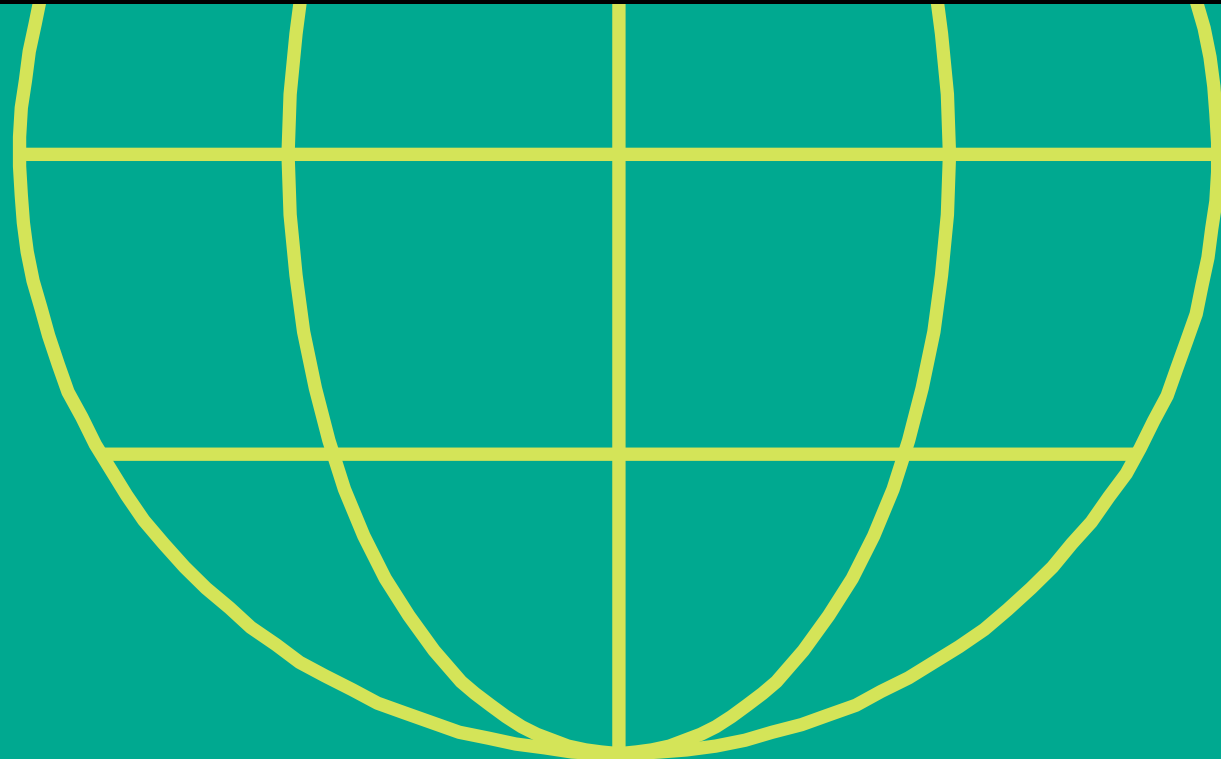


Rödl & Partner

GRMF WEBINAR ON HYDROGEN & GEOHERMAL

H2Global



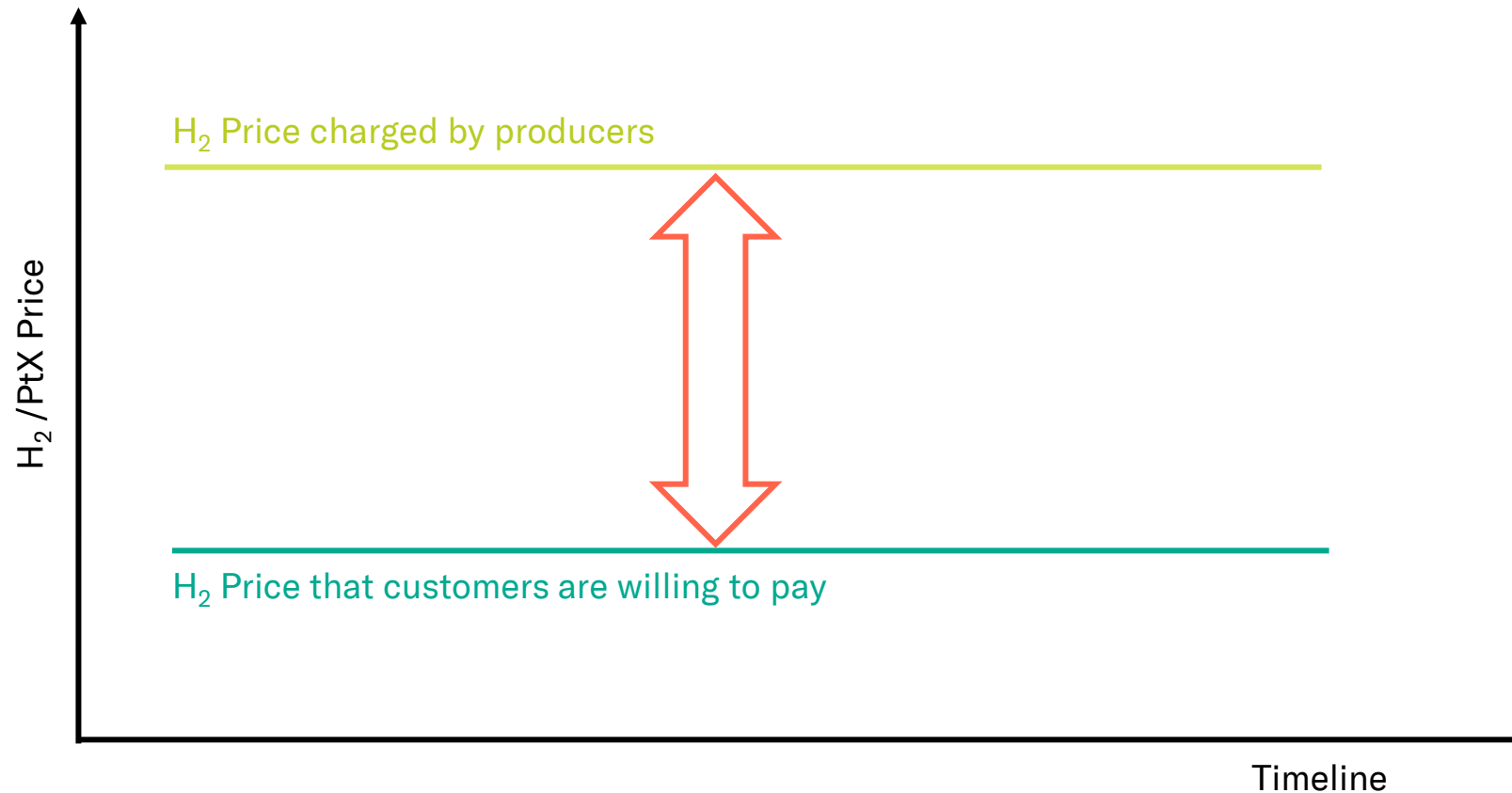
Maria Ueltzen

Webinar, November 16, 2023

CHALLENGES OF THE HYDROGEN MARKET

Chicken and egg question

- Potential producers fear **large investments** due to low demand
- Potential customers fear **low availability** and too **high prices**





The aim of the project is to promote the **international market ramp-up** through a double auction process. In this process, green hydrogen is purchased internationally and auctioned in the EU.



Processing via the subsidiary HINT.CO:

- **10-year contracts** with H₂ sellers
- **1-year contracts** with German & European companies for decarbonization measures



As the production/purchase price is currently still higher than the selling price, HINT.CO's losses are offset by government subsidies **for a maximum of 10 years**.



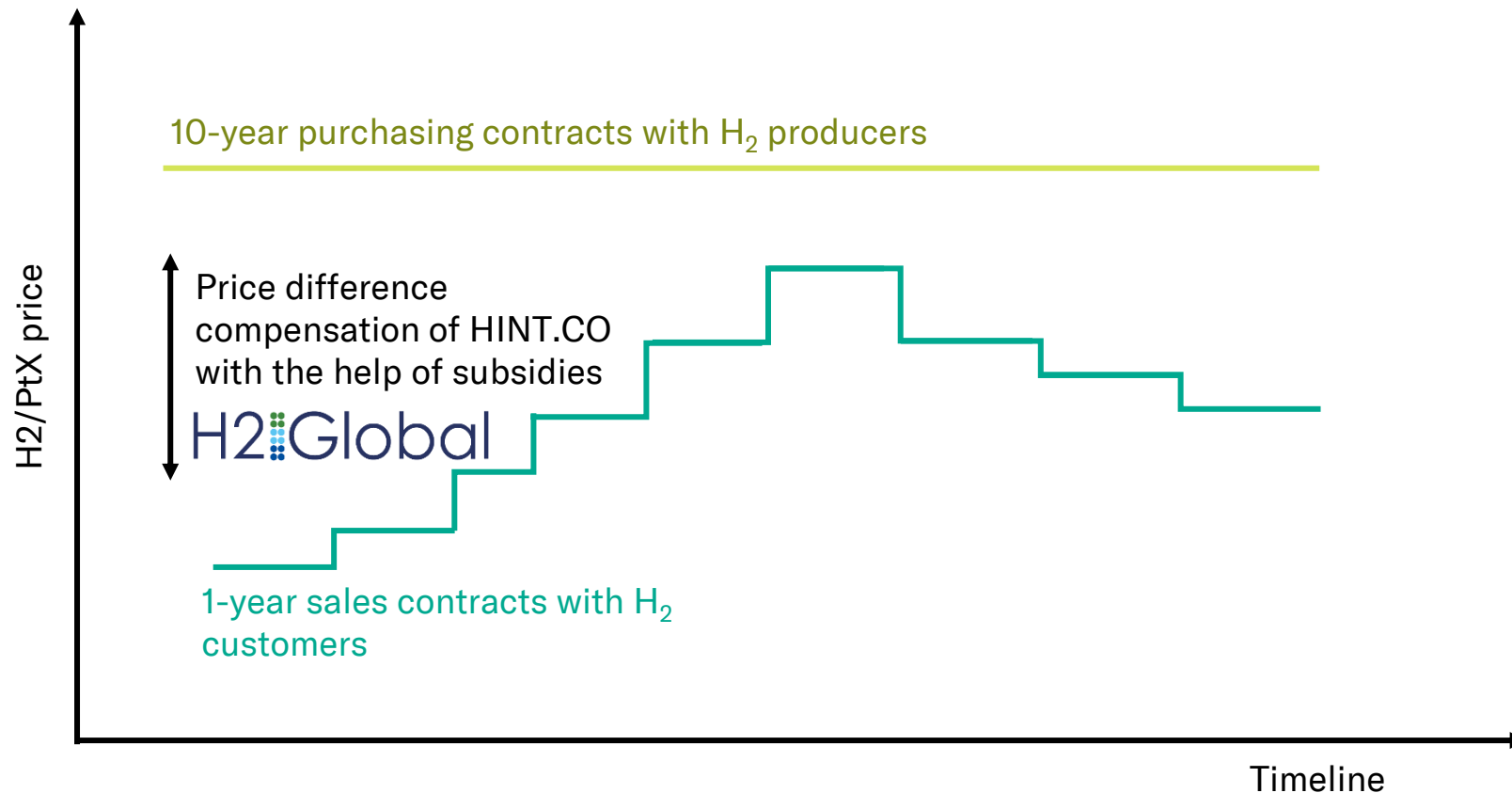
Producers: Vary depending on the **tendering period**

Customers: **Companies in the EU** that are interested in green hydrogen



- 900 million euros provided by the BMWK, with a further **3.6 billion euros** to flow into the H2Global fund
- First period: **€ 300 million per hydrogen carrier** spread over 10 years

H2GLOBAL - PRINCIPLE OF DOUBLE AUCTIONING



- HINT.CO concludes **10-year HPAs** with H₂ producers to create **investment security**
- H₂ is sold in **1-year HSAs** to European/German companies
- The **price difference/losses** are **compensated** by the H2Global Foundation of Hint.CO

Individual funding windows

H2Global
Mechanism

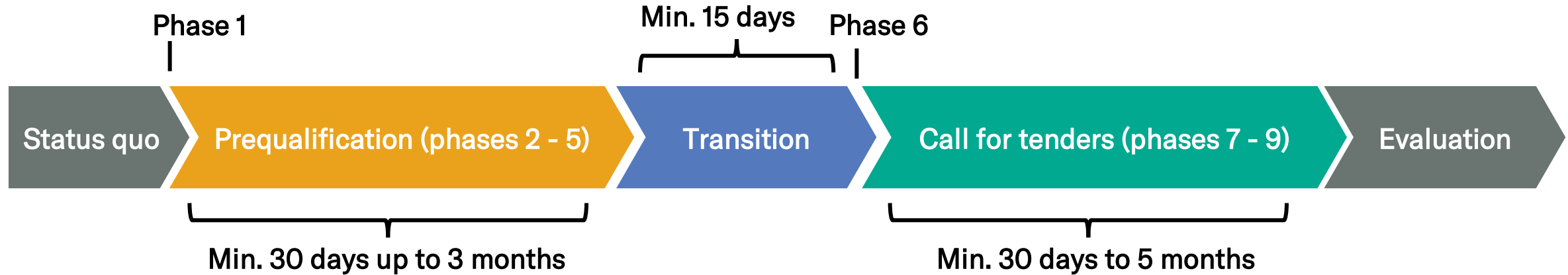
The mechanism is designed to allow for **individual funding windows**

- **New parameters** can be defined for each window (modular principle)
 - **Green products:** e.g. ammonia, methanol and synthetic aviation kerosene (produced from green hydrogen) were selected for the first window
 - **Geographical application:** The first tender was outside the EU, but regional or country tenders may follow
 - **Product requirements and sustainability criteria** for production, transportation and purchase

Price determination

- The purchase and sales prices are determined through competitive tendering procedures. The bids with the **lowest supply price** and the **highest demand price** are awarded the contract in order to minimize the price difference to be compensated
- The **contract price** includes product costs, transportation costs, logistics and import and export duties
- The smaller the price difference, the more financing windows can be opened

Timetable for tenders



1. **Call for applications to participate**
2. **Opening of the requests to participate received** after expiry of the participation deadline
3. **Evaluation of the requests to participate** on the basis of the eligibility and selection criteria
4. **Completion of stage 1** - Unsuccessful applicants will be notified
5. **Result of level 1**
6. **Invitation to tender** (limited to stage 1 selection)
7. **If necessary, negotiation rounds** in which the specifications are amended
8. **Opening of the bids received** after the tender deadline
9. **Evaluation of tenders** on the basis of the award criteria (final selection)
10. **Conclusion of the award procedure**

Additional product specification

- **Electricity procurement:** i) Generator for renewable electricity connected directly to the electrolyzer
ii) From the grid within a zone that is certified as renewable (>90% RE)
iii) From the grid by means of a PPA for renewable energies
- **CO₂ sourcing:** The carbon used for the production of derivatives may only be obtained from certified sources
- **Reduction of greenhouse gas emissions:** The emission saving of the product must be at least 73% compared to a fossil fuel (set at 94gCO₂ eq/MJ) as part of a life cycle analysis

Additional sustainability criteria

- **Environment:** water management, desalination, environmental protection, no release of toxic substances, waste and pollutant management
- **Social:** compliance with ILO standards (minimum age, weekly rest period, ...), living wage, access to health services

Delivery of the product

- **Producers** are responsible for production, transportation, delivery point logistics and storage
- **Consumers** are only responsible for collection at the delivery point and distribution

First financing window

- Ammonia → € 300 million (€ 30 million annually)
- Methanol → € 300 million (€ 30 million annually)
- Synthetic aviation kerosene → € 300 million (€ 30 million per year)

The funds will be disbursed over a period of 10 years (January 1, 2024 - December 31, 2033)

"Take or pay" commitment

- HPA includes a **"take or pay" obligation** for HINT.CO
- HINT.CO assumes the **commercial risk** that products cannot be sold at competitive prices



Intention

- Ensuring the REPowerEU target in **2030: 10 million tons produced in Europe & 10 million tons imported**
- Four pillars of the hydrogen bank:
 1. Creation of a domestic market
 2. **International imports into the EU**
 3. Transparency & coordination
 4. Streamlining existing financing instruments


Most important points

- **Target:** Activities in all four pillars to be launched by the end of 2023
- Enabling private investment in **hydrogen value chains**
- Development of a **European hydrogen market**
- Achieving the **EU hydrogen target**
- **800 million** has been set aside for the first auction in the fall under the Innovation Fund (target region: EU)
- Mechanism is based on **H2Global** (differential cost compensation - fixed premium for a maximum of 10 years)
- **Tenders for imports from outside the EU to follow**

Within the EU "domestic leg"

Imports "international leg"


Aim



Supporting the expansion of **domestic hydrogen production** in the EU

Ensuring diversified **imports** of hydrogen (derivatives) from **outside the EU**


Procedure



Supply-side auctions in which fixed **premium payments** are allocated to hydrogen producers in the EU

Planned: Auctions with fixed **premium payments** to international producers

Financing



Innovation Fund
Implemented by DG Clima

Still open
Implemented by DG Ener

YOUR CONTACT PERSON



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