**Project Portfolio**

**ENGIE**

**Work streams “XXX”, “YYY”, etc. in the strategic value chain**

Table of Content

[1 Project Outline 4](#_Toc67389193)

[1.1 Presentation of Company and Project 4](#_Toc67389194)

[1.1.1 Company 4](#_Toc67389195)

[1.2 Objectives of ENGIE in the IPCEI in all technical fields it is involved 4](#_Toc67389196)

[1.2.1 Context of market and decarbonization 4](#_Toc67389197)

[1.2.2 Objectives of the project 4](#_Toc67389198)

[1.2.3 Roadmap 4](#_Toc67389199)

[1.2.4 Preliminary planning 4](#_Toc67389200)

[1.3 R&D Projects Before IPCEI 5](#_Toc67389201)

[1.4 Technology and Challenges – R&D&I Activities within IPCEI in all technical fields it’s involved 6](#_Toc67389202)

[1.5 First Industrial Deployment (FID) 6](#_Toc67389203)

[1.5.1 Purpose of the FID phase 6](#_Toc67389204)

[1.5.2 Technical challenges in the FID phase 6](#_Toc67389205)

[1.6 Environmental, energy or transport projects before the IPCEI 6](#_Toc67389206)

[1.7 Intellectual Property Rights 6](#_Toc67389207)

[1.7.1 IP management principles 6](#_Toc67389208)

[1.7.2 IP protection principles 6](#_Toc67389209)

[1.8 Work Plan 7](#_Toc67389210)

[1.9 Investments 8](#_Toc67389211)

[Tools and Equipment 8](#_Toc67389212)

[1.9.1 Construction of Buildings/Laboratory 8](#_Toc67389213)

[2 Budget 10](#_Toc67389214)

[3 Spill-over Effects 11](#_Toc67389215)

[4 Other positive effect on the market 12](#_Toc67389216)

[5 Incentive effect 13](#_Toc67389217)

[6 Elaboration on Terms of the Funding Gap Questionnaire 14](#_Toc67389218)

[7 Limitation of distortion of competition and trade 15](#_Toc67389219)

1. Project Outline
   1. Presentation of Company and Project
      1. Company

Schuman Associates recommendation: Here you are to give a brief description of the company or companies involved.

* 1. Objectives of ENGIE in the IPCEI in all technical fields it is involved
     1. Context of market and decarbonization

Schuman Associates recommendation: Describe the problem your product will be trying to solve; you could either discuss methane\CO2 emissions of current technology, so that you can contrast to other types. Explain where the market is going, and why your technology fits into that scheme. References to some studies could be appropriate here.

* + 1. Objectives of the project

Schuman Associates recommendation: Describe exactly what the product where it is in the value chain and give technical specifications.

* + 1. Roadmap

Schuman Associates recommendation: Describe each phase of the project, along with areas of operations and the parties involved.

* + 1. Preliminary planning

Schuman Associates recommendation: You will describe each phase in greater detail with the focus on KPI’s

**2021 – 202Y: R&D or Industrial Deployment**

* 1st phase (2021):
* 2nd phase (2021 & 202Y):
* 3rd phase (202Y & 202X):

Schuman Associates recommendation: If the project has two or more axes you are to do a similar breakwdown

* 1. R&D Projects Before IPCEI

Schuman Associates recommendation: Give a brief description of projects on which you have worked on or completed in the past, including the most recent.

* 1. Technology and Challenges – R&D&I Activities within IPCEI in all technical fields it’s involved

Schuman Associates recommendation: This is another technical description, this one is more general than 1.2, you are to explain why the solution is new, what the existing technical problems were. You must include a section where you describe the state of the art.

* 1. First Industrial Deployment (FID)
     1. Purpose of the FID phase

Schuman Associates recommendation: This is similar to the R&D section, more information about why the project is the first industrial deployment. Information on location, and the place of the project on the value chain. Explain, why this is the first of its kind.

Give an outline of the technical challenges involved.

* + 1. Technical challenges in the FID phase

Schuman Associates recommendation: At this step, it is essential to test at scale the process validated on the pilot and validate the integration of the LH2 production to global LH2 supply chain.:

To successfully prepare the development of the market and the massification, different technical challenges have to be solved: And the different components to setting up this deployment. Explain what kind of revenues one could expect from this phase.

You must also detail how the project will transition from the FID phase to the mass production phase.

* 1. Environmental, energy or transport projects before the IPCEI
  2. Intellectual Property Rights
     1. IP management principles

Schuman Associates recommendation: Explain the companies internal policy when it comes to IP in the context of collaboration with other firms.

* + 1. IP protection principles
  1. Work Plan

The work plan can be divided in three main parts:

* R&D phase from 2021 to 202x
* FID phase from 202x to 202y
* Massification phase from 2030

**1.10.1 R&D phase from 2020 to 2024**



Table 12 - R&D phase work plan

* 1. Investments

Tools and Equipment

Schuman Associates recommendation: You are to give a breakdown of the material that will be purchased and used.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Technology**  **Classification** | **No. of Tools** | **Examples of Tools** | **Investment Cost [EUR]** | **Year\*** | **TF no.** | **WP no.** |
|  |  |  |  |  |  | 1 |
|  |  |  |  |  |  | 1 |
|  |  |  |  |  |  | 1 |
|  |  |  |  |  |  | 1 |
|  |  |  |  |  |  | 2 |
|  |  |  |  |  |  | 2 |
|  |  |  |  |  |  | 2 |
|  |  |  |  |  |  | 2 |
|  |  | Total |  |  |  |  |

\*Investment year

Table 13: Overview of investment in tools and equipment

* + 1. Construction of Buildings/Laboratory

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Technology**  **Classification** | **No. of Tools** | **Examples of Tools** | **Investment Cost [EUR]** | **Year\*** | **TF no.** | **WP no.** |
|  |  |  |  |  |  | 1 |
|  |  |  |  |  |  | 1 |
|  |  |  |  |  |  | 2 |
|  |  | Total |  |  |  |  |

\*Investment year

Table 14: Overview of investment in buildings or laboratories

1. Budget

Schuman Associates recommendation: This section will be filled in by Schuman Associates once the funding gap has been completed

1. Spill-over Effects

Schuman Associates recommendation: This section will be needed in the next stage but not for the initial applications.

1. Other positive effect on the market

Schuman Associates recommendation: This section will be needed in the next stage but not for the initial applications.

1. Incentive effect

Schuman Associates recommendation: This section will be needed in the next stage but not for the initial applications.

1. **Absence of similar projects**

1. **Start date of the project**

The project has not started yet. The project will be launched from July 2021.

1. **Counterfactual scenario**

1. **Increase in R&D and FID efforts**

*Explain and quantify the increase in R&D and FID efforts that are triggered by the State aid (in terms of size, scope, speed, risk, collaborations, etc.).*

IPCEI will finance part of R&D phase and as this is first of kind project, the IPCEI will not be profitable

1. Elaboration on Terms of the Funding Gap Questionnaire

Schuman Associates recommendation: This will be filled in by Schuman associates once the FG is completed

1. Limitation of distortion of competition and trade

Schuman Associates recommendation: This will be one of the last sections to complete, but for the later stages