

# ACER

## **Consolidated report on the progress of electricity and gas Projects of Common Interest**

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## Executive summary

### **Background and content of the consolidated report**

- (1) Energy networks form the backbone of European energy systems today and are expected to play a key role in the transition to carbon-neutral energy systems in the future. Projects of common interest (PCIs) are key cross-border electricity and gas infrastructure projects that would enhance the links between the energy systems of EU Member States and help the EU to achieve its energy policy and climate objectives. The current PCI list includes 106 electricity and 32 gas PCIs<sup>1</sup>.
- (2) Pursuant to Article 5 of Regulation (EU) No 347/2013, project promoters shall submit an annual report for each PCI falling under the categories set out in Annex II.1 and 2 to the relevant Competent Authorities and to ACER. Within three months of the receipt of the annual reports, ACER shall submit to the Regional Groups a consolidated report for the electricity and gas PCIs, evaluating the progress achieved.
- (3) This consolidated report provides a review of the progress of the electricity and gas PCIs achieved from 1 February 2020 to 31 January 2021. The report also provides selected findings covering a longer time horizon (i.e. since the projects' inclusion in the fourth PCI list or, where applicable, since their inclusion in the first PCI list).
- (4) While the consolidated report provides an overview of the progress, or lack thereof, of the implementation of PCIs, it does not analyse the possibilities to speed-up their implementation; for that, a more in-depth analysis would be needed. In this regard, ACER welcomes that the Commission's recent proposal on new EU rules on Trans-European Networks for Energy (the TEN-E Regulation)<sup>2</sup> foresees changing the current annual monitoring of PCIs to a monitoring that takes place once per the 2-year validity period of the PCI list, an approach which would allow a more robust data collection and hence an enhanced assessment of the PCI implementation process by ACER.
- (5) Furthermore, ACER recalls that it has already made several recommendations on how to improve the overall PCI framework, including the governance of infrastructure development, the scope of PCIs, and the TEN-E processes. For more information, please refer to ACER/CEER Position Papers of 5 March 2021<sup>3</sup> and 19 June 2020<sup>4</sup> as well as earlier ACER Position Papers published in 2017<sup>5</sup> and 2016<sup>6</sup>.
- (6) The main findings and observations regarding the PCIs' progress are summarised below.

### **Implementation status and progress**

- (7) With respect the implementation status of the PCI projects, the following can be concluded. About 2/3 of the PCIs are in permitting, under construction, or commissioned, while about 1/3 of the PCIs are planned, but not yet in permitting or still under consideration<sup>7</sup>. The advancement of the PCIs

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<sup>1</sup> <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R0389&from=en>

<sup>2</sup> [https://ec.europa.eu/energy/sites/ener/files/revised\\_ten-e\\_regulation\\_.pdf](https://ec.europa.eu/energy/sites/ener/files/revised_ten-e_regulation_.pdf)

<sup>3</sup>

[https://acer.europa.eu/Official\\_documents/Position\\_Papers/Position%20papers/ACER\\_CEER\\_TEN\\_E\\_2021.pdf](https://acer.europa.eu/Official_documents/Position_Papers/Position%20papers/ACER_CEER_TEN_E_2021.pdf)

<sup>4</sup>

[https://acer.europa.eu/Official\\_documents/Position\\_Papers/Position%20papers/ACER\\_CEER\\_paper\\_on\\_TEN\\_E\\_.pdf](https://acer.europa.eu/Official_documents/Position_Papers/Position%20papers/ACER_CEER_paper_on_TEN_E_.pdf)

<sup>5</sup>

[https://acer.europa.eu/Official\\_documents/Position\\_Papers/Position%20papers/ACER%20Position%20on%20Potential%20Improvements%20to%20the%20EIP.PDF](https://acer.europa.eu/Official_documents/Position_Papers/Position%20papers/ACER%20Position%20on%20Potential%20Improvements%20to%20the%20EIP.PDF)

<sup>6</sup>

[https://acer.europa.eu/official\\_documents/position\\_papers/position%20papers/acer%20position%20on%20eip.pdf](https://acer.europa.eu/official_documents/position_papers/position%20papers/acer%20position%20on%20eip.pdf)

<sup>7</sup> ACER considers that the status of the least developed element of a given PCI is representative for the overall status of the project. The information about the status of the projects is therefore rather conservative, as some of

demonstrates a similar general pattern in both sectors, but electricity PCIs tend to be more advanced, as the share of electricity projects at the stage of consideration (11%) is significantly lower compared to gas projects. However, during the reporting period (1 February 2020 - 31 January 2021) several gas PCIs received planning approvals and consequently the share of gas projects at the stage of consideration fell from 31% to 22%.

- (8) Overall, ACER notes a positive trend in the advancement of electricity and gas PCIs compared to their status in the previous reporting period. During the current reporting period, 18 electricity and 9 gas PCIs advanced their status. However, when comparing the status of the projects as reported in 2021 to the one reported in 2015, ACER notes that 21 electricity<sup>8</sup> and 3 gas PCIs<sup>9</sup> did not manage to advance their status over a 6 years period, with most of them remaining in permitting phase.
- (9) ACER notes that for 7 electricity<sup>10</sup> and 1 gas PCIs<sup>11</sup> no works or activities were reported to have been carried out during this reporting period, with most of them being “on hold” already for the second year in a row.
- (10) Over the reporting period, the implementation of more than half of the PCIs progressed in a timely way (according to schedule or ahead of it). The remaining PCIs were either rescheduled by the project promoters or experienced delays due to various external reasons.
- (11) From the projects on the fourth PCI list, 8 electricity<sup>12</sup> and 2 gas PCIs<sup>13</sup> were commissioned or at least completely constructed by 31 January 2021. About 70% of the PCIs are expected to be commissioned by 2025, which is 10% less compared to the expected ones reported in 2020. However, considering the trends of delays and rescheduling as already observed in previous rounds of monitoring, in ACER’s view such fast rate of implementing the PCIs (about 17 projects annually in the period 2021-2025) still appears to be too optimistic.
- (12) The average (actual or expected) duration of implementation of electricity transmission projects appears significantly longer in the NSI West priority corridor compared to the other priority corridors, which is partially explained by a longer average permit granting process.

#### **Reasons for delayed implementation and for rescheduling**

- (13) Approximately every fourth PCI encountered delays compared to last year’s schedule, in both the electricity and gas sectors, which is a pattern similar to the one observed in the previous reporting period. The reasons for delays vary among the projects. The most frequently mentioned “main” reason for delays for electricity PCIs is again, as in earlier monitoring rounds, related to permit granting (in particular to environmental permitting), whereas in gas it is related to project financing issues.
- (14) ACER notes an improvement in the progress of the gas PCIs compared to previous years, despite the COVID-19 pandemic situation in 2020, which apparently didn’t affect the projects’ advancement to a noticeable extent. In contrast, in electricity several project promoters reported shorter or longer delays caused by the pandemic situation, especially for projects under construction as a result of temporary shortage of materials and restrictions on the mobility of workers.

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the investment items included in a given PCI may be at a more advanced implementation stage than other investment items belonging to the same project.

<sup>8</sup> PCIs 1.10.2, 2.10, 2.13.1, 2.13.2, 2.14, 2.16.1, 2.17, 2.18, 2.9, 3.1.1, 3.11.1, 3.11.3, 3.11.4, 3.21, 3.22.3, 3.22.4, 3.23, 3.24, 3.4, 3.8.5, 4.7

<sup>9</sup> PCIs 6.9.1, 6.20.3, 7.3.1

<sup>10</sup> PCIs 2.13.2, 2.16.1, 2.27.1, 2.27.2, 3.1.4, 10.8, 10.9

<sup>11</sup> PCI 5.3

<sup>12</sup> PCIs 3.11.2, 3.11.5, 3.22.1, 4.2.1, 4.2.2, 4.2.3, 4.8.12, 4.8.17

<sup>13</sup> PCIs 6.2.13, 6.5.1, regarding the PCI 6.24.1, the project promoter didn’t report the PCI being commissioned, even though the public source of information states it has been put in operation on 28 November 2020

- (15) ACER finds that the share of rescheduled PCIs still remains relative low for electricity PCIs<sup>14</sup> (8% in 2021 compared to 5% in 2020), while the share of rescheduled gas PCIs<sup>15</sup> is much higher (i.e. 25%), which is about the same share as in 2020, which indicates that ACER's view that the gas PCIs' implementation plans are too optimistic have grounds. For most of the rescheduled electricity PCIs, the project promoters reported that the commissioning date has been shifted because the project was in an initial stage (under studies) and therefore the previous implementation plan was preliminary, for most of the rescheduled gas PCIs the project promoters reported demand-side and supply-side uncertainties or lack of market interest as a main reason for rescheduling.

### **Project costs and benefits**

- (16) The investment costs of all PCIs, as reported by the promoters, amount to €93.6 billion, which is a slight increase in the overall CAPEX compared to 2020 (€93 billion). About 40% of the electricity and 69% of the gas PCIs reported changes in the expected investment cost compared to the previous year. The reasons for changes in cost vary significantly across the PCIs, including change in the project's technical characteristics, increased accuracy of cost estimations, changes in the prices of raw materials and/or equipment, extra costs due to safety, environmental or legal requirements imposed during the permit granting process, and currency exchange rate variations.
- (17) While for electricity PCIs, the ENTSO-E's TYNDP provides monetised values for some benefit indicators, including the Social-Economic Welfare increase and the impacts due to the variation of losses, for most gas PCIs, project promoters still find it difficult to quantify in monetary terms and report the expected benefits of their projects. ACER is of the view that the absence of a clear indication of both the costs and the benefits of PCIs makes the concerned undertakings open to critique, more difficult to handle in permitting and from regulatory point of view and generally less likely to be supported by the public, the financial community, and the regulators.

### **Exemptions, incentives and cross-border cost allocation**

- (18) ACER notes that during the reporting period no exemption request or application for project-specific risk-related incentives was submitted for any PCI. During the same period 3 investment requests (1 electricity and 2 gas) were submitted to the concerned NRAs and resulted in cross-border cost allocation (CBCA) decisions.
- (19) Over the entire period of the existence of the PCI lists, in total 3 electricity and 5 gas PCIs which appear on the current list, have applied for exemptions from third party access. In addition, 2 gas PCIs have applied for project-specific risk-related incentives. Investment requests, including requests for cross-border cost allocation, have been submitted for over 1/3 of the current PCIs in both sectors<sup>16</sup>.

### **Consistency of network development plans**

- (20) ACER recalls its previous recommendations that the scope of the National Network Developments Plans (NDPs) should allow the inclusion of third party projects. In this regard, project promoters should provide the necessary information to the TSO(s) in charge of developing the relevant NDP(s), as well as to the relevant NRA(s).
- (21) ACER notes that 3 electricity transmission interconnection PCIs have been already approved as a planned project only in one of the NDPs, while they are still under consideration in the other NDP<sup>17</sup>. In ACER's view, the actual implementation of transmission projects strongly relies on the NDPs. If a project is already planned in one of the hosting countries, while it is still under consideration in another country, doubts arise about the feasibility or the consistent implementation of the concerned project. Therefore, the reasons for such a treatment across borders, i.e. different implementation

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<sup>14</sup> PCIs 1.15, 1.12.4, 2.16.1, 2.28.3, 3.1.4, 4.8.12, 4.8.14, 10.8

<sup>15</sup> PCIs 6.2.13, 6.2.2, 6.23, 6.24.4, 6.26.1, 7.1.1, 7.3.4, 7.5

<sup>16</sup> For more information on investment requests and CBCA decisions, please refer to the latest ACER report on CBCA decision: [https://acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Publication/2020-09\\_4th-ACER-CBCA-report.pdf](https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/2020-09_4th-ACER-CBCA-report.pdf)

<sup>17</sup> PCIs 3.21, 2.27.1, 2.27.2

status in the relevant NDPs, should be addressed and evaluated by the Regional Groups during the PCI selection process.

### **Reporting obligations and transparency**

- (22) ACER notes that for all PCIs, except for PCI 1.18 “Offshore hydro-pumped electricity storage facility in Belgium [currently known as ‘iLand’]”, the project promoters have submitted an annual report in 2021. ACER recalls that project promoters are obliged to submit an annual report of their PCI by 31 March in each year following the year of inclusion of the project in the PCI list and the failure to submit such an annual report represents a breach of the TEN-E Regulation.
- (23) In order to increase and ensure transparency, the submission to ACER in the process of monitoring and the publication of fundamental project information on PCIs in ACER’s consolidated report on PCI monitoring (including commissioning date, capacity increase, project status, and project cost) should be mandatory.

### **Concluding remarks**

- (24) The progress of the PCIs’ implementation and the nature of the reasons for project rescheduling which promoters report signals a dichotomy between two objectives apparently pursued by some promoters: (a) getting on a PCI list which makes the projects eligible for regulatory support of accelerated implementation and (after cross-border cost allocation, ‘CBCA’) EU-level grants, and (b) making the projects “shovel ready” in terms of quality project planning, permitting, and securing non-subsidised financing on market terms.
- (25) ACER is of the view that some project promoters are failing to keep the proper balance between these two objectives, concentrating on the pursuit of the first objective at the expense of the second one, and thus not properly taking into account the market conditions. The outcome of this lack of balance could (and often does) lead to slow progress in terms of failing to make the project really mature, risk- and future-prone, thus slowing down permitting and making access to financing more difficult.
- (26) ACER recommends that during the PCI selection process
- a) projects, on which the project promoters did not carry out any works or activity during the last reporting period:
    - i. PCI 2.13.2 “Interconnection between Srananagh (IE) and Turleenan (UK)”;
    - ii. PCI 2.16.1 “Internal line between Pedralva and Sobrado (PT), formerly designated Pedralva and Alfena (PT)”;
    - iii. PCI 2.27.1 “Interconnection between Aragón (ES) and Atlantic Pyrenees (FR)”;
    - iv. PCI 2.27.2 “Interconnection between Navarra (ES) and Landes (FR)”;
    - v. PCI 3.1.4, “Internal line between Westtirol and Zell-Ziller (AT)”
    - vi. PCI 10.8 “Data Bridge (Estonia, Latvia, Lithuania, Denmark, Finland, France)”
    - vii. PCI 10.9 “Cross-border flexibility project (Estonia, Finland)”
    - viii. PCI 5.3 “Shannon LNG Terminal and Connecting Pipeline (IE)”;
  - b) projects which are put on hold and/or rescheduled by the project promoters for at least 2 years postponement of commissioning date since their inclusion in the current PCI list;
    - i. PCI 1.12.4 “Hydro-pumped electricity storage at Cruachan II”;

- ii. PCI 2.16.1 “Internal line between Pedralva and Sobrado (PT), formerly designated Pedralva and Alfena (PT)”;
  - iii. PCI 2.28.3 “Hydro-pumped electricity storage Girones & Raimats (ES)”;
  - iv. PCI 3.1.4 “Internal line between Westtirol and Zell-Ziller (AT)”;
  - v. PCI 3.21 “Interconnection between Salgareda (IT) and Divača — Bericevo region (SI)”;
  - vi. PCI 10.9 “Cross-border flexibility project (Estonia, Finland)”;
  - vii. PCI 6.2.2 “North – South Gas Corridor in Eastern Poland”;
  - viii. PCI 6.26.1 “Cluster Croatia - Slovenia - Austria at Rogatec”;
  - ix. PCI 7.3.1 “EastMed Pipeline with metering and regulating station at Megalopoli”<sup>18</sup>,
  - x. PCI 7.3.3 “Poseidon Pipeline”;<sup>19</sup>
  - xi. PCI 7.3.4 “Reinforcement of internal transmission capacities in Italy”;
  - xii. PCI 7.5 “Cyprus Gas2EU”;
- c) projects for which the project promoters repeatedly failed to achieve progress from the status of “under consideration” or “planned, but not yet in permitting” to a more advanced status since their inclusion in the first PCI list (in 2013).
- i. PCIs 2.9 “Internal line between Osterath and Philippsburg (DE) to increase capacity at western borders [currently known as "UltraneT"]”;
  - ii. PCI 2.10 “Internal line between Brunsbüttel/Wilster and Großgartach/ Bergrheinfeid-West (DE) to increase capacity at northern and southern borders [currently known as "Suedlink"]”;
  - iii. PCI 2.13.2 “Interconnection between Srananagh (IE) and Turleenan (UK)”;
  - iv. PCI 2.16.1 “Internal line between Pedralva and Sobrado (PT), formerly designated Pedralva and Alfena (PT)”;
  - v. PCI 3.21 “Interconnection between Salgareda (IT) and Divača — Bericevo region (SI)”;
  - vi. PCI 3.22.4 “Internal line between Arad and Timisoara/Sacalaz (RO)”;
  - vii. PCI 4.7 “Capacity increase of hydro-pumped electricity storage at Kruonis (LT)”;
  - viii. PCI 6.20.3 “South Kavala UGS facility and metering and regulating station”;
  - ix. PCI 6.9.1 “LNG terminal in Northern Greece”;
  - x. PCI 7.3.1 “EastMed Pipeline with metering and regulating station at Megalopoli”;

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<sup>18</sup> PCI 7.3.1 is put on this list, even though project promoter claims being on time with the project, but the commissioning date is postponed significantly since 2019

<sup>19</sup> PCI 7.3.3 is put on this list, even though project promoter claims every year being on time with the project, but the commissioning date has been postponed three years in a row

are subjected to additional scrutiny by the Regional Groups, including the justification of the lack of progress. In pursuit of ensuring the robustness of the PCI list only projects should be included which are clearly able to respond to a priority at European level.

### **Outlook**

- (27) Promoters of gas PCIs should take due note of the sea change that EU gas sector is facing, in particular the fact that the economic recovery plans will provide better implementation chances to projects which are sustainable, future-proof and, last, but not least, “shovel-ready”. Project promoters should expect that regulators and other decision-makers may wish to insist upon meeting certain preconditions in terms of project maturity and proper risk mitigation, including long-term climate goals compliance, in order to seriously consider giving a green light to implementing a given project.
- (28) In the discussions regarding the Trans-European Energy Networks Regulation (‘TEN-E’) revision, many stakeholders as well as ACER/CEER<sup>20</sup> have stressed the importance of ensuring that sustainability is sufficiently taken into account for new gas infrastructure projects. ACER intends to closely monitor the issue of contribution of the concerned projects to sustainability and energy systems integration, and will consider evaluating the progress of projects in the light of such issues.

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<sup>20</sup> See ACER/CEER position paper on the TEN-E revision, available here:  
[https://www.acer.europa.eu/Official\\_documents/Position\\_Papers/Position%20papers/ACER\\_CEER\\_paper\\_on\\_TEN\\_E.pdf](https://www.acer.europa.eu/Official_documents/Position_Papers/Position%20papers/ACER_CEER_paper_on_TEN_E.pdf)



## 1. Introduction

- (29) Article 5 of Regulation (EU) No 347/2013 requires ACER to monitor and evaluate the progress achieved in implementing gas and electricity projects of common interest ('PCIs'). ACER carries out this monitoring on the basis of annual reports submitted by the project promoters and additional inputs received from the national regulatory authorities ('NRAs'). This Report highlights the results of the seventh annual monitoring by ACER of the progress in PCI implementation<sup>21</sup>.
- (30) This Report provides ACER's general findings on the gas and electricity PCIs included in the fourth Union list of PCIs<sup>22</sup> (the 'fourth PCI list') and on their progress during the reporting period from 1 February 2020 until 31 January 2021.
- (31) For more information regarding each of the reviewed PCIs, please refer to the Annex 1 (for electricity PCIs) and Annex 2 (for gas PCIs) to this Report<sup>23</sup>.

## 2. Overview of PCIs and data submission

### 2.1 Overview of PCIs

- (32) The fourth PCI list includes 106 electricity and 32 gas PCIs. 84 electricity and 31 gas PCIs of the fourth PCI list were already present in the third PCI list, either with the same or slightly different technical scope, and out of them 53 electricity and 14 gas PCIs were already included in the first PCI list in 2013.

#### **Electricity**

- (33) The electricity PCIs are mainly transmission projects (86 projects): half of them are interconnection projects and half of them are internal projects. In addition, there are 14 electricity storage and 6 smart grid projects.
- (34) Figure 1 shows the geographical distribution of the electricity transmission and storage PCIs. Most electricity PCIs are located in the NSI East corridor (33%) and the BEMIP corridor (30%), while the share of PCIs located in the NSI West or NSOG corridors is lower (i.e. 19% and 18% respectively).

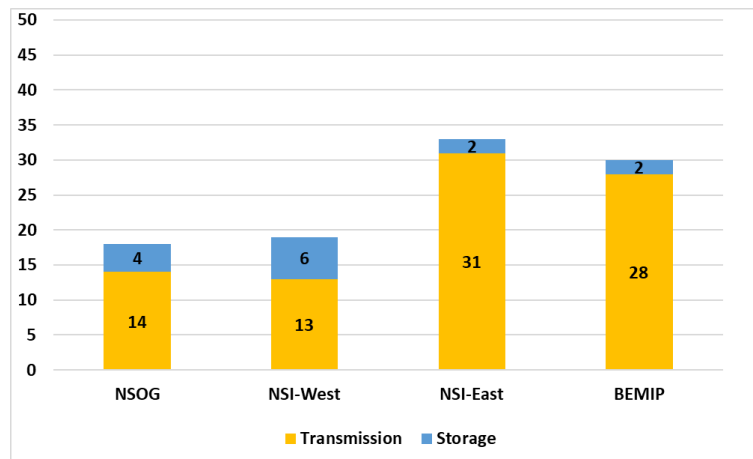
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<sup>21</sup> For ACER findings on the progress of PCIs in previous years and related recommendations please refer to ACER consolidated reports on PCI monitoring (2015-2020). Link to ACER report in 2015 is available: [here](#), in 2016 is available: [here](#); Link to ACER report in 2017 is available: [here](#); Link to ACER report in 2018 is available: [here](#); Link to ACER report in 2019 is available: [here](#); Link to ACER report in 2020 is available: [here](#)

<sup>22</sup> Commission Delegated Regulation (EU) 2020/389 of 31 October 2019 amending Regulation (EU) No 347/2013 of the European Parliament and of the Council as regards the Union list of projects of common interest. OJ L 74, 11.3.2020, p. 1

<sup>23</sup> Link to [Annex I](#), link to [Annex II](#)

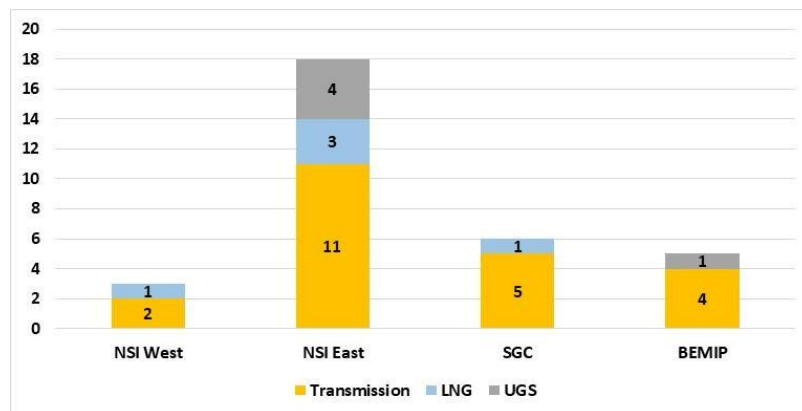
Figure 1: Number of electricity PCIs per priority corridor



## Gas

- (35) The gas PCIs include 22 transmission pipelines, 5 liquefied natural gas (“LNG”) terminals and 5 underground gas storage (“UGS”) projects. As shown in Figure 2, out of a total 32 gas PCIs, 18 (56%) projects are located in the NSI East corridor, including 3 out of the 5 LNG (60%) and 4 out of the 5 UGS projects (80%). The geographic distribution of the projects may be in response to the greater need for market integration and improving security of gas supply in NSI East (and, to a lesser extent, in SGC and BEMIP) compared to NSI West.

Figure 2: Number of gas PCIs per priority corridor



## 2.2 Technical modifications

- (36) Technical modifications compared to the project features reported in the previous year were identified for 9 electricity<sup>24</sup> and 6 gas PCIs<sup>25</sup>. ACER notes that in total 20% of the PCIs (17 electricity and 8 gas PCIs) reported some technical modifications since their inclusion in the fourth PCI list<sup>26</sup>.

<sup>24</sup> PCIs 1.6, 1.12.4, 1.15, 2.7, 2.28.3, 2.28.4, 4.6, 4.7, 4.8.7

<sup>25</sup> PCI 6.2.13, 6.20.6, 6.23, 6.26.1

<sup>26</sup> For list of PCIs with technical modifications during the reporting period between 1 February 2019 and 31 January 2020, please refer to the ACER consolidated report on PCI monitoring in 2020 (p.8.):

[https://www.acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Publication/Consolidated%20Report%20on%20the%20progress%20of%20electricity%20and%20gas%20Projects%20of%20Common%20Interest%20%282020%29.pdf](https://www.acer.europa.eu/Official_documents/Acts_of_the_Agency/Publication/Consolidated%20Report%20on%20the%20progress%20of%20electricity%20and%20gas%20Projects%20of%20Common%20Interest%20%282020%29.pdf)

- (37) The technical modifications reported for the electricity PCIs include the following: new technical solutions, change of route, relocation of converter station, other changes in design topology. The reasoning behind those technical changes are triggered by public objections, results of additional technological feasibility and impact assessment studies, or the aim to reduce environmental impact.
- (38) The technical modifications for the gas PCIs involve changes in gas compressor station configuration, necessity to drill greater number of wells, dividing a part of the project into two sections, and (in two cases) updating the technical configuration in order to accommodate different gas sources, including hydrogen.
- (39) ACER notes that substantial technical changes may affect the costs and/or benefits of the PCIs. ACER invites the Regional Groups to consider the reported changes during the assessment of PCI candidates, whether the respective costs and benefits already take into account the new technical characteristics of the projects.

### 2.3 Completeness and quality of data

- (40) Promoters submitted their annual PCI progress reports to ACER for all 138 electricity and gas PCIs (except for one electricity project<sup>27</sup>) for the 2021 PCI monitoring exercise via ACER's electricity and gas information support system ("AEGIS")<sup>28</sup>. ACER assessed the completeness and the consistency of the received information, consulted the NRAs regarding the quality and the completeness of the project data (for projects located within the domain of the relevant NRA), and requested several clarifications from the promoters regarding missing, incomplete or inconsistent data. The information type of electricity and gas projects may occasionally differ, primarily due to the specific features of the two sectors as well as the varying data availability.
- (41) In general, ACER notes the increasing availability and improved consistency of project information. However, ACER notes the recurrent lack of data on the monetised expected benefits for gas PCIs. For this reason, it is not possible to provide meaningful insights regarding the benefits that each gas PCI would bring<sup>29</sup>.
- (42) For electricity projects, ENTSO-E's TYNDP provides monetised values for several benefit indicators, including the Social-Economic Welfare increase and the impacts due to the variation of losses<sup>30</sup>. Despite the fact that the vast majority of the project promoters can be actively involved in the benefits calculations conducted by ENTSO-E through participation within ENTSO-E, for 10% of the transmission and storage PCIs the project promoters raised some criticism or claimed inconsistencies in the benefit calculations and for 30% of them the project promoters were not able to replicate or assess the appropriateness of such benefit calculations. The ACER views on the benefit calculations for the TYNDP projects, including current PCIs are provided in the ACER Opinion No 03/2021 on the methodological aspects of the ENTSO-E draft TYNDP 2020<sup>31</sup>.
- (43) While ACER welcomes that confidentiality claims for fundamental project information has been significantly reduced compared to last year (i.e. such claim has been submitted only for less than 10% of the electricity PCIs and for only one gas PCI in 2021), ACER reiterates its view<sup>32</sup> that fundamental information (including commissioning date, capacity increase, project status and

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<sup>27</sup> PCI 1.18 – “Offshore hydro-pumped electricity storage facility in Belgium [currently known as ‘iLand’]”

<sup>28</sup> The project promoters were requested to review and provide or update information for electricity projects in the “SWITCH” and for gas projects in the “VALVE” applications. For certain information categories, the project templates were pre-filled with data provided in previous infrastructure monitoring activities.

<sup>29</sup> For the electricity PCIs, benefits have not been monitored for the purpose of this year's Report, as they are available in the ENTSO-E Ten-Year Network Development Plan 2018 and some benefit categories were deeply assessed in the ACER Opinion 11/2019 on the TYNDP 2018. The progress of the benefits for PCIs will be assessed following the publication of the next TYNDP.

<sup>30</sup> <https://tyndp2020-project-platform.azurewebsites.net/projectsheets/>

<sup>31</sup> [https://acer.europa.eu/Official\\_documents/Acts\\_of\\_the\\_Agency/Opinions/Opinions/ACER%20Opinion%2003-2021%20on%20the%20methodological%20aspects%20of%20the%20ENTSO-E%20draft%20TYNDP%202020.pdf](https://acer.europa.eu/Official_documents/Acts_of_the_Agency/Opinions/Opinions/ACER%20Opinion%2003-2021%20on%20the%20methodological%20aspects%20of%20the%20ENTSO-E%20draft%20TYNDP%202020.pdf)

<sup>32</sup> ACER's Opinion No 13/2019, p.59: [here](#).

project cost) on the PCIs shall be made publicly available, where it is not already explicitly required by EU legislation<sup>33</sup>. As pointed out in ACER/CEER Position Papers of 19 June 2020 this may also apply to certain data currently exclusively available to the Regional Groups (i.e. ranking of the projects, thresholds for selection, measures taken or to be taken to conclude the permit granting process with the least possible delay).

### 3. Inclusion in the network development plans

- (44) The vast majority of the PCIs are included in the latest national development plans (NDPs), which means that all investments pertaining to those PCIs are included in the NDP of all the hosting Member States. The remaining 18 electricity and 9 gas PCIs are either entirely not included in the NDP of one or more of the hosting Member States, or not all investment items which pertain to the PCI are included therein. The specific situation per sector is explained in more detail below.
- (45) ACER reiterates its invitation extended to the relevant authorities and TSOs to ensure that PCIs become an integral part of the relevant NDPs, as appropriate. In this regard, ACER recalls its recommendation<sup>34</sup> that the NDPs' scope should allow the inclusion of third party projects. Project promoters should provide the necessary information to the TSO(s) in charge of developing the relevant NDP(s) as well as to the relevant NRA(s). Moreover, NDPs should include information on studies related to projects and on projects "under consideration", and clearly flag them as such.
- (46) In ACER's view, the actual implementation of the transmission projects strongly relies on them being included in the relevant NDPs. If a project is already a planned project in one of the relevant NDPs, while it is still under consideration in another, the inconsistency raises doubts about the feasibility and the consistent implementation of the concerned project. Therefore, the reason for such a different treatment across borders, i.e. different implementation status in the relevant NDPs, should be addressed and evaluated by the Regional Group during the PCI selection process.

#### Electricity

- (47) ACER notes that compared to last year, no additional electricity PCI has been included in the relevant NDPs.
- (48) There are 2 interconnection PCIs which are included only in one of the relevant NDPs, because in the other Member State the NDP includes only the projects which are promoted by the national TSO<sup>35</sup> or the commissioning date is beyond the time span of the NDP<sup>36</sup>. There are 3 additional interconnection PCIs which have a different status across the relevant NDPs, i.e. the PCI has been already approved as a planned project in one of the NDPs, while they are still under consideration in the other NDP<sup>37</sup>.
- (49) One interconnection PCI<sup>38</sup> is not included/present in any of the relevant NDPs. The reason for non-inclusion is due to the commissioning date of the project, which is beyond the time-span of the NDP.
- (50) Out of the 14 storage PCIs, 7 are included in the relevant NDPs or present as an "under consideration" project, while 7 PCIs<sup>39</sup> are not included (or included only as a network connection project by a TSO and/or considered within the NDP studies). The reason for non-inclusion in these instances is related to the fact that the relevant NDP does not include storage projects.

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<sup>33</sup> ACER/CEER Position on Revision of the Trans-European Energy Networks Regulation (TEN-E) and Infrastructure Governance, June 2020 (p.19.)

<sup>34</sup> ACER's Opinion No 13/2019, p.58.

<sup>35</sup> PCIs 2.4, 3.4

<sup>36</sup> PCI 1.16

<sup>37</sup> PCIs 3.21, 2.27.1, 2.27.2

<sup>38</sup> PCI 1.19

<sup>39</sup> PCIs 1.17, 2.18, 1.12.3, 1.12.4, 2.28.2, 2.28.3, 2.28.4

- (51) Out of the 6 smart grid PCIs, 1 is included and 1<sup>40</sup> is partially included in the relevant NDPs. The remaining 4 smart grid PCIs<sup>41</sup> are not included due the early advancement of the project (3 instances) or because the promoter is a non-TSO and non-TSO projects are not included in the relevant NDPs (1 instance).

**Gas:**

- (52) Out of 32 gas PCIs, 23 (72%) are entirely included in the latest NDPs, 6 PCIs<sup>42</sup> are partially included, and 3 PCIs<sup>43</sup> are not included in the relevant NDPs. All 3 PCIs which are not included in NDPs are transmission pipelines (one in “permitting” and two in “under consideration” status).
- (53) The reasons for non-inclusion of these projects in NDPs are, in one instance, that the NDP does not allow for projects promoted by third parties to be included, and, in other instance, the non-existence of an NDP (the case of Cyprus).

## 4. PCI Status and progress

### 4.1 Evolution of the status

- (54) ACER differentiates the following project status categories: under consideration, planned but not yet in permitting, permitting, under construction, commissioned, cancelled<sup>44</sup>.
- (55) ACER finds that about 2/3 of the PCIs are in permitting, under construction, or commissioned, while about 1/3 of the PCIs are planned, but not yet in permitting or still under consideration<sup>45</sup>. As shown in Figure 3 and Figure 4, the advancement of the PCIs demonstrates a similar general pattern in both sectors with the highest share of PCIs being in permitting, while the share of more advanced and the share of less advanced projects are about the same.
- (56) A remarkable difference between the electricity and gas sectors is the share of PCIs which are “under consideration”. Although the share of such projects has significantly dropped for gas PCIs (from 31% to 22%) compared to 2020, it is still almost the double the share of projects under consideration among the electricity PCIs, which is just 11%.

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<sup>40</sup> PCI 10.7

<sup>41</sup> PCIs 10.4, 10.6, 10.8, 10.9

<sup>42</sup> PCIs 6.20.3, 6.24.4, 6.27, 6.8.1, 7.1.3, 7.3.3

<sup>43</sup> PCIs 7.1.1, 7.3.1, 8.3.1

<sup>44</sup> Projects under consideration are in the phase of planning studies and consideration for inclusion in the NDPs, regional plans, and the TYNDPs. Projects which are planned, but not yet in permitting are those projects which have been included in the NDP(s) and have completed the phase of initial studies (e.g. completed pre-feasibility or feasibility study), but have not applied for permits yet. Projects in permitting are designated as such from the moment when the project promoter(s) apply for the first permit regarding the implementation of the project and the application is admitted as a valid one.

<sup>45</sup> ACER considers that the status of the least developed element of a given PCI is representative for the overall status of the project. The information about the status of the projects is therefore rather conservative, as some of the investment items included in a given PCI may be at a more advanced implementation stage than other investment items belonging to the same project.

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Figure 3: Electricity PCIs status

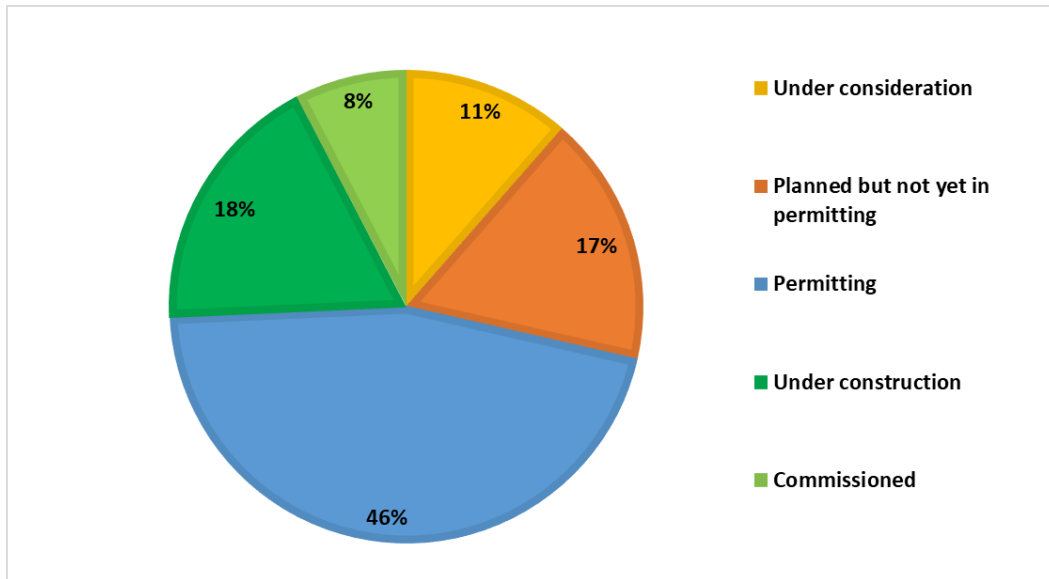
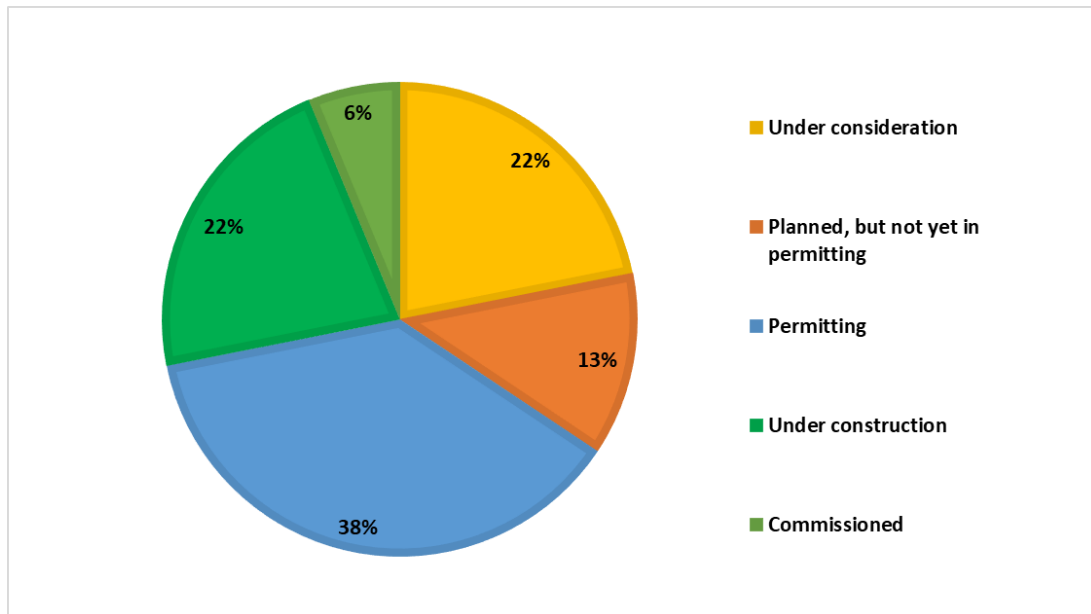


Figure 4: Gas PCIs status



(57) Overall, ACER observes a positive trend in the advancement of electricity and gas PCIs compared to their status last year.

- (58) During the reporting period, 18 electricity and 9 gas PCIs advanced their status, including 8 electricity<sup>46</sup> and 2 gas PCIs<sup>47</sup> which have been commissioned or at least completely constructed by 31 January 2021<sup>48</sup>.
- (59) The remaining electricity PCIs which advanced their status either started the permit granting process for each section or element (5 PCIs<sup>49</sup>), managed to complete permit granting and entered the construction phase (2 PCIs<sup>50</sup>) or they have completed the phase of initial studies and got their planning approved (3 PCIs<sup>51</sup>).
- (60) When comparing the most recently reported project status to the one reported in 2015, ACER notes that 21 electricity PCIs did not achieve an advancement of their overall status over a 6 years period<sup>52</sup>. One of them is still under consideration<sup>53</sup>, 6 are planned, but not yet in permitting<sup>54</sup> and 14 are in permitting<sup>55</sup>.
- (61) Except for the commissioned projects, the remaining gas PCIs which advanced their status are now being planned but not yet in permitting (3 PCIs<sup>56</sup>), 2 PCIs<sup>57</sup> entered permitting and 2 PCIs<sup>58</sup> are now under construction.
- (62) When comparing the most recently reported status of current gas PCIs to the reported status of gas PCIs in 2015. There are 3 PCIs showing no advancement over a 6 year period: 2 projects still under consideration<sup>59</sup> and 1 in planned, but not yet permitting status<sup>60</sup>.
- (63) The project promoters reported 1 electricity PCI<sup>61</sup> and 1 gas PCI<sup>62</sup> which experienced a regress in status: the concerned electricity PCI moved from “under construction” back to “permit granting” due to the termination of the contract with the previous contractor, while the concerned gas PCI moved from “permitting” to “planned but not yet in permitting”.

## 4.2 Delays and rescheduling

- (64) ACER recalls that it is important to differentiate between delayed and rescheduled projects when evaluating their progress. A delayed investment is still needed at the expected date, but cannot be delivered on time due to various external factors like permitting, environmental, legislative reasons, etc., while a rescheduled investment is one that is voluntarily postponed by a promoter due to changes of its external driver (e.g. lower demand, less urgent need for the investment due to updated planning data, or assigning priority to other transmission solutions). In short, an occurrence

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<sup>46</sup> PCIs 3.11.2, 3.11.5, 3.22.1, 4.2.1, 4.2.2, 4.2.3, 4.8.12, 4.8.17

<sup>47</sup> PCIs 6.5.1, 6.5.5

<sup>48</sup> According to the public source of information an additional gas PCI has been completed, but project promoter did not report this PCI as being “commissioned”.

[https://www.transgaz.ro/sites/default/files/Release%20completion%20project%20BRUA%20-%20phase%201\\_0.pdf](https://www.transgaz.ro/sites/default/files/Release%20completion%20project%20BRUA%20-%20phase%201_0.pdf)

<sup>49</sup> PCIs 3.12, 3.14.3, 4.8.1, 4.8.10, 10.7

<sup>50</sup> PCIs 3.9.1, 3.14.4

<sup>51</sup> PCIs 3.14.3, 4.7, 4.8.23

<sup>52</sup> Since in this report the overall PCI status is defined by the status of the least advanced section or element of a project, some of these PCIs include both investments which advanced their status or even commissioned and investments which did not manage to advance their status.

<sup>53</sup> PCI 3.21

<sup>54</sup> PCIs 2.9, 2.10, 2.13.2, 2.16.1, 4.7, 3.22.4

<sup>55</sup> PCIs 1.10.2, 2.13.1, 2.14, 2.17, 2.18, 3.1.1, 3.4, 3.8.5, 3.11.1, 3.11.3, 3.11.4, 3.22.3, 3.23, 3.24

<sup>56</sup> PCIs 6.8.1, 6.9.1, 7.1.1

<sup>57</sup> PCIs 7.1.3, 8.2.1

<sup>58</sup> PCIs 8.3.2, 8.5

<sup>59</sup> PCI 6.20.3, 7.3.1 (project promoter claims to be in permitting status, but NRA confirms to be in under consideration status)

<sup>60</sup> PCI 6.9.1

<sup>61</sup> PCI 3.14.2

<sup>62</sup> PCI 7.3.3

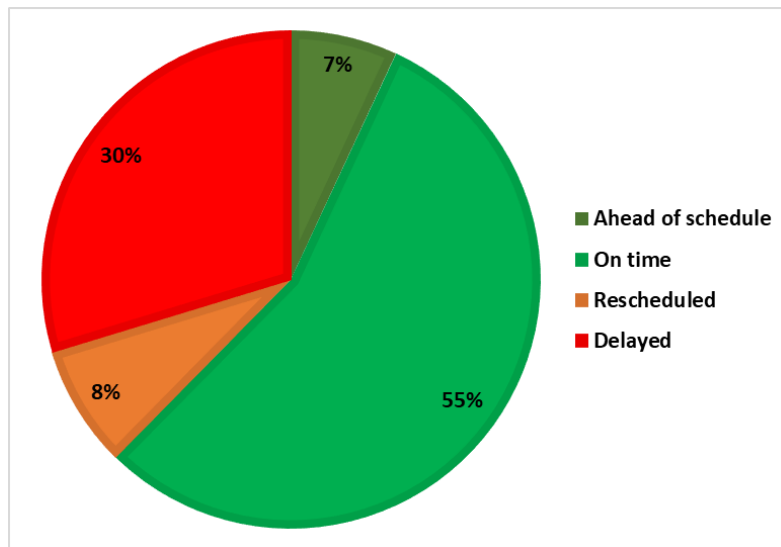
of “rescheduling” is generally caused by overoptimistic project milestones planning by the project promoter.

- (65) The annual progress of the electricity and gas PCIs is shown in Figure 5 and in Figure 8. ACER notes that, similarly to the patterns observed in previous years, more than a quarter of the PCIs encountered delays, both in the electricity and gas sector (30% and 28% respectively). However, the share of rescheduled PCIs remains significantly lower in electricity than in gas (8% vs. 25%)
- (66) According to their planning, currently about 70% of the PCIs are expected to be commissioned by 2025 (compared to 80% in 2020). Based on the previous trends of delays and rescheduling, in ACER’s view this expectation appears to be still overoptimistic.

**Electricity:**

- (67) About two third of the PCIs are on time (or ahead of schedule) compared to last year<sup>63</sup>. ACER notes that it is slightly lower share than last year, which may stop the positive trend in the increase of the share of “on time” (or ahead of schedule) electricity PCIs over the past years (i.e. 53% in 2017, 57% in 2018, 63% in 2019 and 68% in 2020). The share of delayed electricity PCIs remains within the same range as in previous years (i.e. 30% in 2021 compared to 23%-31% in years between 2016-2019) and the share of rescheduled projects again turns out to be relatively low (8%). This confirms ACER’s observation made in last year’s consolidated report<sup>64</sup> that the fourth list of electricity PCIs appears to be more robust than the previous lists.
- (68) However, ACER notes that the expected commissioning dates are set overoptimistic. Almost half of the projects expect a later commissioning date compared to their estimation at the time when they entered the fourth PCI list two years ago. Further, almost half of the rescheduled or delayed PCIs were already rescheduled or encountered delays during the previous reporting period.<sup>65</sup>

Figure 5: Annual progress of electricity PCIs



- (69) Out of the 30 delayed PCIs, 26 are transmission and 4 are storage projects. ACER notes that in particular interconnection projects encounter delays (almost half of them are delayed compared to their last year’s schedule), while the share of delayed internal projects is about 12% of all internal transmission PCIs.

<sup>63</sup> The data was available for 102 PCIs.

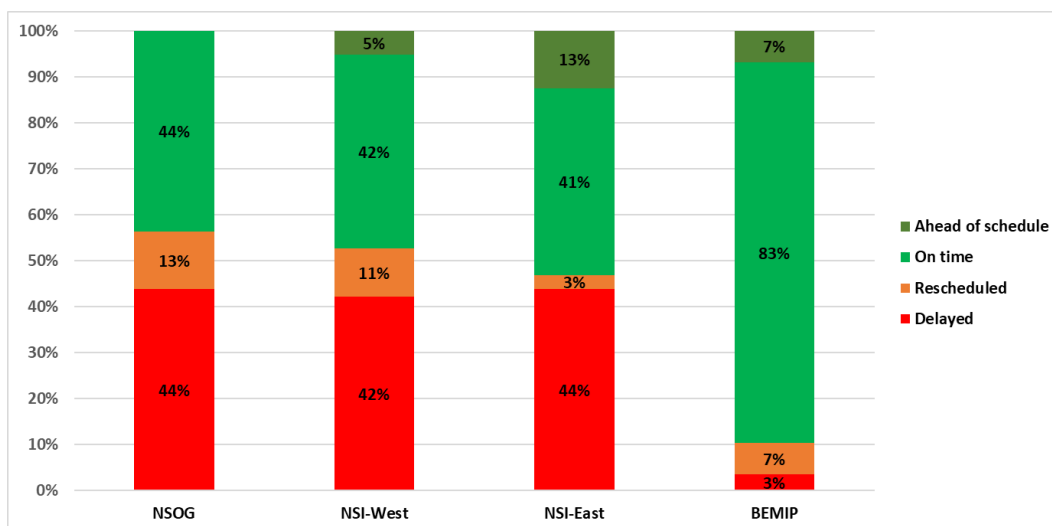
<sup>64</sup> The share of rescheduled electricity PCIs dropped to 5% in 2020 from a level of 12-24% in years between 2015-2019.

<sup>65</sup> PCIs 1.7.3, 1.7.5, 1.9.1, 1.10.2, 1.12.3, 2.7, 2.13.1, 2.17, 2.29, 2.30, 3.1.1, 3.4, 3.8.4, 3.8.5, 3.22.1, 3.22.2



- (70) As shown in Figure 6, more than 40% of the PCIs are delayed in each priority corridor, except in the BEMIP priority corridor, where only 3% (i.e. 1 PCI) is delayed. This huge contrast between the priority corridors can be partially explained by the different share of interconnections within the transmission projects of the priority corridor (i.e. 100% in NSOG, 62% in NSI West, 45% in NSI East and 25% in BEMIP).
- (71) Out of the 8 rescheduled PCIs<sup>66</sup>, 5 are transmission, 2 are storage and 1 is a smart grids. In each priority corridor, 1 or 2 rescheduled PCIs have been reported.

Figure 6: Annual progress of electricity PCIs per priority corridor



- (72) The duration of the reported delays varies for the electricity projects from 3 months up to 3 years (with an average of 15 months), while the duration of rescheduling is typically longer (from 4 months up to 5 years<sup>67</sup>).
- (73) Due to delays or rescheduling, the impacted electricity PCIs' commissioning date has shifted on average by 2 years since their inclusion in the fourth PCI list, and by 4 years since their inclusion in the first PCI list. For 19 PCIs the duration of the overall delay or rescheduling exceeds this average and for some goes up to almost 10 years<sup>68</sup>.
- (74) As shown in Figure 7, about 70% of the PCIs are expected to be commissioned by the end of 2025, which is only a slightly lower figure than last year (i.e. 75%).<sup>69</sup>

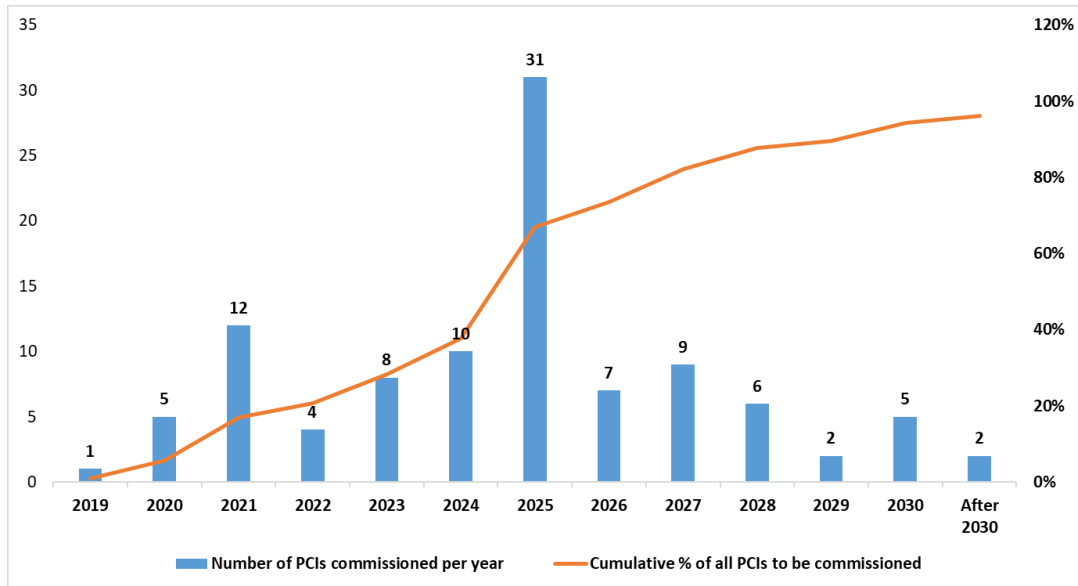
<sup>66</sup> PCIs 1.15, 1.12.4, 2.16.1, 2.28.3, 3.1.4, 4.8.12, 4.8.14, 10.8

<sup>67</sup> For PCI 3.21 the project promoters claimed to be unable to provide an estimation of the expected commissioning date.

<sup>68</sup> PCIs 3.4, 3.22.1 have been delayed and PCI 2.16.1 has been rescheduled, each by more than 8 years.

<sup>69</sup> The data was available for 102 PCIs.

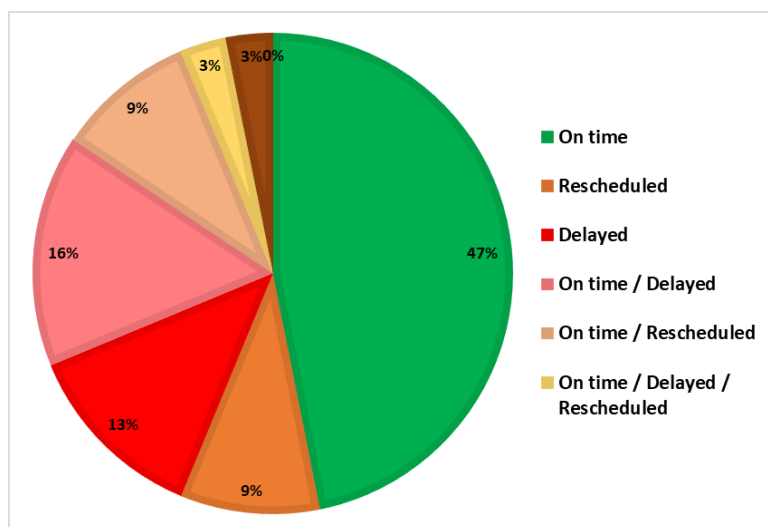
Figure 7: Commissioning date of electricity PCIs



## Gas

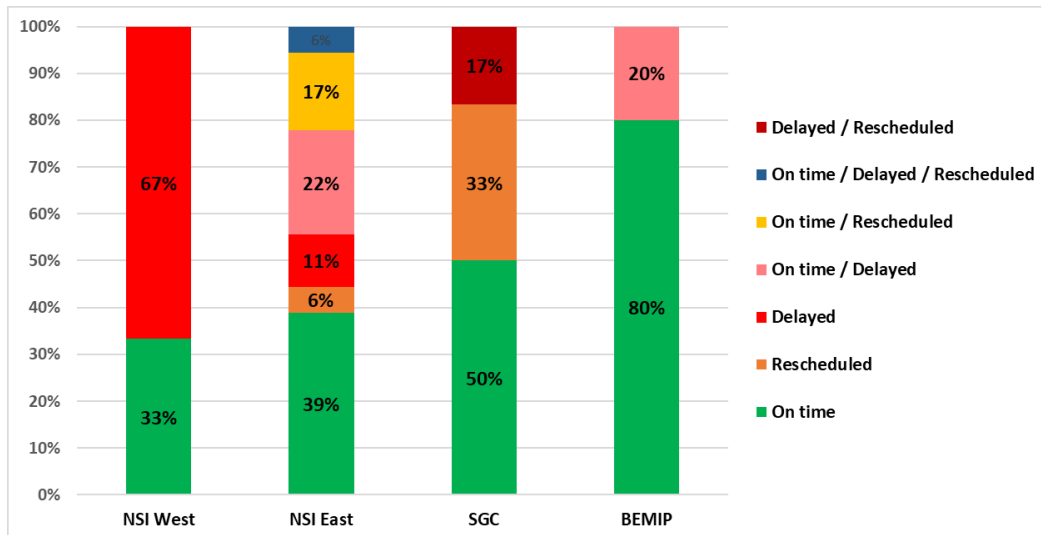
- (75) As in previous years, none of the PCIs reported an expected commissioning date “ahead of schedule”. The submitted reports also cover individual investment items. Certain investment items of one and the same PCI are reported to be progressing at a different pace, some being “on time”, while others are “delayed” or “rescheduled”.
- (76) In this reporting period, in total 28% of the gas PCIs encountered delays and 25% were rescheduled.

Figure 8: Annual progress of the gas PCIs



- (77) Out of the 9 delayed PCIs<sup>70</sup>, 4 are transmission pipelines (18% of gas transmission PCIs), 2 are LNG terminals (40% of LNG projects) and 3 are UGS projects (60% of UGS projects). UGS projects appear to be longer lasting projects and technically more demanding to implement. At the same time in NSI East political decisions might affect the implementation progress as most delayed PCIs are in the NSI East corridor (8 PCIs, i.e. 44% of the PCIs within this priority corridor).
- (78) Out of the 8 rescheduled PCIs<sup>71</sup>, 7 are transmission pipelines and 1 is an LNG terminal. Most rescheduled PCIs are in the NSI East corridor (5 PCIs, i.e. 28% of the PCIs within this priority corridor), as presented in Figure 9.

Figure 9: Annual progress of the gas PCIs per priority corridor



- (79) The extent of the reported delays for gas PCIs varies from 1/2 year up to 2 years. The average reported delay of commissioning is about 14 months. On the contrary, commissioning dates ahead of schedule have also been reported in this reporting period, these being moved forward on average by 14 months, and by a maximum of two and a half years ahead of schedule compared to commissioning dates reported in 2020.
- (80) As shown in Figure 10, 18 gas PCI (56%) are expected to be commissioned within the next 4 years and 25 gas PCIs (78%) are expected to be commissioned by the end of 2025.
- (81) ACER observes cases where project promoters report for the gas PCIs being on time, even though the date of commissioning is postponed for more reporting periods in a row. ACER calls for consistent reporting on the PCIs' progress,

### 4.3 Reasons for delays and rescheduling

- (82) The most frequently mentioned main reasons for delays were related to permit granting (in particular environmental problems) or financing issues. The former reason has been reported more frequently for electricity PCIs, while the latter reason was most often indicated for gas PCIs. The reasons for rescheduling appear to be more diverse across the two sectors, as described below.

#### Electricity

- (83) The most frequently reported reason for delays of electricity PCIs is similar to previous years is permit granting (i.e. more than 40% of the delayed PCIs), in particular environmental permitting.

<sup>70</sup> PCIs 5.19, 5.3, 6.20.3, 6.20.4, 6.20.6, 6.24.1, 6.8.1, 6.9.1, 8.5

<sup>71</sup> PCIs 6.2.13, 6.2.2, 6.23, 6.24.4, 6.26.1, 7.1.1, 7.3.4, 7.5

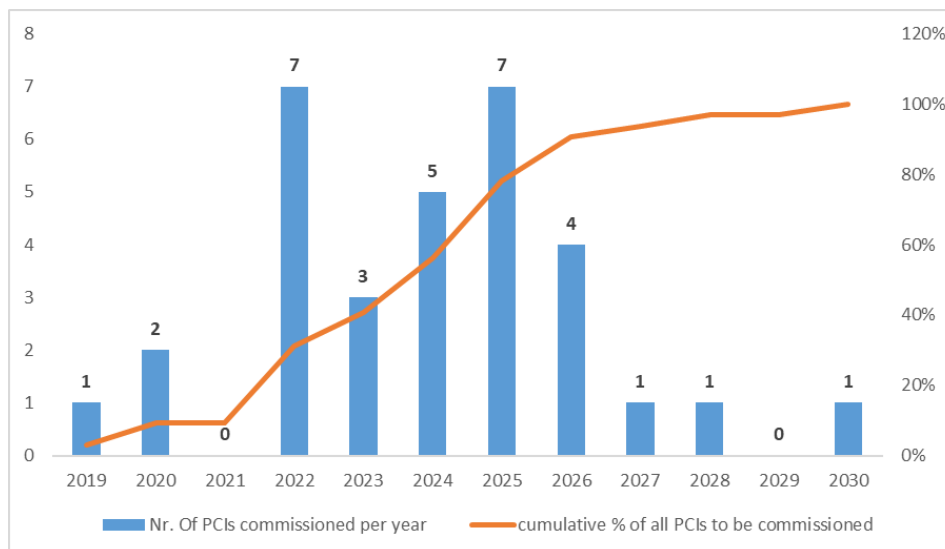
Further, several project promoters (i.e. about 1/4 of the delayed PCIs) reported that they encountered delays due to the COVID-19 pandemic situation, which created (in most instances a few months) delays in construction works typically as a result of temporary shortage of materials and restriction of mobility of workers.

- (84) Additionally project promoter(s) reported delays in the procurement process, delays due to termination of the contract with the contractor, delays due to financing issues, delays due to changes in the technical characteristics of the project, delays due to risks related to the national regulatory framework or uncertainty of regulatory decisions following Brexit, delays due to correlation with other delayed infrastructure investments or delays related to acquisition of or access to land. Each of these reasons were reported in one or two instances.
- (85) ACER notes that several additional electricity PCIs (about 15%) reported that they faced difficulties over the reporting period, in particular due to the COVID-19 pandemic situation, which difficulty did not (for the time being) result in a shift of the expected commissioning to a later date.
- (86) For most of the rescheduled PCIs, the project promoters reported that the expected commissioning date has been shifted because the project was in an initial stage (under studies) and therefore the previous implementation plan was preliminary or the project promoters decided to put the project on hold and/or to carry out additional studies which confirm the need or feasibility of the project. In two instances the project promoters gave priority to another transmission investment.

### **Gas**

- (87) As was the case also in 2020, the most frequently reported reason in 2021 for delays is financing difficulties (4 out of 9 delayed PCIs, i.e. 44%). Other reasons for delays are reported mostly per single PCI and include lawsuits and court proceedings, environmental permit problems, issues related to acquisition of or access to land, national law changes affecting permitting, correlation with other delayed infrastructure investments, and lack of market interest.
- (88) For 8 rescheduled gas PCIs, the project promoters reported as the most common the following reasons: demand-side and supply-side uncertainties; lack of market interest; changes due to complementarity with other rescheduled infrastructure investments (of the same or of other promoters); re-prioritisation of the project's implementation against other investments of the project promoter and restrictions related to COVID-19 pandemic.
- (89) For additional 5 gas PCIs (16%), it was reported that they encountered difficulties in particular due to the COVID-19 pandemic situation, anyhow only in one case (for the time being) resulted in a shift of the expected commissioning to a later date.

Figure 10: Commissioning date of gas PCIs



#### 4.4 Expected duration of implementation

- (90) For the purpose of this report, the duration of the PCIs' implementation is considered from the date of request for the planning approval by the NRA, the competent Ministry or by other national competent authority as provisioned in the national law of each country.

##### Electricity

- (91) The encountered delays and rescheduling only slightly increased the average 10 years (actual or expected) duration of the electricity transmission PCIs' implementation from the planning approval until the commissioning of the project<sup>72</sup>. This finding is mainly explained by the fact that some projects managed to reach their commissioning ahead of schedule, which had a mitigating impact on the average figure. About half of the transmission PCIs have a lower and about half have a longer implementation period, ranging from about 5 to 22 years<sup>73</sup>.
- (92) The average (actual or expected) duration of the permit granting process for transmission PCIs which applied for the first permit after 16 November 2013<sup>74</sup> increased to an average of 3.2 years<sup>75</sup> from an average of 3 years registered last year. This is explained by the fact that in most instances the delay of the project occurred during the permit granting process. For 23 transmission PCIs, the permitting duration exceeds the 3.5 years permit granting time limit set by the TEN-E Regulation,

<sup>72</sup> The data was available for 54 transmission PCIs.

<sup>73</sup> For PCIs 2.13.1, 2.14, 2.16.1 the duration of implementation from the start of planning is expected to exceed 20 years.

<sup>74</sup> According to Regulation (EU) No 347/2013, for these projects Chapter III of the Regulation (Articles 7-10) regarding permit granting and public participation applies and provides a legally binding 3.5 years upper limit with a potential extension of maximum 9 months for the permit granting process.

<sup>75</sup> The data was available for 54 transmission PCIs.

in 16 instances<sup>76</sup> by more than 9 months<sup>77</sup>. The overall duration of the permit granting process<sup>78</sup> for some interconnection PCIs lasts more 6 years<sup>79</sup>.

- (93) The most recent PCI data confirmed that the average duration of implementation of the transmission projects is significantly longer in the NSI West priority corridor (i.e. more than 17 years) compared to the other priority corridors (i.e. about 10 years or less in each), which is partially explained by the longer average permit granting duration (i.e. almost 4 years compared to the 2.5-3.5 years in other priority corridors).<sup>80</sup> ACER stresses that these findings have to be considered with caution as the share of projects with high volumes, complex technical solutions and/or sensitive locations can differ across the priority corridors and between PCI lists. Further, the statistics account only for PCIs on the fourth PCI list, and they do not take into account the expected or actual duration of former PCIs and do not consider when the project entered the PCI list for the first time.
- (94) The average (actual or expected) duration of the storage PCIs' implementation is above 10 years as well, but it varies widely for individual projects (i.e. from 5-15 years)<sup>81</sup>. The average duration of permit granting for storage PCIs is about 3 years where it started (or expected to start) after 16 November 2013<sup>82</sup>. For smart grid PCIs, the data were not deemed sufficiently representative for substantial findings.

### Gas

- (95) Information about the expected or the actual duration of project implementation was provided by project promoters as the time from the date of request for the planning approval until commissioning of the project. The average expected duration of the gas PCI implementation is 4 years. However, PCIs vary greatly in complexity, as they may involve significantly different investment items and subprojects, which result in longer or shorter durations of the implementation period.
- (96) Project promoters report that the estimated overall duration of the permitting process is about 2.2 years. However, in the case of project groups, promoters provided data mostly applicable for each part of the PCI. The reported expected duration of the overall permit granting procedure exceeds the permitting duration foreseen in the TEN-E Regulation (3.5 years)<sup>83</sup> for approximately 10% of projects. As most of the PCIs are located in the NSI East priority corridor, most of the PCIs for which the overall permit granting exceeds 3.5 years are also in this corridor (5 in NSI East and 1 in SGC).

## 4.5 Works or other activities carried out during the reporting period

- (97) ACER requested project promoters to list and describe what kind of work or other activities they carried out with regard to their PCIs between 1 February 2020 and 31 January 2021<sup>84</sup>. For 7 electricity<sup>85</sup> and for 1 gas PCI<sup>86</sup>, no works or activities were reported to have been carried out during this reporting period.

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<sup>76</sup> PCIs 1.7.1, 2.4, 2.7, 2.9, 2.13.1, 3.7.2, 3.7.3, 3.7.4, 3.8.1, 3.10.1, 3.10.2, 3.11.1, 3.11.3, 3.11.4, 4.8.10, 4.8.13

<sup>77</sup> In line with Article 10(2) of Regulation (EU) No 347/2013, where the competent authority considers that the permit granting process will not be completed before the set time limits, it may extend the 3.5 year time limit by a maximum of 9 months.

<sup>78</sup> The start date of the permit granting process is defined by the start of the permit granting for the first section or element, while the end of the permit granting is defined by the end of the permit granting for the last section or element, therefore it is possible that in individual countries the permit granting takes shorter than the indicated period.

<sup>79</sup> PCIs 2.7, 2.13.1

<sup>80</sup> For these statistics only PCIs which applied for the first permit after 16 November 2013 has been accounted for.

<sup>81</sup> The data was available for 9 storage PCIs.

<sup>82</sup> The data was available for 8 storage PCIs.

<sup>83</sup> Idem.

<sup>84</sup> For more information regarding the activities carried out, please refer to the [Annex 1](#) (for electricity PCIs) and [Annex 2](#) (for gas PCIs) to this Report

<sup>85</sup> PCIs 2.13.2, 2.16.1, 2.27.1, 2.27.2, 3.1.4, 10.8, 10.9

<sup>86</sup> PCIs 5.3

- (98) For the same gas PCI and for 4<sup>87</sup> out of the concerned 7 electricity PCIs, no works or other activities were carried out during the previous reporting period (i.e. between 1 February 2019 and 31 January 2020) either.
- (99) In electricity, the reported reasons for lack of works or activities are the following: the project has been put on hold and will not be developed further until the investment need is confirmed (3 instances); difficulties with the implementation of a related project (2 instances); the absence of a decision regarding the final location of a corresponding substation (1 instance); the prioritisation of a more urgent project (1 instance).
- (100) In gas, the reasoning provided for carrying out no activity on a project was that legal matters prevented the activities (no works could be carried out), for the second year in a row.
- (101) The categories of activities reported by the project promoters as having been carried out during the reporting period are listed for each project in the Annexes of this report.

## 5. Cost developments

- (102) The investment costs for all PCIs, as reported by the promoters, amount to €93.6 billion, which is a slight increase in the overall CAPEX compared to last year when costs stood at €93 billion. The cost tag is actually even higher, since operation and other capital expenditure during the life cycle of projects also has to be considered. During the monitored period, close to €4 billion was invested in PCIs and a total amount of €16 billion has already been spent on the current PCIs, representing about 17% of the expected overall investment costs of the PCIs.

### Electricity

- (103) ACER requested the project promoters to provide the cost values expressed at current 2021 real values. The total initial investment costs (or inception CAPEX)<sup>88</sup> for the electricity PCIs are about €67 billion, which is about 7% higher compared to last year (i.e. €62.5 billion). Of this, about €58 billion (i.e. 87%) accounts for transmission projects, more than €8 billion (i.e. 12%) for storage projects and less than €1 billion for smart grid projects. Uncertainties about the investment costs (upward or downward expected variations) were reported for about half of the PCIs. For most of them the main reason for variation is procurement or construction costs uncertainties or the project is in consideration stage and cost estimates are rather uncertain. The later investment costs (or sustaining CAPEX)<sup>89</sup> were provided by project promoters for less than 10% of the PCIs, which ACER deemed insufficient in order to conclude on them.
- (104) As shown in Figure 11, most investment costs (about 42%) are in the NSOG region, followed by NSI West (about 35%), NSI East (18%) and BEMIP (5%). As pointed out in last year's consolidated report on PCI monitoring, the apparent asymmetry between the share of PCIs across the priority corridors compared to their share of the investment costs is mainly due to the difference in the project categories and the resulting differences in the average project costs (i.e. while the share of PCIs in NSOG is 18% and in BEMIP is 30%, the projects in NSOG are typically large scale interconnections, while in BEMIP most of them are internal transmission lines.)

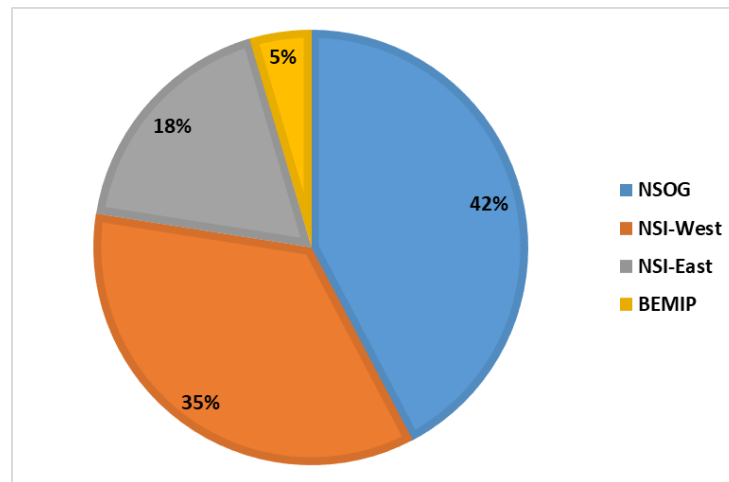
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<sup>87</sup> PCIs 2.13.2, 2.16.1, 2.27.1, 2.27.2

<sup>88</sup> Initial investment costs include development costs (e.g. studies, rights of way, environmental planning, costs for permits), project management costs, material and assembly cost, including installation and commissioning; other construction costs, including temporary solutions, waste management and environmental costs, dismantling of existing assets;

<sup>89</sup> Later investment costs include costs for replacement of devices within the project assessment period and dismantling costs at the end of the equipment lifecycle, where relevant. All costs falling outside the assessment period are not considered.

Figure 11: CAPEX of electricity PCIs per priority corridor



- (105) For 42 PCIs (including 36 transmission, 6 storage PCIs), the project promoters reported changes in the investment costs compared to previous year. For about 60% of these projects the costs increased, for 40% the costs decreased. The main reasons for changes in costs vary across the PCIs, including change in the project's technical characteristics, increased accuracy in cost estimations, changes in prices of raw materials and/or equipment, extra costs due to safety, environmental or legal requirements imposed during permit granting process and exchange rate variations.
- (106) Already incurred<sup>90</sup> costs until 31 December 2020 are about €8.1 billion, representing 12% of the overall electricity PCI budget. About €4.8 billion (i.e. 7%) were additionally contracted<sup>91</sup>. Comparing to the 31 December 2019 data, ACER notes that over a one year period about €4 billion has been spent or contracted for transmission PCIs, the vast majority of it in the NSI West priority corridor. As a result, the share of incurred and additionally contracted costs compared to the total CAPEX has increased from 15% to 22% for transmission, while it remained about 1% for storage.
- (107) The annual operational expenditures<sup>92</sup> compared to the total inception CAPEX amounts to 1% for transmission and 2% for storage.

## Gas

- (108) The CAPEX for 32 gas PCIs in 2021 is reported at about €26.6 billion, which is 2,5% less compared to 2020, mostly due to the reassessed CAPEX values and greater maturity of the PCIs, with more technical details being available and hence improved ability to estimate the cost. The distribution of CAPEX per project type is as follows: 87% in transmission projects, 9% in LNG terminals and 4% in UGS projects. Most investment costs (62%) are expected to occur in the SGC priority corridor, due to the fact that this corridor hosts the lengthiest transmission pipelines and therefore the most demanding PCIs in terms of investment cost.

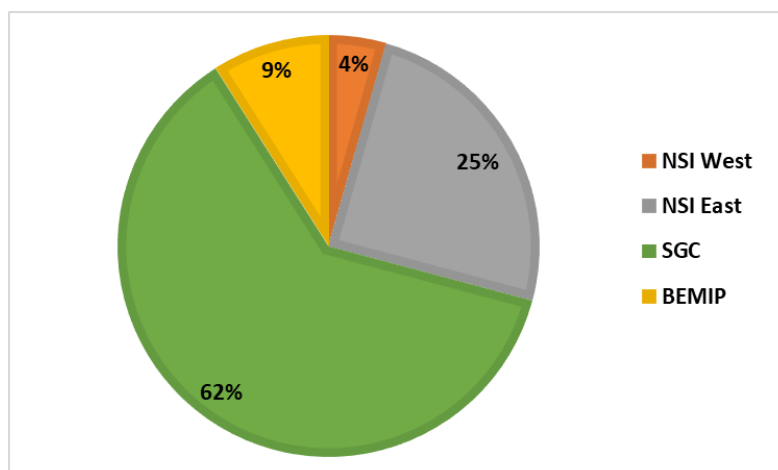
<sup>90</sup> Incurred investment cost include all costs allocated with the project, for which an invoice (or other accounting document which proves the recognition of the cost) has been issued for the purchase of materials or services.

<sup>91</sup> Additional contracted investment cost include all costs to which promoters have committed to (e.g. tender and consequent contracts are signed), excluding the incurred investment cost.

<sup>92</sup> Annual operating expenditures include annual maintenance costs and annual operation costs. The value of annual operating expenditures should not take into account system losses or the cost of purchasing energy for storage investments.



Figure 12: CAPEX of gas PCIs per priority corridor



- (109) The project promoters reported changes in the total investment costs for 22 PCIs compared to those reported in 2020. In 9 instances the costs increased, while in 12 instances the costs decreased. The main reason for changes in costs indicated by the promoters vary across the PCIs, including changes due to increased accuracy of cost estimations, changes in the prices of labour, raw materials and/or equipment, and changes in the project's technical characteristics,
- (110) Already incurred costs until 31 January 2021 for all gas PCIs are about €8 billion, representing 30% of the total gas PCI investment costs.

## 6. Regulatory treatment

- (111) ACER finds that during the reporting period no exemptions or project-specific risk-related incentives have been requested by the project promoters. An investment request, including a request for CBCA, was submitted for 1 electricity and 2 gas PCIs.
- (112) The above findings confirm ACER's earlier observation that project-specific risk-related incentives pursuant to Article 13 of Regulation (EU) No 347/2013 are hardly used by project promoters (2 PCIs in total on the current list). On the other hand, obtaining a decision on an investment request, including a request for CBCA pursuant to Article 12 of Regulation (EU) No 347/2013 is significantly more frequently used. Such investment requests have been submitted for over 1/3 of the current PCIs (in both sectors).

### Electricity:

- (113) ACER notes that project promoters of 3 of the current electricity PCIs<sup>93</sup> applied for exemptions, 2 of them in the NSOG priority corridor and one in the NSI East priority corridor. All of these exemption requests were submitted before the reporting period, in one instance the exemption was already granted, in the other 2 instances the decision is still pending.
- (114) Until 31 January 2021, the project promoters submitted 17 investment requests, including a request for CBCA, pertaining to 34 electricity PCIs of the fourth PCI list<sup>94</sup>. Out of these 35 PCIs, 22<sup>95</sup> are located in the BEMIP priority corridor and the vast majority of them pertain to 2 investment requests related to PCIs serving the purpose of the Baltic synchronisation with continental Europe. The remaining PCIs, for which an investment request was submitted, are located in the NSI East (8

<sup>93</sup> PCIs 1.7.3, 1.10.2, 3.4

<sup>94</sup> In these statistics all investment requests, which have been notified to ACER, are taken into account, including incomplete and/or rejected requests.

<sup>95</sup> PCIs 4.2.1, 4.2.2, 4.2.3, 4.10.1, 4.10.2 and 17 PCIs within PCI cluster 4.8

PCIs)<sup>96</sup>, the NSOG (3 PCIs)<sup>97</sup> and NSI West (2 PCIs)<sup>98</sup> priority corridors. One out of 17 investment requests have been submitted during the reporting period and other ones were submitted before.

- (115) No project promoter of the current electricity PCIs applied for project specific risk-based incentives, while some PCIs have been granted incentives within the general incentives schemes, like the Cap and Floor regime in the UK.

### Gas

- (116) The project promoters submitted in total 12 investment requests for the PCIs on the current PCI list. Out of these 12 PCIs, 4 are located in the BEMIP priority corridor<sup>99</sup>, 3 in NSI West<sup>100</sup> and 5 in the NSI East<sup>101</sup> priority corridor. Two investment requests were submitted in NSI East during the reporting period<sup>102</sup>, and both have already received a CBCA decision from the competent NRAs.
- (117) During the reporting period, none of the PCI project promoters applied for exemptions or for risk-based incentives, which re-confirms the lack of interest for such regulatory treatment, as already noted by ACER in earlier rounds of monitoring. So far, project promoters applied for risk-based incentives for 2 PCIs<sup>103</sup> from the current PCI list. In total, project promoters have requested exemptions for 5 PCIs<sup>104</sup> on the current fourth PCI list (2 in NSI East and SGC each, and one in NSI West), out of which 4 PCIs have already been granted an exemption.

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<sup>96</sup> PCIs 3.10.1, 3.10.2, 3.7.1, 3.7.4, 3.8.1, 3.8.4, 3.9.1

<sup>97</sup> PCIs 1.6, 1.7.1, 1.7.5

<sup>98</sup> PCIs 2.7, 2.16.3

<sup>99</sup> PCIs 8.5, 8.2.4, 8.3, 8.2.1

<sup>100</sup> PCIs 5.3, 5.21, 5.19

<sup>101</sup> PCIs 6.2.1, 6.5.1, 6.8.2, 6.8.3, 6.20.4

<sup>102</sup> PCIs 6.8.3, 6.20.4

<sup>103</sup> PCIs 6.2.1, 8.5

<sup>104</sup> PCIs 5.3, 6.8.1, 6.9.1, 7.1.3, 7.3.3

## Annex 1: Electricity PCIs

See separate pdf file distributed together with this Report, which contains a non-confidential version of some project specific information on electricity PCIs.<sup>105</sup> Link to [Annex I](#).

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<sup>105</sup> ACER will treat the confidentiality claims submitted by project promoters applying, by analogy, Article 27 of Decision No 19-2019 of the Administrative Board, laying down the rules of procedure of the Agency, available [here](#).

## Annex 2: Gas PCIs

See separate pdf file distributed together with this Report, which contains a non-confidential version of some project specific information on gas PCIs.<sup>106</sup> Link to [Annex II](#).

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<sup>106</sup> ACER will treat the confidentiality claims submitted by project promoters applying, by analogy, Article 27 of Decision No 19-2019 of the Administrative Board, laying down the rules of procedure of the Agency, available [here](#).