

2nd stage criteria

Project maturity, relevant costs and cost efficiency



Technical Maturity – key considerations

Similar to the 1st stage, but more details required

Feasibility study

Technical feasibility
to deliver the
expected output and
GHG emissions
avoidance

Strong focus on risks
and their mitigation

- Provide information in line with the table of contents indicated in section 8 of the application form. Highlight and explain any changes compared to your first stage submission.
- Follow the structure in application form
- Highlight and explain any changes compared to the first stage submission
- Underpin your presentation with evidence
- Attach any technical due diligence report if available
- Fill in the risk matrix in section 4.4 of the application form
- Focus on major technical risks, be convincing with their mitigation
- Underpin your analysis with the feasibility study and provide the risk heat map.

Operational Maturity – key considerations

Similar to the 1st stage, but more details required

Project implementation plan

The plan for implementing the project must be sufficiently developed, comprehensive and realistic.

Strong focus on risks and their mitigation

- Provide detailed information in line with the table of contents indicated in section 8 of the application form. Do not forget to highlight and explain any changes compared to your first stage submission.
- Follow the structure in application form
- Highlight and explain any changes compared to the first stage submission
- Be as detailed as possible, this is your actual project planning document
- Be precise with your project milestones and how you get there
- Underpin your presentation with evidence
- Attach any relevant due diligence report if available
- Fill in the risk matrix in section 4.4 of the application form
- Focus on major operational risks, be convincing with their mitigation
- Underpin your analysis with the project implementation plan and provide the risk heat map.

Financial Maturity – key considerations

Much deeper financial analysis compared to the 1st stage

Business plan

- Provide information in line with the table of contents indicated in section 8 of the application form. Do not forget to highlight and explain any changes compared to your first stage submission.

new

Financial Model

- See related slides and instructions. Follow the template.

Is your project financially ready to reach financial close within 4 years and succeed?

- Follow the structure in application form
- Highlight and explain any changes compared to the first stage submission
- Provide evidence, e.g. binding letters of support/MoU/terms of agreement with project funders and/or suppliers/off-takers signed at board level
- Attach any financial due diligence report if available

Strong focus on risks and their mitigation

- Fill in the risk matrix in section 4.4 of the application form
- Focus on major financial risks, be convincing with their mitigation
- Underpin your analysis with the business plan and provide the risk heat map.

Financial Maturity – key considerations

Objective: assess the project's business and financial viability

Credibility of the project business plan

- Value of the innovation, market access, competitive position
- Financial projections and assumptions, contracts with project parties
- Financial viability with the Innovation Fund grant
- Level of detail and consistency of the financial information. **The Financial Model Summary Sheet needs to be filled as a minimum.**

Soundness of the financing plan

- Funding sources to cover the project's needs and at each milestone
- Steps to reach financial close
- Support / commitment from shareholders and other project funders

Understanding of project financial risks

- Risks to financial viability: potential impact and mitigation measures
- Risks to financing plan: ability to reach completion and contingency funding

Updates to the Relevant costs methodology

Overview

- Greater clarity applied to all methodologies, including around key terms, to help applicants understand what should be taken into account in their calculations.

Key terms in a new Glossary

- **CAPEX** now fully defined across: (a) Construction costs; (b) Site infrastructure costs; (c) Development costs; and, (d) Intangible assets.
- **OPEX** – O&M; Replacement costs; Decommissioning costs (if in first 10 years).
- **Revenues** - All sources of revenues generated by the project, excluding operational benefits and external benefits outside the project boundary.
- **Operational Benefits** - Any revenue received by the project from the sale of EU ETS allowances for reductions in CO₂ emissions, preferential tariffs or feed-in premia, or other market-wide regulatory support programmes.

Key principles for relevant costs

Scope of relevant costs & methodologies to use

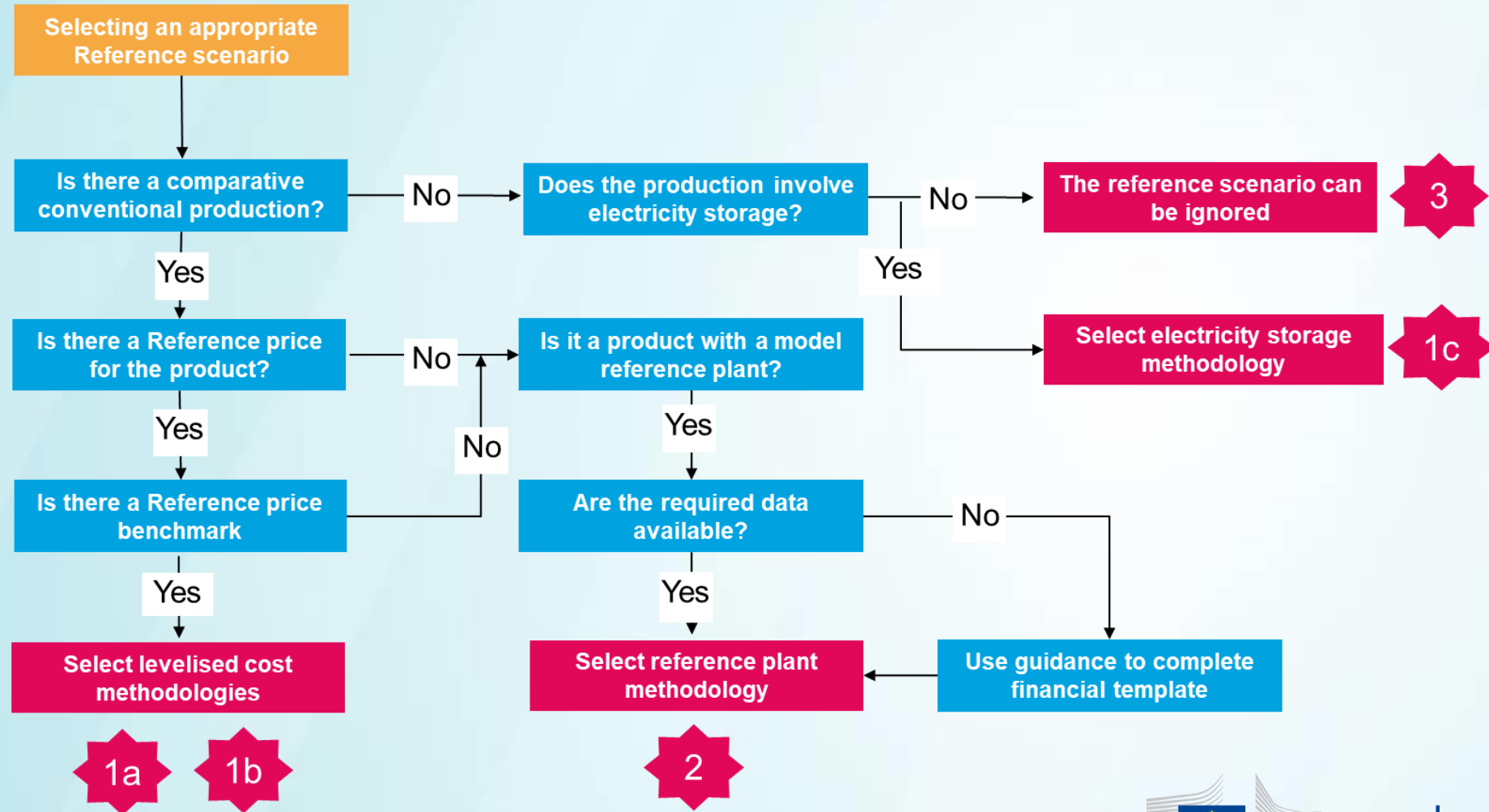
- **Relevant costs are “additional costs”** borne by applicants as a result of the application of the innovative technology related to GHG emissions avoidance.
- For most projects, you should calculate relevant costs based on the **difference between the levelised cost of producing an output unit with the new technology, compared to the cost of producing a reference product using its current market price (“Reference price”)**.
- The **“fall-back” option** for you to use is a reference plant.
- In **exceptional circumstances** there will be no reference scenario to compare your project with.

Decision tree ensures applicants select the right relevant cost methodology

Applicants can use only one relevant cost methodology

1a 1b 1c

Refer to Levelised Cost Models:
 Energy - 1a (LCOE)
 Products - 1b (LCOP)
 Electricity storage - 1c (LCOS)



Key principles for relevant costs

Levelised Cost methodology (Option 1)

- **“Default” methodology** for applicants
- General principle is to establish an identifiable final product and existence of a product Reference price
- Levelised unit cost is cost of one unit of production over the full lifetime of a project. Note that financing costs are captured by the WACC.
- **Suitable for most projects using different variants of the methodology:**
 - Energy/electricity generation (Option 1a)
 - Product manufacture from energy intensive industries (Option 1b)
 - Manufacture of innovative renewable or storage technology components from a new production facility (Option 1b)
 - Electricity storage (Option 1c)

Key principles for relevant costs

Reference plant methodology (Option 2)

- **“Fall back” methodology** for applicants
- Existence of a Reference Plant (i.e. ETS benchmark installation in the case of industrial products or fossil fuel equivalent for renewable electricity/heat)
- Reliable Reference Plant cost data essential
- Project CAPEX, Revenues and Operational Benefits compared to the best estimate of the same parameters of a Reference Plant using conventional technology and with similar product and similar location to the project, where applicable

Key principles for relevant costs

No reference plant methodology (Option 3)

- **“Last resort” methodology** for applicants
- Situations where:
 - No comparable conventional Reference plant exists – either in the EU (i.e. an EU ETS benchmark installation for industrial products) or globally; and,
 - No reference product exists
- Relevant costs are derived from cost data, Revenues and any Operational Benefits from the planned project.

Key principles for relevant costs

Clarification on prices

- **Carbon price/allowance assumptions:** Average price of 2019 and 2020 to be used, which was 24.81 EUR/t.
- **Indexation/inflation assumptions:** Average of 2019 and 2020 to be used. Harmonised Indices of Consumer Prices (HICP) has been updated in Annex B.

Mandatory exclusions

- The following costs must be excluded from all relevant costs calculations:
 - **Terminal value** assumptions beyond the asset lifetime.
 - **Write down of existing (old) technologies** (i.e. stranded assets) that result from the project being supported.

Levelised Cost methodology: LCOE (Option 1a)

Key principles

- Applies Levelised Cost of Energy (LCOE) approach to determine the project's 'price'
- Generates the project/product unit costs, which is then compared to the Reference price
- Mimics long-term forward pricing forecasts used for project funding

Reference

- Reference price is the long-term market price for either power or heat

Approach

- LCOE = [present value of the costs over the full project lifetime]/discounted number energy units produced (MWh) over the full project lifetime

$$LCOE \left[\frac{\text{€}}{\text{MWh}} \right] = \frac{\text{Investment cost} + \sum_n^N \frac{O\&M \text{ cost}}{(1+r)^n} + \sum_n^N \frac{\text{Fuel cost}}{(1+r)^n}}{\sum_n^N \frac{\text{Elec}_{\text{Produced}}}{(1+r)^n}}$$

Where: r = discount rate (WACC)
 n = the year
 N = lifetime

Correction for 10-years OPEX to be applied in separate step (see next slide)

NB: no fuel cost in most renewables projects

OPEX adjustment to the Levelised Costs

Rationale

- To be in line with the IF Delegated Regulation, the share of OPEX after 10 years has to be excluded from the relevant costs calculation.

Approach

- The approach is to estimate the share of the project's discounted OPEX beyond 10 years out of the sum of CAPEX and discounted OPEX over the project lifetime ('discounted costs'). To derive the relevant cost, use this percentage to adjust the discounted costs of the project and of the reference scenario (see steps 8 and 9 on p.21).
- The applicant should verify the effect of the NPV of the difference between the OPEX of the project and of the pre-dominant conventional technology for the remaining lifetime after 10 years of operation.
- In case of a significant impact on the relevant costs, given a reliable estimate of the OPEX for the pre-dominant conventional technology, a more detailed calculation should be applied for the OPEX adjustment.

Levelised Cost methodology – LCOP (Option 1b)

Key principles

- Use a similar approach to the LCOE approach
- Calculates fixed nominal unit price (over full project lifetime) that would need to be paid for the innovative product in order to justify the investment to build the project (Levelised Cost of Product), including its cost of funding.

Reference

- Reliant on market price benchmarks for reference products

Approach

$$LCOP \left[\frac{\text{€}}{\text{Product}} \right] = \frac{\text{Investment cost} + \sum_n^N \frac{\text{O\&M cost}}{(1+r)^n} + \sum_n^N \frac{\text{Fuel cost, Materials cost etc}}{(1+r)^n}}{\sum_n^N \frac{\text{Units}_{\text{Produced}}}{(1+r)^n}}$$

Where:

r = discount rate (WACC)

n = the year

N = lifetime

Correction for 10-years OPEX to be applied in separate step

LCOP – Hypothetical project example

Industrial facility producing a substitute ceramic product with lower emission process

Objective: Calculate discounted cost per unit of production using Levelised Cost of Product

- **Step 1:** Establish the total CAPEX and OPEX of the project
 - Key inputs which applicants need to consider include:
 - Upfront costs of construction (CAPEX);
 - Fixed OPEX & Variable OPEX for the full project lifetime
 - Production (number of units produced by project)
 - Indexation
 - Operational Benefits: Carbon allowances sold (based on 25% emissions reduction, with revenues reducing OPEX. Overall impact reduced relevant cost by 4%)
 - Public support (not applicable in this example)
- **Step 2:** Reduce the OPEX by any Operational Benefits

LCOP hypothetical project - Key inputs (1)

Key inputs

Capacity	100,000	tpa
Reference product price	100.0	EUR/ton
Premium/(reduction) to reference	0.0	EUR/ton
Date of financial close	31-Dec-20	
Construction cost	25,000	EURk
Construction duration	1	years
Project lifetime	20	years
	Construction	Year 1
Production ramp up	0.00%	100.00%
Indexation	2.00%	

LCOP hypothetical project - Key inputs (2)

Key inputs

Benefits		
other state aid received towards construction costs	0	EURk
state aid subsidies received annually	0.00	EUR/ton
carbon allowances sold	2,660	Tons/year
carbon price	25	EUR/ton
Operating costs - variable		
O&M and other variable costs	10	EUR/ton
feedstock	50	EUR/ton
total	60	EUR/ton
Operating costs - fixed		
fixed opex	1,500	EURk/year
Operating costs - total	7,500	EURk/year
Lifecycle		
occasional lifecycle costs	0	EUR/ton
lifecycle cost frequency - once every...	10	years

LCOP hypothetical project – use of WACC

- **Step 3:** Determine the number of units forecast to be produced by the project over the lifetime of the project
- **Step 4:** Discount the OPEX and units produced over the project lifetime using the WACC (see table)*
- **Step 5:** Divide the CAPEX plus Present Value of the OPEX (the “total Discounted costs”) by the total discounted Units produced over the full project lifetime (the “Levelised cost”)

WACC calculation		
Cost of equity		14.0%
Cost of debt		4.0%
Equity percentage		40.0%
Debt percentage		60.0%
Corporation tax rate		28.0%
WACC		7.33%

**Done in order to reflect a flat nominal price of production for the term of the plant operation as per Levelised Cost calculation norms*

LCOP hypothetical project – cost difference

- **Step 6:** Establish the difference between the:
 - a) Reference product price (100 EUR/ton); and
 - b) **Levelised cost calculated for new product (115.88 EUR/ton) = 15.88 EUR/ton**

Discount rate	7.33%	
Discounted costs	111,527	
Production discounted	962,398	
Discounted cost per ton	115.88	EUR/ton
Comparable unit cost	100	EUR/ton
Difference	15.88	EUR/ton

LCOP hypothetical project – relevant cost

- **Step 7:** Multiply the cost difference (EUR15.88/ton) by the discounted units produced over the full project lifetime
- **Step 8:** Calculate percentage of Discounted costs that the discounted OPEX after 10 years of operation represents
- **Step 9:** Multiply difference by 1-OPEX % past 10 years to derive the **relevant cost = EUR 10.8m**
- **Step 10:** Apply IF's 60% maximum intervention rate to relevant cost to derive project's **maximum grant award level = EUR 6.5m**

<i>Subtract OPEX percentage after 10 years</i>		
End date	31 Dec 31	
Opex beyond 10 years NPV	32,510	EURk
Percentage of discounted costs	29.15%	
Cost gap	11.25	EUR/ton
Lifetime discounted production	962,398	tons
Relevant Cost	10,831	EURk
Maximum IF grant	6,499	EURk

Levelised Cost methodology – LCOS (Option 1c)

Key principles

- Follows similar methodology to LCOE/LCOP but incorporates revenue streams from each specific storage ‘use case’ to determine the reference ‘market price’
- Quantifies the discounted cost per unit of discharged electricity for a specific storage technology and application over the project lifetime.
- Accounts for all capital and ongoing costs affecting the lifetime cost of discharging stored electricity in order to derive the relevant costs of the project

Reference

- ‘Market price’ derived by using current market prices and achievable volume for each service in the particular Member State market

Approach

$$LCOS \left[\frac{\text{€}}{MWh} \right] = \frac{\text{Investment cost} + \sum_n^N \frac{O\&M \text{ cost}}{(1+r)^n} + \sum_n^N \frac{\text{Charging cost}}{(1+r)^n}}{\sum_n^N \frac{Elec_{Discharged}}{(1+r)^n}}$$

Where:

r = discount rate (WACC)

n = the year

N = lifetime

Correction for 10-years OPEX to be applied in separate step

Financial Model Summary Sheet * new *

Purpose & use

- **As part of Application Form B, applicants must complete a Financial Model Summary Sheet (FMSS)**
- This ensures that financial information is collected in a **standardised template**
- **FMSS is available to download from the Funding and Tenders Portal**
- Applicants must complete the FMSS using the assumptions and financial projections from their **own financial model**

Financial Model Summary Sheet

5 elements to complete using data from your financial model

1. Project timing

2. Funding sources

3. Profit & Loss

Project name - Model inputs		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Year		31/12/2021	31/12/2022	31/12/2023	31/12/2024	31/12/2025	31/12/2026	31/12/2027	31/12/2028	31/12/2029	31/12/2030	31/12/2031	31/12/2032	31/12/2033	31/12/2034	31/12/2035
Period End																
Project Name	Project name															
Model Start Date	15-Mar-21															
Financial figures unit	EUR															
1 Project timing																
General		Unit														
Corporate tax rate	€	25.0%														
Development & Construction		Unit														
Financial close	Date	15-Mar-21														
Construction Start Date	Date	15-Mar-21														
Construction Period	Months	-														
Commercial Operation Date	Date	15-Mar-21														
2 Funding sources (*)																
Construction funding sources		€														
Innovation Fund grant (during construction)	#DIV/0!	-														
Equity	#DIV/0!	-														
Shareholder loan	#DIV/0!	-														
Senior debt	#DIV/0!	-														
Junior debt	#DIV/0!	-														
[Other]	#DIV/0!	-														
[Other subsidy for construction costs]	#DIV/0!	-														
Total funding	####	-														
3 Profit & loss																
Revenues		Total														
(*) Total revenues of the project		-														
Plus: sale of CO2 emission allowances		-														
(*) Sale of CO2 emission allowances		-														
(*) [Other]		-														
Plus: Innovation Fund grant disbursed during operations		-														
(*) IF grant disbursement during operations		-														
Plus: other OPEX subsidies (for example SDE**)		-														
(*) [Other subsidy 1]		-														
(*) [Other subsidy 2]		-														
(*) [Other subsidy 3]		-														
Less: operating expenses		-														
(-) total OPEX of the project		-														
Less: SG&A and other costs		-														
(-) SG&A and other costs		-														
Less: depreciation & amortisation		-														
(-) Depreciation & amortisation		-														
Less: tax		-														
(-) P&L tax		-														
Less: other P&L items		-														
(-) Other items		-														

Financial Model Summary Sheet

5 elements to complete using data from your financial model

4. Cash flow statement

5. Balance sheet

Project name - Model inputs

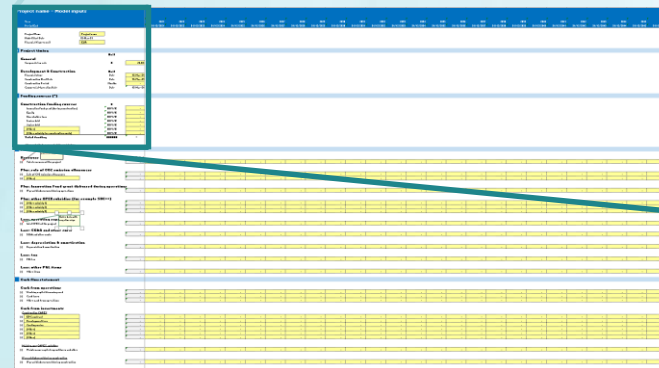
Year	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035
Period End	31/12/2021	31/12/2022	31/12/2023	31/12/2024	31/12/2025	31/12/2026	31/12/2027	31/12/2028	31/12/2029	31/12/2030	31/12/2031	31/12/2032	31/12/2033	31/12/2034	31/12/2035
4 Cash flow statement															
Cash from operations															
(-) Working capital financing need															
(-) Cash taxes															
(-) Other cash from operations															
Cash from investments															
Construction CAPEX															
(-) EPC contract															
(-) Development fee															
(-) Construction															
(-) [Other]															
(-) [Other]															
(-) [Other]															
Maintenance CAPEX and other															
(-) Maintenance capital expenditure and other															
If grant disbursed during construction															
(*) If grant disbursement during construction															
Other grants related to construction															
(*) Other grants															
Cash flow from financing															
New equity															
(*) Equity issue															
(*) Shareholder loan drawdown															
Senior debt issue															
(*) Senior debt drawdown															
(*) [Other]															
(*) [Other]															
Junior debt issue															
(*) Junior debt drawdown															
(*) [Other]															
(*) [Other]															
Equity distribution															
(-) Dividend															
(-) Shareholder loan principal repayment															
(-) Shareholder loan interest															
Senior debt service															
(-) Principal repayment senior debt															
(-) Interest repayment senior debt															
(-) [Floor and other]															
Junior debt service															
(-) Principal repayment junior debt															
(-) Interest repayment junior debt															
(-) [Floor and other]															
Other cash flow from financing															
(*) Financing floor, interest, accounts and other															
5 Balance sheet															
Current assets															
Existing cash															
Other current assets															
Non-current assets															
Net property plant and equipment															
Intangible fixed assets															
Other non-current assets															
Current liabilities															
Current liabilities															
Non-current liabilities															
Junior debt outstanding															
Senior debt outstanding															
Other non-current liabilities															
Equity															
Equity															
[Shareholder loan and other equity]															

Disclaimer | Intro | **Fin Model Summary Inputs** | Fin Model Summary Sheet | Summary Chart | Model Report

Financial Model Summary Sheet

Approach for applicants

- Fill **only yellow cells** in the FMSS with the projected data coming from **your own financial model**
- Ensure that the data inserted in the FMSS is **consistent with the data used for the relevant cost calculation sheet**



Project name - Model inputs			
Year			
Period End			
Project Name		Project name	
Model Start Date		15-Mar-21	
Financial figures unit		EUR	
1 Project timing			
			Unit
General			
Corporate tax rate		%	25.0%
Development & Construction			Unit
Financial close		Date	15-Mar-21
Construction Start Date		Date	15-Mar-21
Construction Period		Months	-
Commercial Operation Date		Date	15-Mar-21
2 Funding sources (*)			
			%
Construction funding sources			
Innovation Fund grant (during construction)		#DIV/0!	-
Equity		#DIV/0!	-
Shareholder loan		#DIV/0!	-
Senior debt		#DIV/0!	-
Junior debt		#DIV/0!	-
[Other]		#DIV/0!	-
[Other subsidy for construction costs]		#DIV/0!	-
Total funding		#DIV/0!	-
<i>(*)expected to be secured at financial close</i>			

Financial Model Summary Sheet

Approach for applicants continued....

- **Fill the expected funding uses and sources** associated with project construction and operation
- Funding sources should correspond to the **total financing package expected to be secured at financial close**
- As per instructions on the input sheet, insert the amount of the Innovation Fund grant amount **expected to be disbursed during construction and the projected grant disbursement profile during operations**, in line with the project milestones
- Any grant disbursed **prior** to construction should be recorded as a reduction in development costs

Financial Model Summary Sheet

Key issues to consider around inputs

- Applicants need to be aware of the following when developing their model:
 - **All data in the FMSS must be consistent with the relevant cost calculation**
 - Information provided in the FMSS is the **minimum required** and you are encouraged to provide additional details from sheets coming directly from your financial model or your full financial models should be appended
 - Full financial models, where provided, should follow good practice and be easy to read and reference
 - Links between relevant cost inputs/calculations and financial model inputs should be clearly marked
 - Errors or an incomplete FMSS indicates a lack of financial maturity
- Applicants can download a **fully developed financial model example** from the Funding and Tenders Portal. It also contains **good practices** for you to follow to help you to develop your financial models and complete the IF Summary Sheet.

Financial Model Summary Sheet

Summary Sheet outputs

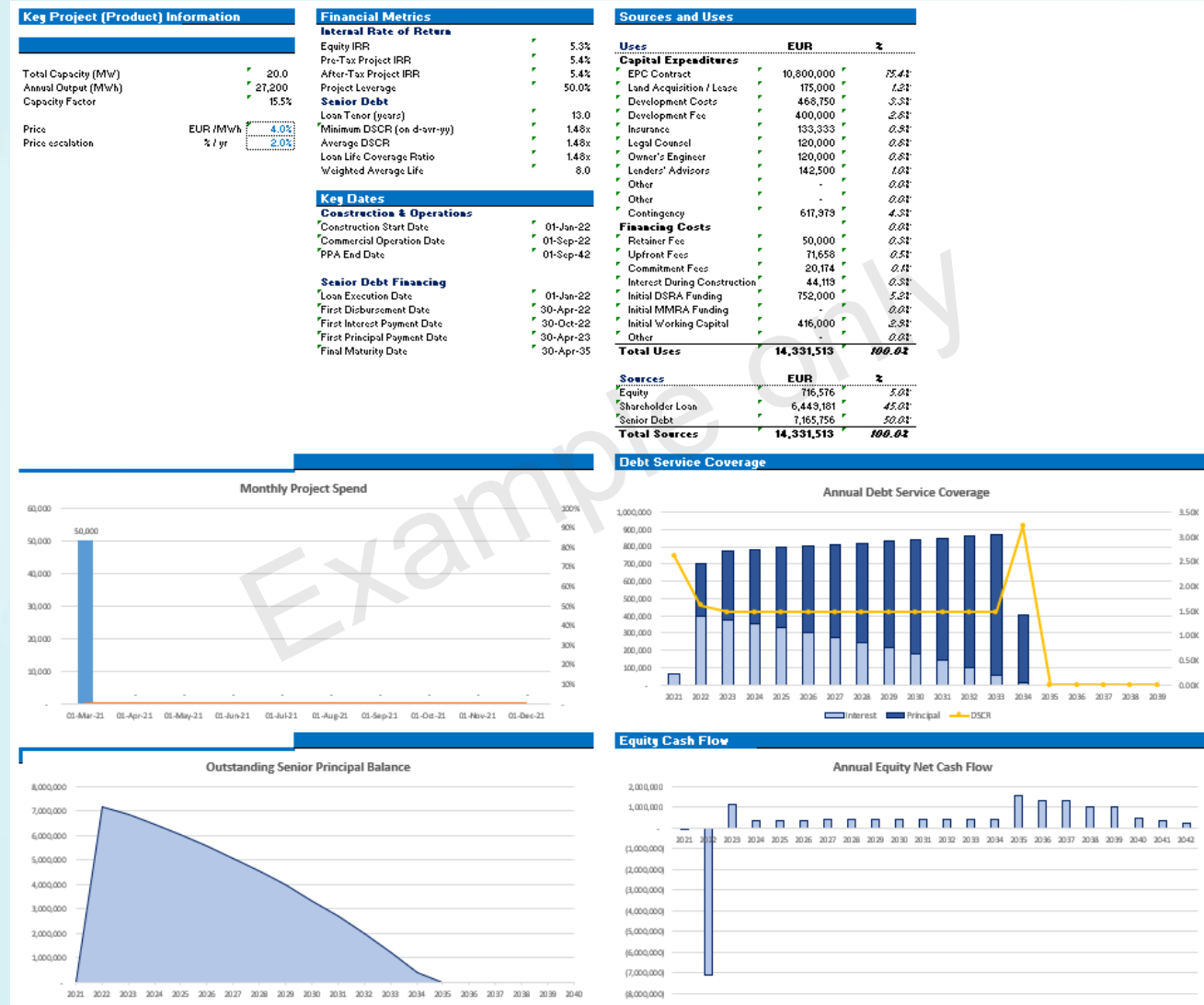
Your data generates:

1. Summary Chart

- Profit & Loss
- Balance Sheet
- Cash Flow Statement
- IRR Analysis

2. Model Report

- Income statement, Balance sheet, Cash Flow Statement, Key Ratios



Cost Efficiency

**Relevant costs less contribution
by project applicant**

=

**Absolute GHG emission
avoidance**

During 10 years after entry into operation

**Maximum grant is 60% of total
relevant costs**

**Applicants that choose not to
apply for the maximum grant
may be more competitive in
their sector when ranked
against other applicants in
'cost per unit performance'
metric**

THANK YOU!