

**OPINION No 02/2021**  
**OF THE EUROPEAN UNION AGENCY**  
**FOR THE COOPERATION OF ENERGY REGULATORS**

**of 3 May 2021**

**on the ENTSOG draft Ten-Year Network Development Plan 2020**

THE EUROPEAN UNION AGENCY FOR THE COOPERATION OF ENERGY REGULATORS,

Having regard to Regulation (EU) 2019/942 of the European Parliament and of the Council of 5 June 2019 establishing a European Union Agency for the Cooperation of Energy Regulators<sup>1</sup> (ACER), and, in particular, Articles 4(3) and 4(5) thereof,

Having regard to Regulation (EC) No 715/2009 of the European Parliament and of the Council of 13 July 2009 on conditions for access to the natural gas transmission networks and repealing Regulation (EC) No 1775/2005, and, in particular, Articles 8(3)(b), 8 (10) and 9(2) thereof,

Having regard to the outcome of the consultation with the ACER's Gas Working Group,

Having regard to the favourable opinion of the Board of Regulators of 28 April 2021, delivered pursuant to Article 22(5) of Regulation (EU) 2019/942,

Whereas:

**1. INTRODUCTION**

- (1) Pursuant to Article 8(3)(b) of Regulation (EC) No 715/2009, the European Network of Transmission System Operators for Gas (ENTSOG) shall adopt a non-binding Community-wide ten-year network development plan (TYNDP), including a European supply adequacy outlook, every two years.
- (2) Pursuant to Article 9(2) of Regulation (EC) No 715/2009, ENTSOG shall submit the draft TYNDP, including the information regarding the consultation process, to ACER for its Opinion.

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<sup>1</sup> OJ L158, 14.6.2019, p. 22.

- (3) ACER may provide an opinion to ENTSOG, in accordance with the first subparagraph of Article 9(2) of Regulation (EC) No 715/2009, on the draft TYNDP, taking into account the objectives of non-discrimination, effective competition and the efficient and secure functioning of the internal markets in electricity and natural gas.
- (4) On 25 November 2020, ENTSOG published part of the draft TYNDP 2020. On 12 January 2021, ENTSOG published the project-specific (PS) Cost-Benefit Analysis (CBA) results<sup>2</sup> of TYNDP projects that intend to apply for the 5th PCI selection process.
- (5) From 25 November 2020 until 15 January 2021<sup>3</sup>, ENTSOG conducted a public consultation on the published part of the draft TYNDP 2020.
- (6) On 10 February 2021, ENTSOG submitted the draft TYNDP 2020 to ACER for its Opinion, including the information regarding the public consultation of the draft TYNDP.

## **2. SUMMARY OF THE DOCUMENT**

- (7) The draft TYNDP 2020 contains several volumes<sup>4</sup> and Annexes. It includes an executive summary, a system assessment report, an infrastructure report, maps of transmission lines and compressor stations, liquefied natural gas (LNG) terminals, and underground gas storage (UGS) facilities, the project-CBA assessments and several Annexes<sup>5</sup>. This structure is similar to the previous 2018 edition of the TYNDP. The draft TYNDP 2020 is available from a dedicated website<sup>6</sup>, which includes a visualisation platform for the main assessments.

### **2.1. Overview of TYNDP 2020 projects**

- (8) The TYNDP 2020 contains a total of 262 investment items<sup>7</sup>, of which 151 (58% of total) are transmission lines (including compressor stations), 23 (9%) are LNG terminals and 13 (5%) are UGS facilities. In addition, the draft TYNDP 2020 includes for the first time 75 (29%) Energy Transition (ET) Projects<sup>8</sup>, which are a new category

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<sup>2</sup> [https://www.entsog.eu/sites/default/files/2021-01/ENTSOG\\_Draft\\_TYNDP2020\\_Projects\\_Assessment.v1.zip](https://www.entsog.eu/sites/default/files/2021-01/ENTSOG_Draft_TYNDP2020_Projects_Assessment.v1.zip)

<sup>3</sup> Extended from 8 January 2021.

<sup>4</sup> Available at <https://www.entsog.eu/tyndp#entsog-ten-year-network-development-plan-2020>

<sup>5</sup> Annexes A to E. A: Projects details and projects tables; B: TYNDP 2020 investment map (all projects); C: Existing and projected capacities per IP and country; D: Methodology, covering the assessment framework, input data items, and indicators; Single Largest Infrastructure (SLI) values; tariff values; and E Analysis Tables.

<sup>6</sup> <https://tyndp2020.entsog.eu/>

<sup>7</sup> See pp. 13-28 of the TYNDP infrastructure report, and Annex A.

<sup>8</sup> Covering the following types of projects: power-to-gas, bio-methane production plants, hydrogen production following steam methane reforming, reverse flow projects between DSO and TSO in order to facilitate flows of renewable/decarbonised gases, upgrading of gas transmission grid to receive blended or pure hydrogen, carbon capture and storage

of projects in the TYNDP. The projects listed in the TYNDP are those projects collected by ENTSOG from project promoters which meet certain criteria (see Section 3.3). The projects listed in the TYNDP are an input and not a result of the modelling exercise ENTSOG performs.

- (9) In terms of maturity level, 24% of the proposed TYNDP 2020 investment items are in (post) FID status<sup>9</sup>, 23% are in “advanced” status<sup>10</sup>, and the majority of the projects (53%) are in “less-advanced” status<sup>11</sup>. ENTSOG also groups the investment items into sets of “functional projects” by aggregating those investments which need to be jointly implemented for their benefits to materialise<sup>12</sup>.
- (10) The overall estimated capital expenditure (CAPEX) for all TYNDP projects seems to be inconsistent across the TYNDP documentation. While the sum of investment items CAPEX in Annex A amounts to €65.6 billion<sup>13</sup>, ENTSOG indicates in the infrastructure report that CAPEX for projects submitted by promoters for inclusion in the TYNDP 2020 amounts to about €97 billion, of which post-FID and advanced projects account for approximately €50 billion. By type (taking as base the €97 billion from the TYNDP infrastructure report), transmission projects cost amounts to almost €66 billion (nearly 70%), followed by €22 billion for ET projects, €6 billion for LNG projects and €1.5 billion for UGS projects.
- (11) Table 1 presents the basic statistics on investment items in the TYNDP 2020

Table 1: Summary of draft TYNDP 2020 investments items, projects by type, and CAPEX

	Transmission lines	LNG	UGS	ET projects	Total
<u>TOTAL investment items, of which</u>	151	23	13	75	262
<i>FID</i>	45	6	3	9	63
<i>Advanced</i>	43	9	4	4	60
<i>Less Advanced</i>	63	8	6	62	139
<u>TOTAL functional project sets (total number of items included)</u>	107	22	13	68	210

<sup>9</sup> The “FID status” of a project denotes a project for which the final investment decision has been taken before the closure of the TYNDP project collection period.

<sup>10</sup> “Advanced status” denotes all non-FID projects that: — are expected to be commissioned by the last day (31 December) of the sixth year after the year of TYNDP project data collection (i.e. by 31 December 2025 in the case of TYNDP 2020, for which projects are collected in 2019), and for which at least one of the following occurred: — permitting started ahead of the TYNDP project data collection; front-end engineering and design (FEED) started; or the project has been selected for receiving CEF grants for FEED.

<sup>11</sup> All projects which do not meet the FID or advanced criteria are considered as being in “less advanced” status.

<sup>12</sup> For example, in case of an interconnector connecting two or more countries, more than one promoter are usually involved in implement the different sections of the same interconnector.

<sup>13</sup> Of which 84% relates to transmission lines, 7% to ET projects, 6% to LNG terminals, and 3% to UGS facilities

<u>TOTAL CAPEX</u> (TYNDP report, in € billions) <sup>14</sup>	~66	~6	~1.5	~22	~97
<u>As sums of project costs in</u> <u>Annex A, in € million</u>	~55.4	~4.2	~1.7	~4.3	~65.6

## 2.2. ENTSOG's main conclusions

- (12) ENTSOG states that<sup>15</sup> “*The document identifies potential investment gaps, and how projects submitted to TYNDP mitigate these gaps, following contrasted scenarios reflecting the European Climate and Energy ambitions*” and concludes that “[...] *the current gas infrastructure is close to completing the internal energy market. Some specific areas still show investment needs to improve interconnections and connection to new supplies, however almost all infrastructure gaps can be addressed in the next five years by projects already initiated, including ability to handle supply route disruptions. It also shows that the gas infrastructure offers exceptional and cost-efficient opportunities for the EU to develop intermittent renewables and decarbonised gases at large scale.*”
- (13) ENTSOG underlines the role of the gas system to contribute to a cost-efficient decarbonisation of the energy sector and to a hybrid gas system where methane and hydrogen will coexist, by stating<sup>16</sup> “*The TYNDP 2020 shows that the gas system as part of a Hybrid Energy Infrastructure can support the inclusion into the existing infrastructure of renewable and low carbon gases, including hydrogen, in line with the European strategies for Hydrogen and Energy System Integration. These strategies can deliver more efficient, resilient, sustainable as well as faster and cheaper decarbonisation of the European energy sector.*”
- (14) ENTSOG stresses the key role of the TYNDP 2020 in the on-going 5th PCI selection process led by the European Commission, since projects applying for PCI status must be included in the most recent TYNDP.

## 3. ASSESSMENT OF THE DRAFT TYNDP 2020

- (15) ACER assessed the draft TYNDP 2020 with due consideration of the requirements of Article 8(10) of Regulation (EC) No 715/2009, the objectives set out in Article 4(3) (b) and 4(5) of Regulation (EU) 2019/942 and Article 9(2) of Regulation (EC) No 715/2009, and the degree of implementation of ACER's recommendations as provided in its Opinion No 14/2019 on the draft TYNDP 2018<sup>17</sup>. In the present Opinion, ACER

<sup>14</sup> As provided in Annex A.

<sup>15</sup> ENTSOG's TYNDP 2020 Press Release PR0221-20, 25 November 2020.

<sup>16</sup> Ibid.

<sup>17</sup>

[https://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Opinions/Opinions/ACER%20Opinion%2014-2019%20on%20the%20ENTSO%20draft%20TYNDP%202018.pdf](https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2014-2019%20on%20the%20ENTSO%20draft%20TYNDP%202018.pdf)

also provides some considerations in view of the 2020 edition of the Gas Regional Investment Plans (GRIPs).

- (16) For matters related to TYNDP scenarios, including the methodology for developing demand and supply assumptions and the treatment of uncertainty, ACER refers mainly to its Opinion No 6/2020<sup>18</sup> on the ENTSO-E and ENTSOG draft TYNDP 2020 Scenario Report. In addition, ACER regrets to notice that ENTSOG failed to take into account ACER's recommendation<sup>19</sup> to develop and use a slow-economic growth scenario in the draft TYNDP 2020. The lack of such a scenario makes the project assessment results unbalanced and potentially overly optimistic. Some topics which are not covered in the ENTSO-E and ENTSOG Scenario Report, such as the supply price curves used by ENTSOG for modelling, are covered in this Opinion.

### 3.1. Improvements noted

- (17) ACER welcomes ENTSOG's introduction of several improvements for the TYNDP 2020<sup>20</sup>. ACER also positively notes that ENTSOG continues to apply improvements as implemented in the earlier TYNDPs. More specifically, ACER positively notes the following:
- a. A better presentation of the TYNDP via a dedicated website and visualization tools which allow for interactive access to the main TYNDP features.
  - b. The implementation of a common ENTSO-E and ENTSOG process for the development of scenarios for the TYNDP 2020 and the preparation of a stand-alone "scenario report" following the practice initiated for the TYNDP 2018.
  - c. The provision of a window of opportunity for NRAs to check input data for the submitted TYNDP candidate projects at an early stage, in August 2019.
  - d. The publication of the PS-CBA Project Fiches, and the provision in spreadsheet format of the projects' results and the results related to CO<sub>2</sub> and other externalities' savings.
  - e. The increased focus of the TYNDP on Energy Transition aspects and better alignment with the Green Deal decarbonisation goals.

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<sup>18</sup> See [https://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Opinions/Opinions/ACER%20Opinion%2006-2020%20on%20ENTSO-E%20and%20ENTSOG%20draft%20TYNDP%202020%20Scenario%20Report.pdf](https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2006-2020%20on%20ENTSO-E%20and%20ENTSOG%20draft%20TYNDP%202020%20Scenario%20Report.pdf) at:

<sup>19</sup> Ibid, paragraph 38.

<sup>20</sup> Some of these improvements were recommended by ACER in its Opinion on the draft TYNDP 2018.

- f. The ongoing efforts to implement a better approach to measuring the contribution of gas infrastructure projects to sustainability.
- g. The introduction of the “existing infrastructure level”, which reflects today’s gas infrastructure, in order to assess possible infrastructure gaps.
- h. The introduction of a mandatory requirement for promoters to submit information related to projects triggered by the incremental capacity process.

### **3.2. Development process and consultation with stakeholders**

*Stakeholders should be consulted at an early stage.*

- (18) ACER notes that ENTSOG organised several webinars and workshops for stakeholder consultation together with ENTSO-E for the development of scenarios, and for project promoters for the development of a Practical Implementation Document (PID)<sup>21</sup> and guidelines for the submission of TYNDP 2020 project candidates.
- (19) However, beyond these consultations on practicalities related to the submission of projects for the TYNDP and a workshop on supply potentials and market related assumptions<sup>22</sup>, ENTSOG interacted less with stakeholders (other than project promoters) in comparison with previous editions of the TYNDP<sup>23</sup>. ACER is of the view that ENTSOG should more actively attempt to engage stakeholders during the early phases of the TYNDP development on strategic aspects and methodological choices, in order to have a TYNDP better considering the views of network users, market participants and other stakeholders, as required by Article 10 of Regulation (EC) No 715/2009<sup>24</sup>.

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<sup>21</sup> [https://www.entsog.eu/sites/default/files/2019-02/TYNDP\\_2020\\_PID\\_webinar\\_FINAL.pdf](https://www.entsog.eu/sites/default/files/2019-02/TYNDP_2020_PID_webinar_FINAL.pdf)

<sup>22</sup> Held on 10.7.2019. <https://www.entsog.eu/entsog-workshop-supply-potentials-and-market-related-assumptions-tyndp-2020>.

<sup>23</sup> Except for consultations and webinars on scenarios, ENTSOG conducted during the TYNDP 2020 development process one webinar on 15.2.2019 on the Practical Implementation Document and one webinar on 4.6.2019 on TYNDP project collection.

<sup>24</sup> “While preparing TYNDP, ENTSOG shall conduct an extensive consultation process, at an early stage and in an open and transparent manner, involving all relevant market participants, and, in particular, the organisations representing all stakeholders. That consultation shall also involve NRAs and other national authorities, supply and production undertakings, network users including customers, distribution system operators, including relevant industry associations, technical bodies and stakeholder platforms. It shall aim at identifying the views and proposals of all relevant parties during the decision-making process”.

- (20) ACER welcomes ENTSOG's presentation on the draft TYNDP analysis to stakeholders in a dedicated webinar<sup>25</sup> and during the Regional Meetings held for the 5<sup>th</sup> selection process of PCIs<sup>26</sup>.

*The stakeholders' consultation of the draft TYNDP 2020 received limited feedback*

- (21) ENTSOG conducted a public consultation on the draft TYNDP 2020 from 25 November 2020 until 15 January 2021<sup>27</sup>. During the consultation, six responses were received. Of these, one was from an environmental non-profit association, one from an international organisation working on the harmonisation of energy legislation of contracting parties within the EU, two from energy companies, one from an association of gas distributors and one from the European association of gas infrastructure operators.
- (22) ACER notes that stakeholders' feedback depends largely on the type of organisation. Regarding elements for improvement in the TYNDP, some stakeholders provided their individual suggestions:
- a. The critical parameters of project analysis (e.g. CBA results) should be presented with more clarity.
  - b. More focus on sustainability aspects. The new category of ET projects should better substantiate its contribution to emission reductions and renewable energy integration.
  - c. More focus on cross-sectoral optimisation and assessments. In the view of this stakeholder, the ENTSOs modelling and CBA methodologies should evolve towards deeper cross-sectoral optimisation. The interplay of all potential flexibility options, such as more efficient use of existing infrastructure, demand response, different storage technologies, flexible generation capacities need to be taken into account. There is a suggestion to develop a joint chapter with ENTSO-E to align on the need for the coupling of electricity and gas grids in both TYNDPs. A consistent methodological framework for the assessment of gas ET projects, evaluating interlinkages and redundancies with electricity and heat networks should be developed.
  - d. More focus on gas developments at distribution level. This stakeholder suggests including the interplay between gas transmission and distribution projects in the

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<sup>25</sup> On 16.12.2020 <https://entsog.eu/tyndp-2020-public-consultation-until-8-january-2021-and-presentation-day-16-december-2020#downloads>

<sup>26</sup> Cf. presentations during the 17.11.2020 kick-off Regional Group meeting for the 5<sup>th</sup> PCI process.

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[https://forms.office.com/Pages/ResponsePage.aspx?id=\\_YQFgflpN0GmocDjMoCxxCMZhqCKoh5LruO4cBF6-BIURUhSRjZJNVNLVTVXWkdEUINVruJHRUNIUS4u](https://forms.office.com/Pages/ResponsePage.aspx?id=_YQFgflpN0GmocDjMoCxxCMZhqCKoh5LruO4cBF6-BIURUhSRjZJNVNLVTVXWkdEUINVruJHRUNIUS4u)

TYNDP, taking into account that most biomethane injections take place at distribution level.

- e. More focus and analysis of infrastructure congestions and actual gas flows in the TYNDP.
- f. Expanding the current list of ET projects to other type of projects, such as connection of H2 valleys, off-shore H2 and H2 blends projects, de-blending projects, etc.
- g. One respondent stresses the need to include the Energy Community Contracting Parties and projects in the geographical scope of the TYNDP.

(23) ACER notes a low level (6) of stakeholders responses to the draft TYNDP 2020, similar to the one observed for the TYNDP 2018 (7 responses), but significantly lower in comparison to the TYNDP 2017, when 21 responses were received. The level of stakeholders' engagement during the public consultation of the gas TYNDP is much lower than for the electricity draft TYNDP 2020<sup>28</sup>, to which 22 stakeholders responded. In particular, ACER is concerned by the lack of stakeholders' engagement and the absence of feedback from gas network users and gas supply and production undertakings during the public consultation.

(24) ACER recommends that ENTSOG:

- a. Ensure that the PS-CBA results become available to all stakeholders before the opening of the public consultation<sup>29</sup>.
- b. Provide a detailed evaluation of responses to the feedback received by stakeholders in the final TYNDP 2020 publication and to the recommendations contained in the present ACER Opinion.
- c. Consider ways for increasing the stakeholders' interest and engagement in the TYNDP development process, by planning early consultation actions on critical aspects, proactively reaching out to EU associations of gas network users and of producers and suppliers, and making sure that stakeholders' engagement can influence the TYNDP process and outcome.

### Recurrent delays in the TYNDP development process

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[https://eepublicdownloads.blob.core.windows.net/public-cdn-container/tyndp-documents/TYNDP2020/Foropinion/TYNDP2020\\_Stakeholder\\_Engagement.pdf](https://eepublicdownloads.blob.core.windows.net/public-cdn-container/tyndp-documents/TYNDP2020/Foropinion/TYNDP2020_Stakeholder_Engagement.pdf)

<sup>29</sup> ENTSOG mentions in question #13 of the Public Consultation that the publication of the results of the cost-benefit analysis of all PCI applicant projects is a new element. However, these results, which are not easy to interpret for most stakeholders, were only published on 12 January 2021 as part of the TYNDP documentation.

- (25) ACER regrets that the TYNDP 2020 process was significantly delayed compared to its initial schedule<sup>30</sup>, with some activities postponed by more than 6 months. ACER notes that these delays are not attributable solely to ENTSOG. For instance, the TYNDP scenario report, which precedes the gas TYNDP report and which was developed jointly by ENTSOG and ENTSO-E, delayed the process – at least partially –, although it is acknowledged that the COVID-19 crisis also created a challenging environment for delivering on the initially planned timeline.
- (26) Delays in the process created uncertainty and time constraints in activities which depend on the availability of the results from the TYNDP 2020 modelling and analytics. For example, the late availability of the results of the PS-CBAs did not allow sufficient time to stakeholders to comment on all documents of the draft TYNDP 2020 during the public consultation. Therefore, ACER calls once again on ENTSOG to look at the reasons for the encountered delays, assess the experience and derive from the lessons learnt a better planning of future TYNDP processes, including foreseeing effective mitigation measures for delays.
- (27) All elements of future draft TYNDPs should be released on time for consultation (targeting mid-2022 for the next edition), and for this purpose ENTSOG should look into possibilities to simplify and speed up its internal processes and approvals of documents. Unfortunately, ACER notes that the significant delays in the TYNDP timeline are now a recurring pattern observed in the recent TYNDP processes, and not a one-off exception.

### **3.3. Project data collection**

#### *Data collection process, projects code*

- (28) Data collection of transmission, LNG and UGS projects took place from 30 May 2019 to 28 June 2019 in a transparent and open process, where ENTSOG supported the process for the project promoters' applications and allowed for the due participation of third-party (non-TSOs) promoters. The submission phase was followed by a check and validation phase during July 2019. Consequently, the draft TYNDP 2020 reflects the status of the projects as of July 2019. Following this process, ENTSOG provided two further project collection windows dedicated to Energy Transition (ET) projects (in August 2019 and from mid-May until mid-June 2020).
- (29) ACER positively notes ENTSOG's consistent use of TYNDP identification projects' codes from the previous TYNDP, in order to ease the monitoring of the progress of projects between the TYNDP editions.

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<sup>30</sup> Cf. slide 3 of Webinar on TYNDP project collection, 3 June 2019. The draft TYNDP for public consultation was expected in June 2020. [https://www.entsog.eu/sites/default/files/2019-06/Webinar1\\_Project%20Collection\\_2020\\_20190603\\_0.pdf](https://www.entsog.eu/sites/default/files/2019-06/Webinar1_Project%20Collection_2020_20190603_0.pdf)

- (30) ACER recommends that in the future ENTSOG strive to implement a single data collection process with a common cut-off date for all types of projects, instead of having a distinct process for the collection of ET projects.
- (31) The data collection process and the cut-off date should be moved, to the extent possible, closer to the publication date of the TYNDP, in order to ensure that the TYNDP is based on up-to-date project information, in particular in instances where a national development plan is updated.

Guidelines for inclusion of projects in the TYNDP 2020 to filter out clearly unrealistic projects

- (32) ACER notes that the updated Practical Implementation Document (PID) for the TYNDP 2020<sup>31</sup> is generally in line with the European Commission's recommendation on "Guidelines on equal treatment and transparency criteria to be applied by ENTSO-E and ENTSOG when developing their TYNDPs", as set out in Annex III.2 (5) of Regulation (EU) No 347/2013<sup>32</sup>.
- (33) However, ACER notes that the process of updating the PID for the TYNDP 2020 opened in February 2019 was suboptimal. ACER regrets that ENTSOG allowed only one week for comments, which is clearly insufficient. ACER notes that ENTSOG should allow more time to stakeholders to provide input on this matter in future updates of the TYNDP.
- (34) ACER notes that ENTSOG required that all investment items included in the draft TYNDP 2020 fulfil the criteria set out in the PID.
- (35) ACER notes that the definition and the criteria for including ET projects in the PID are relatively broad<sup>33</sup>. Also, the PID apparently allows for the inclusion on a case-by-case basis of projects<sup>34</sup> which are not related to the production of renewable or/and decarbonised gas and its injection into the transmission grid. ACER would welcome

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<sup>31</sup> Available at: [https://www.entsog.eu/sites/default/files/2019-05/TYNDP%202020\\_Practical\\_Implementation\\_Document\\_20190502\\_0.pdf](https://www.entsog.eu/sites/default/files/2019-05/TYNDP%202020_Practical_Implementation_Document_20190502_0.pdf)

<sup>32</sup> Commission Recommendation of 24 July 2018 on Guidelines on equal treatment and transparency criteria to be applied by ENTSO-E and ENTSOG when developing their TYNDPs as set out in Annex III 2(5) of Regulation (EU) No 347/2013 of the European Parliament and of the Council. [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0727\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0727(01)&from=EN)

<sup>33</sup> "Any project which facilitates the integration of renewables, the achievement of decarbonisation and efficiency targets, reduction of other air pollutants, sector coupling initiatives and, more generally, all projects specifically aimed at the energy system transformation for reaching sustainability goals and not already included in the previous project categories".

<sup>34</sup> pp. 12-13 of the PID: "Energy transition projects envisaged for TYNDP 2020 collection include, but are not limited to, the following types of projects: [...]. Inclusion of projects in TYNDP 2020 which are not related to the production of renewable/decarbonized gas and its injection into the transmission grid will be assessed on a case by case basis."

greater clarity of the criteria used for the inclusion of ET projects in the TYNDP, and increased transparency as regards the case-by-case assessments of ET projects.

- (36) ACER recalls its recommendation to ENTSOG as provided in its Opinion on the draft TYNDP 2018, namely that ENTSOG propose adequate updated eligibility guidelines in order to filter out unrealistic projects from future TYNDPs. In this sense, ACER regrets that the PID was ineffective in filtering out unrealistic projects from the draft TYNDP 2020, at least judging by the overall number of collected projects. This number clearly exceeds the reasonable needs for new gas infrastructure, as explained in Section 3.6.1 on infrastructure needs and Section 3.7 on projects vs. market needs.

### **3.4. Energy Transition Projects**

- (37) ENTSOG's PID 2020 allows for the submission of energy transition (ET) projects. ACER acknowledges the importance of decarbonising the gas sector in view of the climate objectives of the European Union and the need to identify investments contributing this goal. In this sense, the collection of ET projects gives a first overview of the planned developments. Also, ACER recognises that this is the first time such gas-based energy transition projects have been collected as part of the TYNDP exercise, and thus would see this project collection as a first version which may need to mature over time.

- (38) ACER reiterates that, next to the provision by ENTSOG of a detailed categorisation of ET projects by type<sup>35</sup>, two main categories of energy transition gas projects can be distinguished. On the one hand, there are projects for producing bio-methane, synthetic methane and renewable hydrogen. Such projects are essentially on the gas production and supply side and may be considered as indigenous gas production projects. On the other hand, there are projects for reconfiguring, adapting and upgrading the transmission system in order to allow for the injection of bio-methane and hydrogen into the gas transmission networks, i.e. projects pertaining to gas network infrastructure *per se*, even when considered as enablers of production and supply. In addition, there are projects which may involve both of these two main categories at the same time, by including investments in both gas production facilities and network infrastructure (TSO, LNG or UGS), and a few more projects may not belong to either one of the two main categories.

- (39) ACER notes that none of the TYNDP ET projects are included in NDPs, that most of them are at a conceptual state as demonstration or pilot projects or even only as studies, and that it remains in some cases unclear if the projects fall entirely on the production and supply side or are network-related investments. ACER is of the view

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<sup>35</sup> See Infrastructure Report, pp. 43-44, which lists the ET projects according to the following categories: Hydrogen and synthetic methane, Biomethane Developments, CCS/CCU, Reverse flow DSO-TSO, CNG/LNG for transport (road, train, sea), Smart multi energy system to create synergies between sectors, Hybrid compressor stations, Micro liquefaction, Methane Emissions. Also, in p. 43 there is a reference to the draft TYNDP 2020 Opinion, which appears to be a typo.

that ET projects should be where possible listed and labelled in the TYNDP 2020 as pertaining to these two main categories of projects (production and supply side, network-related and other projects), in addition to the detailed type categories provided by ENTSOG. In addition, ACER finds that the technical features of the ET projects such be collected in greater detail and more standardised way<sup>36</sup>.

- (40) ACER notes that ENTSOG initially collected 46 ET projects, but then reopened the collection in May 2020, increasing the overall number of the ET projects in the draft TYNDP 2020 to 75.
- (41) The recently published Commission’s legislative proposal for a revision of the TEN-E Regulation focuses on hydrogen infrastructure and grid investments for integrating renewable and low-carbon gases (like biogas and renewable hydrogen) into the existing gas networks. The overall direction of the proposal is generally in line with the ACER-CEER Gas Bridge 2025<sup>37</sup> and the ACER-CEER Position Paper on TEN-E Revision<sup>38</sup>. In this context, many questions arise as to ENTSOG’s tasks on ET projects under the future EU regulatory framework, the possible role of gas TSOs for promoting hydrogen infrastructure, and the belonging of the so-called “smart gas grids” projects (if located at DSO level) to the European-wide network planning process, just to name a few.

### **3.5. Consistency of NDPs and EU TYNDP**

- (42) ACER welcomes that ENTSOG collected and provided country-level information about the degree of consistency of the NDPs and the TYNDP projects. For projects not included in NDPs, a justification is provided by the promoters. Approximately 55% of the TYNDP 2020 projects are listed in the relevant NDPs. ACER notes that this level of consistency between the TYNDP 2020 and NDPs is lower than the one achieved for the TYNDP 2018. However, this decrease in consistency between the NDPs and the TYNDP is largely explained by the inclusion in the TYNDP 2020 of 75 Energy Transition Projects<sup>39</sup>, none of which has been included in the most recent

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<sup>36</sup> E.g. By collecting features such as biomethane and hydrogen output, compression power, ability to handle blending of H2 and natural gas, etc.

<sup>37</sup> Nov. 2019  
[https://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/SD\\_The%20Bridge%20beyond%202025/The%20Bridge%20Beyond%202025\\_Conclusion%20Paper.pdf](https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/SD_The%20Bridge%20beyond%202025/The%20Bridge%20Beyond%202025_Conclusion%20Paper.pdf)

<sup>38</sup> June 2020  
[http://www.acer.europa.eu/Official\\_documents/Position\\_Papers/Position%20papers/ACER\\_CEER\\_paper\\_on\\_TEN\\_E.pdf](http://www.acer.europa.eu/Official_documents/Position_Papers/Position%20papers/ACER_CEER_paper_on_TEN_E.pdf)

<sup>39</sup> See p. 12 of ENTSOG’s PID for TYNDP 2020: “These are projects which facilitate the integration of renewables, the achievement of decarbonisation and efficiency targets, reduction of other air pollutants, sector coupling initiatives. They include, but are not limited to: Power to Gas intended for the production of hydrogen and synthetic methane; Biomethane production plants; Hydrogen production following steam methane reforming or similar processes; Reverse flow projects between DSO and TSO in order to facilitate flows of renewable/decarbonized gases; Upgrading of gas transmission grid to receive blended or pure hydrogen; Carbon

gas NDPs. If Energy Transition Projects are not counted, the level of consistency of NDPs and the TYNDP 2020 is similar to the one observed in the TYNDP 2018.

- (43) ACER is of the view that implementing its recent recommendations<sup>40</sup> to increase the consistency of NDPs and the TYNDP will further improve the level of project consistency.

### 3.6. Methodology

#### 3.6.1. Infrastructure needs

- (44) ACER appreciates ENTSOG's system assessment report aimed at identifying potential infrastructure needs on the basis of the so-called "existing level" and "low infrastructure level".

#### Sustainability needs

- (45) ACER notes ENTSOG's conclusion that existing European gas infrastructure can support most of the switch from coal and oil to gas and allow, with adaptations, the integration of renewable and low carbon gases. ACER agrees with this conclusion. Therefore, in principle, no specific sustainability need is to be resolved by additional "conventional" gas infrastructure projects (handling fossil natural gas).
- (46) ACER is of the view that switching from coal to gas in power generation without additional gas infrastructure projects can bring in the short-term important CO<sub>2</sub> savings. In Addition, ET projects have the potential to save a significant amount of CO<sub>2</sub> in mid- and long-term. However, ACER calls for caution regarding CO<sub>2</sub> savings associated with ET projects, as such savings are subject to uncertainty due to the lack of a credible and widely accepted methodology for validating the claims of the project promoters about potential CO<sub>2</sub> savings.

#### Needs driven by security of supply considerations

- (47) ACER agrees with the main conclusion of ENTSOG's assessment, namely that EU's gas infrastructure is resilient to high demand situations caused by a 2-week cold spell, a 2-week *Dunkelflaute* effect, and a peak day. ACER also notes that, with regard to EU's gas system resilience to supply route disruption, some infrastructure limitations

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*Capture and Storage - CCS and/or related CO<sub>2</sub> transport being national or cross-border; and Carbon Capture and Use - CCU and/or related CO<sub>2</sub> transport being national or cross-border"*

[https://www.entsog.eu/sites/default/files/2019-05/TYNDP%202020 Practical Implementation Document 20190502\\_0.pdf](https://www.entsog.eu/sites/default/files/2019-05/TYNDP%202020%20Practical%20Implementation%20Document%20190502_0.pdf)

<sup>40</sup> Agency's Opinion No 9/2020 on the review of national network development plans to assess their consistency with the EU TYNDP, pp. 8-10.

[https://acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Opinions/Opinions/ACER%20Opinion%2009-2020%20on%20the%20consistency%20of%20gas%20NDPs%20with%20EU%20TYNDP.pdf](https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2009-2020%20on%20the%20consistency%20of%20gas%20NDPs%20with%20EU%20TYNDP.pdf)

may prevent certain countries<sup>41</sup> from being supplied (in particular under high demand situation) by sufficient quantities of gas under “Existing” and “Low” infrastructure levels.

- (48) ACER invites the NRAs, the TSOs and the Competent Authorities of the concerned countries to take due note of ENTSOG’s findings and consider possible actions addressing the identified risks to security of gas supply in the coming years.

*Competition and Market integration needs*

- (49) ENTSOG’s results show that geographical specificities, in terms of central or peripheral location, as well as the project scale size largely impact the degree to which LNG and interconnection capacity contribute to diversification, with small and mid-size countries in Central Europe generally exhibiting healthier values than countries in peripheral locations<sup>42</sup>. The results of the supply dependence assessment, as measured by the minimum annual supply dependence (MASD) indicator for LNG supply, demonstrate the reliance of most of Europe on LNG for achieving a satisfactory degree of diversification of supply and competition.
- (50) ACER notes the improvement in ENTSOG’s assessment in terms of dependence on particular basins. ACER notes positively that Europe is not dependent on any single LNG basin.
- (51) ACER notes that in all scenarios MASD indicates that Europe relies on Russian gas supply to cover the overall EU gas demand until 2030 and, to a lesser extent, in 2040.
- (52) ACER notes ENTSOG’s view that the increasing gas price convergence<sup>43</sup> in the EU generally confirms a better efficiency of the existing European gas infrastructure in terms of backing price convergence. The cross-border projects and network codes implemented during the last 5 years have allowed to physically interconnect most of the Member States and integrate them in the European gas markets. ACER is of the view that the observed price differences would mostly result from cross-border tariffs as well as possible market access barriers, including non-sufficiently competitive hubs, rather than from a lack of gas transportation capacity or interconnections across Member States. However, depending on the supply reliance on LNG, some Member States may be exposed to LNG price spikes in the international markets. During LNG price spike episodes, hub prices of countries more dependent on LNG can decouple from the rest of European hubs prices, and the existing interconnection capacity with neighbouring Member States appears to be insufficient during the duration of the spike to counter this.

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<sup>41</sup> E.g., Poland under Ukraine or Belarus route disruption of Russian gas under peak day stress case, Finland under Baltic States and Finland disruption of Russian gas, and several countries in the Western Balkans.

<sup>42</sup> Consistent with the findings of the ACER Market Monitoring Report for 2019, section 3.1.

<sup>43</sup> Ibid, section 3.5.

ACER assessment of infrastructure needs

- (53) ACER appreciates ENTSOG's assessment of the system needs and gaps provided in the TYNDP 2020 System Assessment Report. In particular, ACER appreciates the way in which the results of the analyses are provided and the availability of an online visualisation platform, which enables a swift overview of results.
- (54) However, ACER finds that an analysis of the level of utilization and congestion of existing infrastructure is missing in the TYNDP. ACER deems that the level of use and congestion of existing infrastructure, together with the market demand for additional capacities, should be factored in the assessment of system needs.
- (55) ACER also notes the improved resilience of European gas system compared to the TYNDP 2018. ACER shares ENTSOG's view that the current European gas transmission system is already well-developed and will be even more resilient by 2025, and that therefore not many additions to conventional gas infrastructure will be needed on transmission level in order to address future gas system needs.

3.6.2. Sustainability assessment, CBA implementation and methane emissions

Contribution of gas projects to sustainability

- (56) Natural gas will be a needed energy carrier, at least in the short-term, thus facilitating the energy transition in the European Union. However, the gas sector will have to be decarbonised to meet the ambitious decarbonisation targets under the European Green Deal<sup>44</sup>. ACER notes that gas infrastructure must be future-proof and show a positive contribution to the decarbonisation goals.
- (57) Measuring the sustainability impact of traditional gas infrastructure projects is challenging and technically complex. The impact largely depends on gas supply and demand changes. Gas use can be more or less CO<sub>2</sub> intensive than another primary fuel in each segment of its supply and use. Changes in these patterns are uncertain and generally well beyond the remit and control of infrastructure project promoters. Therefore, it is often difficult to attribute potential CO<sub>2</sub> savings to specific infrastructure projects and other sustainability effects. Furthermore, as long as natural gas flows through gas infrastructure also methane emissions along the value chain need to be taken into account.
- (58) A net positive contribution to sustainability of gas infrastructure is, as a rule, only possible when gas clearly substitutes more polluting fossil fuels (e.g. oil, coal) or the project handles renewable and low carbon gases (e.g. bio-methane and renewable

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<sup>44</sup> See European Commission Communication COM(2019) 640 of 11.12.2019, on the European Green Deal.  
[https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC\\_1&format=PDF](https://eur-lex.europa.eu/resource.html?uri=cellar:b828d165-1c22-11ea-8c1f-01aa75ed71a1.0002.02/DOC_1&format=PDF)

hydrogen). However, it is also possible to have a positive sustainability contribution of gas infrastructure when fossil gas use is combined with carbon capture and storage (CCS) or CCS and use (CCSU). On the other hand, gas infrastructure projects which are not used to substitute more CO<sub>2</sub> intensive fuels may be neutral or negative in terms of sustainability. Additionally, the sustainability of gas infrastructure is interlinked with electricity generation and supply developments, e.g. gas power generation as a back-up for renewables, contributing to balance mismatches of electricity supply and demand (due to intermittency of power generation or other factors).

- (59) The need to implement an improved sustainability assessment methodology as a part of the CBA has been identified by ACER in its Opinions on gas CBA, gas PCI list and in the ACER-CEER Gas Bridge 2025. The goal should be at least to make the sustainability indicator(s) transparent, replicable, objective and accepted by most stakeholders.
- (60) A refined sustainability approach, one that accounts for linkages between gas and electricity - and generally other sector integration effects - would require at least a truly integrated gas and electricity market model. It is also important to align the approach to sustainability in gas with the one applied in the electricity CBA methodology, to the extent possible, and incorporate broader energy system integration issues in the evaluation.
- (61) ACERs appreciates the on-going efforts and discussions with ENTSOG and the European Commission, and supports the use of an improved sustainability assessment for its application in TYNDP assessment and the next PCI process. ACER notes that the recently published consultancy study for the European Commission<sup>45</sup> presented concrete ideas to improve the sustainability indicators for project evaluation.
- (62) In addition, ACER invites ENTSOG to elaborate in greater detail the extent to which TYNDP projects and the infrastructure levels in each of the scenarios provide sustainability benefits. For instance, such elaboration would help to elucidate the benefits which conventional infrastructure (one that still comprises the majority of the TYNDP projects) could bring in terms of sustainability, in the way such benefits are estimated for the ET projects.

#### *Implementation of CBA methodology*

- (63) ACER notes that the project-specific (PS) CBA results have been published, with some delay, as part of the draft TYNDP 2020. ACER finds that, despite some improvements in the CBA implementation (e.g. provision of main results in spread sheet format), the results are the outcome of what remains mainly a multi-criteria

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<sup>45</sup> [https://op.europa.eu/en/publication-detail/-/publication/364d69a4-1744-11eb-b57e-01aa75ed71a1/language-en?WT.mc\\_id=Searchresult&WT.ria\\_c=37085&WT.ria\\_f=3608&WT.ria\\_ev=search](https://op.europa.eu/en/publication-detail/-/publication/364d69a4-1744-11eb-b57e-01aa75ed71a1/language-en?WT.mc_id=Searchresult&WT.ria_c=37085&WT.ria_f=3608&WT.ria_ev=search)

assessment. ACER regrets that the Economic Performance Indicators (EPI)<sup>46</sup> of CBA assessments are not included.

### Methane emissions

- (64) The current CBA methodology of ENTSOG does not provide guidelines to project promoters on how to assess methane emissions associated with gas infrastructure projects. ACER notes that methane emissions leaks of gas infrastructure along the midstream gas value chain within the European Union are estimated to be about 0.2% of the total gas sales in the European Union<sup>47</sup>, and that they represent only a fraction of the overall methane emissions across the gas value chain from production to end-users. MARCOGAZ and GIE<sup>48</sup> estimate methane losses, based on global European gas sales, to be in the range of 0.05% in the gas transmission network, < 0.002% at LNG regasification terminals, in the range of 0.1% to 0.2% for gas distribution networks, and 0.01% for UGS. In terms of greenhouse gas emissions (GHG) equivalence, methane emissions associated with gas infrastructure are thus estimated to be modest and amount to about 0.4% of total GHG emissions (in CO<sub>2</sub> equivalent terms) within the European Union, of which about 0.1% are related to the gas transmission network.
- (65) ACER notes that gas infrastructure may have a limited impact on the overall methane emissions and that the assessment of the emissions may be challenging. Nevertheless, ACER is of the view that properly assessing methane emissions resulting from the construction and operation of specific gas infrastructure (transmission, LNG and UGS projects) is a must. In view of the need to take all possible cost-efficient measures to reduce methane emissions, ACER recommends ENTSOG for future TYNDPs to provide or refer to existing guidelines on the ways of measuring, reporting, verifying, and mitigating methane emissions for TYNDP projects, and to report on such information in the TYNDP project fiches.

### 3.6.3. TYNDP model and model implementation

#### General approach to modelling

- (66) The modelling used for the draft TYNDP 2020 is based on the nodal network model initially developed by ENTSOG in 2010 (NeMo tool), which has undergone certain improvements and adjustments over time. Details are available in Annex D.1 to the TYNDP 2020, which provides a good overview of the modelling approach used for

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<sup>46</sup> Standard indicators such as the Economic Net Present Value (ENPV), Benefit/Cost Ratio (B/CR) and Economic Internal Rate of Return (EIRR), which inform on whether the projected benefits associated to a project are likely to outweigh (or not) its costs.

<sup>47</sup> This is equivalent to 0.3% of the total anthropogenic GHG emissions (measured in CO<sub>2</sub> equivalent) in the EU-28.

<sup>48</sup> <https://www.marcogaz.org/publications-1/documents/>. See document WG-ME-17-31, from 22.11.2017.

TYNDP 2020, with a general description of input, output, assumptions, variables and constants.

- (67) The primary objective of the modelling is to identify, via simulations, a feasible flow pattern under which gas supply and demand are balanced at every node, by using the available and expected system capacities represented by the arcs between the nodes. The objective function of the algorithm seeks to achieve such balance at lowest delivered gas cost. Gas prices used for simulations are exogenous to the model. The outputs also depend on the level of infrastructure tariffs.
- (68) ACER acknowledges ENTSOG's detailed description of the assumptions regarding the use of existing transmission infrastructure and project tariffs<sup>49</sup>, including the publication of tariff values, for the TYNDP 2020, following a consultation with stakeholders in July 2019. Additionally, ACER notes that the price spreads used to create contrasted gas supply scenarios have been halved from +5 €/MWh to +-2.5€/MWh, which is a more realistic assumption in view of the observed price convergence among the EU Member States during recent years.

#### Implementation of interlinked model

- (69) ACER notes that the implementation of the interlinked model is mostly limited to a joint ENTSO-E and ENTSOG TYNDP scenario development. ENTSOG's NeMo tool does not allow for dynamic interactions with electricity modelling tools, and vice versa. ACER welcomes the efforts of the ENTSOs to implement a common screening and dual assessment methodology as part of the so-called interlinked model 2.0. However, ACER notes that these developments are not progressing at the desired speed in view of the new Energy System Integration ambitions. ACER regrets that a dual assessment methodology will most likely not be implemented for the TYNDPs 2020, and that the implementation of the electricity and gas CBA methodologies has still not achieved the desired level of alignment and consistent implementation<sup>50</sup>.
- (70) ACER welcomes ENTSOG's plan to implement a new modelling tool offering more functionalities and enabling better integrated assessment of the gas and electricity systems. ACER notes that ENTSOG's modelling development team started in 2020 to integrate the existing system model and topology in the new modelling, and that in 2021 ENTSOG plans to finalise the implementation of the new tool for its use in the

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<sup>49</sup> Tariffs borne by the infrastructure users from the commissioning of an infrastructure project were considered in addition to the tariffs from the use of already existing infrastructure

<sup>50</sup> A modicum of alignment would entail at least the use of the same scenarios, same assumptions, similar presentation of the CBA outputs, same criteria for economic analysis, while recognising specificities for electricity and gas where needed.

seasonal outlook simulations and, at a later point in time, for the TYNDP 2022 simulations<sup>51</sup>.

- (71) ACER deems that ENTSOs should investigate suitable locations for power-to-gas installations in the system needs analysis of the electricity and gas network development plans with the aim of providing information to potential project developers.

#### 3.6.4. Cost transparency

- (72) ACER appreciates the analysis and overview of the investments costs provided in the Infrastructure Report (section 5.6). However, ACER regrets that there is a general worsening of the level of project costs transparency in comparison with the TYNDP 2018. CAPEX have been published in the TYNDP 2020 for 65% of the TYNDP investment items, either as provided by the promoters (50%) or as estimated by using available references (15%). In the previous TYNDP, the project costs were available for 81% of the investment items.
- (73) ACER notes that the sum of project investment costs for projects included in Annex A of the TYNDP (€66 billion) deviates significantly from the total investment costs indicated elsewhere in the infrastructure report (€97 billion).
- (74) ACER notes that ENTSOG requires a higher level of cost transparency for TYNDP projects that intend to apply for PCI status. ACER reiterates once again its view that maximum reasonable level of cost transparency is recommendable and necessary for *all* TYNDP candidate projects, including those not intending to apply for PCI status. Applying a different level of cost transparency for various TYNDP candidate projects may run contrary to the equal treatment principle set in Regulations (EC) No 715/2009 and (EU) No 347/2013.
- (75) ACER reiterates its view that for future TYNDPs all promoters of regulated infrastructure should provide for each investment item their best estimate of investment cost, the estimated yearly OPEX, the amount of already incurred CAPEX, and the amount of contracted (but not yet incurred) CAPEX. The provision of best cost estimates should be a requirement for all regulated TYNDP projects and not an option for project promoters. For competitive investment projects, like some ET projects appear to qualify, ACER would welcome that cost estimates are provided at least in an aggregated form.

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<sup>51</sup> See p. 38 of ENTSOG's Annual Work Programme for 2021. <https://www.entsog.eu/sites/default/files/2020-12/ENTSOG%20Annual%20Work%20Programme%202021.pdf>

- (76) In addition, this lack of transparency on cost data for gas projects is in direct contrast to the electricity TYNDP<sup>52</sup>, where CAPEX and annual OPEX costs values are provided and published for each investment item.

### 3.6.5. Comparison with previous TYNDPs

#### Projects commissioned

- (77) ACER welcomes the provision of information on projects included in the TYNDP 2020 which have been completed by June 2019, and which are expected to be commissioned in the near future. ACER notes that 10 investments listed in TYNDP 2018 were already completed by June 2019 and have not been submitted to TYNDP 2020. In addition, 21 investments submitted to the TYNDP 2020 are expected to be commissioned by 31 December 2020. ACER deems that ENTSOG should consider verifying and publishing all projects which have been commissioned as of end of 2020 for the finalisation of the TYNDP 2020<sup>53</sup>, in order to provide a more accurate picture of projects commissioned during the last 2 years. Projects which have already been commissioned by end 2020 should not be included as part of the TYNDP 2020 since they should be already in operation or close to start operation.

#### Evolution of number of projects in the TYNDPs

- (78) ACER notes that the number of “traditional” TYNDP projects and investment items has been reduced in the last editions, from 279 items in 2015, to 234 in 2017, 207 in 2018 and 187<sup>54</sup> in 2020. This is mainly due to the completion, cancellation, or withholding the re-submission of several projects. This reduction (-33% over the period 2015-2020) in the number of “traditional” projects is not proportionate to the sharp reduction (-58% from 2015 to 2019) in the number of gas projects included in the PCI lists, and may be at odds with the current objectives of the Green Deal and the proposal for a revised TEN-E Regulation which foresees a very limited role for “conventional” gas infrastructure projects.
- (79) ACER would encourage a further careful and critical review of the merits of the high number of projects in the TYNDP 2020 and in future editions, considering that the current FID projects and advanced projects expected for commissioning for 2025 may well close all existing infrastructure gaps, as confirmed by ENTSOG’s analysis.
- (80) ACER recalls that the projects listed in the TYNDP are an input to the process and not a result of the modelling exercise which ENTSOG carries out. Therefore, many of the TYNDP projects do not match any apparent need, as identified by ENTSOG in the infrastructure needs assessment. In particular, ACER notes that the 77 transmission,

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<sup>52</sup> <https://tyndp.entsoe.eu/documents/>

<sup>53</sup> Some NRAs have provided updates on projects in the Annex to this O

<sup>54</sup> Excluding 75 “Energy Transition Projects”, a new category of project included for the first time in the draft TYNDP 2020.

LNG and UGS projects under the so-called “less-advanced” infrastructure level apparently do not address any infrastructure need identified by ENTSOG’s analysis, and that therefore their inclusion in the TYNDP 2020 is dubious.

*Reverse progress of projects*

- (81) ACER notes the “reverse progress”<sup>55</sup> of 2 projects included in the TYNDP 2020 which are now listed as “planned” rather than as “FID status declared”, and 12 projects which have shifted from “advanced” to “less-advanced” status, mainly due to delays and rescheduling. ACER notes the explanations provided in the TYNDP regarding the “reverse progress” of these projects. However, ACER finds it necessary to explain in greater detail the reverse progress of projects, and calls on project promoters to prepare and report from the very start realistic, coherent and prudent implementation plans.
- (82) ACER reiterates its invitation to ENTSOG to consider developing, based on its experience in monitoring the progress of projects, metrics that would provide early warnings about unrealistic project timelines or conceptually doubtful projects, especially ones that do not address a reasonable infrastructure need, such as projects not addressing needs in previous TYNDPs and not progressing in the meantime.

**3.7. Projects candidates vs market needs**

- (83) ACER appreciates that ENTSOG made obligatory for promoters the provision of information related to the incremental capacity process, in order to include in the TYNDP a list of projects triggered by the market (commitments from market players for additional transportation capacity).
- (84) ACER notes that during the annual capacity auctions, the TSOs which offered incremental capacity did not receive any binding commitments from network users during the last incremental capacity process cycle for 2017-2019<sup>56</sup>, and that therefore no incremental capacity project proceeded to implementation. ACER stresses that gas network expansions should be primarily driven by the market (by demand for capacity). ACER notes the presence of a significant discrepancy between the high number of project proposals put forward by project promoters in the TYNDP and the lack of firm commitments of network users to finance any capacity increases. This discrepancy may be a sign that many proposed projects could become stranded in the mid- and long-term if actually implemented.

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<sup>55</sup> Infrastructure Report, p. 35. Projects moved from FID to planned: TRA-N-137, TRA-N-1138. Projects moved from advanced to less-advanced: TRA-N-86, TRA-N-75, TRA-N-1058, TRA-N-66, TRA-N-809, LNG-N-62, TRA-N-63, TRA-N-325, LNG-N-297, TRA-N-361, TRA-N-423 and TRA-N-1057.

<sup>56</sup> ACER Monitoring update on incremental capacity projects and virtual interconnection points, July 2020 [https://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Publication/ACER%20Monitoring%20update%20on%20incremental%20capacity%20projects%20and%20virtual%20interconnection%20points.2020.pdf](https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/ACER%20Monitoring%20update%20on%20incremental%20capacity%20projects%20and%20virtual%20interconnection%20points.2020.pdf)

- (85) ACER notes that by early 2021, ENTSOG will have access to preliminary information on the status of the incremental capacity process initiated in 2019 (non-binding phase). ACER would appreciate that ENTSOG provide an update on the outcomes of this non-binding phase in the final TYNDP 2020. Additionally, ACER recalls its recommendation from the ACER report on incremental capacity<sup>57</sup> to provide better tracking information of the incremental capacity process.
- (86) Moreover, the support of public institutions such as the European Investment Bank (EIB) to traditional infrastructure projects will come to an end soon<sup>58</sup>. The public support from the EU (e.g. CEF-energy funds), which has dramatically diminished in recent years for gas projects, is projected to be very scant or cease altogether in view of the new priorities under the Green Deal and the proposal of a revised TEN-E Regulation, which excludes “conventional” gas infrastructure projects that handle fossil gas. In addition, ENTSOG and many other parties foresee a significant reduction of natural gas demand in Europe from the year of 2030 onwards. In this context, it is difficult to understand why the TYNDP includes a large portfolio of “conventional” gas infrastructure projects which clearly exceeds the reasonable needs for such infrastructure.

### **3.8. Gas Regional Investment Plans**

- (87) Pursuant to Article 12 of Regulation (EC) No 715/2009, TSOs shall establish regional cooperation within ENTSOG and publish Gas Regional Investment Plans (GRIPs) every two years. Based on the GRIPs, TSOs may take investment decisions. Pursuant to Article 5(8) of Regulation (EU) 2019/942, ACER shall monitor the regional cooperation of TSOs, and take due account of the outcome of such cooperation when formulating its opinions, recommendations and decisions.
- (88) During 2020, three out of the six GRIPs<sup>59</sup> were published on ENTSOG’s website. No GRIPs reports have been published for BEMIP and South-North Corridor since 2017,

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<sup>57</sup> “The Agency recommends ENTSOG to become a central point of information by keeping a record of DARs per unique border, avoiding duplication per country/TSO, and to report on the conclusion about the demand indications and whether the process is closed or continued. This record should be updated every year to have a transparent overview of which incremental processes are alive and in what stage of the process they are.”

<sup>58</sup> See p.3, [https://www.eib.org/attachments/strategies/eib\\_energy\\_lending\\_policy\\_en.pdf](https://www.eib.org/attachments/strategies/eib_energy_lending_policy_en.pdf)

<sup>59</sup> Six gas GRIPs regions are defined:

- North-West includes 9 countries: Belgium, Denmark, France, Germany, Ireland, Luxembourg, the Netherlands, Sweden and the United Kingdom.
- South includes 3 countries: Spain, Portugal and France.
- Central Eastern Europe (CEE) includes 10 countries: Austria, Bulgaria, Croatia, the Czech Republic, Germany, Hungary, Poland, Romania, Slovakia, and Slovenia.
- Baltic Energy Market Interconnection Plan (BEMIP) includes 7 countries: Finland, Estonia, Latvia, Lithuania, Poland, Denmark and Sweden.
- Southern Corridor includes 9 Countries: Austria, Bulgaria, Croatia, Hungary, Greece, Italy, Romania, Slovakia, and Slovenia.
- South-North Corridor includes 6 countries: Italy, Belgium, France, Germany, Luxembourg and Switzerland.

and there is no explanation available at ENTSOG's site on the status of the BEMIP, South-North Corridor and South GRIP reports<sup>60</sup>.

- (89) ACER acknowledges that elaborating the GRIPs is a complex and resource-intensive task for TSOs which, however, appears to be of lesser interest for most NRAs and stakeholders in comparison to the TYNDP and the NDPs. Therefore, TSOs and/or ENTSOG should collect topics of possible interest to NRAs and stakeholders before developing the GRIPs, in order to increase NRA interest.
- (90) The GRIPs may constitute a good tool for cooperation among TSOs, for discussing and exchanging information on technical matters and seem to be more relevant for analyses of issues of regional dimensions (such as L/H gas conversion in North-West Europe, or regional plans for decarbonisation of the gas sector).
- (91) ACER notes that there is an obligation of publishing a GRIP every other year pursuant to Article 12 (1) of Regulation (EC) No 715/2009, and that such publication could entail, as a minimum, a short update on the status of regional TSO cooperation in the region. Therefore, ACER calls for the publication of a GRIP for those regions where no GRIP has been published during the last 2 years in order to be compliant with regulatory requirements. ACER notes that the concise 2019 GRIP for the South region, which was published on the South TSOs websites in May 2020, should also be made available online on ENTSOG's site.

#### **4. RECOMMENDATIONS**

- (92) In view of the foregoing, ACER recommends the following to ENTSOG:

*Short-term recommendations (for the final TYNDP 2020)*

- (93) ACER urges ENTSOG to consider for the final version of the TYNDP 2020:
- a. The comments and remarks of NRAs on the TYNDP 2020 projects, as contained in Annex I to this Opinion.
  - b. The publication of a summary document indicating how feedback from the public consultation and from ACER's Opinion are taken into account for the final TYNDP 2020 and will be considered in future TYNDPs.
  - c. Including the Economic Performance Indicators in the Project Specific CBA assessments results.

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<sup>60</sup> A concise GRIP for 2019 is available for the South Region at ENAGAS's and the South TSOs' sites. [https://www.enagas.es/stfls/ENAGAS/Gesti%C3%B3n%20T%C3%A9cnica%20del%20Sistema/GRIP\\_2019.pdf](https://www.enagas.es/stfls/ENAGAS/Gesti%C3%B3n%20T%C3%A9cnica%20del%20Sistema/GRIP_2019.pdf)

- d. Classifying and labelling the ET projects<sup>61</sup> into two main categories, i.e. project pertaining to the supply/gas production side projects (in principle competitive activities) and network related investments to enable injection of decarbonised and low carbon gases in the network, providing further sub-labels where appropriate.
- e. Verifying and publishing all projects included in the draft TYNDP which have been commissioned as of end of 2020.

*Mid- and long-term recommendations (for the TYNDP 2022)*

(94) ACER encourages ENTSOG to consider for future TYNDPs:

*Scenarios, timing and consultation of next TYNDP*

- a. Implementing ACER's recommendations regarding scenarios, as provided in its Opinion No 6/2020.
- b. Improving the planning process, in order to avoid the recurrent delays in the development and the release of TYNDPs. The draft TYNDP should be published for stakeholders' consultation earlier, preferably by mid-year (June 2022 for next edition) instead by the end of the year, also in order to better align the TYNDP and the PCI selection processes.
- c. Increasing stakeholders' engagement in the TYNDP development process and during the draft TYNDP consultation.

*Implementation of CBA and sustainability assessment*

- d. Improving the implementation of the CBA 2.0 methodology and its application regarding the monetisation of benefits, the provision of Economic Performance Indicators in the CBA results, an assessment framework for ET projects and a more refined, in-depth approach to the sustainability dimension.
- e. Requiring CBA project assessments for all TYNDP projects instead of only for projects having declared their intention to apply for PCI status, at individual project level.
- f. Requiring promoters to provide the same (maximum) level of cost transparency for all TYNDP regulated projects, irrespective of their intention to apply for PCI status.

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<sup>61</sup> In addition to the detailed categories for ET projects available in the draft TYNDP 2020.

- g. Analysing the level of utilisation and contractual and physical congestion of interconnection points<sup>62</sup>, as an essential parameter to be taken into account when analysing the need for additional gas infrastructure, in order to avoid the risk of stranded or inefficient investments.

*Interlinked assessment with electricity network planning*

- h. Implementing improvements leading to the development of a consistent and interlinked electricity and gas networks and market model, in pursuit of greater alignment and integration of analyses with the electricity sector, in compliance with regulatory requirements and sector integration ambitions, and rolling out of modelling tools allowing for sector integrated assessments.
- i. Identify, jointly with the electricity TYNDP, suitable locations for power-to-gas installations in the system needs analysis.

*Align the number of conventional gas projects with needs and market interest*

- j. Better incorporating the low market interest shown for developing additional capacities during the incremental capacity process in the infrastructure needs assessment.
- k. Including a number of “conventional” gas infrastructure projects in the TYNDP only to the extent commensurate to the assessed needs. This could be achieved up-front by refocusing the Practical Implementation Document in order to flag and filter out unrealistic projects (e.g. not addressing any need in previous TYNDP(s) and/or not progressing during the last 2 years) during the data collection process. Projects with unrealistic timelines or doubtful projects that do not address any apparent need should not be included in the TYNDP.

*Network adaptations for decarbonised gases, methane emissions*

- l. Considering focusing more on the necessary adaptations of the gas infrastructure to enable the injection of higher shares of renewable and decarbonised gases (blending of hydrogen, synthetic methane, and bio-methane) and the costs, implications and challenges associated with such adaptations.
- m. Considering ways for analysing and addressing the issue of methane emissions from transmission pipelines, compressor stations, LNG terminals and UGS facilities in the TYNDP.

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<sup>62</sup> See the Agency’s Annual Report on Contractual Congestion at Interconnection Points for 2017 [https://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Publication/Congestion%20Report%205th%20ed.pdf](https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/Congestion%20Report%205th%20ed.pdf)

HAS ADOPTED THIS OPINION:

1. ACER notes limited improvements and evolution of the draft TYNDP 2020 in comparison to previous TYNDP editions in terms of process and methodology, and welcomes the presence of a new group of projects with specific features not present in earlier editions of the TYNDPs, namely the energy transition (ET) projects. Looking forward, ENTSOG should improve the definition of ET projects, the clarity of the criteria used for its inclusion in the TYNDP as well as the assessment framework.
2. ACER finds that the draft TYNDP 2020 assessments and the projects included in it generally contribute to the objectives of effective competition and secure functioning of the internal gas market referred to in Article 8(2) of Regulation (EC) No 715/2009. However, ACER notes that the TYNDP 2020 does not sufficiently contribute to the objectives of non-discrimination and efficient functioning of the market, mainly due to the following shortcomings:
  - a. Shortcomings in the applied methodologies, such as a lack of a complete quantitative needs assessment and doubtful quality of the CBA 2.0 methodology and its application, which still requires significant improvements, especially in order to monetise all benefits at individual project level, to demonstrate that benefits exceed costs at individual project level, to properly assess the contribution of projects to sustainability, and to provide adequate project Economic Performance Indicators. A net positive contribution of gas infrastructure to sustainability is, as a rule, only possible when gas clearly substitutes more polluting fossil fuels (e.g. oil, coal) or the project handles renewable and low carbon gases. A more refined sustainability assessment, accounting for dynamic linkages between gas and electricity would require at least a truly integrated gas and electricity market model.
  - b. The lack of analysis of the existing and forecasted use of gas infrastructure, including the expected level of future physical congestion, which is a critical criterion to take into account when analysing the need of additional gas infrastructure. The lack of appetite of network users to develop additional capacities via incremental capacity infrastructure projects does not fit well with the large portfolio of investment items included in the draft TYNDP. In this sense, ENTSOG should develop criteria to flag and filter out unrealistic projects from the TYNDP.
  - c. The asymmetric treatment of candidate TYNDP projects, whereby the assessment of some TYNDP projects is incomplete since they are not subject to CBA, while other projects are subject to CBA, and consequently creating within the TYNDP classes of projects for which the level of analysis and the quality of information differ.

This Opinion is addressed to ENTSOG, the European Parliament, the Council and the Commission.

Done at Ljubljana, on 3 May 2021.

**- SIGNED -**

*For the Agency  
The Director*

C. ZINGLERSEN

Annexes:

Annex I – NRA comments on draft TYNDP 2020 projects

## Annex I – NRA comments on draft TYNDP 2020 projects

By 16 March 2021, 21 NRAs provided input, of which:

-13 NRAs had comments on the TYNDP 2020 projects: NRAs of Austria, Czech, Croatia, Cyprus, Estonia, France, Greece, Italy, Hungary, Latvia, Malta, Portugal, Spain.

-8 NRAs had **no** comments on the TYNDP 2020 projects: NRAs of Belgium, Germany, Ireland, Lithuania, Luxembourg, Romania, Slovenia, Sweden.

Reporting NRA MS	TYNDP project code	TYNDP project name	NRA comment
Austria	TRA-A-21	Bidirectional Austrian-Czech Interconnector (BACI)	Project TRA-A-21 is not part of the Austrian NDP anymore. A new project called CZATi has been developed by the project promoters
Austria	TRA-N-361	GCA 2015/08: Entry/Exit Murfeld	The project TRA-N-361 should reflect 4 different capacity offer levels that have been modelled in the national NDPs. Lower capacity offer levels were included in order to take into account the fact that the capacity of the LNG terminal Krk is currently much lower than envisaged some years ago.
Austria	TRA-F-954	TAG Reverse Flow	The scope of the project has changed, allowing just to create entry FZK capacity at the IP Ceršak/Murfeld from the Slovenian to the Austrian gas transportation system, once the project TRA-N-361 (or any related capacity offer levels) will be triggered by the market. The objective of the planning project TAG Reverse Flow does not cover anymore the creation of a reverse flow FZK capacity on the TAG GmbH pipeline system, by upgrading existing entry DZK capacity to entry FZK capacity at the IP Arnoldstein/Tarvisio
Austria	TRA-N-423	GCA Mosonmagyaróvár	This project is not part of the Austrian NDP anymore, because the capacity related to it was already offered in July 2020 without achieving a positive economic test. Moreover, the Hungarian counterparts explicitly disagree on this project and the necessary activities on the Hungarian side are missing from the TYNDP.
Austria	ETR-N-896	P2G4A	This Project is not part of the Austrian NDP (in none of the above-mentioned editions), and the project table contains very little information about this project. According to our knowledge, Gas Connect Austria plans to conduct a study concerning a P2G project, but it is far from planning.
Croatia <sup>63</sup>	TRA-N-86	Interconnection Croatia/Slovenia (Lučko - Zabok - Jezerišće - Sotla)	<u>Commissioning Year</u> -TYNDP 2020: 2023 -NDP 2021-2030:2024

<sup>63</sup> In view of information from the last Croatian NDP 2021-2030 released on 18.12.2020

			<p><u>Capacity (GWh/d) - @NCV for NDP</u> -TYNDP 2020: 162 -NDP 2021-2030: 146 <u>NDP Number:</u> -TYNDP 2020: 1.9, 1.10, 1.11 -NDP 2021-2030: 1.12, 1.13, 1.14</p>
Croatia	TRA-F-90	LNG evacuation pipeline Omišalj - Zlobin (Croatia)	<p><u>Capacity (GWh/d) - @NCV for NDP</u> -TYNDP 2020: 40,8 -NDP 2021-2030: 440 <u>NDP Number:</u> -TYNDP 2020: 1.18 -NDP 2021-2030: 1.1</p>
Croatia	TRA-N-75	LNG evacuation pipeline Zlobin-Bosiljevo-Sisak-Kozarac	<p><u>Commissioning Year</u> -TYNDP 2020: 2027 -NDP 2021-2030:2028 <u>Capacity (GWh/d) - @NCV for NDP</u> -TYNDP 2020: 54,3 -NDP 2021-2030: 440 <u>NDP Number:</u> -TYNDP 2020: 1.19, 1.20, 1.21 -NDP 2021-2030: 1.2, 1.3, 1.4</p>
Croatia	TRA-N-1058	LNG Evacuation Pipeline Kozarac-Slobodnica	<p><u>Commissioning Year</u> -TYNDP 2020: 2027 -NDP 2021-2030:2028 <u>Capacity (GWh/d) - @NCV for NDP</u> -TYNDP 2020: 82,0 -NDP 2021-2030: 205 <u>NDP Number:</u> -TYNDP 2020: 1.32 -NDP 2021-2030: 1.5</p>
Croatia	TRA-N-1057	Compressor stations 2 and 3 at the Croatian gas transmission system	<p><u>Commissioning Year</u> -TYNDP 2020: 2029 -NDP 2021-2030:2030</p>
Croatia	TRA-N-66	Interconnection Croatia - Bosnia and Herzegovina (Slobodnica-Bosanski Brod)	<p><u>Commissioning Year</u> -TYNDP 2020: 2025 -NDP 2021-2030:2026 <u>Capacity (GWh/d) - @NCV for NDP</u> -TYNDP 2020: 162 -NDP 2021-2030: 146 <u>NDP Number:</u> -TYNDP 2020: 1.15 -NDP 2021-2030: 1.17</p>
Croatia	TRA-A-302	Interconnection Croatia - Bosnia and Herzegovina (South)	<p><u>Commissioning Year</u> -TYNDP 2020: 2023 -NDP 2021-2030:2024 <u>Capacity (GWh/d) - @NCV for NDP</u> -TYNDP 2020: 81 -NDP 2021-2030: 73 <u>NDP Number:</u> -TYNDP 2020: 1.13 -NDP 2021-2030: 1.16</p>
Croatia	TRA-A-68	Ionian Adriatic Pipeline	<p><u>Capacity (GWh/d) - @NCV for NDP</u> -TYNDP 2020: 116,6 -NDP 2021-2030: 205 <u>NDP Number:</u></p>

			-TYNDP 2020: 1.12, 1.25-1.27, 5.5 -NDP 2021-2030: 1.8, 1.9, 1.10, 1.11
Croatia	TRA-A-70	Interconnection Croatia/Serbia (Slobodnica-Sotin- Bačko Novo Selo)	<u>Commissioning Year</u> -TYNDP 2020: 2027 -NDP 2021-2030:2028 <u>Capacity (GWh/d) - @NCV for NDP</u> -TYNDP 2020: 197,9 -NDP 2021-2030: 205 <u>NDP Number:</u> -TYNDP 2020: 1.30, 1.31, 1.22 -NDP 2021-2030: 1.20, 1.21, 1.33
Croatia	TRA-N-303	Interconnection Croatia-Bosnia and Herzegovina (west)	<u>Commissioning Year</u> -TYNDP 2020: 2026 -NDP 2021-2030:2027 <u>Capacity (GWh/d) - @NCV for NDP</u> -TYNDP 2020: 81,0 -NDP 2021-2030: 73 <u>NDP Number:</u> -TYNDP 2020: 1.35, 1.36 -NDP 2021-2030: 1.18, 1.19
Croatia	TRA-N-336	Interconnection Croatia/Slovenia (Umag-Koper)	<u>Commissioning Year</u> -TYNDP 2020: 2029 -NDP 2021-2030:2030 <u>Capacity (GWh/d) - @NCV for NDP</u> -TYNDP 2020: 16,2 -NDP 2021-2030: 15 <u>NDP Number:</u> -TYNDP 2020: 1.37 -NDP 2021-2030: 1.15
Czech Republic	TRA-A-133	Bidirectional Austrian Czech Interconnection (BACI)	Project was not part of the 4th PCI list. CZ TYNDP 2019-2018 shows project CAPEX of 19 mil. EUR instead of 20 mil. EUR, maybe differences in rounding
Czech Republic	TRA-F-918	Capacity4Gas – CZ/SK	In CZ TYNDP 2019-2028, the commissioning year is 2020
Czech Republic	ETR-N-306	Greening of Gas (GoG)	Project not included in the CZ TYNDP 2019-2028. No data available to check or compare.
Czech Republic	TRA-A-136	Czech-Polish Gas Interconnector (CPI)	In CZ TYNDP 2019-2028, the commissioning year is 2022 instead of 2023 (in the draft TYNDP 2020)
Estonia	TRA-F-895	Balticconnector	Commissioning year 2020 was not meet because Paldiski compressor station (part of project) is not yet ready. Expected commissioning is 2021.
Estonia	TRA-F-915	Enhancement of Estonia-Latvia interconnection	Commissioning year 2019 was not meet because Puiatu compressor station (part of project) is not yet ready. Expected commissioning is 2021.
France	ETR-F-587	West Grid Synergy	Project should be already commissioned according to the data in the table.

France	ETR-N-624	Biomethane: Reverse flow projects	-This group of projects website does not contain any specifics on the project - Unclear if this type of reverse flow projects have the European significance to be included in the TYNDP - Connection of biomethane production units to the grid is done in France through a national zoning principle linked to a unique financing line. Having a separated line for projects from GRTgaz and another for Teréga does not make sense.
France	ETR-F-546	Jupiter 1000: first industrial demonstrator of Power to Gas in France	- The project is at national scale, does not have a European significance, and does not develop the network - Commissioning date in the TYNDP is 2020. According from the last update from GRTgaz to CRE, the date is 2021.
France	ETR-F-728	Biomethane: connection of production units and reverse flow projects	-This group of projects website does not contain any specifics on the project - Unclear if this type of reverse flow projects have the European significance to be included in the TYNDP - Connection of biomethane production units to the grid is done in France through a national zoning principle linked to a unique financing line. Having a separated line for projects from GRTgaz and another for Teréga does not make sense.
France	ETR-F-743	Impulse 2025	- No project website - The project is at national scale - CRE only approved phase 1 of the project. CRE does not have data on the overall costs and final commissioning date
France	ETR-N-226	Fos Tonkin LNG Terminal Evolution	- No dedicated project website for this project - Commissioning date in 2022 (instead of 2021).
France	ETR-N-899	mosaHYc (Mosel Saar Hydrogen Conversion)	- No dedicated project website. - As a project developing H2 network, unclear if this falls under the gas TYNDP scope
France	ETR-N-901	HyGéo	- No dedicated project website. - This project does not contribute to network development and is a national project. Unclear the value of including it in the TYNDP
France	ETR-N-942	Lacq Hydrogen	- No dedicated project website. - The project do not contribute strictly to gas network development.
France	LNG-N-227	Fos Cavaou LNG Terminal Expansion	CRE recalls that any new capacity development must respond to a market need and be backed by subscription commitments
France	LNG-N-225	Montoir LNG Terminal Expansion	CRE recalls that any new capacity development must respond to a market need and be backed by subscription commitments
Greece	LNG-N-62	LNG terminal in northern Greece / Alexandroupolis - LNG Section	Maturity status of the project must be upgraded to "Advanced". The binding phase of the market test was concluded on 24.3.2020 and on 5.5.2020 Gastrade notified the conclusion of the Market Test. RAE on 10.12.2020 issued its final decision on the Exemption Application of Gastrade S.A. (1580/2020 RAE's Decision). Gastrade was granted exemption from Art 32 and others of the Gas

			Directive only for the part of the capacity that has been booked through the Market Test.
Greece	TRA-N-63	LNG terminal in northern Greece / Alexandroupolis - Pipeline Section	Maturity status of the project must be upgraded to "Advanced"
Greece	TRA-N-14	Komotini-Thesprotia pipeline	Project has been removed from the TSO's NDP. Must be removed from the list of projects
Greece	TRA-F-51	Trans Adriatic Pipeline	Projects can be removed from the TYNDP list as already in operation as of December 2020.
Greece	TRA-F-941	Metering and Regulating station at Nea Messimvria	Projects can be removed from the TYNDP list as already in operation as of December 2020.
Greece	TRA-A-10	Poseidon Pipeline	Maturity status of the project is considered "Less - Advanced"
Greece	TRA-A-330	EastMed Pipeline	Maturity status of the project is considered "Less - Advanced"
Greece	TRA-A-967	Nea-Messimvria to Evzoni/Gevgelija pipeline (IGNM)	Maturity status of the project is considered "Less - Advanced"
Greece	TRA-N-1278	Compressor station at Ambelia	Maturity status of the project must be upgraded to "FID".
Greece	UGS-N-385	South Kavala Underground Gas Storage facility	Two levels of withdrawal and injection daily rates should be examined. 1st Withdrawal Capacity: 4milNm <sup>3</sup> /day and Injection Capacity 5 milNm <sup>3</sup> /day, 2nd Withdrawal Capacity: 9milNm <sup>3</sup> /day and Injection Capacity 7 milNm <sup>3</sup> /day
Hungary	TRA-F-286	Romanian-Hungarian reverse flow Hungarian section 1st stage	Since 28 November 2020 the capacity of the interconnector is 1.75 bcm for both directions after Romanian Transgaz finished works on the Romanian side. (The capacity for Hungary -> Romania direction was already increased to 1,75 bcm in October 2019 when the Hungarian TSO finished the development)
Italy	ETR-F-516	CNG and L-CNG stations	Further information on the project should be provided to allow for a comprehensive case-by-case assessment. This is particularly relevant as the project does not fall under one of the pre-defined categories of ET projects as defined in the Practical Implementation Document and is not related to the production of renewable/decarbonized gas and its injection into the transmission grid
Italy	ETR-F-599	Sector coupling: hybrid compressor station	The project could be better classified as a transmission project, also considering that it does not fall under one of the pre-defined categories of ET projects as defined in the Practical Implementation Document, and is not related to the production of renewable/decarbonized gas and its injection into the transmission grid. The project has been included in the latest NDP by Snam Rete Gas with CAPEX of 91.8 M€ and OPEX of 0.1 M€/year.
Italy	ETR-N-528	Microliquefaction plants	Further information on the project should be provided to allow for a comprehensive case-by-case assessment. This is particularly relevant as the project does not fall under one of the pre-defined categories of ET projects as defined in the Practical Implementation Document and is not related to the production of renewable/decarbonized gas

			and its injection into the transmission grid. Also, technical characteristics of the project such as the liquefaction capacity are regarded as confidential, but they should be part of a minimum set of information requirements
Italy	ETR-N-595	Transport of hydrogen into natural gas network	Further information on the project should be provided as it is currently not possible to clearly understand the activities and investments foreseen
Italy	ETR-N-617	Project to facilitate biomethane production plants interconnection	Further information on the project should be provided as it is currently not possible to clearly understand the activities and investments foreseen
Italy	ETR-N-958	Green Crane – Italy	Further information on the project should be provided as it is currently not possible to clearly understand the activities and investments foreseen
Italy	LNG-N-304	Italy-Sardinia Virtual Pipeline	The PID states that, for a project to fall into the “LNG” category, the project shall be a new LNG/CNG terminal/facility or an upgrade of an existing terminal, to be connected to a gas transmission pipeline as defined in section 4.1.2 (12), aiming at promoting at least one of the following technical features/characteristics: Send-out (regasification or decompression) capacity; LNG storage capacity; Range of ship size to be received in an LNG terminal. Some parts of the project (namely, the LNG carriers) do not seem to fulfil the criteria for the inclusion in TYNDP. Also, at national level, there is an ongoing assessment on the most efficient infrastructural configuration to achieve the methanization of Sardinia.
Italy	TRA-A-12	GALSI Pipeline Project	The project shows little to no progress compared to previous TYNDPs, hence it is questionable whether it should still be included in the TYNDP 2020. Also, the project is partially overlapping with the TRA-N-1194 project. Also, it says commissioning in 2022 and schedule “on time”, but the information is not consistent
Italy	TRA-F-1193	TAP interconnection	According to latest NDP by Snam Rete Gas, CAPEX is 282 M €
Italy	TRA-F-409	Larino - Chieti	According to latest NDP by SGI, the commissioning was expected by 2020
Italy	TRA-N-1063	Export to Malta	The project is part of the 2019 incremental capacity process related to the creation of new capacity from Italy to Malta. The project has been included in the latest NDP by Snam Rete Gas
Italy	TRA-N-11	Matagiola-Massafra pipeline	According to latest NDP by Snam Rete Gas, CAPEX is 309 M€ and commissioning is 2027
Italy	TRA-N-1246	Greece - Italy interconnection	During the Incremental Capacity process launched in 2017, SRG and DESFA received a non-binding demand for the realization of new technical capacity to interconnect Greece and Italy. Following interactions between SRG, DESFA and the competent NRAs and feedback received from the latter, both TSOs considered to include the above demand (adding an ad hoc offer level to accommodate the capacity) in the Incremental Capacity process 2019 under the framework of TAP expansion
Italy	TRA-N-354	Interconnection with Slovenia	The project has been included in the latest NDP by Snam Rete Gas with a CAPEX of 7 M€ and commissioning in 2025

Italy	TRA-N-439	Stazione di Spinta "San Marco"	According to latest NDP by SGI, commissioning is 2023
Italy	TRA-N-7	Development for new import from the South (Adriatica Line)	The project is also part of the 2019 incremental capacity process related to the creation of additional capacity from TAP. According to latest NDP by Snam Rete Gas, CAPEX is 1,596 M€ and commissioning is 2027
Latvia	ETR-N-80	Power to Gas Production with infrastructure building/enhancement in Latvia	Project depends on investments in wind farms, project is of importance in the light of Green Deal, introducing production of hydrogen and methane as a method of usage of excess power.
Latvia	ETR-N-125	Biomethane production with infrastructure building/enhancement in Latvia	Project depends on political decisions in the light of Green Deal as a solution of biomethane production and usage.
Latvia	LNG-N-912	Skulte LNG	Project with potential to increase the security of supply in the Baltic States and facilitate competition in the regional gas market. This and other projects in the region will ensure the gas supply diversification and flexibility in the region (Baltic States and Finland regional market).
Latvia	TRA-A-382	Enhancement of Latvia-Lithuania interconnection (Latvian part)	PUC expresses support for the project because it is important for the development of regional market
Latvia	TRA-N-1181	Connecting pipe to LNG terminal in Latvia	The connecting pipe to Skulte LNG terminal with connection to the transmission system and Incukalns UGS will increase the UGS competitiveness and will decrease the gas prices to the end users. Project will ensure the gas supply diversification and flexibility in the Baltic States and Finland regional market.
Latvia	UGS-F-374	Enhancement of Incukalns UGS	PUC expresses support for the project. Incukalns UGS is significantly important for LV and Regional security of supply as the region is located far away from deposit areas and main gas transmission routes. With working gas capacity of 24 TWh Incukalns UGS represents the largest available gas storage in the Baltic Sea region. Project will facilitate competition in the developing regional market, and can be considered as additional gas source in winter, contributing to the market integration, ensuring Security of Supply and Sustainability.
Latvia	TRA-A-342	Enhancement of Latvia-Lithuania interconnection (Lithuania's part)	PUC expresses support for the project because project together with other regional scale projects will help to diversify sources and routes, and will enable competition in the regional gas market, eliminate bottleneck for alternative gas flows once GIPL will be in operation
Latvia	TRA-F-341	Gas Interconnection Poland-Lithuania (GIPL) (Lithuania's section)	Project is important to improve security of supply of the Baltic States and Finland; it will also ensure Baltic States integration in common European gas market.

Malta	TRA-A-31	Melita TransGas Pipeline	The project will end the isolation of Malta from the European gas network, will increase the energy security of the Maltese economy and will reduce the greenhouse gas emissions related to the current LNG supply through a Floating Storage Unit, which is considered an intermediate solution until the pipeline interconnection is implemented. The results of the Demand Assessment carried out in 2020 have shown market interest in this project. The next steps that the project is expected to achieve during 2022 are the finalization of the Design Phase leading to the establishment of the Interconnection Point and the auction of the capacity for the first 15 years of useful life the pipeline. The REWS supports the inclusion of the Melita TransGas Pipeline project (TRA-A-31) in the TYNDP 2020 list due to its strategic importance for Malta in order to end the isolation of the country to the European gas market and to increase its level of security of supply. This infrastructure will also be a milestone for the country towards 2050 objective of carbon neutrality, since it will allow the transport of a blend of renewable and natural gas up to 100% hydrogen.
Portugal	TRA-A-283	3rd IP between Portugal and Spain (pipeline Celorico-Spanish border)	This project does not belong to the NDP. Furthermore this project would need the Spanish counterpart which does not exist
Portugal	TRA-A-320	Carregado Compressor Station	This project does not belong to the NDP
Spain	ETR-F-541; ETR -F-632; ETR-N-427; ETR-N-483; ETR-N-504; ETR-N-537; ETR-N-921	CORE LNGas hive and LNGHIVE2 Infrastructure and logistic solutions; Railway project roadmap. Transformation to LNG; P2G integrated in Reganosa NG Transmission Grid; L2DG (LNG to Decarbonised Gas); Sun2Hy; Green Crane - Spain; Circular economy: waste to biomethane	CNMC's understanding is that all these projects are at pilots. CNMC does not have competences regarding renewable gases, but welcomes that some agents are working on renewables gases production to support scaling-up of the market.
Spain	LNG-F-163; LNG-F-183	Gran Canaria LNG Terminal; Tenerife LNG Terminal	The first project to build these LNG infrastructures was rejected.
Spain	LNG-F-178	Musel LNG terminal	CNMC doubts on the need for this project, which was built years ago but still in idle state

Spain	LNG-A-295; LNG-A-296; LNG-A-297; TRA-A-950	Mugardos LNG Terminal: Send-out Increase; Mugardos LNG Terminal: 2nd Jetty; Mugardos LNG Terminal: Storage Extension; Guitiriz - Lugo - Zamora pipeline	According to the current Spanish Energy Policy of decarbonisation, new gas infrastructure expansions / corridors are not going to be developed in the Iberian Peninsula
Spain	TRA-A-283	3rd IP between Portugal and Spain (pipeline Celorico- Spanish border)	CNMC doubts on the need for this project. Currently there are two interconnection pipelines between these countries that are under booked (booked around 67% of the technical capacity in the first semester of 2020) and, additionally, underused (only around 10% of the booked capacity was used in the first semester of 2020). In the yearly products auctions for the gas year 2020 (oct-20, sept-21) only 4% of the offered capacity (26% of the technical capacity was available and, therefore, offered) from Spain to Portugal was allocated, at the reserve price. No capacity from Portugal to Spain was requested by the market (82% of the technical capacity was available and offered)