

Secure and Sustainable - Opposites or Mutually Reinforcing Goals?

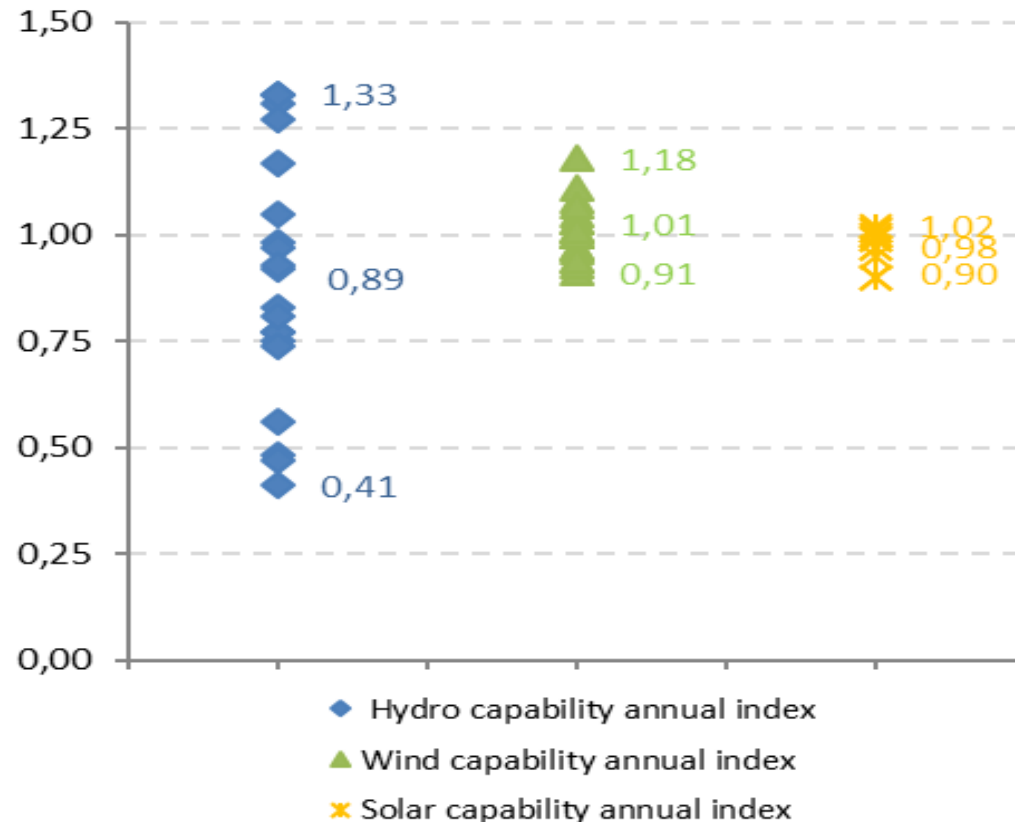
Pedro Verdelho
22 August 2023

Main ingredients towards an essential goal



Myth: Intermittency of renewables is bad for SoS

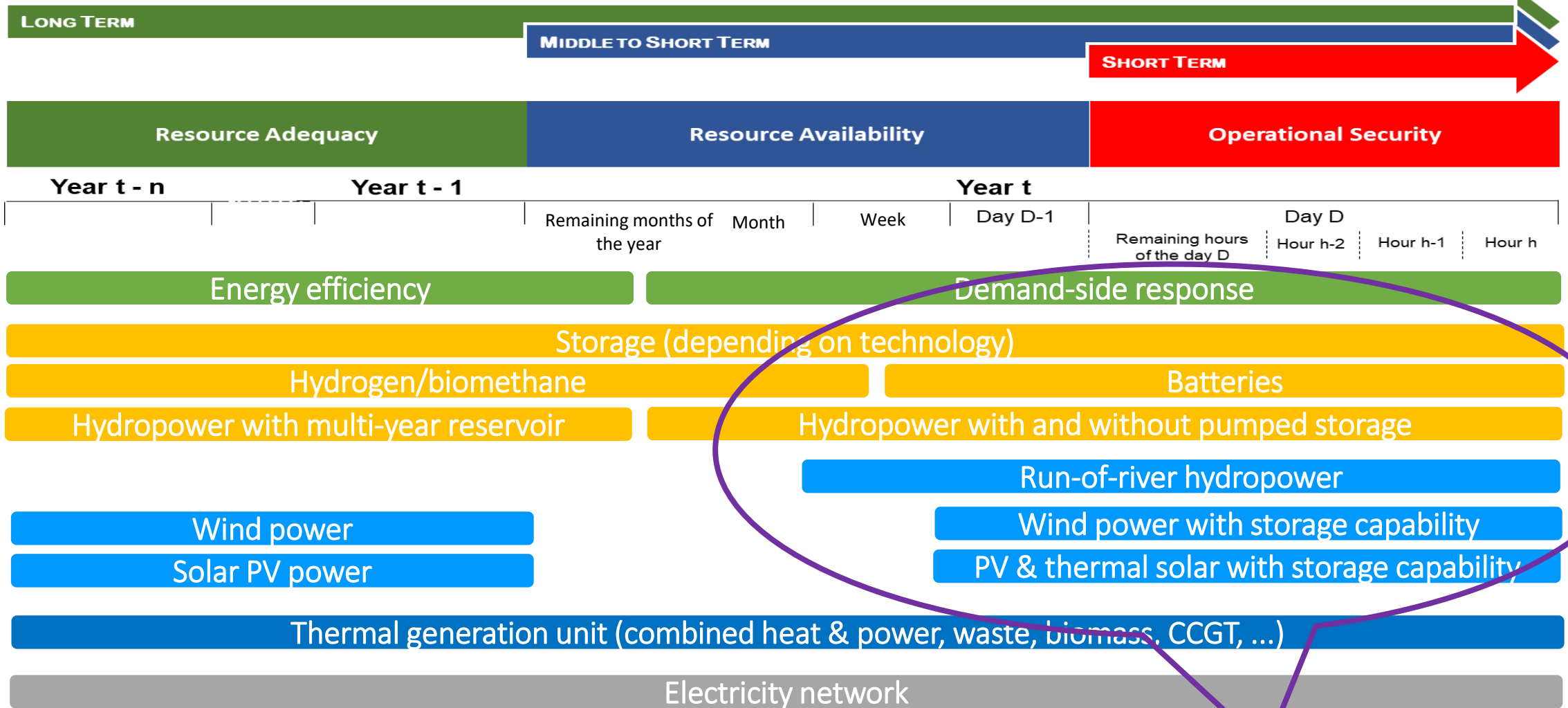
Fact: Solar and Wind are excellent tools to promote resource adequacy





Power generation resources and security of supply timeframes

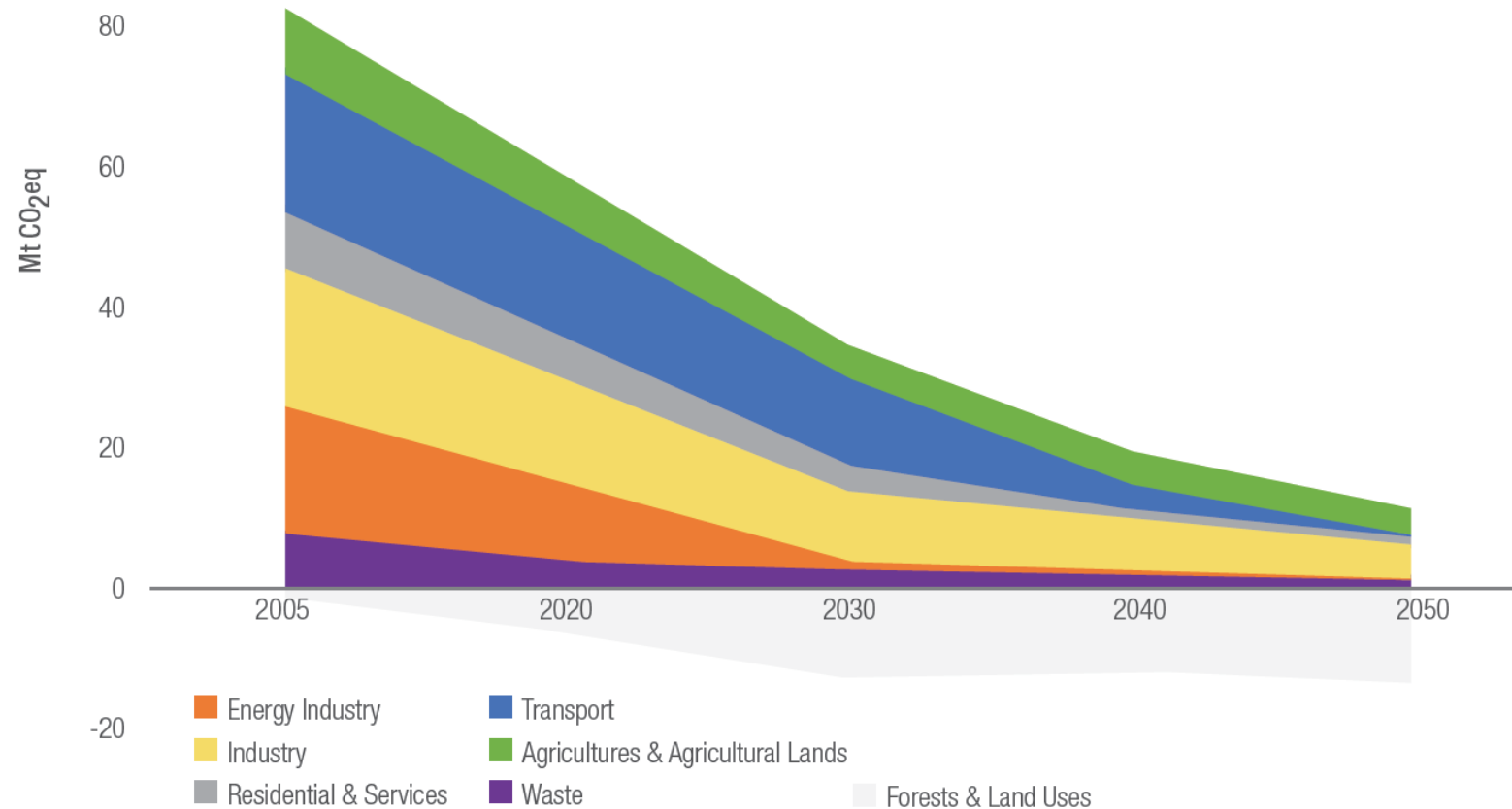
Security of Supply



New flexibility tools

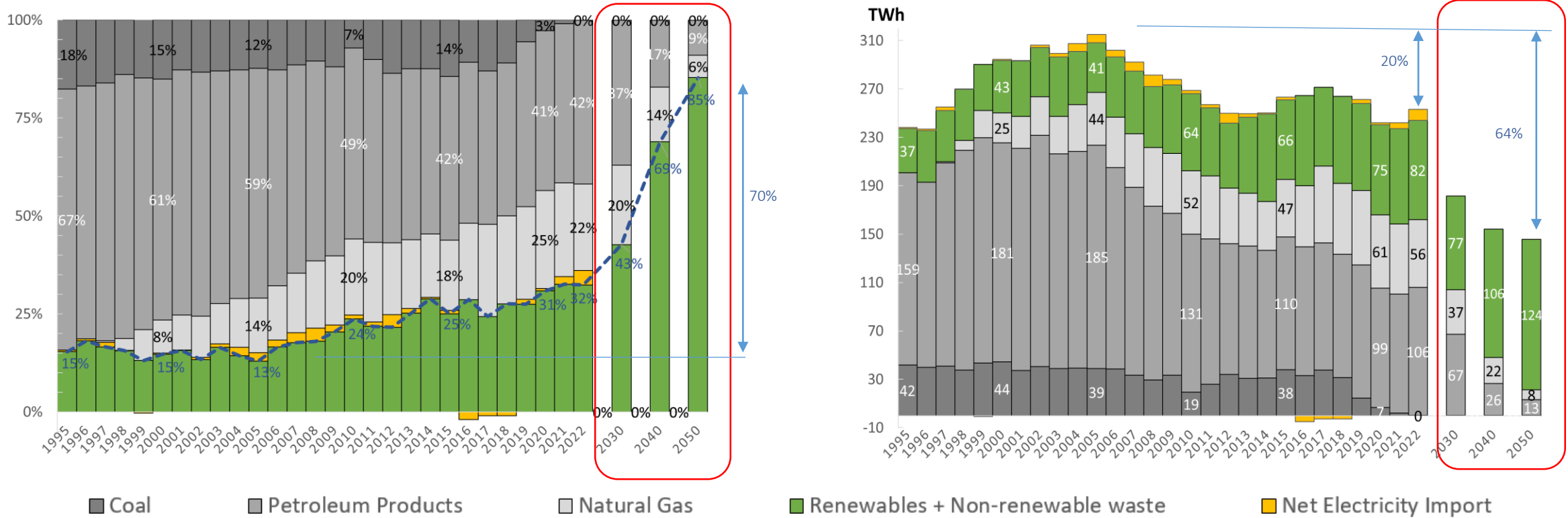
Contribution by sectors to the GHG emissions reduction trajectory by 2050 for Portugal

Data from the 2019 Portuguese *Roadmap for Carbon Neutrality 2050*



Portuguese Roadmap for energy transition to a carbon neutral society by 2050

Real and predicted evolution of primary energy consumption in Portugal

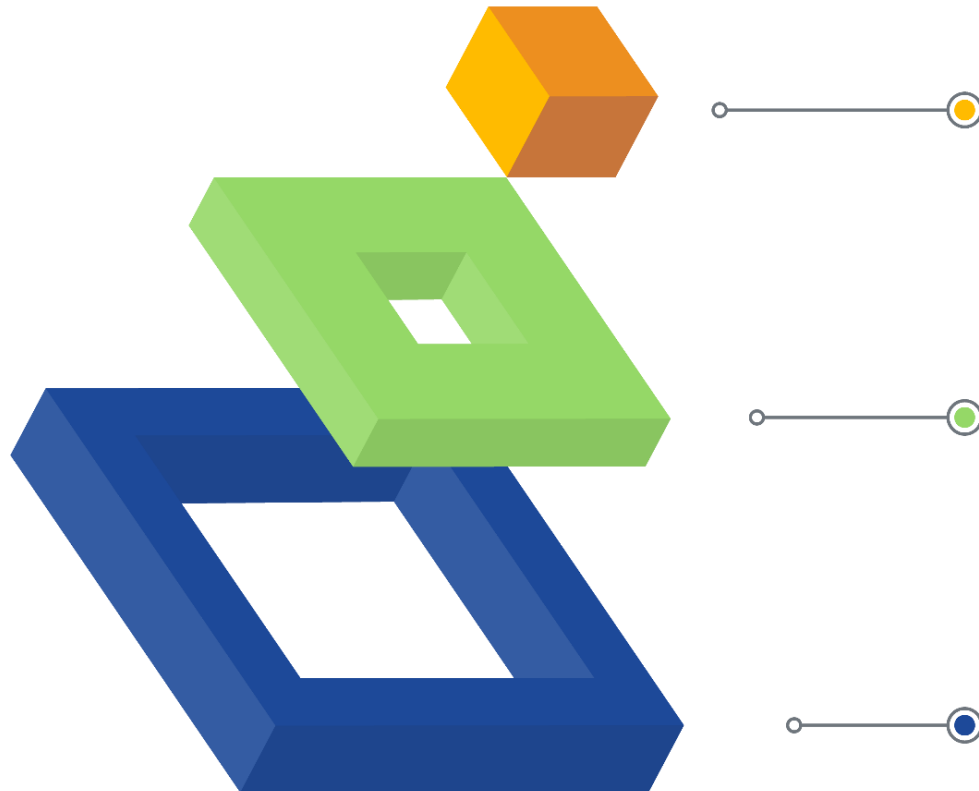


- In 2021, phase out of coal from the Portuguese energy mix
- Renewables will increase from the current 32% to 85% in 2050
- An increase of 40% on **energy efficiency** will reduce the overall primary energy consumption from the current 240 TWh to 145 TWh/year
- Energy dependence will reduce from current 66% to 15%



GLOBAL+LOCAL+CIRCULAR

GLOCAL



Energy system integration and a CIRCULAR energy economy

- Green Deal & H2 & RES gas
- System integration
- New actors, technologies and business models
- Carbon neutral society
- Energy efficiency

Local integration and a LOCAL energy economy

- Clean Energy Package
- Consumer empowerment
- Self-consumption
- Energy communities
- Peer-to-peer

Deepening of market integration and a GLOBAL energy economy

- 1^o, 2^o, 3^o EU Legislative Packages
- Liberalisation
- Unbundling
- Internal Energy Market
- New EU level bodies and codes



EDIFÍCIO RESTELO
Rua Dom Cristóvão da Gama, 1, 3º
1400-113 Lisboa
Portugal
Tel: +(351) 21 303 32 00
e-mail: erse@erse.pt
url: <http://www.erse.pt>

OBRIGADO!