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Projects of Common Interest (2020)

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

30 June 2020

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Executive summary

This report provides a review of the annual progress of the electricity and gas projects of common interest ('PCIs') included in the fourth PCI list. The Report covers the period from 1 February 2019 to 31 January 2020. While the report provides an overview of the progress, or lack thereof, of the implementation of PCIs, it does not analyse the possibilities to speed up implementation; for that, a more in-depth analysis would be needed.

The main findings, observations and recommendations are summarised below.

Change and continuity

The number of electricity and gas PCIs included on the list continues to fall, especially in gas. The list now includes 106 electricity and 32 gas PCIs, compared to the 110 electricity and 53 gas included in the third PCI list.

Relatively few new PCIs got on the list, the vast majority of them in electricity and only one in gas. Of the electricity projects, 79% were already included in the previous list. For gas only one new PCI was put forward: 96% of the ones which got on the list were already present on the previous list.

The trends of decreasing overall number of PCIs and smaller share of gas projects persisted. Between the first (2013) and the fourth (2019) PCI list, PCIs decreased from 238 to 138 and the share of gas projects went down from 44% to 23%.

The numbers of gas transmission PCIs (-74%) and of liquefied natural gas terminal PCIs (-62%) has significantly dropped compared to the first PCI list.

Location

About 2/3 of all new PCIs are internal electricity projects. The vast majority of the new transmission electricity PCIs (about 3/4) are internal projects.

Both in electricity and gas the highest share of PCIs is located in the NSI East priority corridor, while the new electricity PCIs are concentrated in the BEMIP priority corridor.

Implementation status

About 2/3 of the PCIs on the current list are in permitting or in a more advanced status, while about 1/3 of the PCIs are planned, but not yet in permitting, or under consideration. In general, the electricity PCIs tend to be more advanced. While 31% of the gas PCIs are still under consideration, only 11% among the electricity PCIs are in such a status.

The pace of implementation

16 out of 115 PCIs (14%) advanced their status compared to the previous year, of which 14 electricity and only 2 gas PCIs.

68% of the electricity PCIs and 44% of the gas PCIs are on time compared to the previous year's schedule. This means that within just one year about a third of the electricity projects and more than half of the gas projects have fallen behind schedule. Despite this, project promoters remain optimistic about the time frame for the completion of the projects.

38% of the gas PCIs and 27% of the electricity PCIs are delayed compared to last year's schedule (the other projects which are not on time being rescheduled).

ACER notes a significant decrease in the share of rescheduled electricity PCIs (5% in 2020 compared to 12-24% in previous years), which may be a signal of a more robust electricity PCI list. The share of rescheduled gas PCIs decreased less (from 34% in 2019 to 22% in 2020), still also representing an improvement.

More than 40% of the PCIs are expected to be commissioned within 4 years, and about 80% by the end of 2025. ACER reiterates its view that, given the actual slow pace of implementation, project planning for gas PCIs appears to be too optimistic.

Reasons for delayed implementation and for rescheduling

The reasons for delays of projects vary among projects. The most frequently mentioned “main” reason for delays for electricity PCIs is related to permit granting (in particular environmental permitting), whereas in gas it is related to project financing issues.

Difficulties with permit granting procedures in electricity also raise an issue on how to align the planning of the new electricity generation capacity and the necessary transmission infrastructure to connect the newly generated energy to the consumption centres. Competent authorities for permitting should endeavour to implement effectively the accelerated permit granting procedures foreseen by the Regulation.

The implementation plans scheduled by PCI promoters have recurrently proven to be overoptimistic, in particular due to a failure to recognise risks, such as changes in market conditions for gas projects.

Project costs and benefits

The investment costs of all PCIs, as reported by the promoters, amount to €90 billion. About 30% of the electricity and 70% 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.

In many instances, gas 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 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:

ACER observes that so far in total 3 electricity and 5 gas PCIs applied for exemptions from third party access. In addition, 2 gas PCIs applied for project specific risk-related incentives.

An investment request, including a request for cross-border cost allocation, was submitted for over 1/3 of the current PCIs (in both sectors).

Consistency of network development plans

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).

Transparency

The publication of fundamental project information on PCIs (including commissioning date, capacity increase, project status, and project cost) should be made mandatory.

Concluding remarks

The progress of the PCIs' implementation and the nature of the project rescheduling which they face signals a dichotomy between two objectives apparently pursued by some promoters: (a) getting on a list which makes the projects eligible for 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.

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 making the project really mature, risk-and future-prone, thus slowing down permitting and making access to financing more difficult.

Outlook

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 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 a given project.

In the discussions regarding the Trans-European Energy Networks Regulation (‘TEN-E’) revision, many stakeholders as well as ACER/CEER¹ 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, energy systems integration, and will consider evaluating the progress of projects in the light of such issues.

¹ 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

1. Introduction

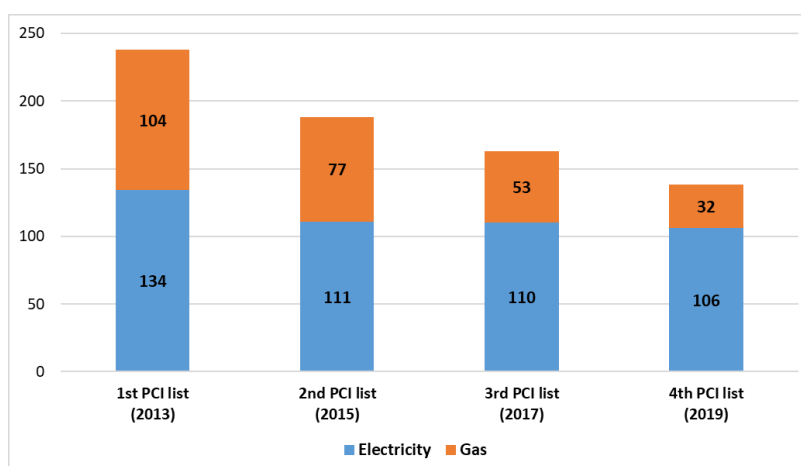
- (1) Article 5 of Regulation (EU) No 347/2013 requires ACER to monitor and evaluate the progress achieved in implementing gas and electricity projects of common interest ('PCIs'). ACER carries out this monitoring on the basis of annual reports submitted by the project promoters and additional inputs received from the national regulatory authorities ('NRAs'). This Report highlights the results of the sixth annual monitoring by ACER of the progress in PCI implementation².
- (2) This Report provides ACER's general findings on the gas and electricity PCIs included in the fourth Union list of PCIs³ ('fourth PCI list') and on their progress during the reporting period from 1 February 2019 until 31 January 2020.
- (3) 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 Report⁴.

2. Overview of PCIs and data submission

2.1 Overview of PCIs

- (4) The fourth PCI list includes 106 electricity and 32 gas PCIs, which shows a decreasing trend in the number of PCIs and share of the gas PCIs within the PCI list as presented in Figure 1.

Figure 1.: Number of electricity and gas PCIs in each PCI list



- (5) The decreasing trend applies to several project categories: comparing the fourth PCIs list in 2019 and the first PCI list in 2013, the number of electricity transmission PCIs decreased by 28%, the gas transmission PCIs decreased by 74%, liquefied natural gas PCIs decreased by 62% and gas storage PCIs decreased by 29%. On the other hand, electricity storage (16 in the fourth PCI list vs. 13 PCIs in the first list) and electricity smart grids (6 in the fourth list in 2019 vs. 2 PCIs in the first list) show an increasing trend.

² For ACER findings on the progress of PCIs in previous years and related recommendations please refer to ACER consolidated PCI monitoring reports (2015-2019). Link to ACER consolidated PCI monitoring 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 2019 is available: [here](#).

³ 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

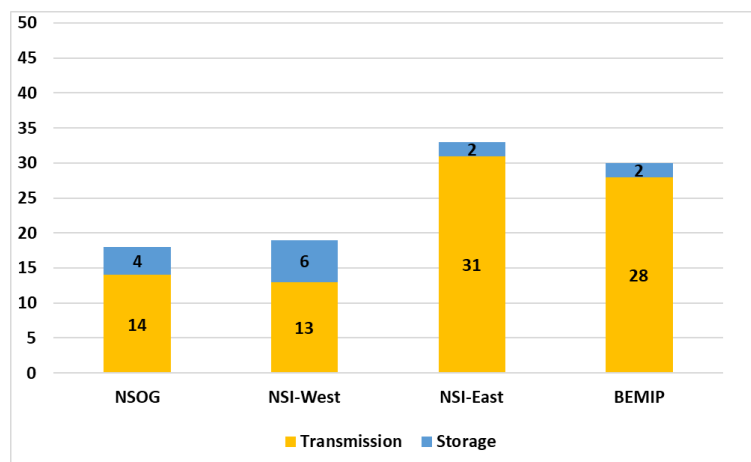
⁴ [Link to Annex I](#), [link to Annex II](#)

- (6) ACER notes that the share of electricity storage and smart grid projects in the PCI list keeps increasing over time (i.e. their share within the electricity PCIs was 11% in 2013, 11% in 2015, 15% in 2017 and 19% in 2019).
- (7) 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. ACER finds that out of the 23 new PCIs (i.e. those which were not included in the third PCI list), 22 are electricity and only 1 is a gas project.

Electricity:

- (8) Similar to previous years, 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. Out of the 22 new electricity PCIs, 16 are transmission projects (3/4 of them are internal), 3 are storage and 3 are related to smart grids.
- (9) Out of the new transmission PCIs, 12 are located in the BEMIP priority corridor (all of them belong to the PCI cluster “Integration and synchronisation of the Baltic States’ electricity system with the European networks”), while 2 are located in the NSOG priority corridor. All 3 new storage PCIs are located in the NSI West corridor. There is no new PCI in the NSI East corridor.
- (10) Figure 2 shows the geographical distribution of the electricity transmission and storage PCIs. ACER notes that 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). ACER notes that share of PCIs across the priority corridors shows significant differences compared to the first list, where about 47% of the relevant PCIs were located in the NSI East, 25% in the NSI West, 17% in the NSOG and only 9% in the BEMIP priority corridor.

Figure 2.: Number of electricity PCIs per priority corridor



- (11) The share of electricity interconnection projects in each priority corridor is significantly different: 100% in NSOG, 62% in NSI West, 45% in NSI East, and about 20% in BEMIP.

Gas:

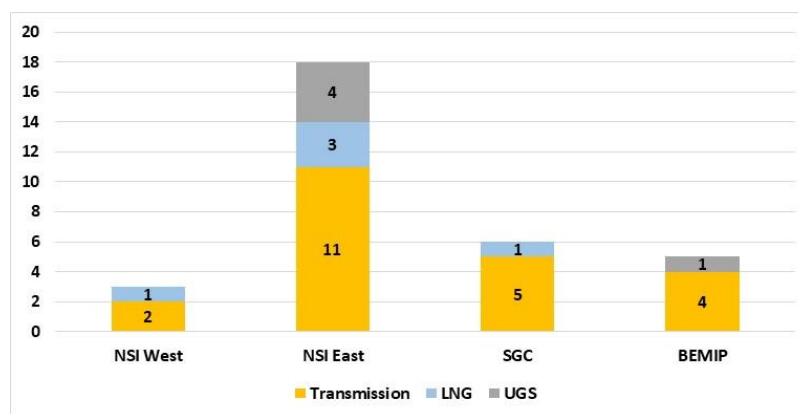
- (12) The gas PCIs include 22 transmission pipelines, 5 liquefied natural gas (“LNG”) terminals and 5 underground gas storage (“UGS”) projects. The new gas PCI is an LNG terminal in the NSI East corridor.⁵ As shown in Figure 3, out of a total of 32 gas PCIs, 18 (56%) projects are located in the NSI East corridor, apparently due to a persisting need to improve security of gas supply standards,

⁵ PCI 6.27 (LNG terminal): FSRU Polish Baltic Sea Coast

diversification of gas supply, and gas market integration in the region, objectives to which the gas infrastructure projects in the NSI East corridor may positively contribute.

- (13) In gas, a decreasing number of PCIs is observed from the first till the fourth PCI lists, in 2013 there were 104 gas PCIs on the list, the 2015 PCI list included 77 projects, the 2017 PCI list included 53 projects and the current list includes 32 PCIs (presented in Figure 1).

Figure 3.: Number of gas PCIs per priority corridor



2.2 Technical modifications

- (14) Technical modifications compared to the project features reported in the previous year have been identified for 11 out of 115 PCIs (about 10%), of which 9 electricity⁶ and 2 gas PCIs⁷.
- (15) The technical modifications reported for the electricity PCIs include the following: new technical solutions decided after public consultation, change of route, replacement of part of the OHL to underground cables, changes in the connection scheme by the TSO, reducing the length of the route, inclusion of additional investments or discard of an investment in the PCI scope, other changes in design topology.
- (16) The technical modifications for the gas PCIs involve in one instance lower compressor station capacity and in another instance re-routing due to geo-hazards.

2.3 Completeness and quality of data

- (17) Promoters submitted their annual progress report to ACER for all 138 electricity and gas PCIs for the 2020 PCI monitoring exercise via the ACER's electricity and gas information support system ("AEGIS")⁸. ACER assessed the completeness and the consistency of the received information, consulted the NRAs regarding data of the projects located within their domain and requested clarifications from the promoters regarding missing, incomplete or inconsistent data. Information regarding electricity and gas projects may occasionally differ, primarily due to the specific features of the two sectors as well as the varying availability of data.

⁶ PCIs 1.7.5, 2.4, 2.7, 3.24, 10.43.11.4, 4.10.1, 4.10.2, 4.4.2.

⁷ PCI 6.8.1, 7.1.3

⁸ 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 PCI monitoring activities and/or recent publicly available information.

- (18) For only 3 gas PCIs the expected benefits were reported, therefore it is not possible to provide meaningful insights regarding the benefits that gas PCIs would bring⁹.
- (19) In addition, for some PCIs basic project features (e.g. estimated investment costs or the expected date for completing major implementation stages) are missing, rendering their assessment practically impossible.
- (20) Furthermore, ACER notes that some project promoters claimed confidentiality for a wide range of project information. In line with the recommendations of previous ACER reports and opinion¹⁰, ACER considers that the publication of fundamental information (including commissioning date, capacity increase, project status and project cost) on the PCIs, where it is not yet explicitly required by the EU legislation, should be made mandatory.

3. Inclusion in the network development plans

- (21) ACER observes that all relevant¹¹ electricity and gas PCIs are included in the ENTSO-E and ENTSG Ten-Year Network Development Plans (TYNDPs) 2018, which were the basis for the selection of the projects ultimately included in the fourth PCI list.
- (22) 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 17 electricity and 5 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.
- (23) ACER keeps encouraging the relevant authorities and TSOs to ensure that PCIs become integral part of the relevant NDPs, as appropriate. In this regard, ACER recalls its recommendation¹² that the NDPs' scope 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). Moreover, NDPs should include/inform on studies and "under consideration" projects and clearly flag them as such.

Electricity:

- (24) Out of 86 electricity transmission PCIs, 80 (93%) are entirely included in the latest NDPs, and one is present as an "under consideration" project¹³. Four interconnection PCIs¹⁴ are either partially included in the relevant NDPs or included only in one of the relevant NDPs. One interconnection PCI¹⁵ is included/present in none of the relevant NDPs. In this latter instance, the reason for non-inclusion is due to the commissioning date of the project, which is beyond the time-span of the NDP.
- (25) Out of the 14 storage PCIs, 5 are included in the relevant NDPs, 2 are present as "under consideration" project and 7 PCIs¹⁶ are not included (or included only as a network connection

⁹ 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.

¹⁰ ACER's Opinion No 13/2019, p.59. Link to the Opinion is available: [here](#).

¹¹ The TYNDP 2018 does not include the smart grid PCIs. It is to note, however, that, pursuant to Annex III 2 (3) of Regulation (EU) No 347/2013, there is no requirement for smart grid projects to be in the Union-wide TYNDP to obtain a PCI status.

¹² ACER's Opinion No 13/2019, p.58.

¹³ PCI 4.8.7

¹⁴ PCIs 1.16, 2.4, 3.4, 3.21

¹⁵ PCI 1.19

¹⁶ PCIs 1.17, 2.18, 1.12.3, 1.12.4, 2.28.2, 2.28.3, 2.28.4

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.

- (26) Out of the 6 smart grid PCIs, one is included and one¹⁷ is partially included in the relevant NDPs. The remaining 4 smart grid PCIs¹⁸ are neither included or present 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:

- (27) Out of 32 gas PCIs, 24 (75%) are entirely included in the latest NDPs, 5 PCIs¹⁹ are partially included, and 3 PCIs²⁰ are not included in NDPs. Out of the 3 PCIs which are not present in NDPs, one project is an UGS (in permitting) and 2 projects are transmission pipelines (one in permitting and one under consideration).
- (28) The reasons for non-inclusion of these projects in NDPs are, in one instance, that the NDP in the Member State is very general and does not include particular projects (however, the PCI is included in the relevant National Energy and Climate plan 2021 – 2030), in another instance, that the NDP does not allow for projects promoted by third parties to be included, and, in the third instance the reasoning has not been provided by the project promoter.

4. PCI Status and progress

4.1 Evolution of the status

- (29) ACER differentiates the following status categories: Commissioned; Cancelled; Under Construction; Permitting; Planned but not yet in Permitting; Under Consideration. Under consideration projects are in the phase of planning studies and consideration for inclusion in the NDPs, Regional Plan/EU TYNDPs; Planned, but not yet in permitting projects are those which have been included in the NDP(s), as a planned project, and completed the phase of initial studies (e.g. completed pre-feasibility or feasibility study), but have not initiated the permitting application yet; Permitting: starts from the date when the project promoter(s) apply for the first permit regarding the implementation of the project and the application is valid.
- (30) ACER finds that about 2/3 of the PCIs are in permitting or under construction or commissioned, while about 1/3 of the PCIs are planned, but not yet in permitting or still under consideration²¹.
- (31) As show in Figure 4 and Figure 5, most PCIs in both sectors are in permitting (40% of the electricity PCIs and 44% of the gas PCIs). While the general pattern is similar in electricity and gas regarding the more advanced statuses, the share of “under consideration” PCIs is significantly higher in gas (31%) than in electricity (11%).

¹⁷ PCI 10.7

¹⁸ PCIs 10.4, 10.6, 10.8, 10.9

¹⁹ PCIs 6.20.3, 6.8.1, 7.1.1, 7.1.3, 8.2.1

²⁰ PCIs 7.3.2, 8.2.4, 8.3.1

²¹ ACER considers that the status of the least developed element of a given PCI represents 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 project.

Figure 4: Electricity PCIs status

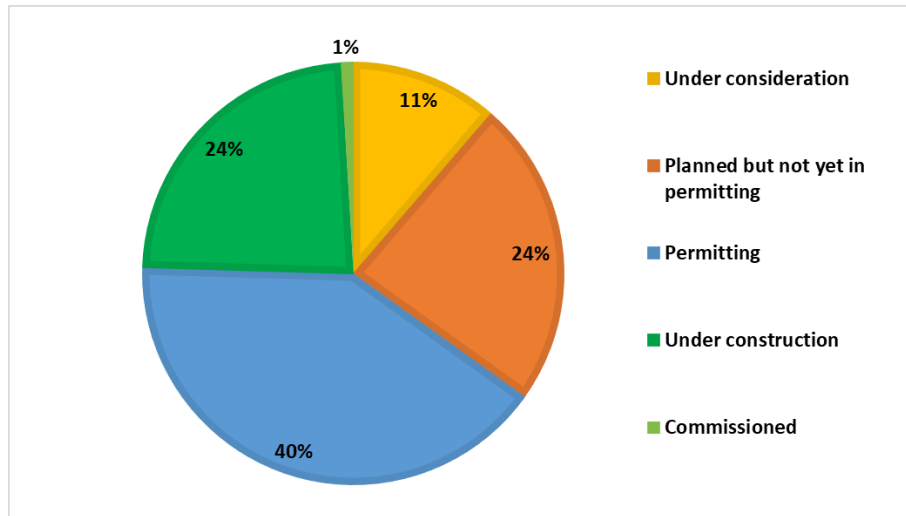
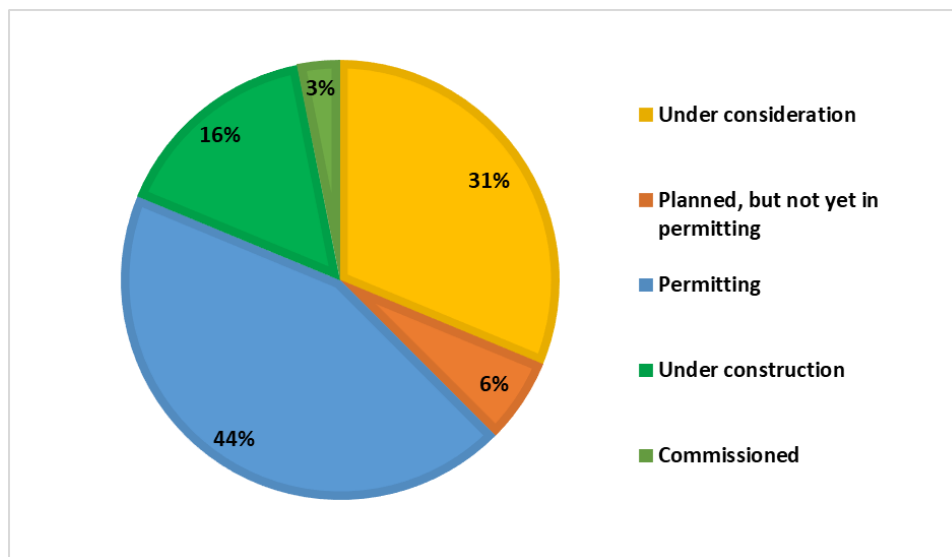


Figure 5: Gas PCIs status



- (32) In total, 16 out of 115 PCIs (i.e. 14%), 14 electricity and 2 gas PCIs, which were already included in the third PCI list, advanced their status during the monitored period. Out of them, 2 PCIs²² (one electricity, one gas) were commissioned. Most of the remaining PCIs, which advanced their status, finished permit granting and entered in “under construction” status.

4.2 Delays and rescheduling

- (33) ACER recalls that it is important to differentiate between delayed and rescheduled projects. 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 voluntarily postponed by a promoter due to changes of its external driver (e.g. lower demand, less urgent need for an investment due to updated planning data or priority to other

²² PCIs 3.11.5, 6.5.5

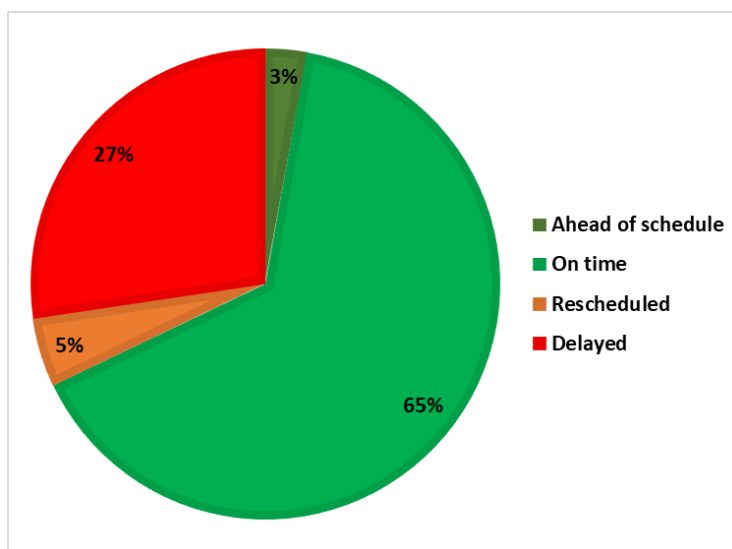
transmission solutions). In short, a “rescheduling” is the consequence of a too optimistic date previously expected by the project promoter.

- (34) The annual progress of the electricity and gas PCIs is shown in Figure 6 and in Figure 9. ACER notes that similar to the patterns observed in previous years, several PCIs encountered delays both in the gas and in the electricity sector (i.e. 38% and 27% respectively). However, the share of rescheduled PCIs is significantly lower in electricity than in gas (i.e. 5% and 22% respectively)
- (35) More than 40% of the PCIs are expected to be commissioned within 4 years (similar to previous year) and about 80% by the end of 2025. In this regard, ACER maintains its view that the project planning for gas PCIs appears to be too optimistic.

Electricity:

- (36) 68% of the PCIs are on time (or ahead of schedule) compared to last year. ACER notes that for the third year in a row, the share of “on time” (or ahead of schedule) electricity PCIs has kept increasing (i.e. 53% in 2017, 57% in 2018, 63% in 2019 and 68% in 2020). While the share of delayed electricity PCIs remains about the same (i.e. 27% in 2020 compared to 23%-31% in years between 2016-2019), the share of rescheduled projects has significantly decreased to 5% from 12-15% in years between 2016-2019 and 24% in the first ACER PCI monitoring report (2015).
- (37) In ACER’s view, the continuous decrease of rescheduling is a clear indication of an increasingly robust PCI list and of more accurate estimates by electricity PCI promoters.
- (38) About 40% of the delayed PCIs (12 out of 29) repeatedly encountered delays.

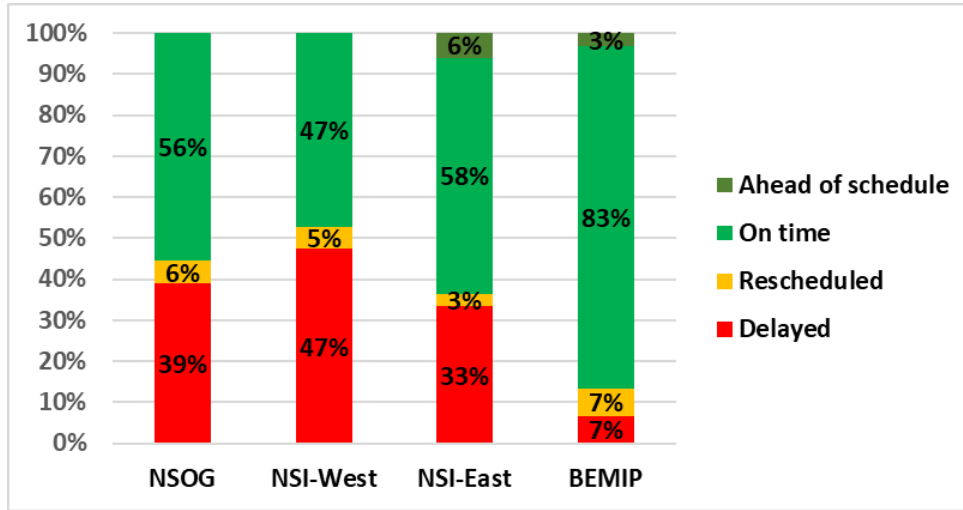
Figure 6: Annual progress of electricity PCIs



- (39) Out of the 29 delayed projects, 22 are transmission and 7 are storage PCIs, which means that about 25% of the transmission and half of the storage PCIs are delayed.
- (40) As shown in Figure 7, the highest share of delayed PCIs is in the NSI West priority corridor (i.e. 9 PCIs corresponding to 47% of the PCIs within this priority corridor). In contrast, 2 PCIs (i.e. 7% of all PCIs within this priority corridor) are delayed in the BEMIP priority corridor.

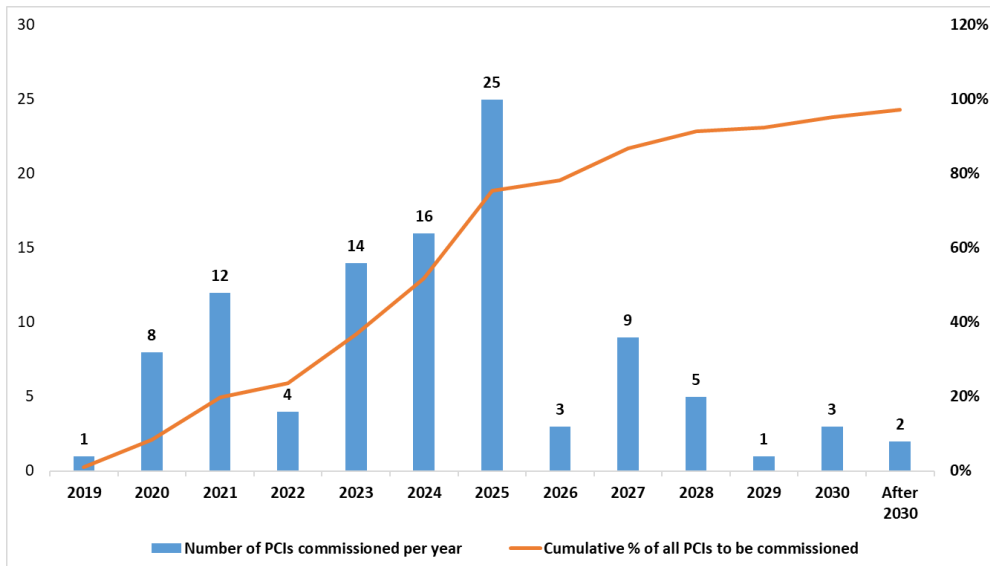
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Figure 7: Annual progress of electricity PCIs per priority corridor



- (41) The duration of the reported delays varies significantly between the electricity projects (from 3 months up to 4 years). The average delay is about 17 months.
- (42) The typical shift of the commissioning date of the rescheduled projects is about 12 months.
- (43) As shown in Figure 8, 39 electricity PCIs (37%) are expected to be commissioned within the next 4 years and 80 electricity PCIs (75%) are expected to be commissioned by the end of 2025.

Figure 8: Commissioning date of electricity PCIs

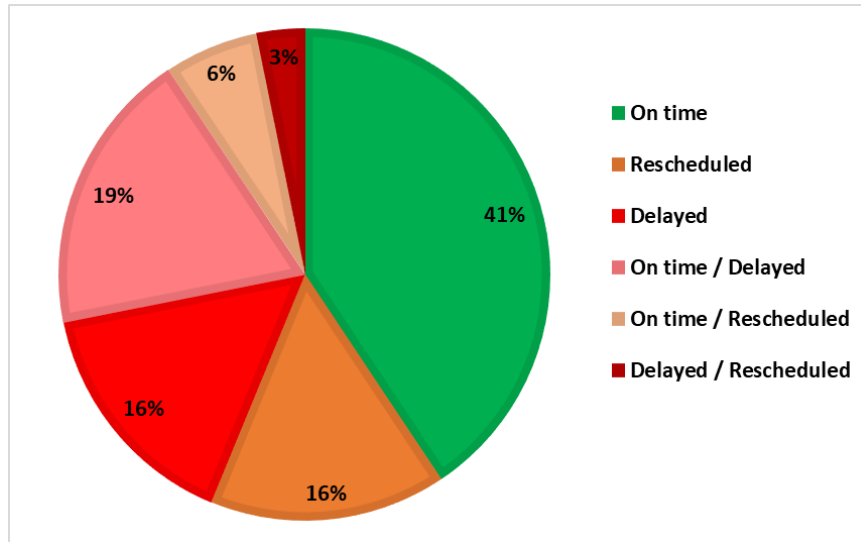


Gas:

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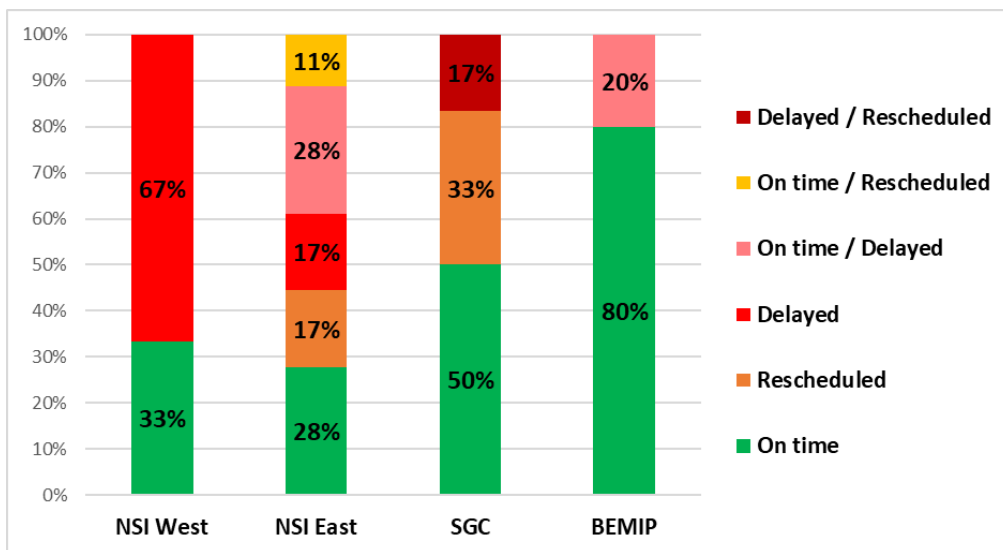
- (44) Also this year, none of the PCIs were reported with a commissioning date “ahead of schedule”. The submitted reports also cover individual investment items. Certain investment items of one and the same PCI are reported to be progressing at a different pace, some being “on time”, while others are “delayed” or “rescheduled”.
- (45) 38% of PCIs encountered delays and 22% of PCIs were rescheduled.

Figure 9: Annual progress of gas PCIs



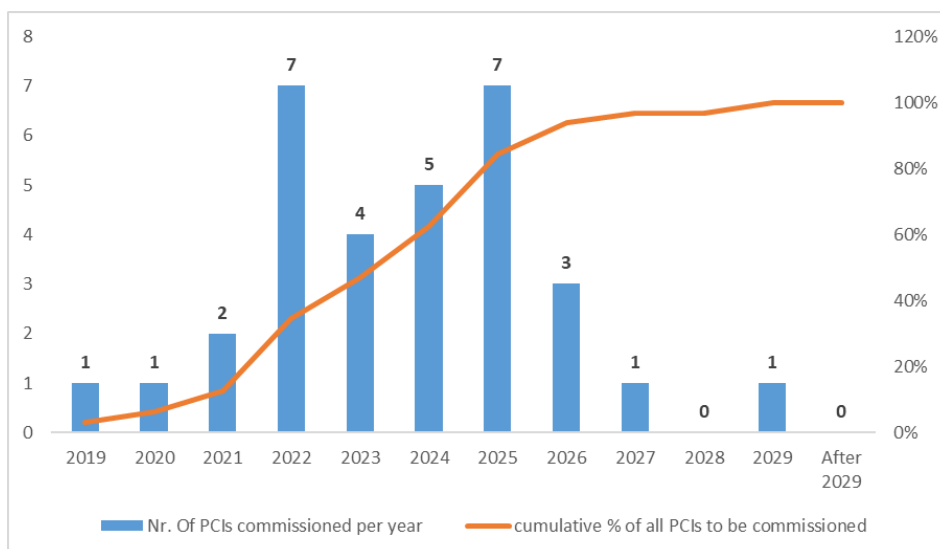
- (46) Out of the 12 delayed PCIs, 7 are transmission pipelines (32% of gas transmission PCIs), 2 are LNG terminals (40%) and 3 are UGS projects (60%). Most delayed PCIs are in the NSI East corridor (8 PCIs, i.e. 44% of the PCIs within this priority corridor).
- (47) Out of the 7 rescheduled PCIs, 5 are transmission pipelines, 1 is LNG terminal and 1 UGS project. Most rescheduled PCIs are in the NSI East corridor (5 PCIs, i.e. 28% of the PCIs within this priority corridor), as presented in the Figure 10.

Figure 10: Annual progress of gas PCIs per priority corridor



- (48) The duration of the reported delays varies significantly across the gas projects (from two months up to almost 9 years). The average reported delay of PCI commissioning is about 33 months.
- (49) As shown in Figure 11, 20 gas PCI (63%) are expected to be commissioned within 4 years and 27 gas PCIs (84%) are expected to be commissioned by end of 2025.

Figure 11: Commissioning date of gas PCIs



4.3 Expected duration of implementation

- (50) The findings regarding the expected duration of the PCIs' implementation is not directly comparable between gas and electricity. For the purpose of this report, in electricity the duration of the electricity PCIs' implementation is calculated from the planning approval by the NRA, the competent Ministry or by other national competent authority (as provisioned in the national law of each country); in gas the dates for the planning approval implementation stage are available only for a few PCIs, therefore the market test end date is used as a start date for the implementation duration.

Electricity:

- (51) The average (actual or expected) duration of the electricity transmission PCIs' implementation from the planning approval until the commissioning of the project is about 10 years²³. 55% (respectively 45%) of the electricity PCIs have a lower (respectively higher) expected implementation period than this average value.
- (52) The average (actual or expected) duration of the permit granting process for transmission PCIs which applied for the first permit after 16 November 2013 is less than 3 years²⁴. However, for more than 1/3 of the PCIs, the (actual or expected) permitting duration exceeds the 3 years and 6 months

²³ The data was available for 51 transmission PCIs.

²⁴ The data was available for 62 transmission PCIs.

period foreseen in the Regulation, in 10 instances²⁵, by more than 9 months²⁶. For transmission PCIs which applied for permitting before 16 November 2013 the average permit granting duration is about 9 years. These figures are not directly comparable because the latter PCIs are likely to be projects which suffered and are suffering actual delays (and therefore still present in the PCI list after several years), while the permit granting duration “after November 2013” can frequently be an expected duration of the permit granting process.

- (53) The average duration of implementation is significantly longer in the NSI West priority corridor compared to the other priority corridors (i.e. 16 years compared to 8-10 years), while the permit granting duration is significantly shorter in the BEMIP priority corridor compared to other priority corridors (i.e. 2 years compared to 3-3.5 years).
- (54) The average (actual or expected) duration of the storage PCIs’ implementation is about 10 years. The average duration of permit granting for storage PCIs is about 3 years where it started (or expected to start) after 16 November 2013 and about 9 years where it started before 16 November 2013. For smart grid PCIs, the data were not deemed sufficiently representative for substantial findings.

Gas:

- (55) Duration reported between the actual (or planned) end date of the market test and the expected commissioning date has been assessed. The average expected duration of the gas PCIs’ implementation from the actual (or planned) end date of the market test is about 5 years. Data were submitted for only 10 investment items of 8 PCIs.
- (56) Project promoters report that the estimated overall duration of the permitting process is 3.4 years. However, for 25% of the PCIs, the expected duration of the overall permit granting procedure exceeds the permitting duration foreseen in the Regulation (3.5 years)²⁷. 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 (2 in NSI West, 5 in NSI East, 1 in SGC).

4.4 Works or activities carried during the reporting period

- (57) ACER requested project promoters to list and describe what kind of work or activities they carried out with regard to the PCIs between 1 February 2019 and 31 January 2020²⁸. For 5 electricity²⁹ and for 2 gas PCIs³⁰, no works or activities were reported to have been carried out during this reporting period.
- (58) In electricity, the reported reasons for lack of works or activities were either difficulties with the implementation of a related project (in 2 instances), the absence of decision regarding the final location of a corresponding substation or the project is on hold and not developed further until the investment need is confirmed. In one instance, no reason was provided for not carrying out any works or activities over the reporting period.

²⁵ PCIs 2.7, 1.7.1, 3.11.3, 3.11.4, 3.7.2, 3.7.3, 3.7.4, 3.8.1, 4.8.10, 4.8.13

²⁶ 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 time limit by a maximum of 9 months.

²⁷ Idem.

²⁸ 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

²⁹ PCIs 2.13.2, 2.16.1, 2.27.1, 2.27.2, 4.8.7

³⁰ PCIs 5.3, 6.8.3

- (59) In gas, in one instance the reasoning for carrying out no activity was provided. Inactivity was due to legal matters, namely activities were put on hold (no works could be carried out) pending a decision of the European Court of Justice.

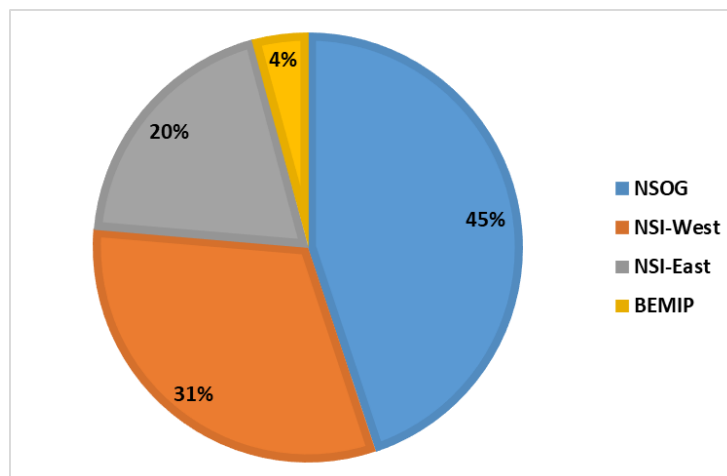
5. Cost developments

- (60) The investment costs for all PCIs, as reported by the promoters, amount to €90 billion. The cost tag is actually even higher, since other capital and operation expenditure during the life-cycle of projects also have to be considered. The total amount already spent on the current PCIs is about €12.2 billion, representing 13.5% of the overall PCIs investment costs.

Electricity:

- (61) ACER requested the project promoters to provide the cost values expressed at current 2020 values. The total initial investment costs (or inception CAPEX)³¹ for electricity PCIs are about €62.5 billion³²: €54 billion (i.e. 87%) accounts for transmission projects, €8 billion (i.e. 13%) for storage projects and less than €0.5 billion for smart grid projects. Uncertainties of the investment costs (upward or downward expected variations) were reported for about half of the PCIs. The later investment costs (or sustaining CAPEX)³³ were not provided by the project promoters at sufficient level of completeness/quality in order to report and to conclude on them.
- (62) As shown in Figure 12, most investment costs (about 45%) are in the NSOG region, followed by NSI West (about 32%), NSI East (19%) and BEMIP (4%). 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 (i.e. large scale interconnection projects and internal projects) and the resulting differences in the average project costs.

Figure 12: CAPEX of electricity PCIs per priority corridor



- (63) For 29 PCIs (including 25 transmission, 3 storage and one smart grid PCIs), the project promoters reported changes in the investment costs compared to previous year. For about half of the projects the costs increased, for half the costs decreased. The main reasons for changes in costs vary

³¹ 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;

³² The data was available for 103 PCIs, including 84 transmission, 14 storage and 4 smart grid PCIs.

³³ 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.

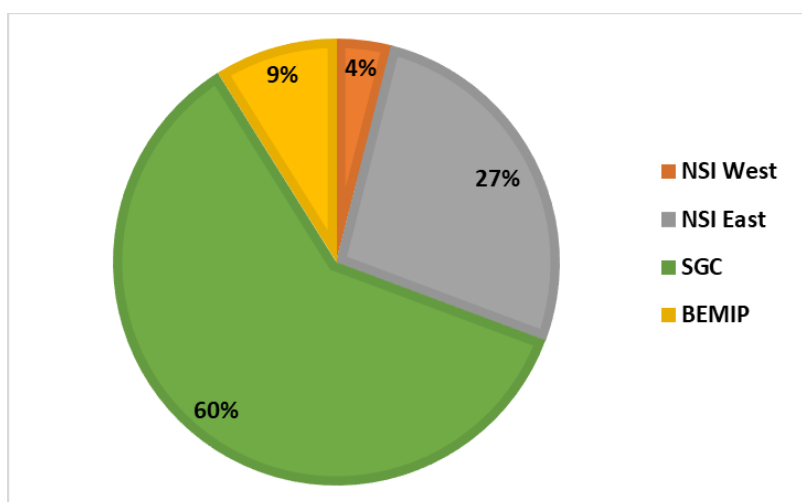
across the PCIs, including change in the project's technical characteristics, increased accuracy in cost estimations, changes in prices of raw materials and/or equipment, extra costs due to safety, environmental or legal requirements imposed during permit granting process and exchange rate variations.

- (64) Already incurred³⁴ costs until 31 December 2019 are about €6.2 billion, representing 10% of the overall electricity PCI budget. About €2.3 billion (i.e. 4%) were additionally contracted³⁵. The share of incurred and additionally contracted costs compared to the total inception CAPEX is 15% for transmission and about 1% for storage.
- (65) The annual operational expenditures³⁶ compared to the total inception CAPEX amounts to 1% for transmission and 2% for storage.

Gas:

- (66) The CAPEX for 32 gas PCIs in 2020 is about €27.7 billion (vs. €42.5 billion in 2019 for 53 PCIs), which is 35% less compared to last year, mostly due to the reduced number of projects on the fourth PCI list in comparison to the third PCI list. The distribution of CAPEX per project type is as follows: 88% in transmission projects, 9% in LNG terminals and 3% in UGS projects. Most investment costs (61%) are in the SGC priority corridor, due to the fact that this corridor hosts the largest and therefore the most demanding PCIs in terms of investment cost.

Figure 13: CAPEX of gas PCIs per priority corridor



- (67) The project promoters reported changes in the total investment costs for 22 PCIs compared to those reported in 2019. In 13 instances, the costs increased, while in 9 instances the costs decreased. The main reason for changes in costs significantly vary across the PCIs, including change in the project's technical characteristics, increased accuracy in cost estimations and changes in prices of raw materials and/or equipment.
- (68) Already incurred costs until 31 January 2020 of all gas PCIs are about €6 billion, representing 22% of the total PCI investment costs.

³⁴ Incurred investment cost include all costs allocated to 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 provided services).

³⁵ Additional contracted investment cost include all costs in which promoters are committed to (e.g. tender and consequent contracts are signed) excluding the incurred investment cost.

³⁶ Annual operating expenditure include annual maintenance costs and annual operation costs. Annual operating expenditure value should not take into account either system losses or cost of purchasing energy for storage investments.

6. Reasons for delays and rescheduling

- (69) The most frequently mentioned main reason for delay was 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 for gas PCIs. The reasons for rescheduling appear to show more differences across the two sectors as described below.

Electricity:

- (70) The most frequently reported reason for delays (i.e. for 11 out of 27 delayed PCIs, 40%) is related to permitting (including environmental problem, public opposition, required technical changes, additional assessments or rejection of permit by the authority).
- (71) Additionally the project promoter(s) reported financing issues (in 3 instances) and delays in tendering/procurement processes as a reason for delay (in 3 instances) and other (non-permit granting related) less frequent reasons, such as technological issue (re-routing), acquisition of or access to land, disagreement between NRAs, delays in construction works, lawsuits and court proceedings, delays due to correlation with other delayed infrastructure (in one or two instances each).
- (72) For the 5 rescheduled PCIs, the project promoters reported rescheduling of the commissioning date either because the project was in initial stage (under studies) and therefore the previous implementation plan was preliminary (2 instances), the operational aspects and the parallel works have been optimised (1 instance), the length of certain construction stage was underestimated (1 instance) or the overall planning inputs have changed with consequent impact on needs (1 instance).

Gas:

- (73) The most frequently reported reason for delays is financing difficulties (4 out of 12 delayed PCIs, i.e. 38%). 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.
- (74) For 7 rescheduled PCIs, the project promoters reported as the most common the following reasons: re-prioritisation of the project's implementation against other investments of the project promoter; demand side changes / uncertainties and supply side changes / uncertainties.

7. Regulatory treatment

- (75) ACER observes that project specific risk-related incentives pursuant to Article 13 of Regulation (EU) No 347/2013 are hardly used by project promoters (2 PCIs). Exemptions from third party access are not widely used (8 PCIs). Obtaining a decision on an investment request, including a request for cross-border cost allocation (CBCA) pursuant to Article 12 of Regulation (EU) No 347/2013 have been significantly more frequently used. Such investment request has been submitted for over 1/3 of the current PCIs (in both sectors).

Electricity:

- (76) ACER notes that project promoters of 3 of the current electricity PCIs³⁷ applied for exemptions, 2 of them in the NSOG priority corridor and one in the NSI East priority corridor. Two of these

³⁷ PCIs 1.7.3, 1.10.2, 3.4

exemption requests were submitted during the reporting period, one exemption request was submitted before.

- (77) Until 31 January 2020, the project promoters submitted 16 investment requests, including a request for CBCA, pertaining to 34 electricity PCIs of the fourth PCI list³⁸. Out of these 34 PCIs, 22³⁹ 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 (7 PCIs)⁴⁰, the NSOG (3 PCIs)⁴¹ and NSI West (2 PCIs)⁴² priority corridors. 3 out of 16 investment requests have been submitted during the reporting period and 13 investment requests were submitted before.
- (78) No project promoter of the current electricity PCIs applied for project specific risk-based incentives.

Gas:

- (79) The project promoters submitted in total 10 investment requests for the PCIs on the current PCI list. Out of these 10 PCIs, 4 are located in the BEMIP priority corridor⁴³, 3 in NSI West⁴⁴ and 3 in NSI East⁴⁵ priority corridor. Two investment requests were submitted during the reporting period⁴⁶.
- (80) In total, project promoters report having requested exemptions for 5 PCIs⁴⁷ 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 exemption.
- (81) So far project promoters applied for risk-based incentives for 2 PCIs⁴⁸. For none of the PCIs project promoters applied for exemptions or project specific risk-based incentives during this reporting period.

³⁸ In these statistics all investment requests, which have been notified to ACER, are taken into account, including incomplete and/or rejected requests. The statistics do not include an additional investment request (PCI 3.27) which was submitted after the reporting period.

³⁹ PCIs 4.2.1, 4.2.2, 4.2.3, 4.10.1, 4.10.2 and 17 PCIs within PCI cluster 4.8

⁴⁰ PCIs 3.10.1, 3.10.2, 3.7.1, 3.7.4, 3.8.1, 3.8.4, 3.9.1

⁴¹ PCIs 1.6, 1.7.1, 1.7.5

⁴² PCIs 2.7, 2.16.3

⁴³ PCIs 8.5, 8.2.4, 8.3, 8.2.1

⁴⁴ PCIs 5.3, 5.21, 5.19

⁴⁵ PCIs 6.2.1, 6.5.1, 6.8.2

⁴⁶ PCIs 5.19, 8.2.1

⁴⁷ PCIs 5.3, 6.8.1, 6.9.1, 7.1.3, 7.3.3

⁴⁸ PCIs 6.2.1, 8.5

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.⁴⁹ [Link to Annex I.](#)

⁴⁹ The Agency 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.⁵⁰ [Link to Annex II.](#)

⁵⁰ The Agency 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](#).



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