Council of the European Union
General Secretariat

Brussels, 17 January 2023

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MEETING DOCUMENT

From:	General Secretariat of the Council
To:	Working Party on Energy
Subject:	EU Hydrogen imports - presentation

Delegations will find in the annex the presentation on the EU Hydrogen imports.

European Commission

PUBLIC

EU Hydrogen imports

Energy Working Party

12 January 2023

EU Strategy Documents

- 8 July 2020: **The EU Hydrogen Strategy**
- 11 December 2020: **Council Conclusions**
  'Towards a hydrogen market for Europe'
- 25 January 2021: **Council Conclusions**
  'Delivering on the external dimension of the European Green Deal' (Climate and Energy Diplomacy)
- 8 March 2022: **The REPowerEU**
- 18 May 2022: **The REPowerEU Plan**:
  - ❖ **Hydrogen Accelerator**
  - ❖ **EU External Energy Strategy**

EU Hydrogen partnerships

Strategic natural gas suppliers/ decarbonisation partners:

- ✓ Morocco – *MoU onGreen Partnership, signed on 18 October 2022*
- ✓ Egypt – *MoU on Renewable Hydrogen, signed on 16 November 2022*
- ❖ Ukraine – *MoU on Renewable Gases (submitted to the Council)*
- ❖ Norway – *Green Alliance (under preparation)*

Raw material suppliers:

***MoUs on Raw Materials and Renewable Hydrogen**:*

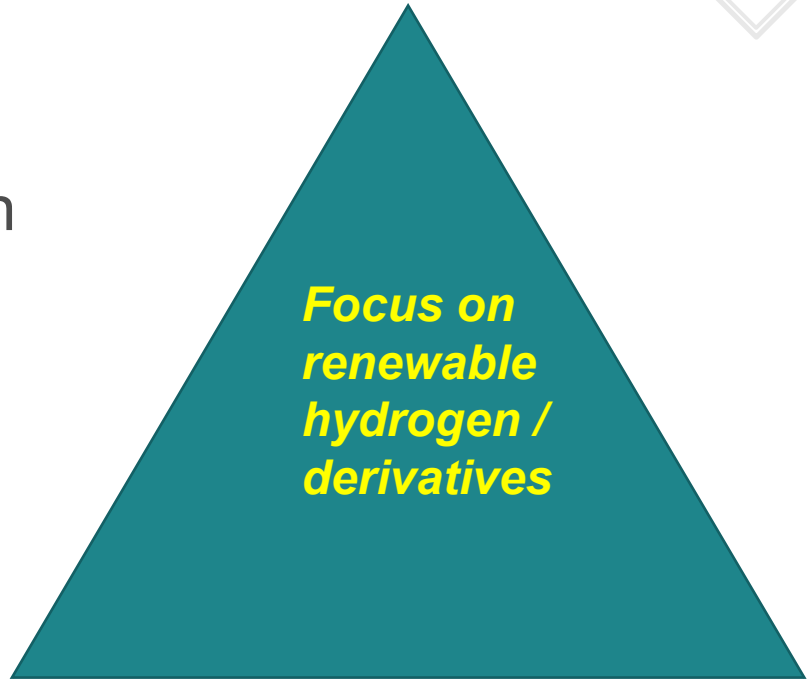
- ✓ Kazakhstan – *signed on 7 November 2022*
- ✓ Namibia – *signed on 8 November 2022*
- ❖ South Africa – *under preparation*

Hydrogen importer, technology partner:

- ✓ Japan – *MoU on Hydrogen cooperation signed on 2 December 2022*

Priorities for international cooperation

Support decarbonisation and transition of energy systems in partner countries

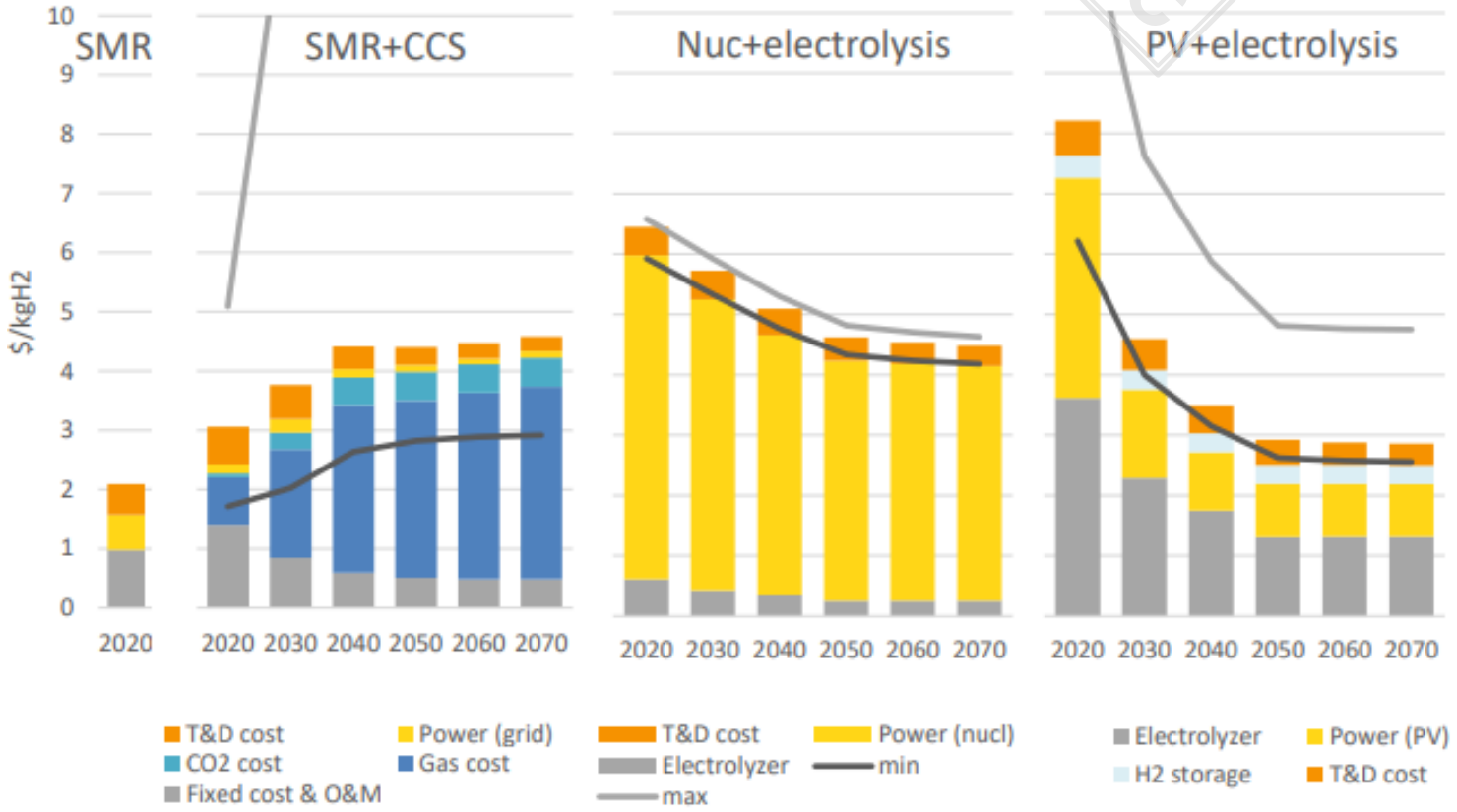


Set up framework for functioning and global rules-based hydrogen market, set global standards

Reduce EU supply uncertainty, develop industrial supply chains at competitive prices

JRC hydrogen production cost assessment

Figure 29. Hydrogen production costs for selected technologies, global mean, minimum and maximum, 1.5°C

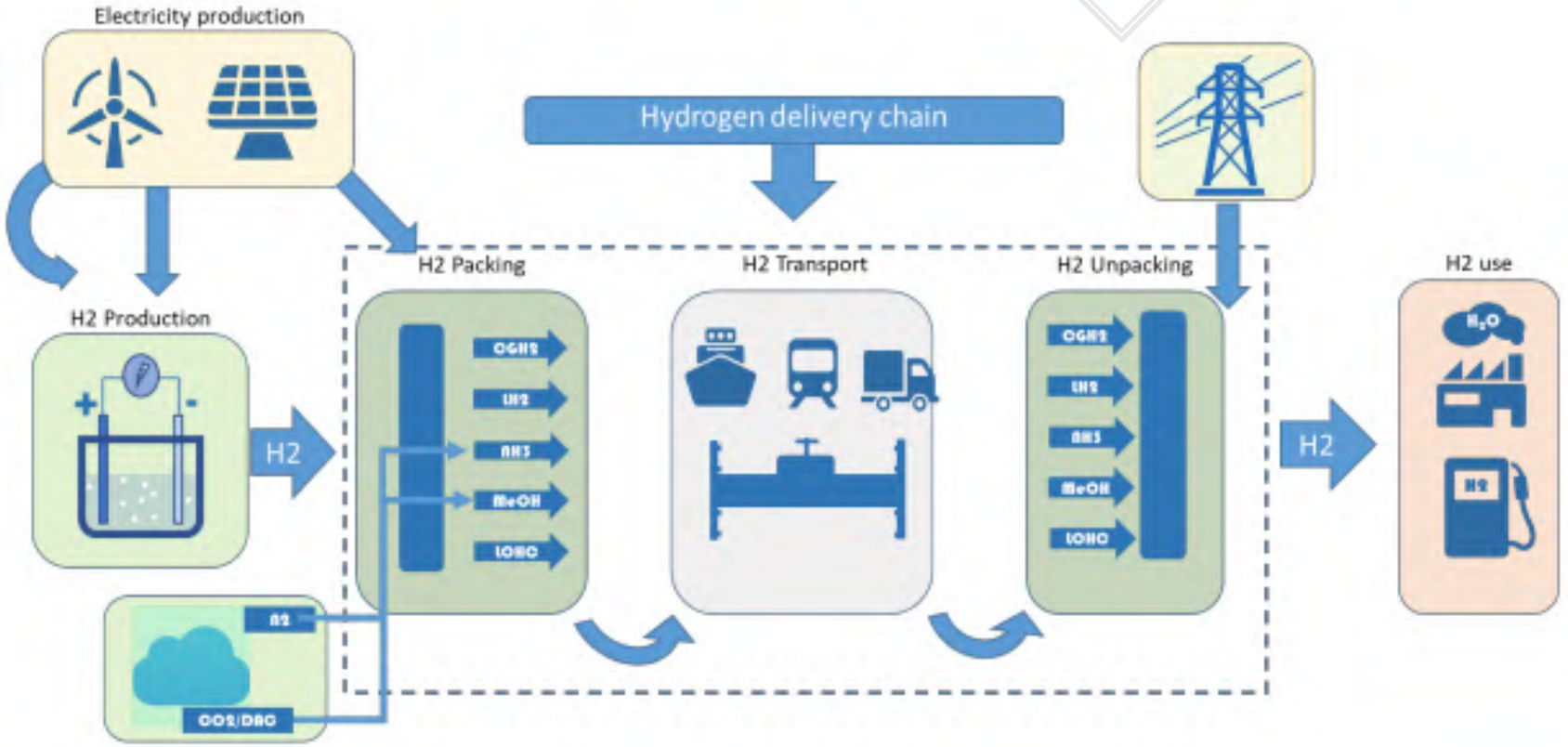


Source: JRC Global Energy and Climate Outlook 2022: Energy trade in a decarbonised world, 2022

European Commission

JRC hydrogen delivery cost assessment (I)

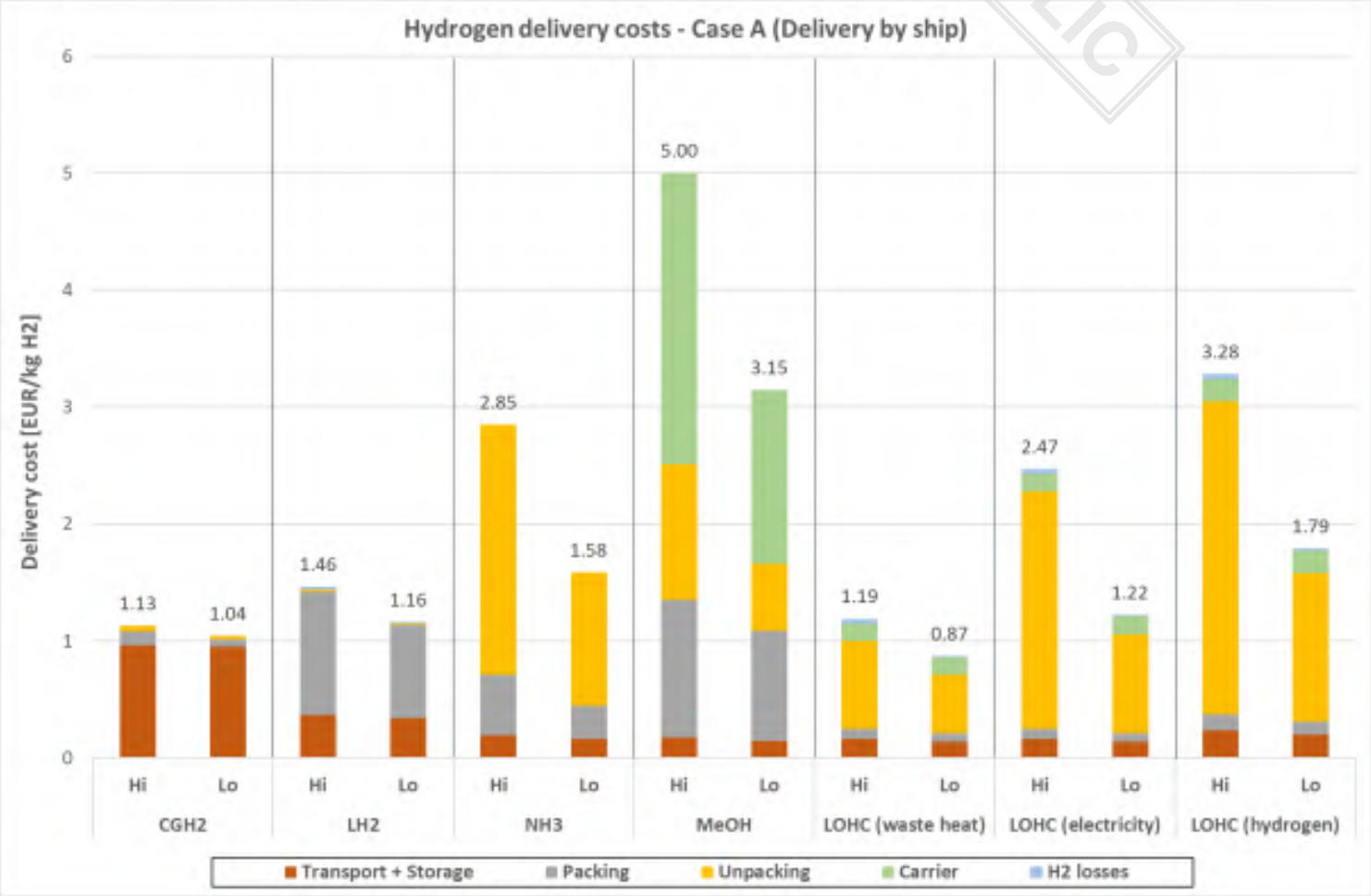
Figure 1 depicts the delivery chain elements considered in our study. Our analysis refers only to the elements within the dotted line.



Source: JRC, 2022

JRC hydrogen delivery cost assessment (II)

Figure 7 Hydrogen delivery costs for Case A (delivery by ship). High and Low electricity prices for each carrier.



Source: Assessment of Hydrogen Delivery Options Feasibility of Transport of Green Hydrogen within Europe, 2022

European Commission

Potential hydrogen corridors

European Commission

Council Conclusions “Towards a hydrogen market for Europe’, 11 December 2020

4.6 **To assess infrastructure options taking account of different deployment patterns with regard to the efficient and affordable supply with domestic and, where needed, imported hydrogen and its derivatives and the impact on the design of competition and regulatory frameworks.**

4.16 **To make use of the potential for domestic hydrogen production, while further deepening international cooperation on hydrogen, to strengthen efforts to produce and enable import of renewable hydrogen, especially where partners have high renewable-energy potentials and thereby addressing the entire value chain and aiming for the creation of a global, competitive, liquid and sustainable hydrogen market while reducing import dependencies.**

Council Conclusions ‘Delivering on the external dimension of the European Green Deal’ (Climate and Energy Diplomacy), 21.01.2021

“…The Council also calls for further deepening international cooperation on hydrogen, to strengthen efforts to produce and enable import of renewable hydrogen in particular.”

Thank you!