



Green Hydrogen -Youth Perspective

Lukáš Kout
2024

Note from UNECE secretariat:

- *The author and the speaker of this presentation confirm that they have authorization to use all photos and visual elements.*
- *The material is either copyright-free or the author / speaker holds the necessary copyright.*
- *The UNECE will remove any material from its events and supporting websites if there is unlawful use of copyrighted material.*
- *The author / speaker takes responsibility for any infringements on copyright and holds the UNECE harmless to this effect.*








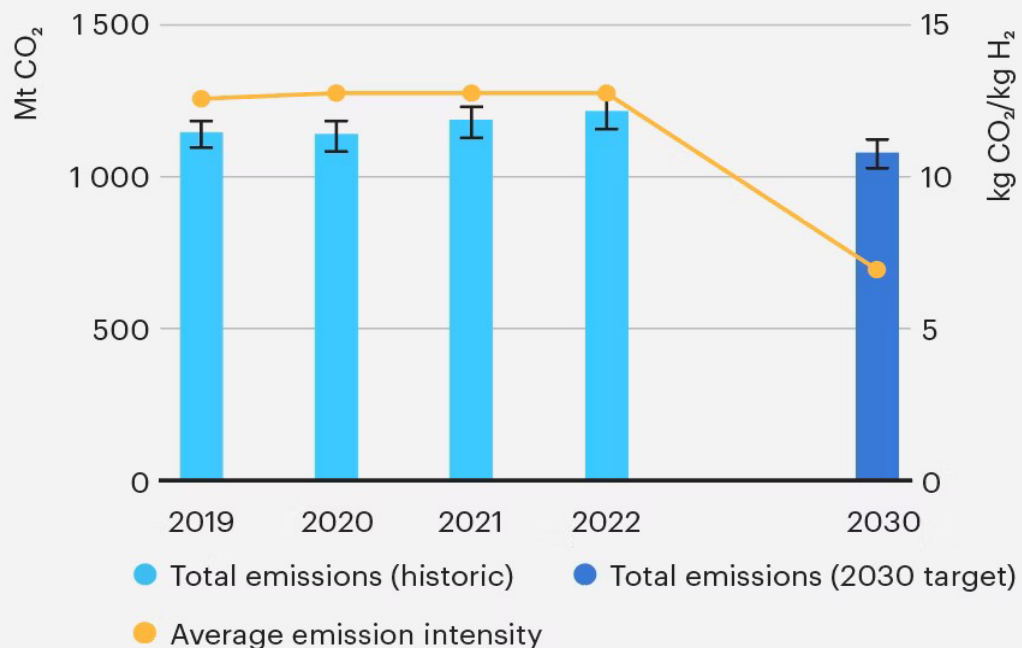
AVIATION INDUSTRY IN 2022 =
almost 800 Mt CO₂

(Kim & Teter, *Aviation* 2023)

HYDROGEN PRODUCTION
(fossil based hydrogen) = 
1 100 – 1 300 Mt CO₂

(Source: World Trade Organization)

Emissions





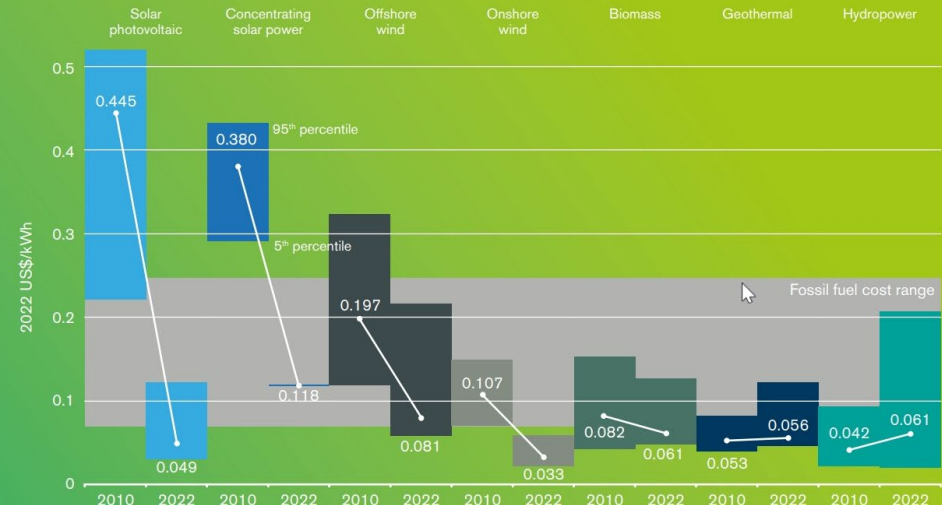
2010-2022

- **Photovoltaic solar power cost:**
decreased by 90%
- **Onshore wind generation cost:**
decreased by 69%
- **Offshore wind generation cost:**
decreased by 59%

Source: (World Trade Organization)

FIGURE 3
Global levelized cost* of electricity from newly commissioned utility-scale renewable power technologies

Source: IRENA (2023b).



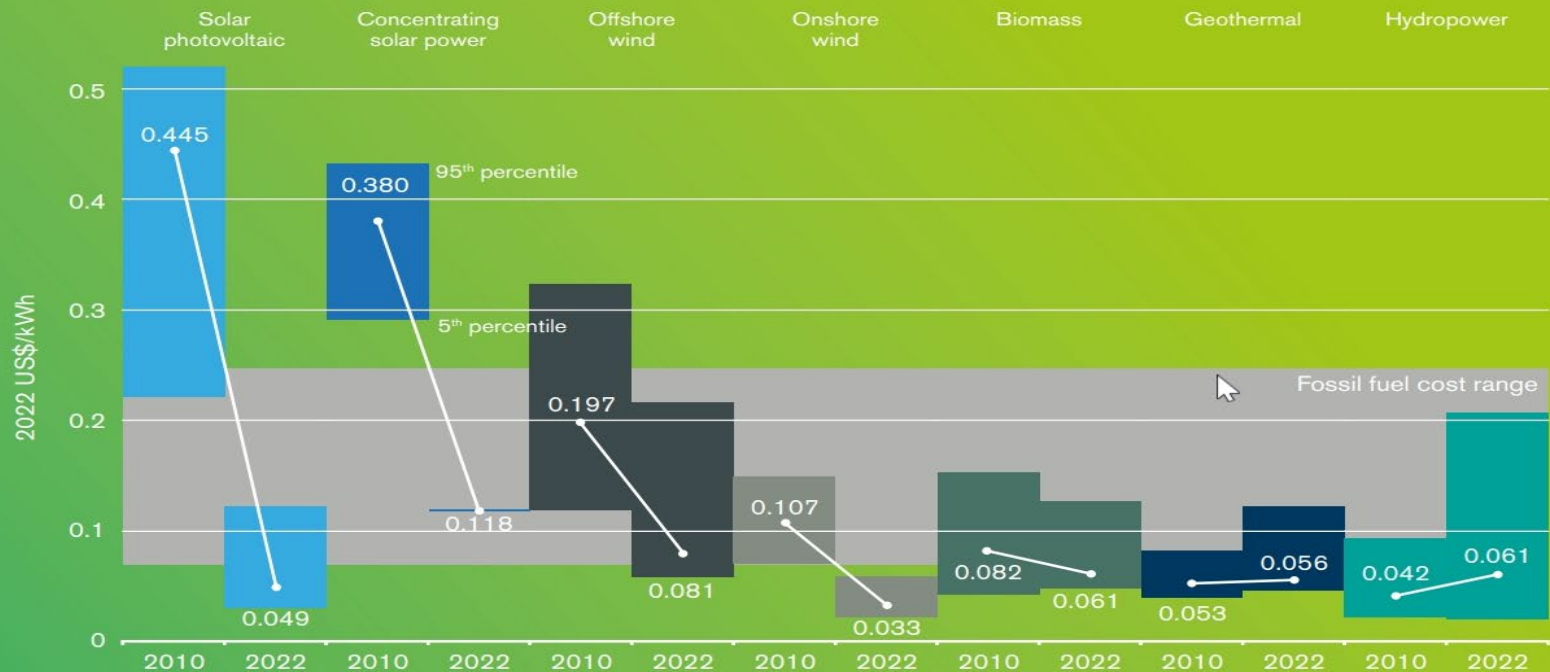
Note: kWh = Kilowatt-hour, i.e., a measure of the quantity of energy delivered by one kilowatt of power for a duration of one hour.

* The levelized cost of electricity is the ratio of lifetime costs to lifetime electricity production of a power generator, both of which are discounted back to a common year using a discount rate that reflects the cost of capital.

FIGURE 3

Global levelized cost* of electricity from newly commissioned utility-scale renewable power technologies

Source: IRENA (2023b).



Note: kWh = Kilowatt-hour, i.e., a measure of the quantity of energy delivered by one kilowatt of power for a duration of one hour.

* The levelized cost of electricity is the ratio of lifetime costs to lifetime electricity production of a power generator, both of which are discounted back to a common year using a discount rate that reflects the cost of capital.



***It represents a human right to have a clean, healthy
and sustainable environment***

(UN Human Rights Council resolution 48/13)



Thank you for your attention!

Bibliography

- **Slide 4 (Aviation)**: Kim, H. and Teter, J. (2023) *Aviation*, IEA. Available at: <https://www.iea.org/energy-system/transport/aviation> (Accessed: 24 March 2024).
- **Slide 4 (Emissions of Hydrogen production)**: International Trade and Green Hydrogen – Supporting the global transition to a low-carbon economy, World Trade Organization [page 10]
- **Slide 4 (Graph)**: IEA, IRENA & UN Climate Change High-Level Champions (2023), Breakthrough Agenda Report 2023, IEA, Paris <https://www.iea.org/reports/breakthrough-agenda-report-2023>, Licence: CC BY 4.0
- **Slide 5/6 (Statistics + Graph)**: International Trade and Green Hydrogen – Supporting the global transition to a low-carbon economy, World Trade Organization [page 12]

