Shaping the global energy transition.

International Market Consultation on the 1st H2Global Tender
Berlin, 13th July 2022
Agenda

1. Introduction
   a. Welcome, Setting the Scene

2. Key Aspects of the Awarding Procedure
   a. Legal Procedural Process
   b. Eligibility and Selection Criteria - Prequalification

3. Product Requirements / RED II
   a. Dealing with RED II
   b. Key Aspects of the DAs

4. Additional Sustainability Criteria

5. HINT.CO: Commercial Model

6. Hydrogen Purchase Agreement - Draft Commercial Terms
   a. Key Aspects of the Draft Commercial Term Sheet
Disclaimer

The content of the following presentation represents the **current status** of the preparations for the first H2Global tender. However, the content presented is still **subject to change**, hence the **final design** of the tender **might differ** from the documents and design presented.
Introduction

Federal Ministry for Economic Affairs and Climate Action
HINT.CO GmbH
Purpose of the Market Consultation

As the first auctions are designed, it is necessary to have as precise as possible an understanding of the short-term potential availability of and demand for green PtX products.

To this end, the Federal Ministry for Economic Affairs and Climate Action is holding an international consultation of market players.
Key Aspects of the Awarding Procedure

Ernst & Young
Disclaimer

All of the following information regarding the procurement process is preliminary/indicative. It is only intended to provide an impression of the general framework conditions.
Outline of the Procurement Procedure — Stage 1: Prequalification

1. Call for requests of participation (unlimited)
   - Publication of the prequalification tender (Europe-wide and national)

2. Examination of suitability and final selection (limitation) of bidders and bidding consortia to be considered for stage 2

3. Evaluation of the requests to participate on the basis of the suitability and selection criteria (limitation)

4. Opening of the received requests for participation after expiration of the participation period

5. Conclusion of stage 1
   - Notification letter about the non-inclusion of applicants

Result of stage 1
- List of bidders and bidding consortia to be considered in stage 2
Outline of the Procurement Procedure — Stage 2: Tender

6. Call for offers (limited to stage 1 selection)
   - Publication of the award procedure by exficon

7. Submission and recording

8. Opening of the received tenders after the expiry of the tender period

9. Evaluation of the offers on the basis of the award criteria (final selection)
   - Formal review of the bids and evaluation against the award criteria

10. Completion of the award procedure (award)
    - Information letter to bidders

If necessary, negotiation rounds in which the specifications (“Leistungsverzeichnis”) are modified / sharpened

This presentation describes an example of a two-stage negotiated procedure. The specific details of the award procedure will be set out in the award documents.
Selection Criteria


- sufficient level of experience demonstrated by suitable references from contracts performed in the past (Art. 58 par. 4 Directive, §§ 46 Abs. 3 Nr. 1 VgV)
- minimum yearly turnover (Art. 58 par. 3 Directive, §§ 45 Abs. 1 Nr. 1, Abs. 2 VgV)

- the necessary human and technical resources and experience to perform the contract to an appropriate quality standard (Art. 58 par. 4 Directive, §§ 46 Abs. 3 Nr. 2 VgV)
- quality assurance standards (Art. 62 par. 1 Directive, §§ 46 Abs. 3 Nr. 3 VgV)
- specification of the supply chain management and supply chain monitoring system (§ 46 Abs. 3 Nr. 4 VgV)
- environmental management standards (Art. 62 par. 1 Directive, §§ 46 Abs. 3 Nr. 7 VgV)
- average annual employment over the last 3 years (§ 46 Abs. 3 Nr. 8 VgV)

The present examples only serve to explain the legal framework. The actual selection criteria are subject of the prequalification tender documents.
Identifying Candidates

Legal framework: Art. 65 Directive 2014/24/EU („Directive“) / § 51 Vergabeverordnung („VgV“)

- **Goal:** limit the number of candidates meeting the selection criteria
- **Requirements:** „The contracting authorities shall indicate, in the contract notice or in the invitation to confirm interest, the objective and non-discriminatory criteria or rules they intend to apply, the minimum number of candidates they intend to invite and, where appropriate, the maximum number.”
- “In the competitive procedure with negotiation … the minimum number of candidates shall be three”.

Suitable criteria for reducing the circle of suitable candidates (e.g.):
- References
- Turnover
- Human and technical resources and experience to perform the contract (e.g. “qualification levels”)
- ...

The present examples only serve to explain the legal framework. The actual selection criteria are subject of the pre-qualification tender documents.
Indicative Timeline

Expected End of August 2022

Relevant aspects and (minimum) deadlines:
- Participation or tender deadlines start on the day after the notice is sent to the Publications Office of the European Union (regularly via TED).
- Standard deadline in the negotiated procedure/competitive dialog for submitting requests to participate: 30 days (day 0: sending via TED)

Legal minimum 30 days term

Status quo

Prequalification (steps 2 - 5)

According to experience approx. 2 - 3 months

Call for requests of participation

Legal minimum 30 days term

at least 15 days

Transition (esp. deadlines regarding possible complaints)

According to experience approx. 3 - 5 months

Call for final bids (limited to stage 1 selection)

Legal minimum 30 days term

Tender (steps 7 - 9)

Relevant aspects and (minimum) deadlines:
- For the start of the bidding period, only the day on which the notice is sent is relevant - bidding period starts at 0:00 a.m. on the day after the notice is sent.
- Standard deadline in negotiated procedure/competitive dialogue for submission of bids: 30 days (day 0: sending via TED)
- In the course of negotiations, sharpening of the specifications is possible to a limited extent.

The present schedule describes a two-stage negotiated procedure as an example. The specific details of the award procedure and the deadlines to be observed by the bidders are set out in the award documents.
Product Requirements / RED II

Federal Ministry for Economic Affairs and Climate Action
Ludwig-Bölkow-Systemtechnik (LBST)
TÜV SÜD
Electricity supply cases (RED II)

Case 1: Grid Mix
Partial renewable hydrogen
- Renewable share of grid
- 70% rel. to 94 g\textsubscript{CO2eq}/MJ
- GHG emissions: grid mix

Case 2: Direct connection
100% renewable hydrogen
- New renewable installation
- 70% rel. to 94 g\textsubscript{CO2eq}/MJ

Case 3: PPA
100% renewable hydrogen
- New renewable installation
- No aid to renewable installation
- Temporal correlation
- Geographic correlation
- 70% rel. to 94 g\textsubscript{CO2eq}/MJ
Delegated Acts


DA$_{27(3)}$
- Delegated Act establishing a Union methodology setting out detailed rules for the production of renewable liquid and gaseous transport fuels of non-biological origin (RFNBO) as defined in Art. 27(3) of RED II


DA$_{28(5)}$
- Delegated Act specifying a methodology for assessing greenhouse gas (GHG) emissions savings from RFNBOs and from recycled carbon fuels (RCF) as defined in Art. 28(5) of RED II

Renewability

DA\textsubscript{28(5)} Annex clause 3 specifies:

If the output of a process does not fully qualify as RFNBO or RCF, their respective shares in the total output shall be determined as follows:

(a) the fraction of RFNBO shall be determined by dividing the relevant renewable energy input into the process by the total relevant energy inputs into the process. [...]  

The relevant energy for material inputs is the lower heating value of the material input that enters into the molecular structure of the fuel.\textsuperscript{1}

For electricity inputs that are used to enhance the heating value of the fuel or intermediate products the relevant energy is the energy of the electricity.

For industrial off-gases, it is the energy in the off-gas based on their LHV. In case of heat that is used to enhance the heating value of the fuel or intermediate product, the relevant energy is the useful energy in the heat that is used to synthesise the fuel. Useful heat is the total heat energy multiplied by the Carnot efficiency[...]. Other inputs are only taken into account when determining the emission intensity of the fuel.

\textsuperscript{1} For material inputs containing water, the lower heating value is taken to be the lower heating value of the dry part of the material input (i.e. not taking into account the energy needed to evaporate the water).
Additionality: Direct Connections

DA_{27(3)} Art. 3 related to directly connected installations specifies with respect to additionality:

Rules for counting electricity sourced from directly connected installations as fully renewable

For the purpose of demonstrating compliance with the criteria set out in Article 27(3), fifth subparagraph, of Directive (EU) 2018/2001 for counting electricity obtained from direct connection to an installation generating renewable electricity as fully renewable, the fuel producer shall provide evidence on the following:

(a) [...]  
(b) the installations generating renewable electricity came into operation not earlier than 36 months before the installation producing RFNBO. Where additional production capacity is added to an existing installation producing renewable liquid and gaseous transport fuel of non-biological origin, the added capacity shall be considered to be part of the existing installation, provided that the capacity is added at the same site and the addition takes place no later than 24 months after the initial installation came into operation;
Additionality: Grid Connection

DA27(3) Art. 4 related to electricity sourced through power purchase agreements (PPA) specifies with respect to additionality:

Rules for counting electricity taken from the grid as fully renewable [...] 

2. Fuel producers may also count electricity taken from the grid as fully renewable if they have concluded one or more renewables PPAs [...] provided that the following criteria are met:

(a) the installation generating renewable electricity came into operation not earlier than 36 months before the installation producing the RFNBO.

Where an installation generating renewable electricity [...] under a renewables PPA [...] that has ended, it shall be considered to have come into operation at the same time as the installation producing the RFNBO under a new renewables PPA. Where additional production capacity is added to an existing installation producing RFNBO, the added capacity shall be considered to have come into operation at the same time as the initial installation [...] 

(b) the installation generating renewable electricity has not received support [...] 

DA27(3) Art. 7 related to transitional phase specifies with respect to additionality:

Transitional phase

Article 4(2), points (a) and (b) shall apply from 1 January 2027.
Temporal Correlation

DAE27(3) Art. 4(2) point c related to electricity sourced through PPAs specifies with respect to temporal correlation:

RFNBO is produced:

(i) during the same one-hour period as the renewable electricity produced under the renewables PPA; or

(ii) from renewable electricity from a storage asset that is located behind the same network connection point as the electrolyser and that has been charged during the same one-hour period in which the electricity under the renewables power purchase agreement has been produced;

DAE27(3) Art. 7 2nd and 3rd subparagraphs related to transitional phase specifies with respect to temporal correlation:

Until 31 December 2026, by way of derogation from Article 4 (2) (c)(i) and Article 4 (2) (c)(ii), the RFNBO shall be produced during the same calendar month as the renewable electricity [...]

For projects involving State aid, other than where the aid remunerates only capital expenditure, the derogations in the second paragraph shall not apply
Geographical Correlation: Europe

DA$_{27(3)}$ 4(2) point d related to electricity sourced through PPAs specifies with respect to geographical correlation:

(a) installation generating renewable electricity under the renewables PPA is located, or was located at the time when it came into operation, in the same bidding zone as the electrolyser; or

(b) in a neighbouring bidding zone and electricity prices in the relevant time period on the day-ahead market referred to in point (c) in the neighbouring bidding zone is equal or higher than in the bidding zone where the RFNBO is produced; or

(c) the installation generating renewable electricity under the renewables PPA is located in an offshore bidding zone adjacent to the bidding zone where the electrolyser is located.

“Bidding zone” is defined in Article 2, point (65), of Regulation (EU) 2019/943 as follows:

(65) ‘bidding zone’ means the largest geographical area within which market participants are able to exchange energy without capacity allocation:
Geographical Correlation: Other Countries

We suggest the following two options for interpreting these provisions in countries where the definition of bidding zone cannot be applied:

**Option 1:**
- the maximum distance (as the bird flies) between power generation installation and hydrogen generation installation shall be 50 km; both installations must be connected by the grid and within the same country
- where the distance is higher, evidence must be provided that there are no grid congestions between power generation installation and hydrogen generation installation; both installations must be connected by the grid and within the same country

**Option 2:**
- Bidding zone = interconnected grid connecting renewable installation and electrolyzer within the country
GHG Reduction: Fossil Fuel Comparator

RED II Art. 25(2) specifies a GHG reduction of 70%.

2. The greenhouse gas emissions savings from the use of renewable liquid and gaseous transport fuels of non-biological origin shall be at least 70%* from 1 January 2021.

compared to the fossil fuel comparator defined in DA28(5) clause 2:

For all renewable liquid and gaseous transport fuels of non-biological origin and recycled carbon fuels, the total emissions from the fossil fuel comparator referred to under point 2 shall be $94 \text{ gCO}_2\text{eq/MJ}$. 

*HINT.CO is considering to require higher emission savings
GHG Reduction: CO₂ Sources

DA 28(5) Annex related to CO₂ sources specifies in clause 11:

Emissions from existing use or fate include all emissions in the existing use or fate of the input that are avoided when the input is used for fuel production. These emissions shall include the CO₂ equivalent of the carbon incorporated in the chemical composition of the fuel that was or would have otherwise been emitted as CO₂ into the atmosphere. This includes CO₂ that was captured and incorporated into the fuel provided that at least one of the following conditions is fulfilled:

(a) The CO₂ has been captured from an activity listed under Annex I of Directive 2003/87/EC and has been taken into account upstream in an effective carbon pricing and is incorporated in the chemical composition of the fuel before 2036, or;

(b) The CO₂ has been captured from the air, or;

(c) The captured CO₂ stems from the production or the combustion of biofuels, bioliquids or biomass fuels complying with the sustainability and greenhouse gas saving criteria and the CO₂ capture did not receive credits for emission savings from CO₂ capture and replacement, set out in Annex V and VI of Directive (EU) 2018/2001, or;

(d) The captured CO₂ stems from a geological source of CO₂ and the CO₂ was previously released naturally;

with the exception of captured CO₂ stemming from a fuel that is deliberately combusted for the specific purpose of producing the CO₂ and CO₂ the capture of which has received an emissions credit under other provisions of the law.

Emissions associated with the inputs like electricity and heat and consumable materials used in the capture process of CO₂ shall be included in the calculation of emissions attributed to inputs.
GHG Reduction: Co-Processing

DA\textsubscript{28(5)} Annex related to “co-processing” specifies in clause 2:

[...] The greenhouse gas emissions shall be determined by dividing the total emissions of the process concerning each element of the formula by the total amount of fuel stemming from the process and shall be expressed in terms of grams of CO\textsubscript{2} equivalent per MJ of fuel (g CO\textsubscript{2eq}/MJ fuel). If a fuel is a mix of RFNBO, RCF and other fuels, all (fuel) types shall be considered to have the same emission intensity.
Additional Sustainability Criteria

Roundtable for Sustainable Biomaterials (RSB)
TÜV SÜD
Development of Additional Sustainability Requirements

Minimum Criteria
- Environmental
- Social

Supplementary Criteria
- Reporting on relevant SDG indicators

International best practice, Sustainability Standards

Required Documentation
- Validation
- Verification
- Company-related
- Project-related

Ancillary provisions
Grant notice
Minimum Criteria: Environment

- Environmental Impact Assessment
- Environmental & Social Management Plan
- Water
  - Ensuring water availability for downstream users
  - Water quality and water management system
- Desalination (if applicable)
  - Exclusively renewable energies
  - Sustainable handling of residues
- Conservation
  - Project areas not within / directly located next to conservation areas (e.g. nature reserves, wetlands, cultural sites)
  - Good conservation status regarding biodiversity and carbon storage is maintained
- No release of toxic substances
- Waste and pollutant management
Minimum Criteria: Social

- Social impact assessment
- Compliance with ILO standards
  - C014 — weekly rest
  - C029 — no forced labour
  - C098 — right to organise + collective bargaining
  - C100 — right to equal pay
  - C111 — no discrimination
  - C138 — minimum age
  - C183 — maternity protection
- Living wage
- Access to health services / health insurance
- Local value creation / competence gains: stakeholder & local SME participation
- Gender: active involvement of women in project; no gender-based violence / harassment
- No forced resettlement / illegal land grabbing
Minimum Criteria

Compliance with additional sustainability criteria will be assessed during tendering procedure, before delivery of first products and during operational phase.

- **Validation:** process for evaluating the reasonableness of the assumptions, limitations and methods that support a statement about the outcome of future activities

- **Verification:** process for evaluating a statement of historical data and information to determine if the statement is materially correct and conforms to criteria

ISO 14064-3:2019
Example: Environmental and Social Impact Assessment

- **Requirement**
  An environmental and social impact assessment, which takes into account the entire supply chain in addition to the production sites, must be carried out. Both assessments should comply with an international Environmental Impact Assessment (EIA) and be carried out by the operator.

- **Validation**
  Draft EIA acc. to IFC - Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts, or Worldbank ESS1; and

  Draft SIA acc. to IFC - Performance Standard 1: Assessment and Management of Environmental and Social Risks and Impacts or RSB SIA guidelines (RSB-GUI-01-005-01) or Worldbank ESS1

- **Verification**
  Final EIA and SIA

NB: The IFC — 1 Standard includes establishment of management programs, organisational capacity, stakeholder engagement, as well as grievance mechanisms
Example: Water Supply

- **Requirement**
  The water supply for the production of hydrogen must be sustainable so that no impairment of quality or water scarcity is contributed to the project.

- **Validation**
  - Assessment of water availability and water scarcity in the area
  - Water impact assessment (as part of EIA, assessing impact on water table, natural watercourses and reservoirs)
  - Water management plan (based on local rainfall conditions, including optimisation of water use, waste water reduction, water recovery
  - Water sourcing concept
  - Consultation with relevant local stakeholders

- **Verification**
  - Updated plans and assessments
  - Regular monitoring

NB: For the regional assessment, resources such as WRI Aqueduct Water Risk Atlas can be used: [https://www.wri.org/aqueduct](https://www.wri.org/aqueduct)
Example: Conservation

- **Requirement**
  - Project operator must ensure that project areas along the entire value chain are not located in or directly on the border with nature reserves, landscape conservation areas, marine protected areas, special protected areas (e.g., bird sanctuaries), areas with high biological diversity (e.g., rainforests), areas with high natural carbon stocks (e.g., wetlands) and in areas with important cultural sites.
  - Project operator must maintain conservation status with regard to biodiversity and natural carbon storage in order to avoid ecological consequential damage at the production location.

- **Validation**
  - Land use plan
  - Satellite images
  - Documentation of assessment tools (e.g., GRAS or IBAT)
  - (Consultation of regional and local stakeholders)
  - Draft EIA, Draft ESMP

- **Verification**
  - Final EIA, Final ESMP

NB: For locally important conservation values and areas used for provisional services, local stakeholder consultations may need to be conducted.
Example: Land Grabbing

- Requirement
  - Forced resettlement or illegal land grabbing must be ruled out.

- Validation
  - Land use plan, satellite images before project start
  - Plan of stakeholder consultation about land rights and land use prior to operations
  - Grievance procedures
  - Policies to avoid involuntary resettlement
  - No verification possible in case there are disputes about the tenure agreements of the land among stakeholders

- Verification
  - Contracts / records of land ownership or lease
  - Records of stakeholder consultation

NB: Free, Prior and Informed Consent (FPIC) is a specific right that pertains to indigenous peoples and is recognised in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). It allows them to give or withhold consent to a project that may affect them or their territories. The FPIC-360° (https://fpic360.org) tool can be used to implement and monitor FPIC processes.
Example: Local Value Creation, Competence Gains and Gender

- **Requirement**
  - The contribution to local value creation as well as the participation of local and civil law actors is to be ensured, e.g. by ensuring the competence gains of local actors and by actively involving local SMEs in the project. Women must be actively involved in the implementation of the project. The tenderer shall provide evidence of compliance with these requirements.

- **Validation**
  - Action plan with key targets regarding:
    - stakeholder engagement, and
    - regional capacity building, and
    - involvement of local SMEs, and
  - one of the following: 1) creation of year-round and/or long-term jobs; 2) establishment of governance structures to support empowerment of rural communities; 3) use of locally produced bioenergy; 4) shareholding options, local ownership, joint ventures and partnerships with local communities; and 5) social benefits for local communities such as building and servicing of clinics, homes and schools

- **Verification**
  - Evidence / status of fulfilment of the key targets defined in the action plan
  - Measurement of the key targets, with disaggregated reporting data to report benefits achieved for women, indigenous communities and vulnerable people
Example: Implementing the SDGs

- **Requirement**
  - Bidders must explain how the project supports the implementation of the UN Sustainable Development Goals (SDGs) in the respective partner country.

- **Validation**
  - Action plan including targets on the following aspects (covering relevant SDG indicators as defined by TÜV SÜD):
    - Energy efficiency policy
    - Material / resource efficiency policy
    - Buildings with sustainability certificate
    - GHG reduction programme

- **Reduction of air pollution + air pollution management system / mitigation strategy**
- **Registration of workers in the social security system**
- **Availability of child care service is available**
- **Training / education programme for local workforce**
- **Programme for involvement of local MSMEs (local value creation)**

- **Verification**
  - Reporting on targets
HINT.CO: Commercial Model
Executive Summary

- In mature commodity markets the roles and responsibilities of Producer, Midstreamer and Consumer are clearly assignes along the value chain.
- Due to resource restrictions and grant stipulations HINT.CO GmbH will not be in the position to own and manage the risks usually owned by the Midstreamer.
- HINT.CO is a special purpose entity that has been established to perform the operations of the H2Global support scheme. Hence it will buy products using long term Hydrogen Purchase Agreements (HPA) with an annual contract value determined by the annual support scheme budget.
- HINT.CO is capitalized with 25,000 € equity, deploying very limited manpower, possessing neither logistics infrastructure nor risk capital. The scope of HINT.CO's operations will be limited to few administrative processes. Hence the roles and responsibilities of the contract counterparties must be adapted to HINT.CO's unique requirements.
- Against this backgrounds the HINT.CO team is in the process of developing a commercial model for the company that consists of HPA and Hydrogen Sales Agreements (HSA). A draft of the Commercial Terms for the HPA has been shared in the info material of this market consultation for comments.

When commenting on the draft Commercial Terms please bear in mind these unique characteristics of HINT.CO's scope and mandate
### Usual Risk Allocation in the Value Chain

In the value chain the roles and responsibilities of Producer, Midstreamer and Consumer are clearly assigned.

<table>
<thead>
<tr>
<th>Value Chain Risk Map</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation</td>
</tr>
</tbody>
</table>

**Producer**
- **Volume Risk**
  - Low: x
  - Medium: xx
- **Quality Risk**
  - Low: x
  - Medium: xx
- **Price Risk**
  - Medium: xx

**Midstreamer**
- **Transport & DPL***
  - Low: xx
  - Medium: x
- **Storage**
  - Low: x
  - Medium: xx
- **Distribution & DPL***
  - Low: xx

**Consumer**
- **Usage**
  - Low: x

---

x/xx/xxx: low/medium/high risk intensity

* Delivery Point Logistics & Dispatch

In mature commodity markets risks along the value chain are owned and managed by Producer, Midstreamer and Consumer respectively.
HINT.CO is a special purpose entity that has been established to perform the operations of the H2Global support scheme

Framing of HINT.COs role in the Value Chain

The objective of the H2Global scheme is to accelerate the ramp-up of the international green hydrogen value chain. HINT.CO is the beneficiary of a 10-year support scheme by the BMWK of 900 Mio € in total. This grant will be utilized to conclude long term purchase agreements for green products.

HINT.CO is going to sell these green product by concluding short term - up to one year - sales contracts with multiple customers.

HINT.CO is entitled to deploy the support scheme funds solely for making up any revenue difference between the proceeds from product sales and procurement expenditure. HINT.CO is not supposed to utilize support scheme funds for providing any kind of services - e.g. product logistics, storage or risk management — in the value chain.

HINT.CO has been established with an equity of 25.000 €, accordingly HINT.COs balance sheet does not provide any risk capital. To fund its very lean operations HINT.CO is going to charge a service fee and a risk fee to its counterparties from purchase and sales contracts, respectively.

Due to its unique set up HINT.CO does not possess the resources - manpower, logistics infrastructure or risk capital - a Midstreamer regularly provides to the value chain. Hence in this particular case activities and risks usually managed by the Midstreamer will have to be assigned to the counterparts of HINT.CO.

Only by fully de-risking HINT.COs operations the long-term purchase agreements HINT.CO is going to conclude will become bankable.

HINT.CO is in the process of designing a suitable commercial model following the guiding principle that risks shall be allocated to such counterparty that is best positioned to bear and manage the respective risk. At no time will HINT.CO possess any product physically.
The scope of HINT.COs operations will be limited to few administrative processes

HINT.CO assumes only selected operations while contractually becoming a counterparty to producers and consumers

Detailed description (non-exhaustive list)

Conducting tender processes
- HPA tenders for up to three products
- Annual HSA tenders
- HSA tender prequalification

Contract Management
- HPAs
- HSAs

Managing the payment process
- Invoicing of customer
- Funding call to BMWK
- Payment to producer

Reporting
- BMWK requirements
- EU Commission requirements

Other Processes
- Operating payment accounts
- Monitoring of delivery process and confirmations (trigger for payments)
- Monitoring of quality auditing
Risk Allocation in the H2Global Value Chain

Due to resource restrictions and grant stipulations HINT.CO will not be in the position to own and manage the risks usually owned by the Midstreamer.

<table>
<thead>
<tr>
<th></th>
<th>Generation</th>
<th>Transformation</th>
<th>Transport &amp; DPL*</th>
<th>Storage</th>
<th>DP</th>
<th>Distribution &amp; DPL*</th>
<th>Usage</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Producer</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Volume Risk</strong></td>
<td>xx</td>
<td></td>
<td>x</td>
<td>xxx</td>
<td>xx</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Quality Risk</strong></td>
<td>xx</td>
<td></td>
<td>xx</td>
<td>xx</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Price Risk</strong></td>
<td></td>
<td></td>
<td></td>
<td>xx</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Consumer**
- x
- xx
- xxx
- xx

x/xx/xxx: low/medium/high risk intensity

* Delivery Point Logistics & Dispatch

In comparison to the conventional value chain the roles and responsibilities of the contract counterparties must be refined and adapted to HINT.CO's unique requirements.
Term Sheet: Hydrogen Purchase Agreements

Freshfields Bruckhaus Deringer
H2Global — Contractual Landscape

HPA (green) Ammoniak
HPA (green) Methanol
HPA Sustainable Aviation Fuel

Hint.CO GmbH

- HSA
- HSA
- HSA
- HSA
- HSA

Hint.CO concludes long-term Hydrogen Purchase Agreements (HPA) to provide investment security for producers

BMWK funding is used to offset difference between HPA purchase price and HSA sales price

Hint.CO sells products under short-term Hydrogen Sales Agreements (HSA) to customers in the EU
Commercial Key Points

- **HPA Tender**: Global tender procedure — production site outside of the EU and EFTA states
- **Parties**: HINT.CO and winning bidder as determined by tender
- **Products**: green ammonia, green methanol, sustainable aviation fuel (one HPA for each product)
- **Term**: 10 years (1 January 2024 — 31 December 2033)
- **Quantity**: Determined by annual funding amount (approx. € 34m as of 2026) and agreed price
- **Price**: Includes product cost, transport charge, logistics & dispatch and import duty
- **Delivery**: A port in Germany, Belgium or the Netherlands at agreed intervals
- „**Take or pay**“: HINT.CO will assume commercial risk that products cannot be sold at competitive prices
- **Product quality**: Determined by technical product specifications, additional product specifications and additional sustainability requirements
- **Contractual safeguards**: Performance bond, penalty payments, termination rights in favor of HINT.CO
  → Commercial terms are (partially) determined by EU state aid approval and BMWK funding decision
Discussion Point: Port of Delivery / Handling of Products

- The Port of Delivery must be a port in Germany, Belgium, or the Netherlands (Delivery Region).

- Determined by Seller with approval by HINT.CO. Mutually agreed change of Port of Delivery within Delivery Region is possible with 18 months notice period.

- Transfer of title and risk from Seller to HINT.CO (and from HINT.CO to HSA Customer) will take place at the flange of the port facility (Delivery Point) where the HSA Customer takes over the Product.

- Seller is responsible for the Product transport, storage and port logistics up to delivery to the Delivery Point. This does include the import of the Product into the EU.

⇒ Interested parties are invited to comment particularly for SAF on the delivery concept.
Discussion Point: Delivery Schedule

- Seller will deliver the annual quantity of Product in a mutually agreed delivery schedule complying with the following conditions:
  - [2-12] [equal] lots,
  - spread out [evenly] over the entire year and at predetermined dates,
  - including flexibility of delivery date of [+/- 5] working days,
- Seller will provide customary proof of delivery to HINT.CO.
- DDP Incoterms 2020 to apply.
- Transport and logistics shall take place in compliance with all applicable safety regulations.

Interested parties are invited to comment separately for ammonia, methanol, and SAF which adjustments to the delivery schedule, if any, would have a significant impact on reducing the contract price.
## Discussion Point: Technical Product Specifications

Each Product will have to comply with technical product specifications (subject to a warranty) upon delivery:

<table>
<thead>
<tr>
<th>Ammonia</th>
<th>Methanol</th>
<th>SAF (renewable electricity based)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
<td>Methanol min. 99,85 wt%</td>
<td>to be determined</td>
</tr>
<tr>
<td>Water</td>
<td>Water max. 0,100 wt%</td>
<td></td>
</tr>
<tr>
<td>Oxygen</td>
<td>Acetone max. 30 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Oil</td>
<td>Ethanol max. 50 mg/kg</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Chlorine max. 0,5 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

➔ Interesting parties are invited to comment (also from an off-taker sector-perspective) separately for ammonia, methanol and SAF on technical specifications.

a) would be required to fully mirror prevailing conventional product specs,
b) would have a material impact for reducing the contract price.
Discussion Point: Contract Price & Payment

- HINT.CO pays Seller the contract price for duly delivered Product quantities.
- The contract price (CP) consists of the price elements of the contract price formula:
- \[ CP = P + T + LD + ID \]
  - \( P \) = Product Price (fixed)
  - \( T \) = Transport Charge (variable)
  - \( LD \) = Logistics & Dispatch Charge (variable)
  - \( ID \) = Import Duty
- Payments are due by the [25th] day of the [second] month after the month of delivery.

> The contract price formula envisages variable elements due to the term of the HPA. Interested parties are invited to comment on whether a fixed price for the components \( T \) and \( LD \) would also be feasible for the entire term of the HPA.
Partner
Thank you for your attention.

You have the possibility to comment on the process in writing by 31st July 2022 by emailing marktkonsultation-h2global@bmwk.bund.de.