*[13/06/2024]*

*[VLAIO]*

*Measure name:*

*[MILESTONE 21 /I-1.16 An Industrial value chain for Hydrogen]*

**Milestone/target description:**

Award of contracts to hydrogen IPCEI projects (defined as those projects forming the subject of the IPCEI State aid notification) under the measure “An industrial value chain for hydrogen transition” (Flanders). Are excluded from selected projects: all activities under the Emission Trading Scheme (ETS) with projected CO2 equivalent emissions that are not substantially lower than the relevant benchmarks established for free allocation.

Selected research and innovation (R&I) projects shall comply with the following conditions:

- The R&I exclusively or primarily focuses on low-impact options (such as renewable hydrogen production or other zero emission environmental innovations); or

- The R&I is dedicated to improving “best in class” technology (such as technologies with the most limited impact (but not zero / low impact) among those currently available), and appropriate flanking measures are put in place to prevent lock-in effects (measures enabling the uptake of low impact technologies, or their development); or

- The results of the R&I process are technologically neutral at the level of their application (i.e. they may be applied across all available technologies)

- Any electricity used in the projects is of green origin (such as using RES-e) or based on green PPAs.

**Verification mechanism:**

Summary document duly justifying how the milestone (including the relevant elements of the milestone, as listed in the description of milestone and of the corresponding measure in the CID annex) was satisfactorily fulfilled. This document shall include as an annex the following documentary evidence:

1. Copy of the communication to the applicants, internal guidance documents, selection guidelines, copy of the jury reports that ensure compliance of selected projects with provisions specified in the CID annex (exclusion of ETS activities with emissions that are not significantly below ETS benchmarks and conditions on R&I projects) and demonstrating the application of the above-mentioned selection criteria for each selected project.

2. As far as GHG emissions for activities subject to ETS are concerned, instructions to applicants requiring the applicants to:

i) provide and substantiate the projected level of GHG emissions per unit of product for awarded projects with activities under the EU ETS;

ii) indicate the sector to which the activity concerned by the project belongs and to indicate which ETS benchmarks are applicable; and

iii) to detail the hypotheses taken in account to estimate demonstrate that the project will achieve GHG gas emissions that are significantly lower than the relevant benchmarks for free allocation, as set out in the Commission Implementing Regulation (EU) 2021/447.

3. Copy of contract(s) award notification.

4. Spreadsheet with a list of selected projects with beneficiaries, brief description of project, location, justifications that requirement of the CID are fulfilled.

5. The copy of the DNSH assessment for each project including supporting evidence on which the decision has been taken upon.

6. For awarded projects with activities under the EU ETS:

a) Extract from the application demonstrating that the projected level of GHG emissions per unit of product will be significantly lower compared to the relevant benchmarks under the followed hypothesis;

b) Summary information on the type of intervention and/or the change of technology implemented.

c) For EU ETS operators a unique identifier, the name, the location, the Installation ID/Aircraft Operator ID in the European Union Transaction Log (EUTL).

7. For projects involving the use of electricity, abstract from contractual clauses requiring the electricity to be used for the production of hydrogen to be of green origin or based on green PPAs.

8. For R&I projects:

- evidences (i.e. abstract from the project description, description of the state of the art, description of the energy supply for hydrogen, GHG emissions output) demonstrating the R&I focus of the project on low impact technologies or zero emission

OR

- a demonstration the projects have focused on improving technologies with the most limited impact including a comparison grid. A description of planned/adopted flanking measures to prevent lock-in effects and the contribution of measures taken for the uptake or development of low impact technologies.

OR demonstration of how the selected technologies can be applied across different fields. It is expected for R&I project to include a description of the state of the art for available technologies, a description of the current performance of the technology in terms of emissions and evidence on the expected improvement.

**A. Evidence provided:**

* Annex 1. Internal guidance - Werkwijze DNSH - I-1.6: internal guidance for the application of DNSH-requirements
* Annex 1bis – Notes VR - IPCEI.2021.0002 - IPCEI.2021.0003.zip: decision notes of the Flemish government with a short description of the project and all conditions that have to be met by the projects
* Annex 1tris - HBC 2022.0002 - Hydrogenics – Beslissingsnota.docx: short description of the R&D – part of one of the projects in milestone 21
* Annex 1quater – Decisions of the Flemish government - IPCEI.2021.0002 - IPCEI.2021.0003.zip: signed and dated decisions of the Flemish government
* Annex 3. Award notifications IPCEI.2021.0002 - IPCEI.2021.0003.zip: a copy of the contract award notifications for the projects in milestone 21
* Annex 3bis - Hydrogenics R&D - Beslissingsbrief HBC.2022.0002.pdf: a copy of the contract award notification for the R&D part of one of the projects in milestone 21
* Annex 4. Spreadsheet selected projects milestone 21.xlsx: list of the selected projects under milestone 21
* Annex 5. DNSH-assessments milestone 21.zip: copy of the DNSH assessment for each project. The assessments were validated by the Flemish government on 15 July 2022 (as an annex to the grant decision).
* Annex 5bis - DNSH questionnaire IPCEI notification.zip: copy of the DNSH assessment for each project as submitted as part of the IPCEI state aid notification
* Annex 06a - Hy2Tech - IPCEI\_Hydrogenics.pdf: copy of the state aid approval for IPCEI Wave Hy2Tech
* Annex 06b - Hy2Use - IPCEI\_ENGIE.pdf: copy of the state aid approval for IPCEI Wave Hy2Use

**B. Detailed justification:**

*[Explain clearly how the achievement of the milestone/target is demonstrated by the evidence provided,* ***covering ALL elements of the milestone/target.***  *(e.g. the fact that (i) a certain institution had (ii) to accomplish something (iii) in a certain way in order (iv) to achieve a certain goal (v) by a certain date). The Commission is looking* ***for a clear link between the elements of the milestone/target and the evidence provided.***

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| **1. Copy of the communication to the applicants, internal guidance documents, selection guidelines, copy of the jury reports that ensure compliance of selected projects with provisions specified in the CID annex (exclusion of ETS activities with emissions that are not significantly below ETS benchmarks and conditions on R&I projects) and demonstrating the application of the above-mentioned selection criteria for each selected project.**  The internal guidance for the application of DNSH-requirements in the CID can be found in “Annex 1. Internal guidance - Werkwijze DNSH - I-1.6”. This document describes the way in which DNSH has been applied in this measure. The template for the self-assessment requires the applicant to provide all the necessary information to demonstrate the application of DNSH selection criteria for each selected project. There are no separate documents for the evaluation of the self-assessments by the applicants. The definitive versions of the assessments were validated by VLAIO and included as an annex in the decision of the Flemish government on the grants for these projects (15 July 2022).    The notes of the Flemish government reflect the evaluation of the projects and also make the subsidies conditional on the correct application of DNSH. The notes of the Flemish government for the projects under milestone 21 are included in Annex 1bis – Notes VR - IPCEI.2021.0002 - IPCEI.2021.0003.zip. These documents include a short description of the project and all conditions that have to be met by the projects. A signed copy of the decisions by the Flemish government is attached in Annex 1quater – Decisions of the Flemish government - IPCEI.2021.0002 - IPCEI.2021.0003.zip  As for DNSH, the following condition was included in the decision:  *“De steunverlening blijft afhankelijk van het voldoen aan al de vereisten en rapporteringen gesteld door de IPCEI-mededeling en de RRF-verordening, met inbegrip van de vereisten gesteld door het DNSH-principe.”*  For administrative reasons, Hydrogenics' investment was split into 2 separate applications: (1) an R&D part (HBC.2022.0002) based on the Flemish Government's decree of 12 May 2017 regulating support to companies for research and development with a knowledge-intensive character in Flanders and the Flemish Government's decree of 12 May 2017 regulating support to companies for development and innovation in Flanders, in which the decision authority is delegated by the government to the *Beslissingscomité bij het Fonds Innoveren en Ondernemen* and (2) an FID part for which no delegation exists and the decision was taken directly by the government based on the ‘*Decreet van 16 maart 2012 betreffende het economisch ondersteuningsbeleid, artikel 38, derde lid* (Decree on economic support policy from 16 March 2012, article 38, third section). The decision for the R&D part was taken by the *Beslissingscomité bij het Fonds Innoveren en Ondernemen*. Annex 1tris - HBC 2022.0002 - Hydrogenics – Beslissingsnota.docx includes a short description of this part of the project and a description of all conditions that have to be met. As for DNSH, the following condition was included in the decision:  “*De opstart van het project en de toekenning van de subsidie is afhankelijk van de bevestiging door de begunstigde dat  bij de uitvoering van het project te allen tijde de relevante EU-, nationale en regionale milieuwetgeving, met inbegrip van de vereisten gesteld door het DNSH-principe, wordt gerespecteerd. DNSH omvat eveneens de bevestiging van de begunstigde dat alle elektriciteit die in het project gebruikt wordt voor de productie van waterstof via elektrolyse, uit groene bronnen komt.*”  With respect to state aid compliance, both the R&D project and the First Industrial Deployment project are included in het IPCEI notification (SA64642). R&D projects and investment projects follow a different decision-making procedure in Flanders. The authority to approve R&D projects was delegated by the Flemish government to the decision-making committee at the Fonds Innoveren en Ondernemen (HBC). The authority for investment projects lies with the Flemish government. In approving this grant, the existing decision-making procedures were followed: the R&D part was approved by the HBC and the First Industrial Deployment part by the Flemish government.  **2. As far as GHG emissions for activities subject to ETS are concerned, instructions to applicants requiring the applicants to:**  **i) provide and substantiate the projected level of GHG emissions per unit of product for awarded projects with activities under the EU ETS;**  **ii) indicate the sector to which the activity concerned by the project belongs and to indicate which ETS benchmarks are applicable; and**  **iii) to detail the hypotheses taken in account to estimate demonstrate that the project will achieve GHG gas emissions that are significantly lower than the relevant benchmarks for free allocation, as set out in the Commission Implementing Regulation (EU) 2021/447.**  The instructions to the applicants requiring them to provide the above-mentioned information regarding activities subject to ETS were included in the template for the self-assessment that can be found in “Annex 1. Internal guidance - Werkwijze DNSH - I-1.6”.  **3. Copy of contract(s) award notification.**  Attachment “3. Award notifications IPCEI.2021.0002 - IPCEI.2021.0003.zip” contains a copy of the contract award notifications for the projects in milestone 21. These contract award notifications were sent to the applicants on 10th of January 2023. The DNSH conditions to be met by projects in measure I-1.16 An industrial Value chain for Hydrogen are attached to this communication.  The award notification for the R&D part of Hydrogenics’ project is attached in annex 3bis - Hydrogenics R&D - Beslissingsbrief HBC.2022.0002.pdf. This notification was sent to the beneficiary on 23 August 2022.  **4. Spreadsheet with a list of selected projects with beneficiaries, brief description of project, location, justifications that requirement of the CID are fulfilled.**  Annex “4. Spreadsheet selected projects milestone 21.xlsx” is a list of the selected projects under milestone 21 containing a brief description of the projects, the budget allocated for each project, the beneficiary and address of the beneficiary.  **5. The copy of the DNSH assessment for each project including supporting evidence on which the decision has been taken upon.**  The copy of the DNSH assessment for each project including supporting evidence on which the decision has been taken upon can be found in annex “5. DNSH-assessments milestone 21.zip“. These are the final versions of the companies' self-assessments, validated by VLAIO, which in some cases required several iterations to obtain the necessary information before an assessment could be made. These assessments were added to the file for the Inspection of Finance and the decisions of the Flemish Government. In addition, DNSH assessments for these projects were also sent to DG COMP as part of the IPCEI state aid notification. These assessments are included in annex “5bis - DNSH questionnaire IPCEI notification.zip”  **6. For awarded projects with activities under the EU ETS:**  **a) Extract from the application demonstrating that the projected level of GHG emissions per unit of product will be significantly lower compared to the relevant benchmarks under the followed hypothesis;**  **b) Summary information on the type of intervention and/or the change of technology implemented.**  **c) For EU ETS operators a unique identifier, the name, the location, the Installation ID/Aircraft Operator ID in the European Union Transaction Log (EUTL).**  No projects with activities subject to ETS were selectedin milestone 21  **7. For projects involving the use of electricity, abstract from contractual clauses requiring the electricity to be used for the production of hydrogen to be of green origin or based on green PPAs.**  One of the projects in milestone 21 relates to producing hydrogen through electrolysis. The applicant has indicated in the DNSH assessment that the electricity for electrolysis will come partly from locally produced green power, partly from power purchased through PPA. (see Annex 5. DNSH Assessment milestone 21 - IPCEI20210002 Electrabel). In the Flemish government's decision, the aid was granted subject to compliance with DNSH obligations. The decision letter (see Annex 3. Award notifications IPCEI.2021.0002) restates this condition and also imposes the obligation to provide supporting documents for this.    **8. For R&I projects:**  **- evidences (i.e. abstract from the project description, description of the state of the art, description of the energy supply for hydrogen, GHG emissions output) demonstrating the R&I focus of the project on low impact technologies or zero emission**  **OR**  **- a demonstration the projects have focused on improving technologies with the most limited impact including a comparison grid. A description of planned/adopted flanking measures to prevent lock-in effects and the contribution of measures taken for the uptake or development of low impact technologies.**  **OR**  **- demonstration of how the selected technologies can be applied across different fields. It is expected for R&I project to include a description of the state of the art for available technologies, a description of the current performance of the technology in terms of emissions and evidence on the expected improvement.**  For R&I projects the requested justification was included in the DNSH assessments (see annex “5. DNSH-assessments milestone 21.zip“). Part of one of the projects in milestone 21 (HBC 2022.0002 - Hydrogenics) relates to research and development focused on low-impact applications, namely the development of PEM Electrolysers used to produce hydrogen and P2X products.  Project descriptions can be found in the documents from the Flemish government (Annex 1bis – Notes VR - IPCEI.2021.0002 - IPCEI.2021.0003.zip) and the note relating to the decision of the Beslissingscomité bij het Fonds Innoveren en Ondernemen (Annex 1tris - HBC 2022.0002 - Hydrogenics – Beslissingsnota.docx) |

**Achievement of the requirements in the description of the measure:**

**Description of the measure in the CID Annex**

Investment I-1.16 ‘An industrial value chain for hydrogen transition’ of the Flemish Region

**This measure aims at supporting the transition to a sustainable hydrogen industry in Flanders through investment and project financing. In large part, the funding shall support a portfolio of projects which, like the planned wider cross-border Important Project of Common European interest (IPCEI) project, of which it shall form an integral part, aims at developing an industrial value chain towards hydrogen production, transport, storage and related applications. Outside the IPCEI portfolio, additional projects with a focus on hydrogen are also included, mostly both in the field of research and development and investment projects.**

*In the context of this measure 9 investments were supported divided in 13 projects. All of the projects are aimed at the transition towards a sustainable hydrogen industry in Flanders. In the portfolio there are investments related to:*

* *hydrogen production (Engie – Hyoffwind)*
* *Production of elektrolysers (Hydrogenics/Cummings)*
* *Hydrogen reloading stations for use by heavy duty vehicles (transport/storage - Dats, Air Liquide, Aertssen)*
* *The use of hydrogen for the production of clean steel (Arcelor).*

*All of these projects were submitted in the context of an expression of interest on IPCEI-Hydrogen for Climate. At the request of the European Commission, a number of proposals were shifted to the GBER with support granted under existing notified state aid frameworks. One applications originally envisaged under the IPCEI notification was transferred to a notification under the CEEAG framework.*

**Milestone 21 - Award of contracts to hydrogen IPCEI projects**

**Qualitative indicator:** Written notification of contract awards to successful candidates

**Requirements:**

**i) Award of contracts to hydrogen IPCEI projects (defined as those projects forming the subject of the IPCEI State aid notification) under the measure “An industrial value chain for hydrogen transition” (Flanders).**

*Written notifications have been sent out to the applicants for the IPCEI-projects in the beginning of 2023. At the request of the European Commission, some projects originally envisaged under the IPCEI notification were shifted to the general block exemption regulation, existing notified state aid frameworks and the CEEAG. This resulted in only 2 projects being notified and approved under the IPCEI state aid notification:*

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| ***Project*** | ***Notification status*** |
| ***BE16 Hydrogenics/Cummins***  ***(IPCEI.2021.0003)*** | *Notification in Wave IPCEI H2-Technology. Approved on 15 July 2022. SA 64642.* |
| ***BE11 Engie***  ***(IPCEI.2021.0002)*** | *Notification in Wave IPCEI H2-Use. Approved on 21 September 2022. SA 64641.* |

*Both projects were approved by the Flemish government on 15 July 2022 subject to approval of the state aid notification by the European Commission. This condition has since been met. The documents for the approval of the State aid for both waves are attached in annexes 06a - Hy2Tech - IPCEI\_Hydrogenics.pdf* and 06b - Hy2Use - IPCEI\_ENGIE.pdf.

*The Hydrogenics/Cummings investment was divided into an FID project and an R&D project for administrative reasons. Both the R&D project and the First Industrial Deployment project are included the IPCEI notification. R&D projects and investment projects follow a different decision-making procedure in Flanders. The authority to approve R&D projects was delegated by the Flemish government to the decision-making committee at the Fonds Innoveren en Ondernemen (HBC). The authority for investment projects lies with the Flemish government. In approving this grant, the existing decision-making procedures were followed: the R&D part was approved by the HBC and the First Industrial Deployment part by the Flemish government.*

*Project beneficiaries were notified in writing. This notification also includes a reference to the DNSH terms and conditions applicable to the projects.*

**II) Are excluded from selected projects: all activities under the Emission Trading Scheme (ETS) with projected CO2 equivalent emissions that are not substantially lower than the relevant benchmarks established for free allocation**

*A question on whether activities under the application of ETS occur in the project was included in the template for the DNSH assessment provided to applicants. Applicants indicated that there were no activities under the application of ETS. Based on the self-assessment by the companies and the project descriptions in the application, VLAIO concluded that there are no activities under ETS in any of the projects under milestone 21.*

**III) Selected research and innovation (R&I) projects shall comply with the following conditions:**

**- The R&I exclusively or primarily focuses on low-impact options (such as renewable hydrogen production or other zero emission environmental innovations); or**

**- The R&I is dedicated to improving “best in class” technology (such as technologies with the most limited impact (but not zero / low impact) among those currently available), and appropriate flanking measures are put in place to prevent lock-in effects (measures enabling the uptake of low impact technologies, or their development); or**

**- The results of the R&I process are technologically neutral at the level of their application (i.e. they may be applied across all available technologies)**

*A question on Research & innovation was included in the template for the DNSH assessment provided to applicants. Part of one of the projects in milestone 21 (HBC 2022.0002 - Hydrogenics) relates to research and development focused on low-impact applications, namely the development of PEM Electrolysers used to produce hydrogen and P2X products. The applicant indicated in the self-assessment that part of the project relates to R&D on low-impact applications. Based on this self-assessment by the company and the project descriptions in the application, VLAIO concluded that the project does indeed focus on R&D dedicated to low-impact options* *and aims to improve best-in-class technology.*

**IV) - Any electricity used in the projects is of green origin (such as using RES-e) or based on green PPAs.**

*A question on whether the electricity used in the projects for the production of hydrogen is of green origin or based on green PPAs was included in the template for the DNSH assessment provided to applicants. The applicants indicated that all electricty that will be used in the production of hydrogen will be of green origin. Consequently, this requirement was imposed as a condition in the grant award as part of the general condition that DNSH-conditions have to be met by the projects at all times. In addition, a requirement is imposed that all relevant supporting documents showing that the DNSH conditions are respected must be added to the reports on the projects. ( e.g. power purchase agreements,… )*