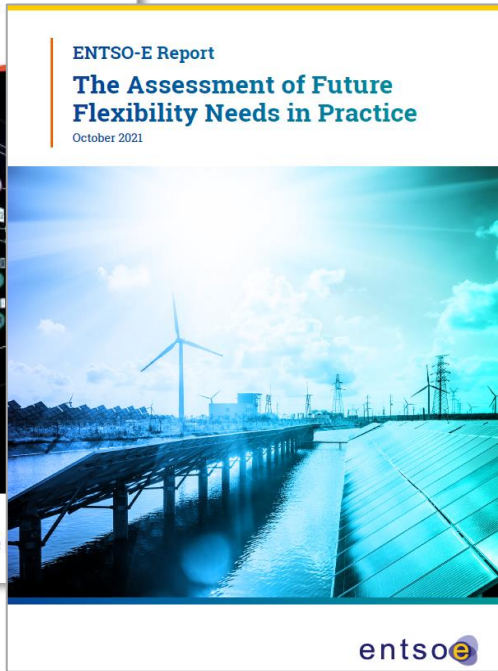
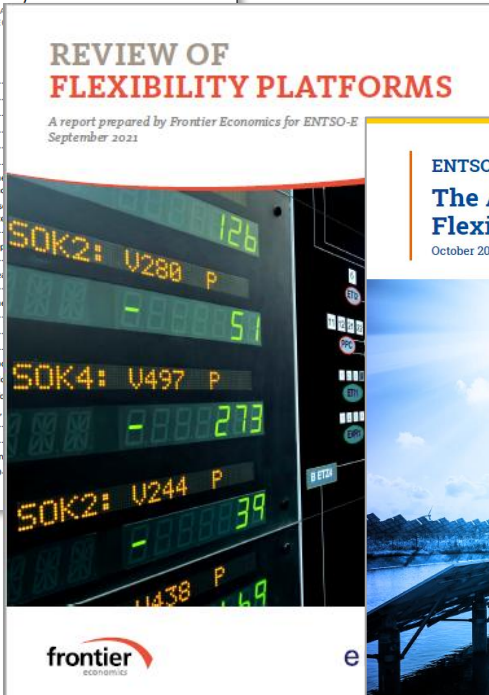
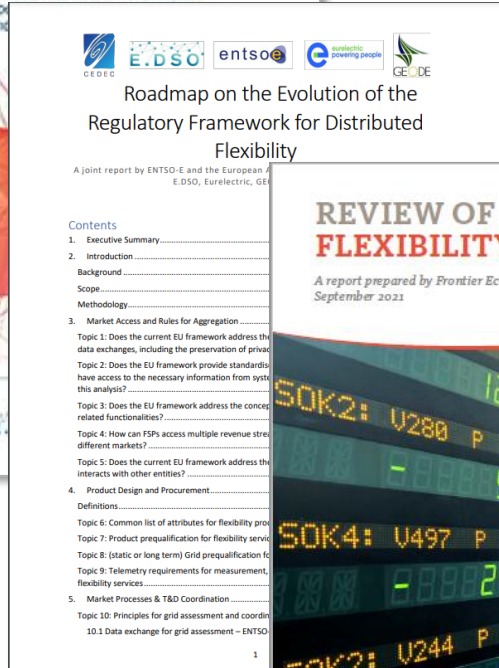
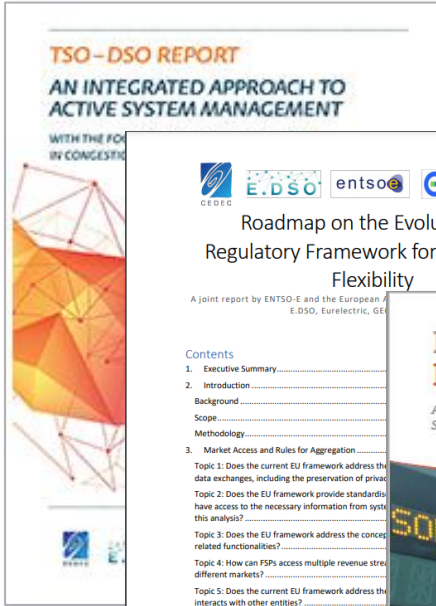
# 2030 Market Design to enhance distributed flexibility

Fabio Genoese, Task Force Chair on Demand-side Flexibility at ENTSO-E & Head of Strategy at Terna

12 November 2021

# Background & Objective of the Webinar

- ✓ Continuing the dialogue on ENTSO-E recent work on 2030 Market Design, TSO-DSO cooperation & Demand-Side Flexibility
- ✓ Following-up on 10 June Webinar on 2030 Market Design clear stakeholder appetite for debate on flexibility markets & market-based redispatch



- ✓ Presenting 2 new ENTSO-E papers on Flexibility Platforms, and on Flexibility Needs

# European Union has a Net Zero GHG target for 2050: Growing role of power sector

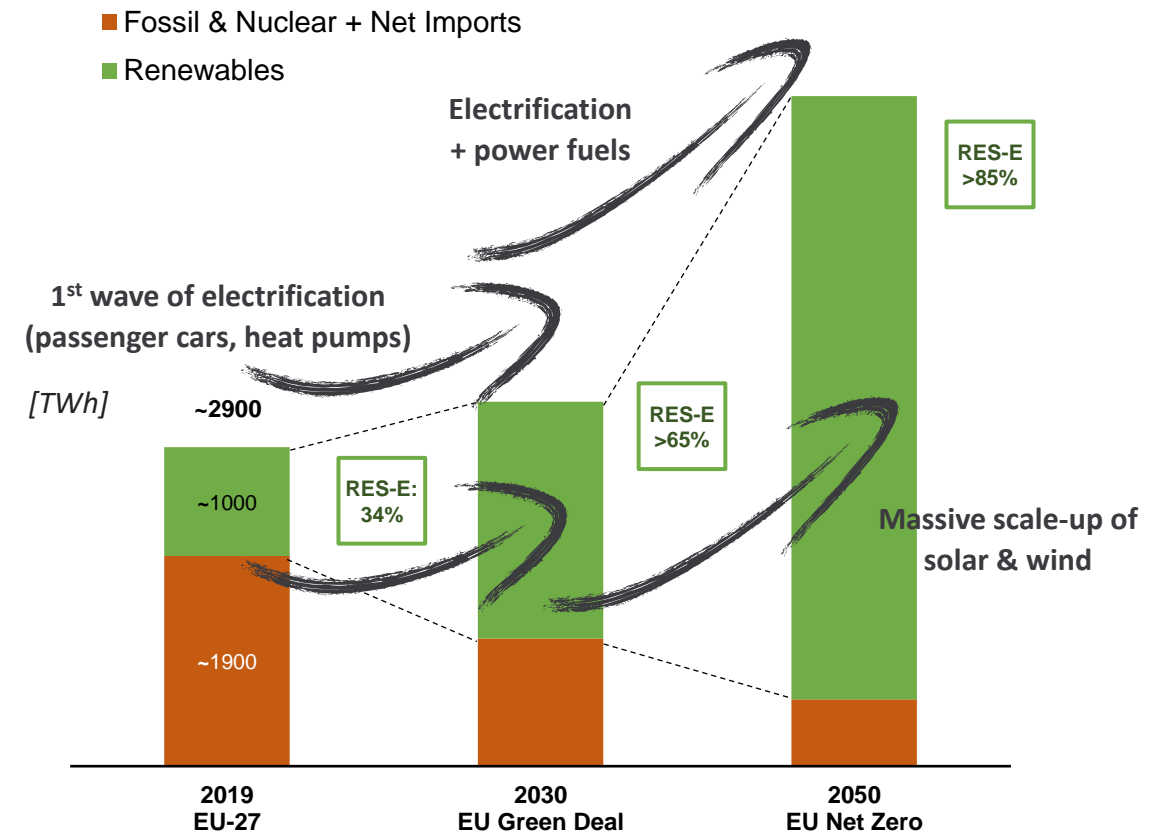
Mega trends for energy systems going towards Net Zero GHG emissions:

- ✓ Increased share of electricity in total energy consumption (“electrification”)
- ✓ Power sector dominated by renewables (“RES-E”), especially wind & solar

Challenges:

- ✓ Lack of “traditional” resources that provide grid ancillary services
- ✓ More volatile electricity demand profile with millions of electric cars and heat pumps
- ✓ Increasing peak electricity usage due to climate change

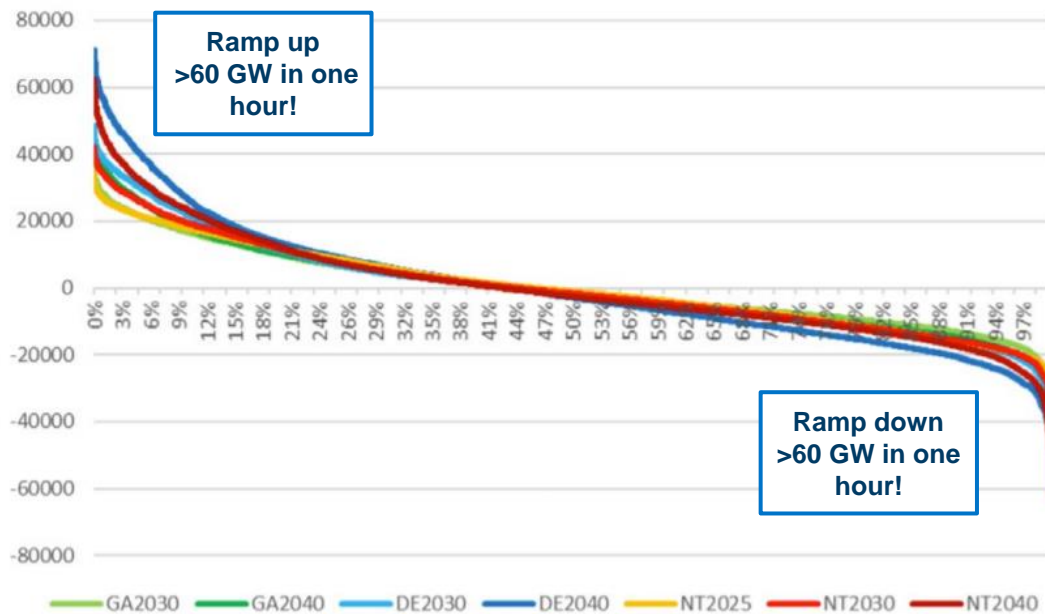
Electricity demand coverage in EU-27 (TWh)





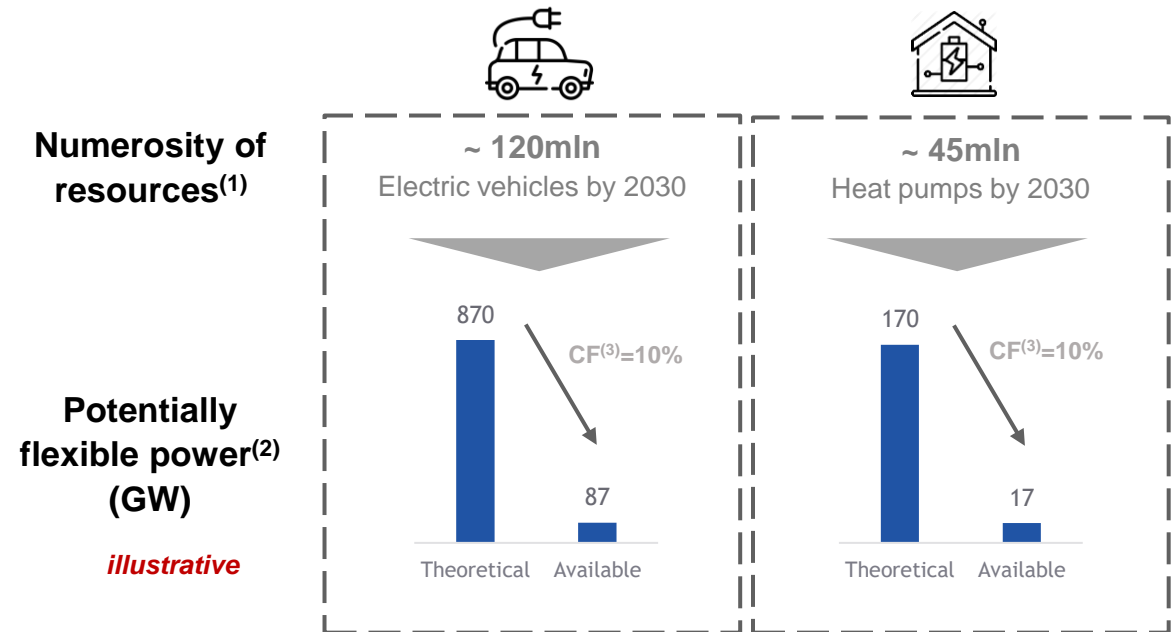
# 2030: Distributed resources could represent a significant source of flexibility

Hourly ramps of residual load\* (MW/h) in Continental Europe (2030)



\* Total load net of renewables

Flexible Distributed Resources (2030)



(1) Distributed Energy scenario

(2) Own elaboration assuming: (a) heat pump: 4kW, (b) electric vehicle charge point: 7,4 kW

(3) CF = Contemporary Factor: Average share of resources available to be turned off

**Sources:**

• ENTSO-E TYNDP 2020 scenarios report - [https://eepublicdownloads.azureedge.net/tyndp-documents/TYNDP\\_2020\\_Joint\\_Scenario\\_Report\\_ENTSOG\\_ENTSOE\\_200629\\_Final.pdf](https://eepublicdownloads.azureedge.net/tyndp-documents/TYNDP_2020_Joint_Scenario_Report_ENTSOG_ENTSOE_200629_Final.pdf)

• ENTSO-E Power System Needs Analysis - [https://eepublicdownloads.azureedge.net/tyndp-documents/loSN2020/200810\\_loSN2020mainreport\\_beforeconsultation.pdf](https://eepublicdownloads.azureedge.net/tyndp-documents/loSN2020/200810_loSN2020mainreport_beforeconsultation.pdf)

# Housekeeping Rules

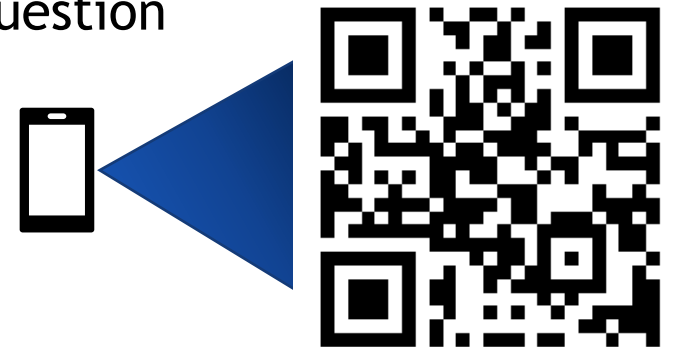
## Video and audio

- Video and audio is allowed only for Speakers or Panellists
- Speakers or Panellists will be asked to switch video and audio OFF when not talking

## Participants Questions via slido

- Participants can place their **questions directly through slido** and not through Teams
- Please also vote for most interesting questions posted
- Indicate your name and company/institution when posting your question

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...OR scan **this QR code** with your mobile



# Agenda - morning sessions

10.00	<b>Welcome &amp; Introduction</b>	Opening Remarks by <b>Fabio Genoese</b> , <i>Demand Side Flexibility TF Convenor, ENTSO-E</i>	10 min
10.10	<b>Session 1</b> <b>TSOs &amp; DSOs flexibility needs and market facilitation</b>	<u>Assessing flexibility needs of the power system</u> - <b>Christos Dikaiakos</b> , <i>ENTSO-E</i>	15 min
		<u>Review of Flexibility Platforms</u> - <b>Matt Cooper &amp; Abbas Hussein</b> , <i>Frontier Economics</i> <b>Victor Charbonnier</b> , <i>ENTSO-E</i>	25 min
		<u>DSOs' role and flexibility needs</u> - <b>Paul de Wit</b> , <i>EU DSO Entity</i>	25 min
11:15	<b>COFFEE BREAK</b>		15 min
11.30	<b>Session 2</b> <b>Market based redispatch: challenges &amp; opportunities</b>	<u>Keynote speech 1</u> : <b>Lion Hirth</b> , <i>Neon &amp; Hertie School</i>	15 min
		<u>Keynote speech 2</u> : <b>Jørgen Bjørndalen</b> , <i>DNV</i>	15 min
		<u>Panel followed by Q&amp;A</u> <b>Mathieu Fransen</b> , <i>ACER</i> <b>Philippe Vassilopoulos</b> , <i>Europex</i> <b>Gerard Dooman</b> , <i>ENTSO-E</i> <b>Zuzana Sádlová</b> , <i>Eurelectric</i> <i>Moderation: Marco Foresti, ENTSO-E</i>	30 min
12.30	<b>LUNCH BREAK</b>		60 min

# Agenda - afternoon session

13.30	<b>Session 3</b> <b>Enabling consumers' flexibility</b>	<u>Case Study 1: Freddy Van Bogget, KBC</u>	20 min
		<u>Case Study 2: Jacob Dalton, Tibber</u>	20 min
		<u>Panel followed by Q&amp;A</u> <b>Veli-Pekka Saajo, CEER</b> <b>Andrés Pinto-Bello, SmartEN</b> <b>Rita Mota, Eurelectric</b> <b>Torsten Knop, EU DSO Entity</b> <i>Moderation: Gilles Etienne, ENTSO-E</i>	40 min
14.50	<b>Key Take-aways &amp; next steps</b>	Conclusions by <b>Gilles Etienne, WG Market Design &amp; RES Convenor, ENTSO-E</b>	10 min