

Timmermans Recovery Plan for Ukraine

Ukraine has been attacked by its neighbour Russia. It needs a recovery plan that can build up the most modern and sustainable energy system in Europe. As many parts of this plan will be climate neutral, zero emission and based on renewable and clean technology the close cooperation between EU and Ukraine is adamant. The hydrogen sector in Europe and Ukraine would propose the following "Timmermans Recovery Plan" to be discussed and implemented by the "EU Ukraine Forum for Hydrogen and Biomethane":

1. Implementation is key

Whereas there are several recovery plans discussed in Ukraine the most important aspect will be the implementation thereof. The Timmermans Recovery Plan aims at bringing enterprises of all sizes together in order to organise a matchmaking between existing industries and to sign an implementation agenda.

2. Renewables matter

Whereas a solar infrastructure of approximately 7 GW has been already installed some 50% of it has been destroyed during the war. It will be of utmost importance to restructure this and to scale it up until 2030 to 15 or even 20 GW. The wind infrastructure which has reached some 1.2 GW already should be ramped up in parallel up to 5 or even 8 GW.

3. Joining the EU Electrolyser Partnership

Renewables will be the most important basis for the production of hydrogen. Together with the partnership of the electrolyser industries in Europe a concrete master plan will be developed to ramp up installed capacity in Ukraine according to the needs.

4. Pipelines via the Central European H2 Corridor initiative

Ukraine is a very promising supply area of hydrogen and it's well connected to Europe by its large natural gas pipeline system that can be repurposed to transport hydrogen to central Europe. The initiative will create a hydrogen highway and Ukraine will be an integral part of it.

5. Germany expected to sign an off-take guarantee

Ukraine is connected via the existing gas grids also to the most important energy markets in Europe. The German government has nationalised important resellers of natural gas that can be strategic partners in signing of take agreements to create market security.

6. Reduced iron ore as a strategic product for the EU

Ukraine possess substantial natural reserves of iron ore which are concentrated in central southern and eastern regions. The Ukrainian steel production could switch to the DRI technology using hydrogen to reduce iron ore. This would contribute to the massive decarbonisation of the European steel production and would create immediate value added also by exporting reduced pellets to be specialised in Europe.

7. Ammonia as H2 carrier and as a commodity

Ukraine is equipped with a robust infrastructure for ammonia which was used for Russian production beforehand. 5 million tons of ammonia could be produced directly in Ukraine whereas the existing infrastructure could help to transport ammonia to Odessa and to ship it via the Black Sea or/and the Danube. Either as H2 carrier or as a feedstock for fertiliser and alike. Methanol could be produced up to 50.000 tons.

8. Clean H2 from nuclear sources

The vast possibilities of Ukrainian nuclear electricity production could contribute to lowering the cost of clean hydrogen production to a high extent. Some 30% off the overall capacity could be switched to direct hydrogen production using 2 - 4 GW of electricity for these new upcoming markets.

9. Biomethane for direct use or for H2 production

Ukraine has traditionally been one of the biggest food producers globally. As the export situation has been impacted negatively by the war produced crops cannot be shipped to markets. A transition solution would be the use for the biogas and biomethane production to be directly fed into existing pipelines. The amount of 10 billion m³ is feasible. This could also be a source for Hydrogen using CCS or pyrolysis technology in both cases contributing to reduce CO₂ from the atmosphere.