

Deployment of the hydrogen ecosystem – a view from ECPs

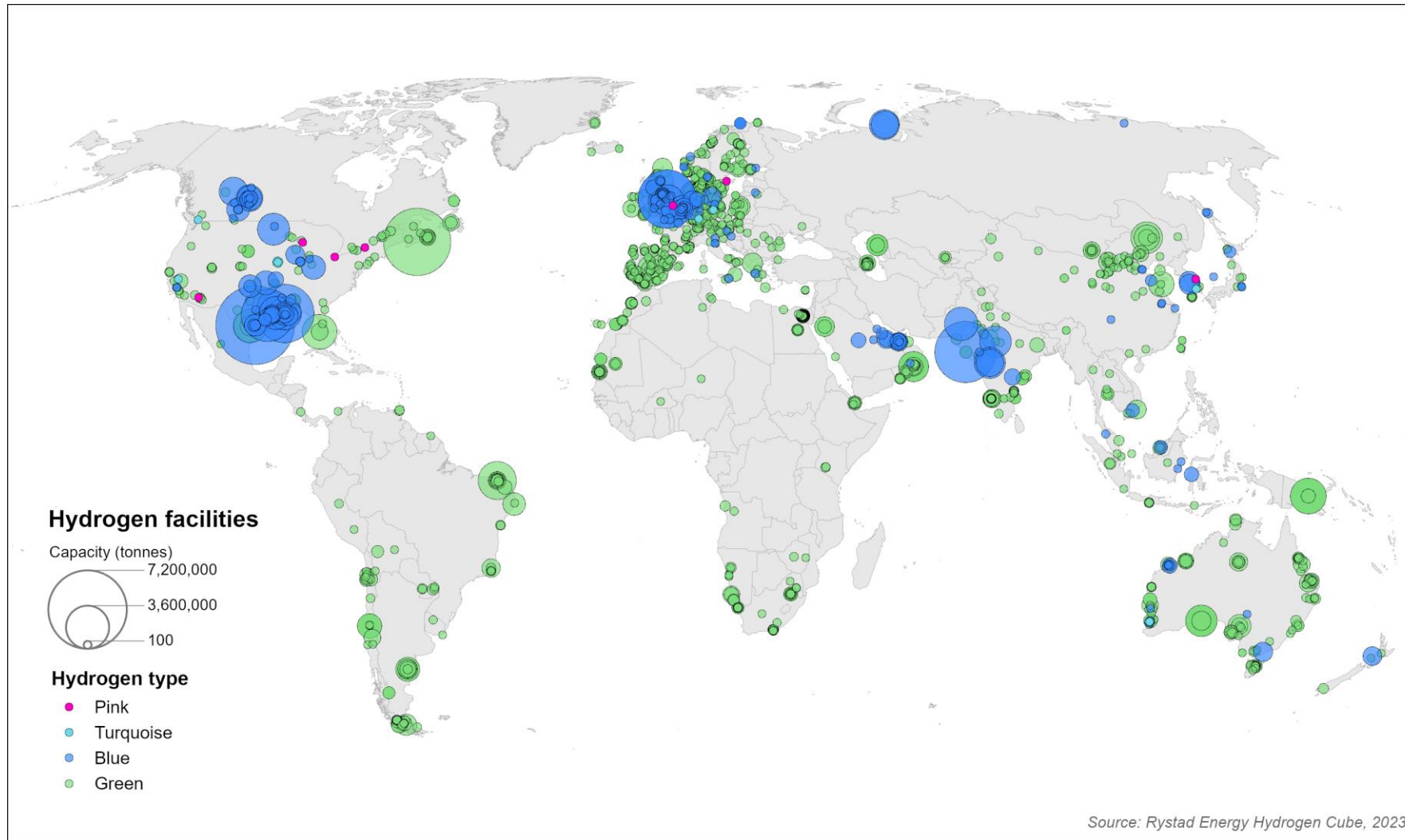
Introduction to panel discussion

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Green hydrogen continues to see strong announcement rate and capacity for the last few years

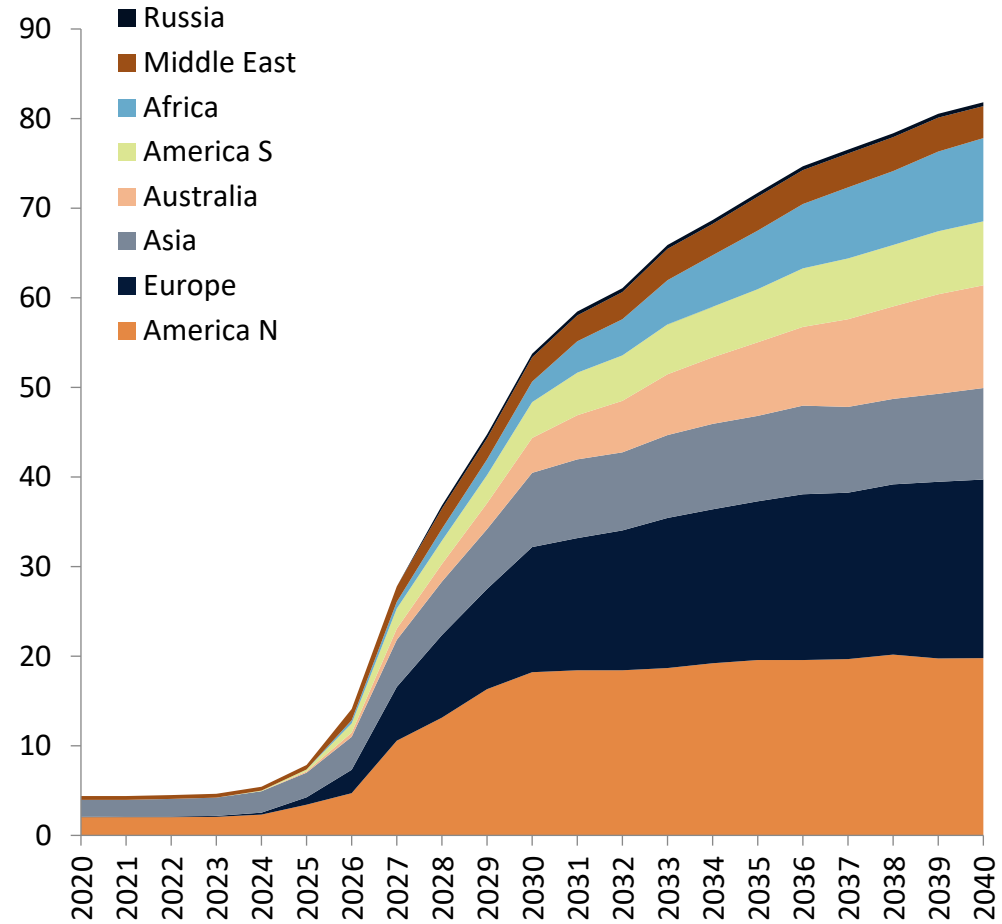
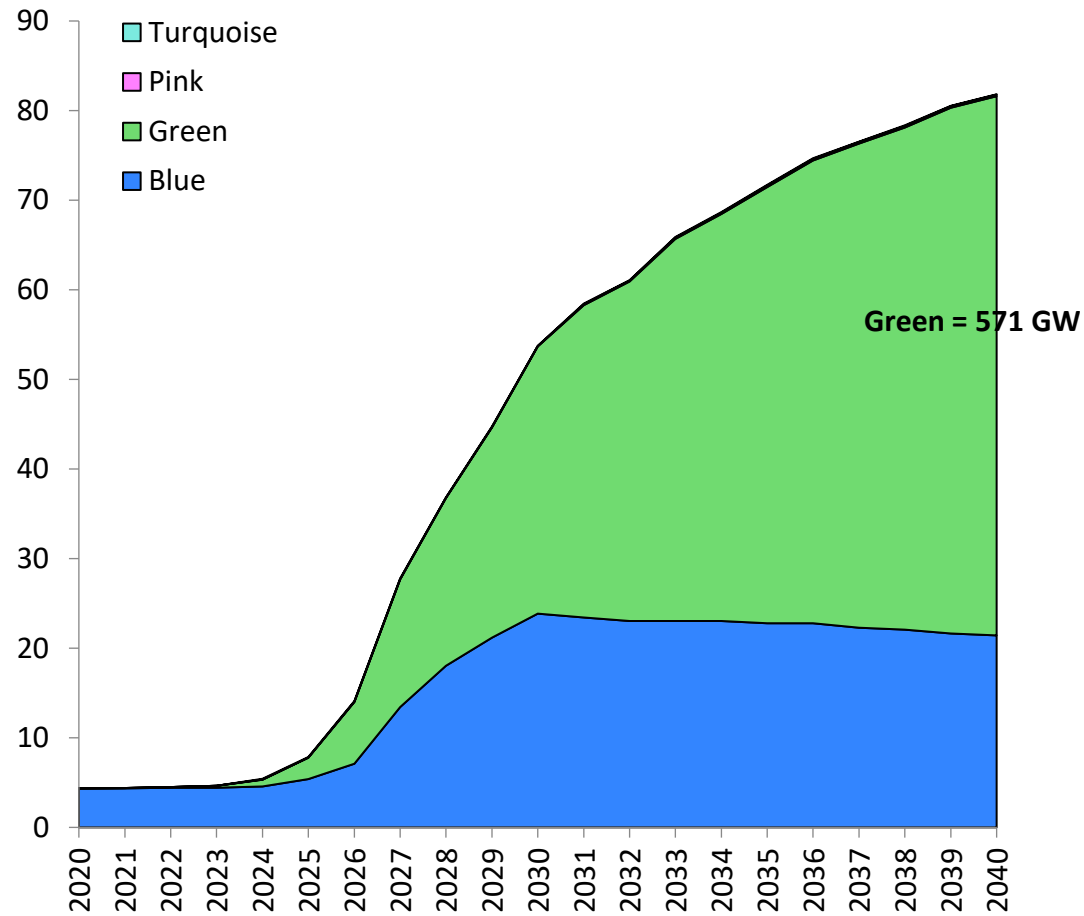


Source: Rystad Energy Hydrogen Solution

Clean hydrogen pipeline close to 90 million tonnes

Overall clean hydrogen production pipeline by type (left) and by continent (right)

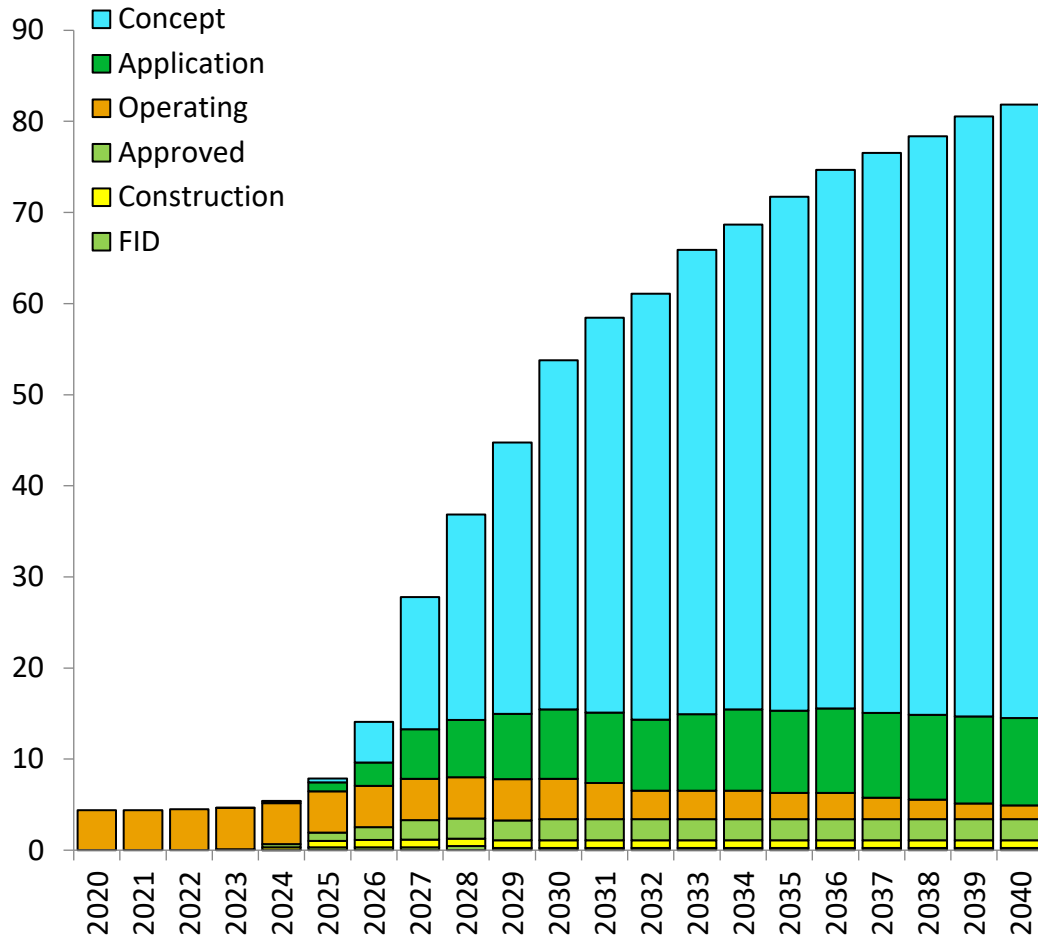
Million tonnes (Mt)



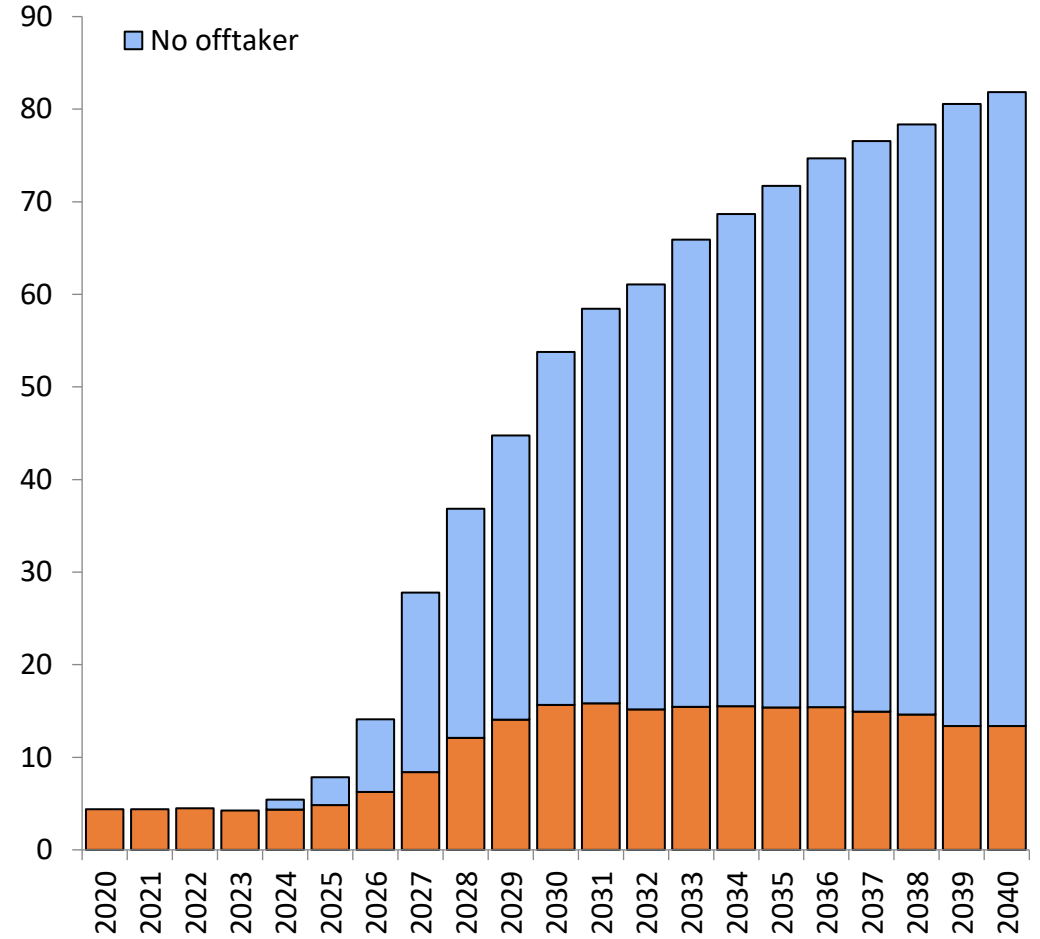
Source: Rystad Energy Hydrogen Solution

More than 80% of clean hydrogen capacity in 2040 is in concept phase and has no offtakers

Clean hydrogen capacity by status
Mtonnes



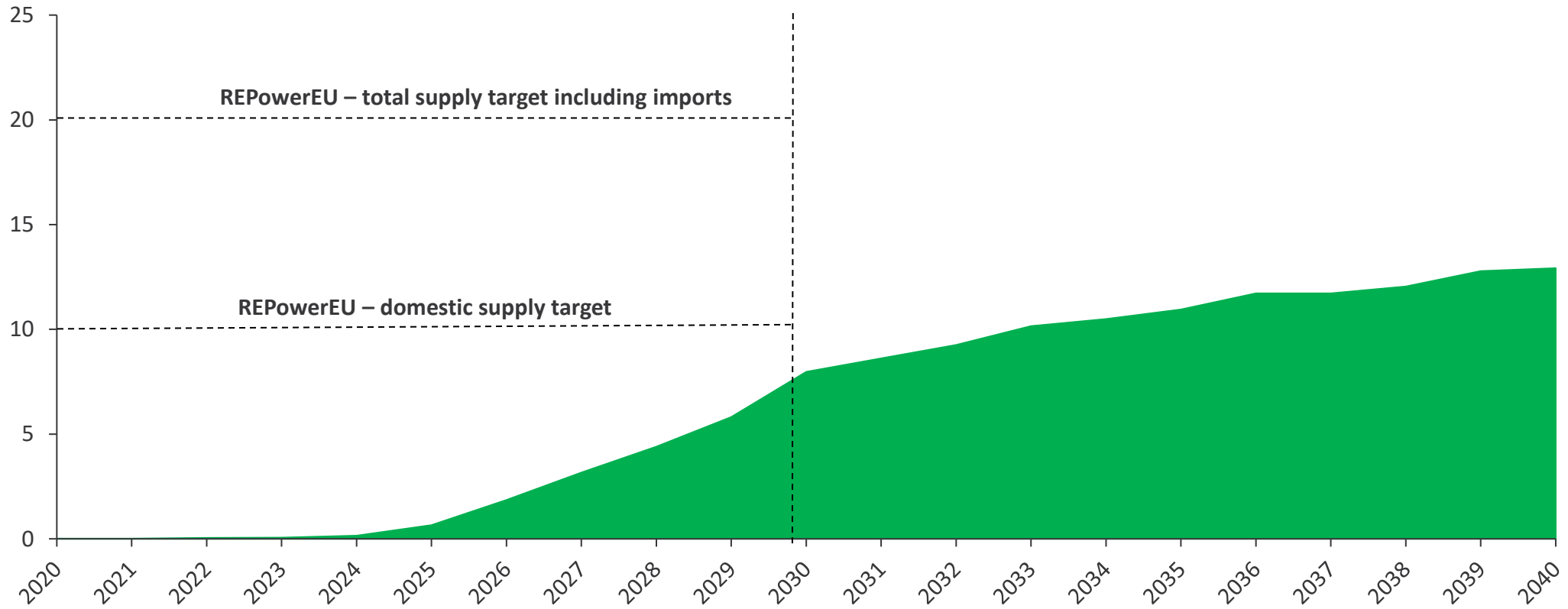
Clean hydrogen capacity by offtaker
Mtonnes



Source: Rystad Energy Hydrogen Solution

EU clean hydrogen pipeline getting closer to target in 2030

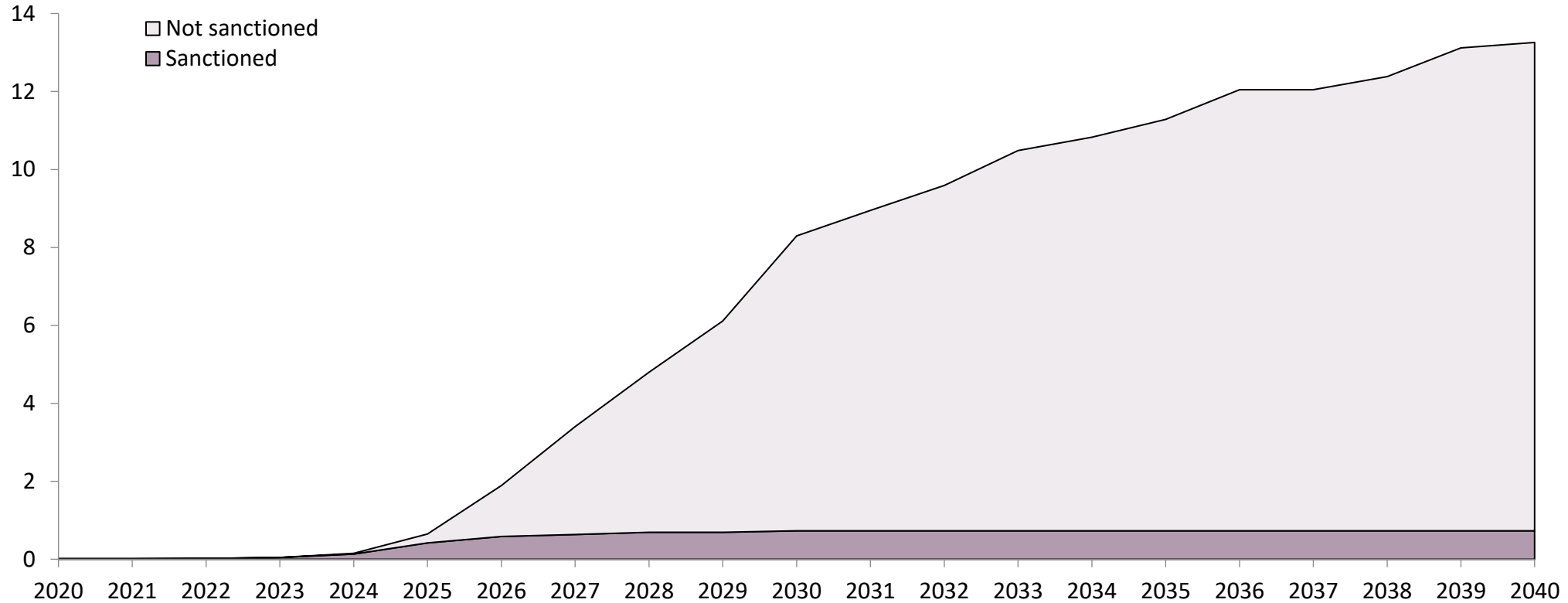
EU's domestic green hydrogen supply outlook
Million tonnes



Source: Rystad Energy Hydrogen Solution

...but EU clean hydrogen pipeline requires a big step up in sanctioning of new projects

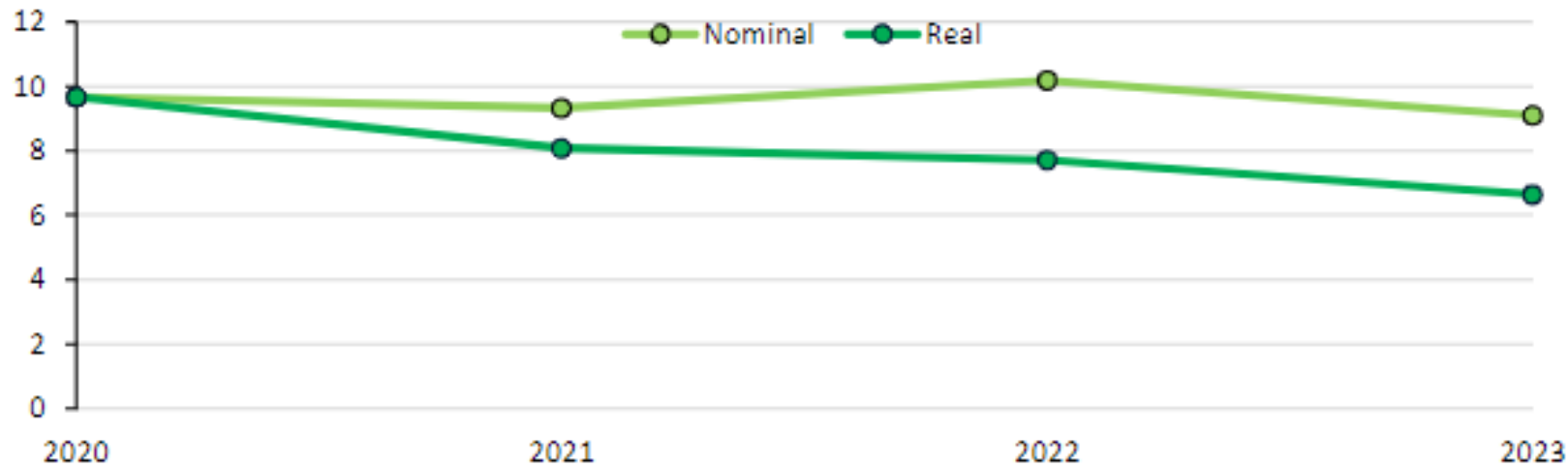
EU's domestic green hydrogen supply outlook
Million tonnes



Source: Rystad Energy Hydrogen Solution

Green hydrogen cost not decreasing as fast as was anticipated a few years ago due to inflation of materials

Average levelized cost of hydrogen from onshore wind electrolysis in Germany
USD per kg



* 100 MW electrolyzer using PEM, connected to dedicated onshore wind with no grid connection, discount rate at 8%

Source: Rystad Energy Hydrogen Solution