

Session 2

Stakeholder views on current pathways and sustainable energy market outlooks



Key drivers

Within the Energy Sector

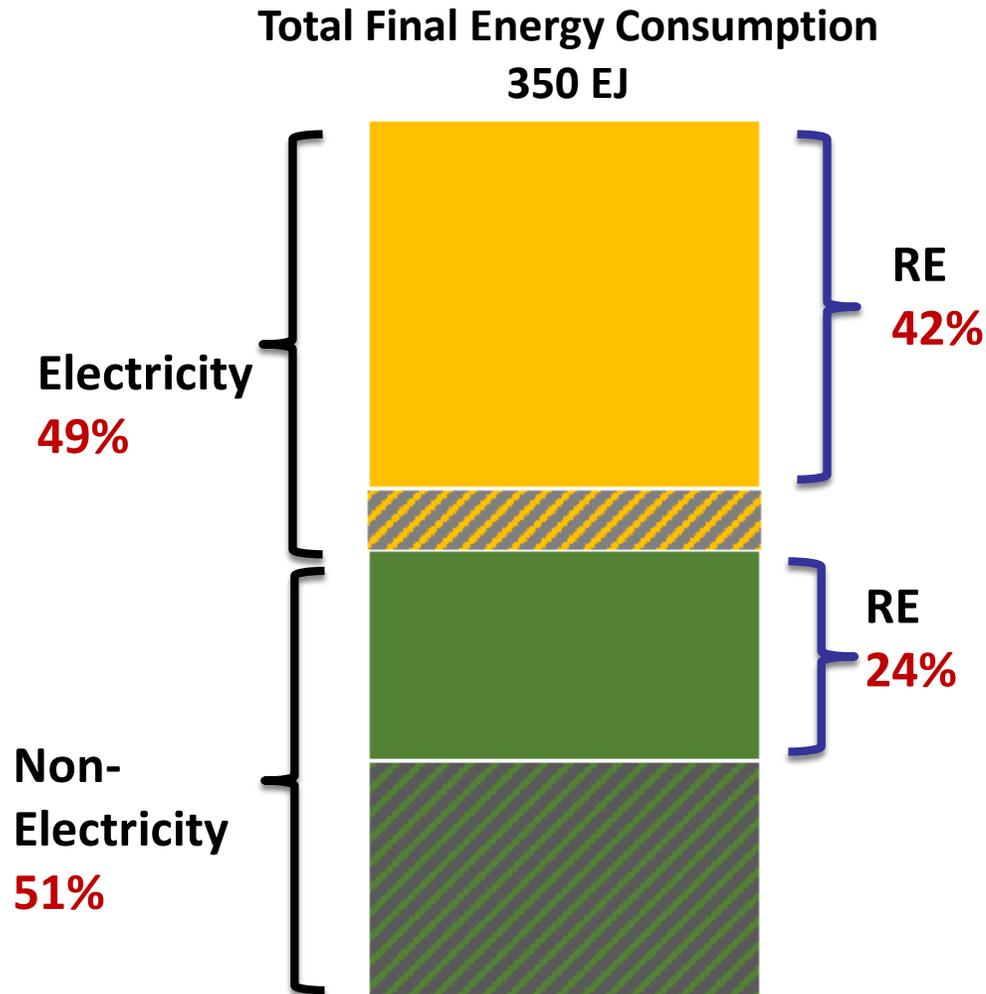
- RE Strong Business case
 - Policy frameworks
 - Dramatic cost reduction
- Policy imperatives
 - SDGs
 - Climate and environmental agenda (Paris agreement)

Around the Energy Sector

- Digitalization
- Electrification
- Decentralization

Move towards resilient economies

- Diversification of economic structure
- Diversification of energy supply



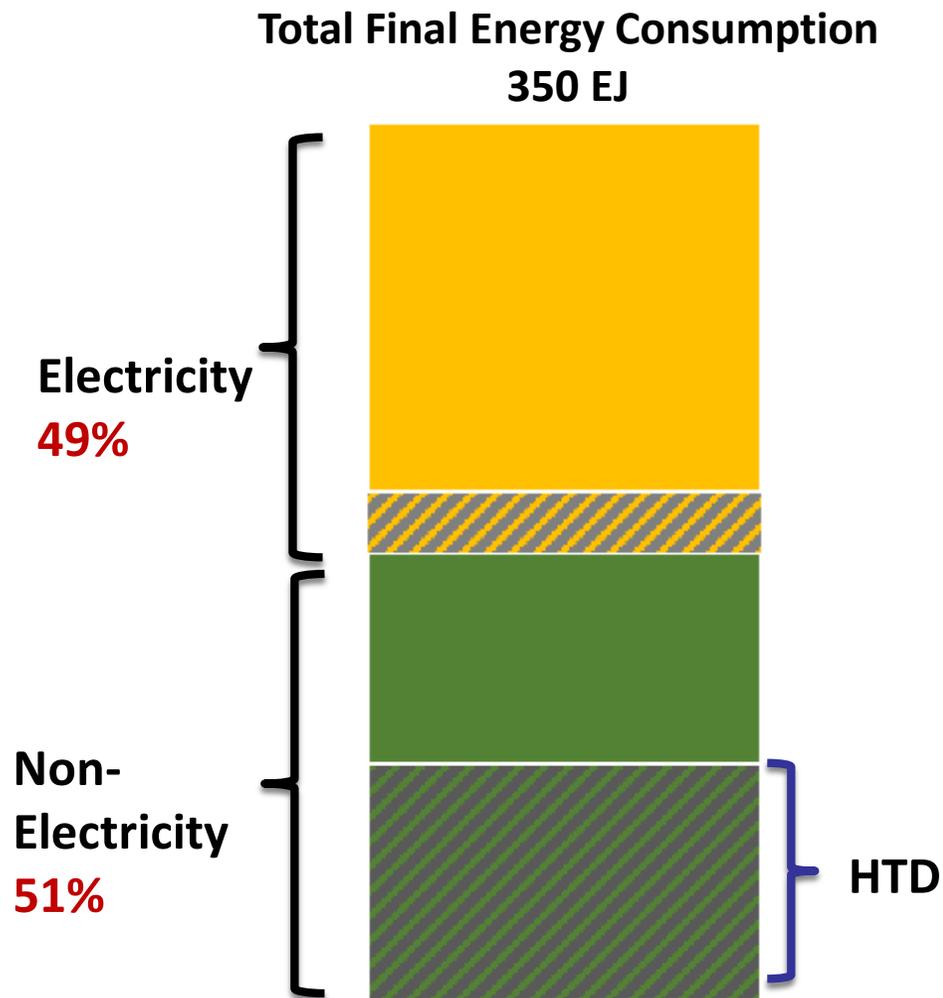
Electricity

- Supply: 86% from RE sources, including 60% from solar and wind
- Use: 16% for green hydrogen production, 9% for EV, 7% heat pumps

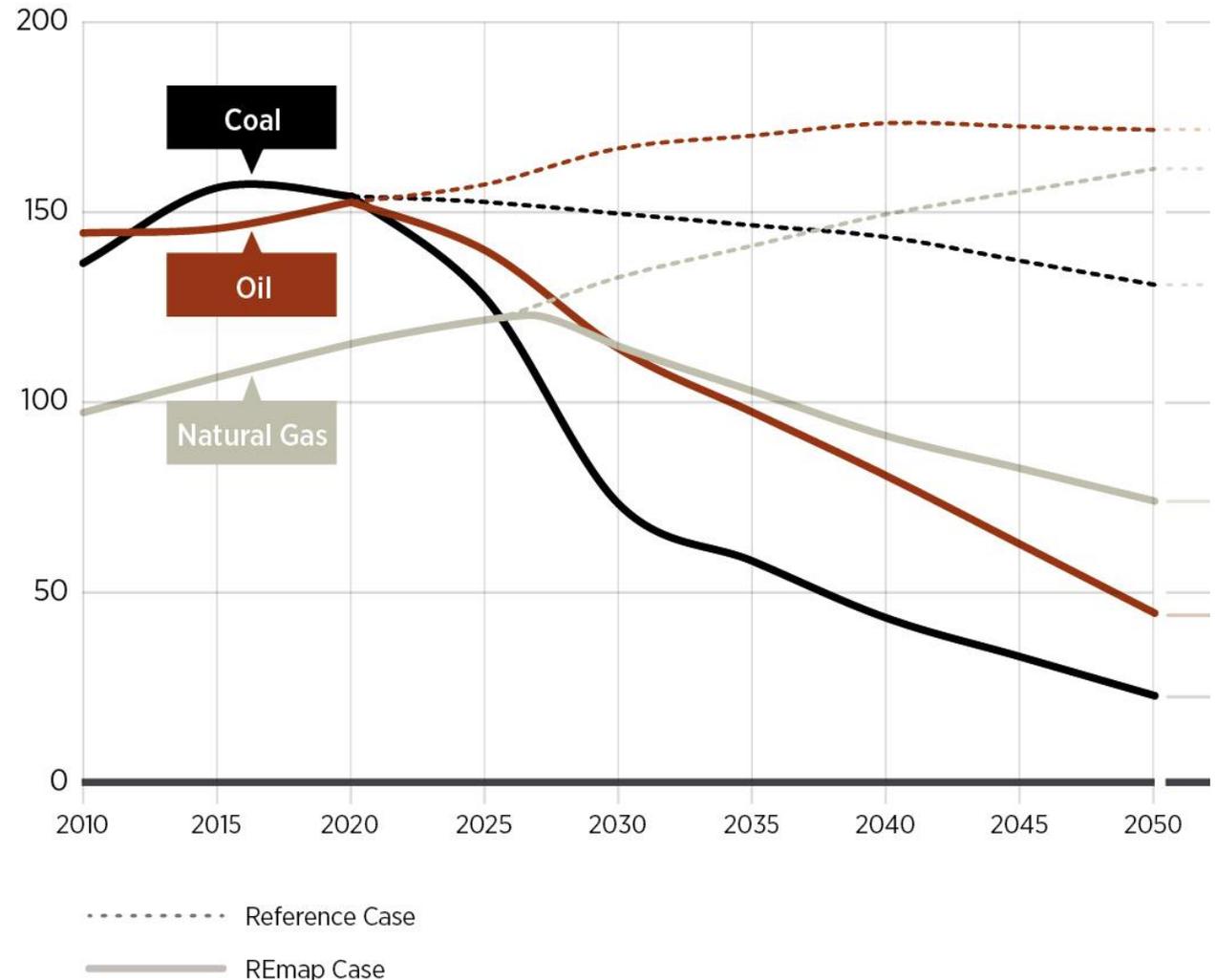
Non-electricity

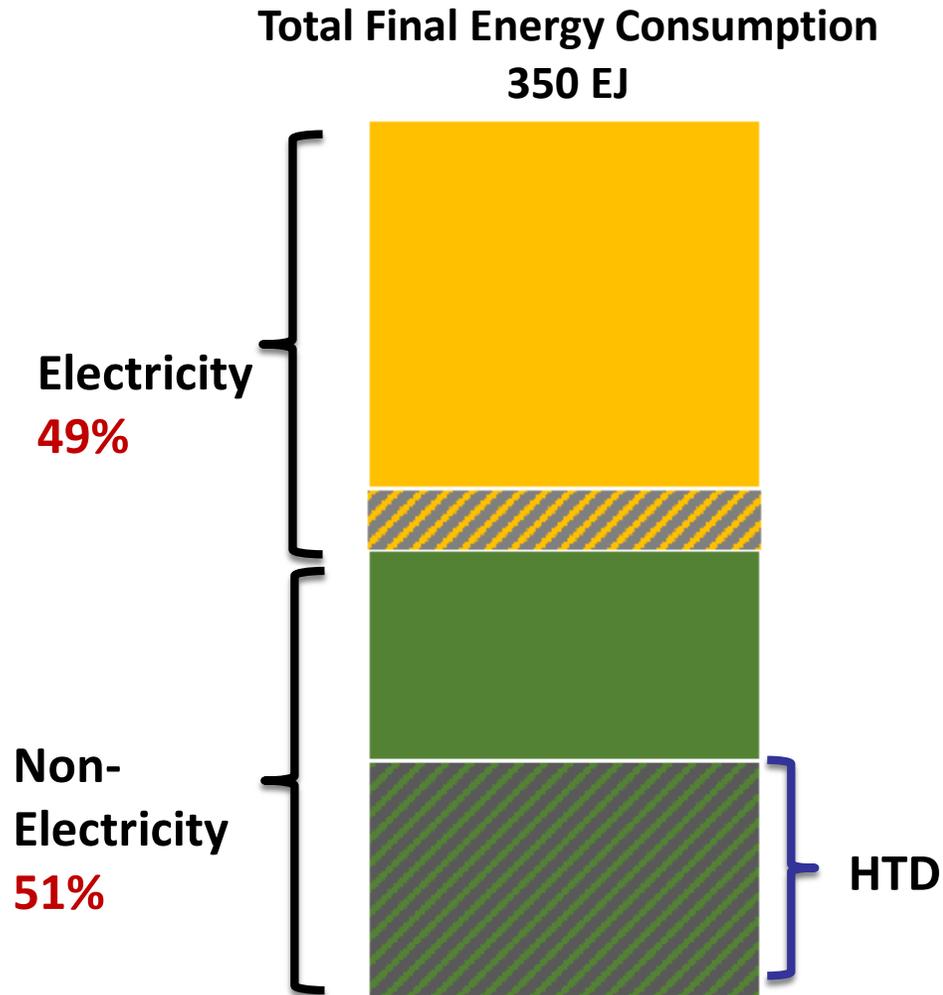
- 47% from RE sources, including 31% biofuels (16% industry, 10% transport and 4% transport), 9% District Heating, 7% solar thermal

Prospects for 2050 energy mix



Energy-related fossil fuel demand (EJ)





Hard to Decarbonize (HTD) sectors

Possible solutions include:

- Non-electricity – hydrogen, E-fuels, CCS, etc.

- What are the key drivers that define the long-term outlook for the energy sector?
- How significant would the electrification of the end-use sector be compared with IRENA's scenario for 2050?
- How can RE play a greater role in the industry, building and transport sector?
- How can a transformation into a knowledge-based economy be built into the transformation strategies of the energy sector?
- How can we better prepare for the infrastructure when we face great uncertainties on winning technologies?

IRENA 2nd International Forum

Long-term Energy Scenarios for the Clean Energy Transition

International gathering of experts who are either using or developing long-term energy scenarios to support policymaking and planning for the clean energy transition



A CAMPAIGN OF THE CLEAN ENERGY MINISTERIAL

Programme

- Electrification scenarios for a carbon-neutral energy system
- Incorporating economic and financial risks of the clean energy transition in LTES
- Representing systemic innovation in energy demand and consumer behaviour in LTES
- Stakeholder engagement in the LTES process for a just transition
- Exploring the global landscape of LTES narratives and assumptions
- Robust and resilient LTES building processes scenarios



25-27 March, 2020 Berlin