

ENTSOG Publication :

[001]- Comments on the Project in the context of the current publication. :

General Information :

[002]- Is the project an enabler for groups? : No

[003]- Project(System) Code : 442

[004]- ENTSOG Project Code : HYD-N-442

[005]- Was the project item part of the last TYNDP? : Yes

[006]- Project Name : Example Hydrogen Project

[007]- Infrastructure Type : HYD

[008]- Is the project a virtual submission of more projects : Yes

[009]- Project Description : This hydrogen project is located in the north sea and will connect a offshore wind park incl electrolyzer to the shore. The ambition is to build an industrial-scale power-to-gas installation that converts green electricity into green hydrogen. The Project also includes 60 km connecting pipelines for the transport of hydrogen.

[010]- Project Host Country : Germany

[011]- Project Status : Planned

[013]- Promoter Legal Personality : Mareike Dollinger

[014]- Project Promoter Type. : TSO

[016]- Which Company will be the commercial operator once your project is completed. : Energinet

[017]- Will there be any other commercial operator(s) once your project is completed? If yes, please mention it/them. :

[018]- Has your project taken the FID? : No

[020]- Is your project only a Capacity Modification, which does not require actual investment or construction works ? : No

[021]- Estimated CAPEX (in million €) : 100

[022]- Are these CAPEX costs considered confidential? : No

[024]- Amount of already incurred CAPEX (in million EUR] at the time of project submission : 0

[026]- Amount of contracted but not yet incurred CAPEX (in million EUR] : 0

[028]- CAPEX Range (in %) : 5

[029]- Estimated OPEX (in million € per year) : 9

[030]- Are these OPEX costs considered confidential? : No

[032]- OPEX Range (in %) : 2

[033]- Name of your representative in charge of the Project submission : Mareike Dollinger

**[034]- E-mail address of your representative in charge of the Project submission :**

mareike.dollinger@entsog.eu

**[035]- Phone number of your representative in charge of the Project submission :** +321789654321

**[036]- Project Website :**

**[037]- General Remarks :**

Administrative Criteria :

**[041]- Please select the category of the project promoter you are :** D.1 Company which is a Member, Observer or Associated Partner of ENTOSOG or an entity being a partner of the company in the same project or having a shareholding relation with this company.

**[042]- Company Existence (Pass-Fail Criteria) :** Yes

**[043]- Company Financial Strength (Pass-Fail Criteria) :** Yes

**[044]- Company Technical Expertise (Pass-Fail Criteria) :** Yes

**[045]- Please indicate if your project has completed the (Pre-) Feasibility study :** No

**[052]- Please select one of the following options :**

- Important Projects of Common European Interest (IPCEI)

- Energy Clean Hydrogen Alliance (ECHA)

**[053]- Please provide any additional comments :**

Inclusion in NDP :

**[054]- Is your project part of a National Development Plan (NDP) ? :** No

**[058]- If is not part of NDP, please give a reason :** (4) there is no obligation at national level for such a project to be part of the NDP

Enabler/Enhancer Projects :

**[061]- Is this project an internal enabler? :** No

**[065]- Is this project an enhancer ? :** No

Project Shareholders :

<b>[069]- Project Section</b>	<b>[070]- Shareholder Name</b>	<b>[071]- Shareholder Share</b>
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Technical Information :

**[072]- Indicate if your project is part of :** Hydrogen production and connecting pipe

**[073]- Choose PRJ :** PRJ-G-134 [H2 interconnected network]

**[074]- Is this a multi-phase project? :** No

Type Specific Information - New or repurposed infrastructure to carry hydrogen :

**[113]- Please indicate the sub-category of project :** Hydrogen production with network related function;

**[124]- In case of hydrogen transmission pipeline, does the project enable the transmission of hydrogen across borders of the MS or increase existing hydrogen transport capacity at a border by at least 10 % compared to the situation prior to the commissioning of the project? : No**

**[125]- Please justify your answer. :** Still in feasibility study but from current planning the host country will have a high H2 demand in the future. Therefore the supply of this production facility will only be used for internal demand and not exported to neighbouring country.

**Type Specific Information - Production facilities :**

**[126]- Please indicate the expected efficiency and the average daily consumption of the production facility. :** Efficiency: 70% Average daily consumption: - 50 MW max. capacity - 40% average utilisation ->  $50 \text{ MW} * 24\text{h} * 0.4 = 480\text{MWh}$

**[127]- Please indicate the expected operating mode :** Dedicated RES

**[128]- Please indicate the grid-connection capacity to/from the production facility on hourly and daily basis. :** electricity: 50MWh/h -> 1200 MWh/d gas: 35 MWh/h -> 840MWh/d

**[129]- Please indicate the expected CO2 emissions (tons/MWh of the conversion) : 0**

**Entry :**

**Exit :**

**[131]- Please indicate the expected load factor of your project (when completed) on yearly basis : 40**

**[132]- Please indicate the expected load factor of your project (when completed) under peak situation : 100**

**Project of Common Interest(PCI) Label :**

**[136]- Is your project in the current legal PCI list ? : No**

**[138]- Do you intend to apply for PCI label in the next PCI round? : No**

**Variant for Modelling :**

<b>[156]- Variant Name</b>	<b>[157]- Variant Description</b>	<b>[158]- Considered for Modelling</b>
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**Increments in Entry/Exit Capacity (If you do not complete this section, your project cannot be modelled) :**

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<b>[159]- Transportable/storable gas</b>	<b>[160]- Share of selected gas/ total capacity [%]</b>
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**Natural gas :**

**Hydrogen : 100**

**Synthetic methane :**

**Biomethane :**

[161]- Operator	[162]- Point	[163]- Flow Direction	[164]- Status	[165]- Variant	[166]- Commissioning Year	[167]- Modelling Commissioning Year	[168]- Increment (GWh/d)	[169]- Peak Increment (GWh/d)	[170]- Comment
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**Cross Border Cost Allocation and Financial Assistance :**

**[171]- Does your project have a CBCA decision by NRAs or ACER ? Select one or more :**

- No, we have not submitted an investment request yet, but we do plan to submit it

**[172]- {if option 1, 2 or 3} When the investment request was submitted/or you plan to submit it? :**  
10/01/2022

**[173]- If option 1), when was the decision taken? :**

**[174]- If option 1), please provide CBCA Decision Website :**

**[175]- If option 1), please list the countries identified from the CBCA decision as net benefiting countries :**

**[176]- If option 1), please list the countries identified from the CBCA decision as net cost bearers :**

**[177]- Please provide any additional comments :**

**[178]- Have you already applied for financial support from the Connecting Europe Facility (CEF) :**

- (1) Yes, we have applied for CEF and we have received a decision

**[179]- [If options 1) or 2) in above box list] Did your project request EU financial assistance in the form of grants for studies? : Yes**

**[180]- Did you receive any grants for studies following your request? : Yes**

**[181]- If yes, please indicate the amount [mil EUR] : 2**

**[182]- If options 1) or 2) Did your project request EU financial assistance in the form of grants for works? : No**

**[183]- Did you receive any grants for works following your request? : Not applicable**

**[184]- If yes, please indicate the amount [mil EUR] :**

**[185]- If option 3), Do you intend to apply for financial support from the Connecting Europe Facility? :**

**[186]- Have you received any financial support from funding programmes other than CEF at European, regional or national level? : No**

**[187]- Please Provide details :**

**[188]- Do you plan to apply for any other type of financial assistance ? : Yes**

**[190]- Please Provide any further relevant details :**

**Project Schedule :**

[192]- **Pre-Feasibility** : No Pre-Feasibility

[193]- **Feasibility Start date** : 01/10/2020

[193]- **Feasibility End date** : 31/12/2021

[194]- **FEED** : Exact dates not yet available

[195]- **Permitting Phase** : Exact dates not yet available

[196]- **Supply Contracts** : Exact dates not yet available

[197]- **Expected FID date** : Exact dates not yet available

[198]- **Construction** : Exact dates not yet available

[199]- **Project Advancement** : In Progress

[200]- **Comments about Project Advancement** : Project advancement is in progress and feasibility study will be finalized soon. Then the exact planning and all further steps can be examined.

: 2026

[202]- **Date of grant obtention for studies/for works** : 15/04/2021

[203]- **Comments about the schedule, including Realisation Conditions** :

[204]- **Compared to previous TYNDP indicate if your project is** : --Select--

[205]- **Delay Explanation** :

Project Expected Impact :

[206]- **Main Project Driver(s)** :

- Sustainability

[207]- **Does the project contribute to any of the following** :

- Integration of renewable and low carbon gases into the gas network

[209]- **Comments on the Main Project Driver** : The main project driver are sustainability and to decarbonize different sector by producing green hydrogen.

[210]- **In line with the definition of Gasification provided in the Handbook, does your project contribute to the gasification of a country or the gasification of a specific area not reached yet by gas?** : No

[212]- **Please provide your project expected benefits** : This will be a large scale up project for green hydrogen and here we are working closely together with many research institutes to gain more experience and know-how and so innovations important for the future hydrogen development can evolve.

[213]- **Impacted countries and relevant information.** : Country A

[214]- **Please indicate the number of new jobs created associated to the project, the impacted countries and provide relevant information** : Currently no robust figures can be provided.

**[215]- Please describe and quantify any possible positive impact of the project on climate change :**  
Decarbonization of different sectors and end-use application. By using green hydrogen instead of natural gas 201 Joint work with research institutes to enable the further research and knowledge which can be used in other green hydrogen projects in the future, benefitting in more and efficient

**[216]- Please describe and quantify any possible negative impact of the project on climate change :**

**[222]- Does your Project include new digital solutions? : No**

**[224]- Does your project enable the integration with the electricity, heating, water or telecommunication network? : No**

**[229]- Does your project contribute to any of the following specific criteria? :**

- facilitating smart energy sector integration through the creation of links to other energy carriers and sectors and enabling demand response

**[231]- Gas Sourcing :**

**Algeria : No**

**Caspia/Azerbaijan : No**

**Libya : No**

**Norway : No**

**Russia : No**

**Israel : No**

**Turkey : No**

**LNG : No**

**LNG Country :**

:

**Electrolysis : Yes**

**SMR : No**

**Pyrolysis : No**

**Biogas : No**

**Others :**

**[232]- Please provide the background for the gas sources the project will be supplied with. :**

Power-to-gas installation that converts green electricity into green hydrogen

**Intergovernmental Agreement :**

<b>[270]- Agreement Name</b>	<b>[271]- Signed</b>	<b>[272]- Date</b>	<b>[273]- Description</b>	<b>[274]- Other comments</b>
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**Barriers in Implementation :**

**[275]- Regulatory Framework :**

- Missing regulatory framework for infrastructure planning of low carbon or renewable gases
- Unclear role of TSO's on ownership and operation of intended project

**[277]- Permit granting :**

**[278]- Financing :**

**[280]- Political :**

**[281]- Market :**

**[282]- Project acceptability by the local community. :**

**[283]- Technical/Technological. :**

**[285]- Value chain :**

**[286]- Other Barriers, please explain :**

**[287]- Which incentives would support your project implementation :**

**[288]- Have you received additional regulatory incentives for your project :**

**Please upload a map of your project :**