



B E T

ENERGY. THINKING AHEAD

Impulse Paper

Further development of the H2Global funding mechanism

April 18th, 2023 | Brussels

On behalf of E.ON Hydrogen GmbH



e.on

INHALT

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INTRODUCTION

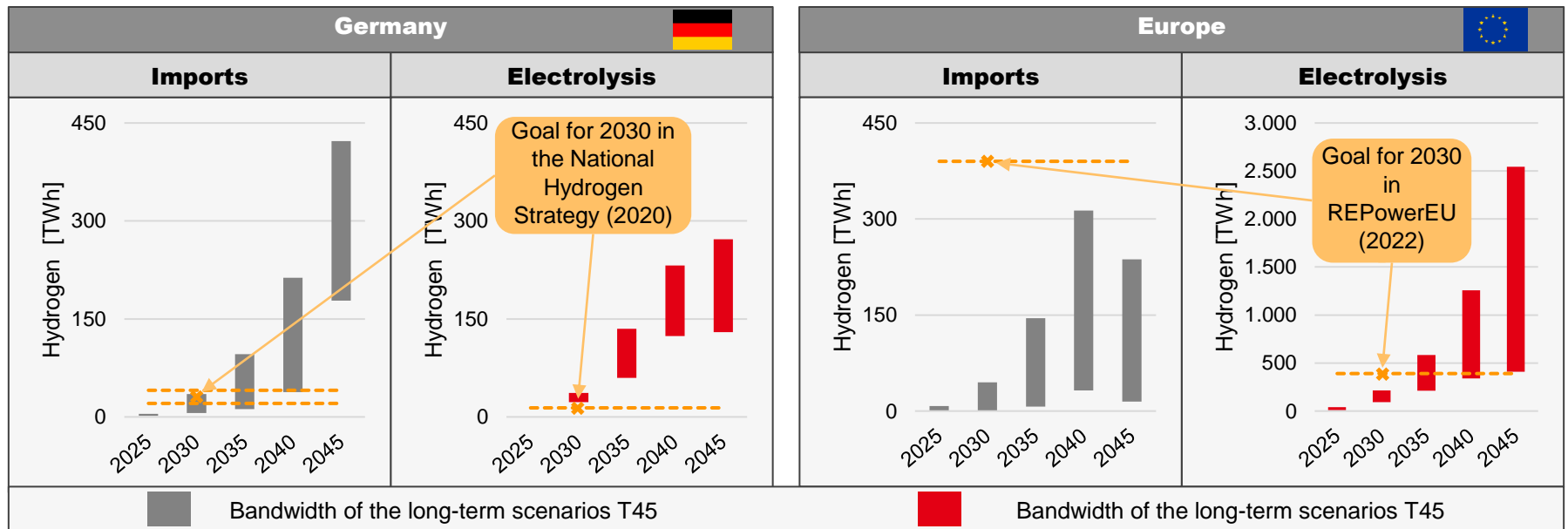
The presented paper gives impulses for the further development of H2Global since there is a strong demand for a faster hydrogen ramp-up which cannot be fully covered by the existing mechanism

Introduction to the Impulse Paper



Key question of the impulse paper:

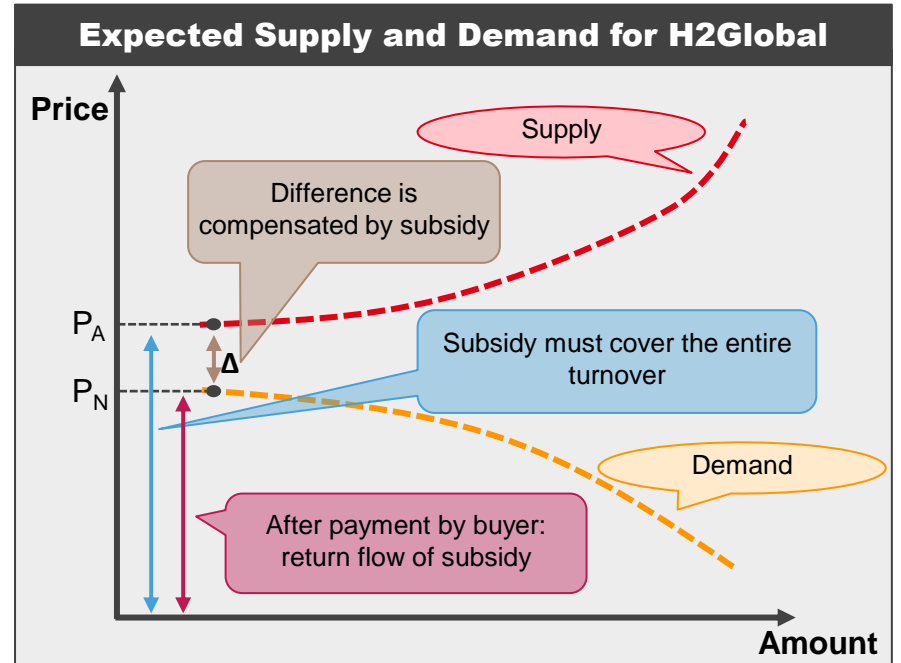
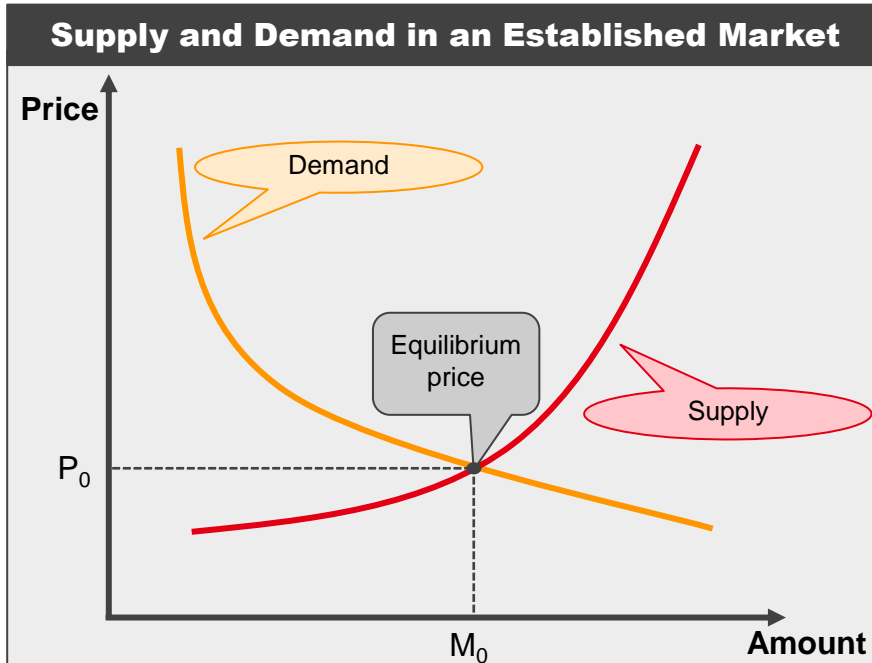
„How can the funding mechanism of H2Global be further developed, to efficiently **accelerate** the **ramp-up** of the hydrogen economy and to **increase planning security** for all players in the value chain?“








Germany will import large quantities of hydrogen, also from within Europe. The goals of the National Hydrogen Strategy and the REPowerEU program are very ambitious. A fast and efficient realization requires target-oriented funding programs.

CURRENT FUNCTIONALITY OF H2GLOBAL

The current H2Global mechanism implements separate auctions on the producer and buyer side. The difference between the prices is compensated by the subsidy

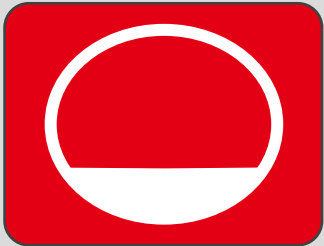


	Products	› Ammonia, Methanol und e-kerosene
	Delivery/Transfer point	› Port in Germany, Belgium or Netherlands
	Auctions: Producer side	› Maximum contract duration of ten years (first delivery 2024-2026, end 2033) › Subsidies cover the entire turnover to minimize risk for HINT.CO
	Auctions: Buyer side	› Current plans: one year contract duration › Subsidy compensates the difference between bid prices (producer-buyer)
	Continued use of return flow of subsidy	› For now, no concept for continued use of the remaining subsidy from return flow from auctions on buyer side

The budget of the current mechanism is too low, it lacks planning security for buyers and has too strict framework conditions

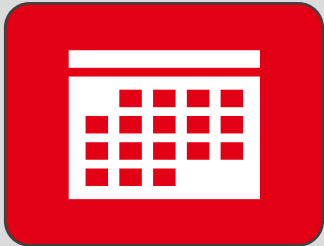
Potentials for further development of H2Global

Low volume of subsidized imports



- › Funding volume of €30 million per product and year only equals 3-9 % of the German ammonia production in 2021 (demand will increase)
- › For now, no continued use of the return flow of subsidy

Lack of planning security for buyers



- › Due to annual auctions, acquiring product is not reliable
 - › Delivery time is unknown long in advance, risk of change of delivery point
 - › Even when winning the auction, delivery is not entirely ensured (replacement or compensation)
- Lack of planning security → no basis for investments in supply chain (logistics chain, conversion plants, production conversions)

Strict framework conditions in contracts



- › Limitation of countries of origin to outside of EU and EFTA
- › Strict specifications about port and responsibilities for transport and logistics
- › Costly and time-consuming application and prequalification process to participate in auction

Approaches to bundle the promotion funds and improve planning security of the buyers'

I - Increase in funded import volumes through bundling of promotion funds



- › Supplementation of promotion funds for H2Global by €3.5 billion
- › Combination of different promotion funds, e.g., German Federal Ministry for Digital and Transport for renewable fuels
- › Involvement of further European countries and initiatives



- › Creation of a continued use of the return flow of subsidy for the efficient and target-oriented use of the funds

II - Improving planning security on the buyer side through long-term contracts



- › Introduction of long-term contracts (e.g., 10-15 years) on buyer side (additional to existing annual contracts)



- › Reinforcing the delivery obligation of the producer
→ Introduction of fallback mechanisms, e.g., storage facilities close to the place of delivery

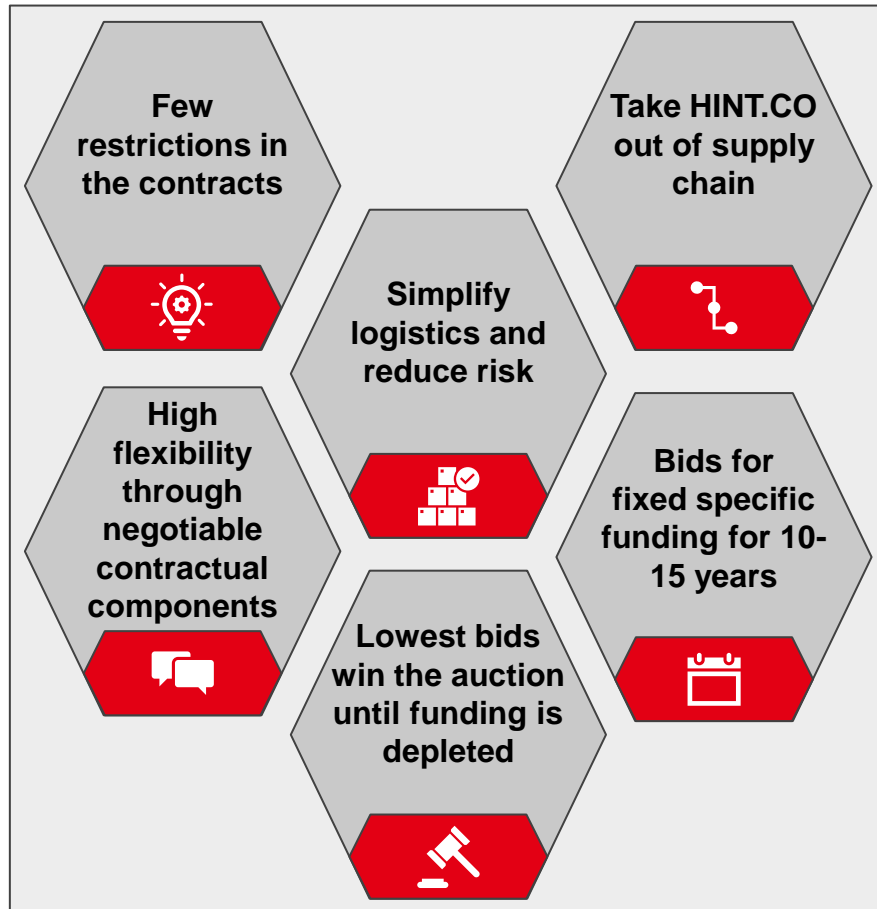


- › Introduction of contracts for difference (CfDs) to hedge the price risk (additional to existing annual contracts)

Flexibility in contract design by implementation of bilateral contracts. Two possible steps for implementation.

III - Flexibility in contract design by bilateral contracts

Step 1: Bilateral contracts with fixed specific funding



Logic:

- › The lower the restrictions in the contracts, the more attractive is the funding
→ larger number of attractive bids expected
- › Enable bilateral contracts
→ bilateral negotiations simplify the logistics
→ more flexibility through contracts with fixed and negotiable contractual components
→ HINT.CO is not part of the supply chain
→ reduction of risks for HINT.CO
- › Possibility of expansion to EU and EFTA to utilize the large European potential

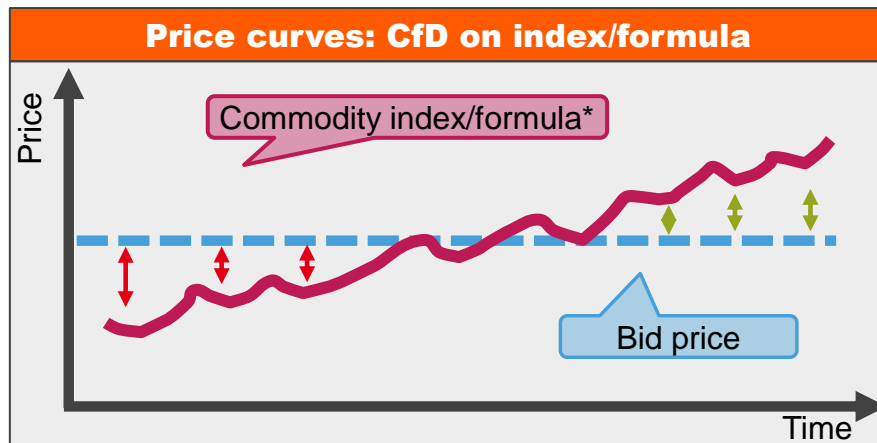
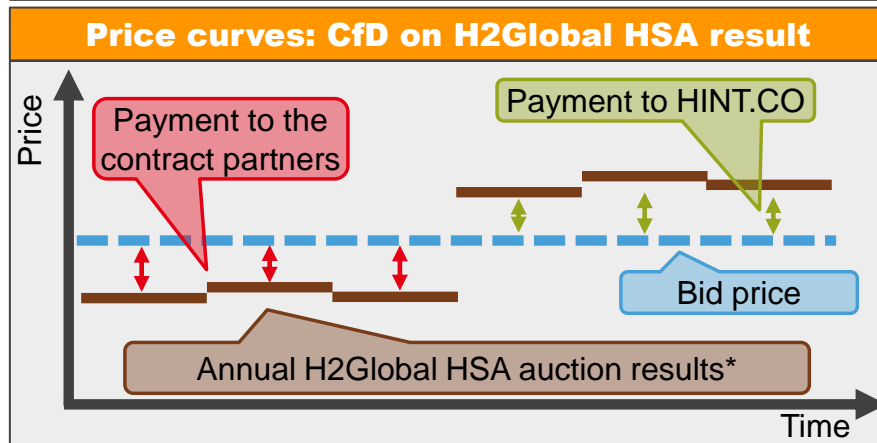
Functionality:

- › Contract partners bid on a fixed funding (in €/t)
- › Contract duration 10 or 15 years
- › Lowest bids win the auction until funding is depleted
- › Possibly limitation to 100/90% of funding of the annual H2Global auctions

**Flexibility in contract design by implementation of bilateral contracts.
Two possible steps for implementation.**

III - Flexibility in contract design by bilateral contracts

Step 2: Promoting bilateral contracts through CfDs



Logic:

- › CfDs as an additional element to reduce the risk and secure competitiveness

Functionality:

- › Contract partners bid a fixed price in an auction
- › Bids with the lowest funding requirements (in this case the highest bid) are awarded until the funding is exhausted
- › Difference between bid price and a market-based reference price is paid
- › If the reference price lies below the bid price, the partners pay the difference back to HINT.CO

Market-based reference price:

- CfDs on annual H2Global HSA auction result**
 - › Especially to ensure competitiveness compared to other import projects
- CfDs on commodity index or a formula**
 - › Especially to ensure competitiveness compared to on-site or local/regional production

CONCLUSION

The extension of the H2Global mechanism by bilateral contracts offers the biggest potential for the acceleration of the hydrogen ramp-up

Overview of approaches to further develop H2Global				
	Long-term planning security on producer side	Long-term planning security on buyer side	Integration of European sources	Flexibility in contract design and logistics
Current H2Global mechanism	✓	✗	✗	✗
Addition of long-term contracts: <u>4.2:</u> Long-term auctions <u>4.2:</u> CfDs on annual H2Global result	✓	✓	✗	✗
Addition of bilateral contracts: <u>4.3.1:</u> Fixed funding <u>4.3.2 a):</u> CfDs on annual H2Global result <u>4.3.2 b):</u> CfDs on commodity index	✓	✓	✓	✓

CONCLUSION

So that H2Global can develop its full potential as a lead index for green hydrogen (and its derivatives), a further development is necessary in four dimensions

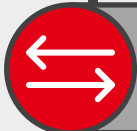
Dimensions of the Further Development



Supplementation and bundling of subsidies



Prolongation of contract period on buyer side



Introduction of bilateral contracts



Expand the countries of origin to EU and EFTA

➤ With H2Global, an instrument was created to promote the ramp-up of hydrogen, which has the potential to develop into the central import mechanism for green hydrogen and its derivatives in Europe.

➤ Based on the approaches described above for the further development of the mechanism, the attractiveness can be increased, the reach can be extended, and the efficiency of the subsidy can be improved.

➤ E.ON Hydrogen GmbH and B E T offer their services as initiators and discussion partners for the further concrete design.

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B E T
Büro für Energiewirtschaft
und technische Planung GmbH

Alfonsstraße 44
D-52070 Aachen
Phone +49 241 47062-0

info@bet-energie.de
www.bet-energie.de

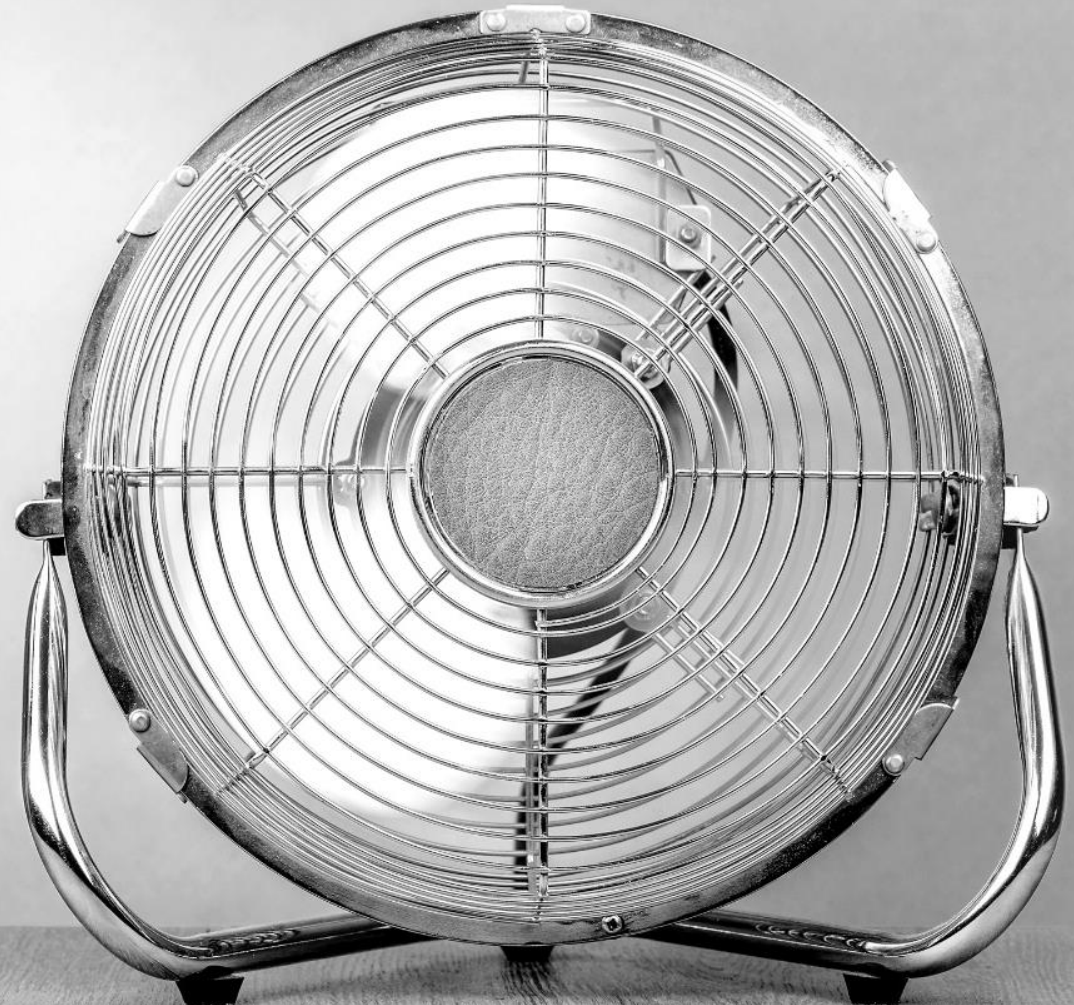
Managing Directors:
Dr. Alexander Kox | Dr. Olaf Unruh

Executive Associate:
Dr. Michael Ritzau | Dr. Wolfgang Zander

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