



**EUCF**

European City Facility

# Excel-based analysis tool to be introduced- relevance, purpose and main features



@eucityfacility

**GNE FINANCE**  
High Impact Investments

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 864212



## RELEVANCE

Currently heterogeneity of ICs make difficult to compare them from an investors point of view requiring the development of a simplified model

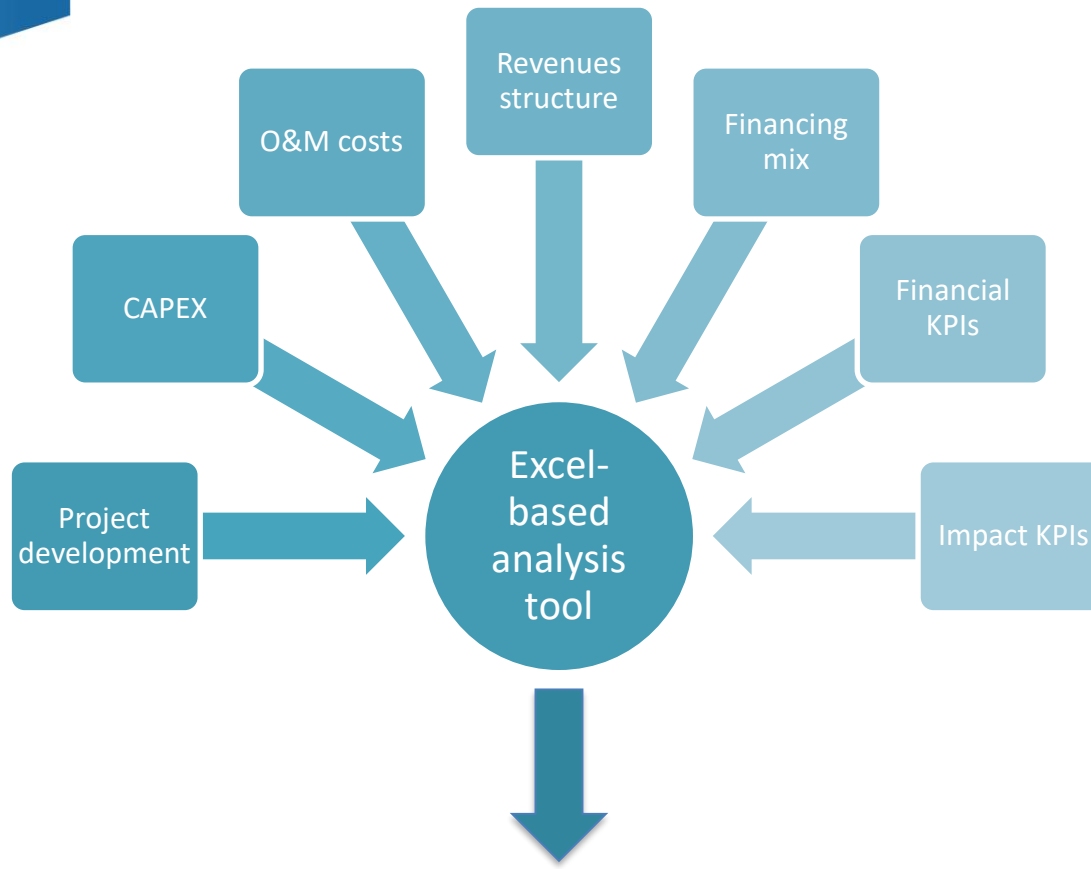
This tool increases projects' appeal and widen the access to potential investors

## PURPOSE

Allow ICs to be compared form investors' analytic perspective simplifying as much as possible the input info requested to final users

Summarize common elements of projects in way investors are familiar with

# Relevance and purpose



Project assumptions  
sheet



Revenues streams in form  
of profit-loss statement

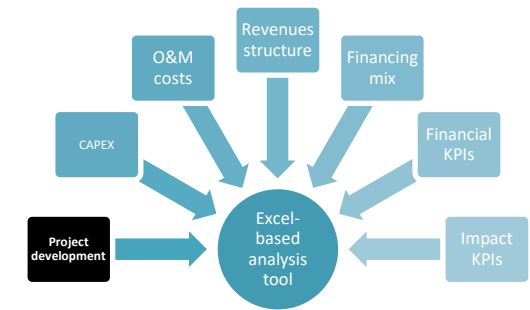


Cash-flow statement



Key ratios

## Excel-based analysis tool main features



Although each project presents its own features, the following elements affect all projects:

- Project development through medium-long term steps (implementation, operation)
  - Implementation during investment period (feasibility study, construction phases)
  - Operation period in which revenues and on-going operating costs will start (flexible start)
  - Possibility to have investments also during the operation period (within the first 10 years)
- Project Financing via a mix of (i) subsidies + public equity, and (ii) private equity + debt instruments;
  - subsidies + public equity assumed “not redeemable” (partly funding an initial cash endowment to cover cash outflows during investment period)
  - Private equity + debt assumed redeemable
  - Debt cost and equity premium benchmarked on country sovereign debt market rates from public sources adjusted for sub-sovereign risk (sources: Investing, Damodaran websites, ICO)
- Cash flows distribution assumed via a pre-defined waterfall
- Project viability determined by a mix of economic, financial and impact KPIs measured by financial and sustainability ratios. Model tested with a “proxy project” (average figures of a sample of ICs)
- **The Users have only to focus on input their figures, the model makes all the rest**

## **Executive Summary – Project development**

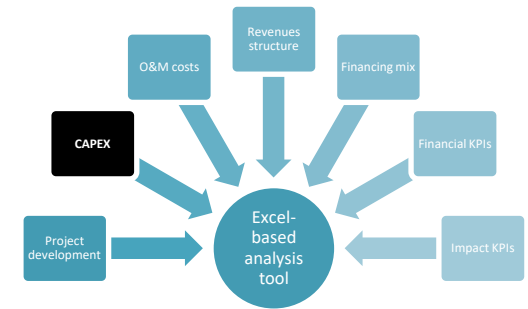


# Capex (Inputs)

Investment horizon in 3 macro stages of a development period up to 10 years

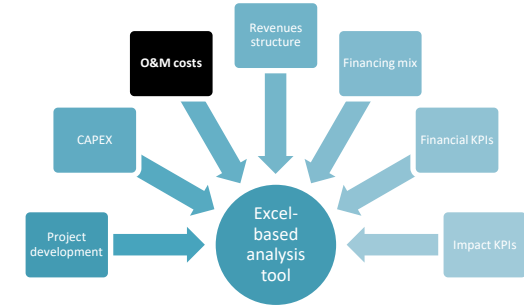
For each stage the Users can define:

- Investment items and expenses
- Year of investment



CAPEX	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	Investment value
<b>Feasibility study</b>											
Preliminary analysis	1.129.528 €										2%
Scope definition	1.694.292 €										3%
Market research	2.823.819 €										5%
...											0%
<b>Total FS</b>	<b>5.647.639 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>10%</b>
<b>Construction phase 1</b>											
item 1		6.777.166 €									12%
item 2		11.295.277 €									20%
item 3		4.518.111 €									8%
...											0%
<b>Total C1</b>	<b>0 €</b>	<b>22.590.555 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>40%</b>
<b>Construction phase 2</b>											
item 1			11.295.277 €								20%
item 2			8.471.458 €								15%
item 3			8.471.458 €								15%
...											0%
<b>Total C2</b>	<b>0 €</b>	<b>0 €</b>	<b>28.238.194 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>50%</b>
<b>TOTAL by year</b>	<b>5.647.639 €</b>	<b>22.590.555 €</b>	<b>28.238.194 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	

## Investment assumptions (Capex)



OPEX		
2025		
Operating Expenses		
Rent	-318.833 €	12%
Salaries and wages	-850.221 €	32%
Accounting and legal fees	-106.278 €	4%
Sales and marketing fees	-159.416 €	6%
Office supplies	-53.139 €	2%
Repairs	0 €	0%
Utilities Expenses	-132.847 €	5%
Cost of goods sold	-1.036.207 €	39%
Bank charges	0 €	0%
...		0%
<b>TOTAL</b>	<b>-2.656.941 €</b>	<b>100%</b>

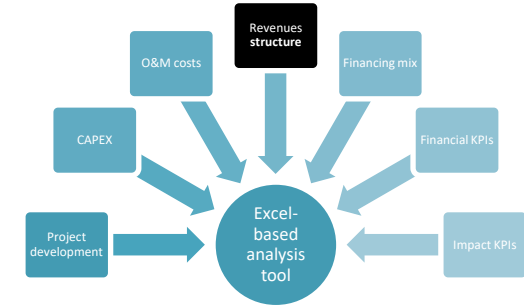
**Operating Expenses (Inputs)**

*The Users can define:*

- Expenses items
- Annual amount

## Operating expenses assumptions

REVENUES		
	2025	
<b>Sales</b>		
Sales of products	1.965.388 €	26%
Sales of services	3.023.674 €	40%
		0%
		0%
		0%
		0%
		0%
		0%
...		0%
<b>Total Sales</b>	<b>4.989.062 €</b>	<b>66%</b>
<b>Rents on a property</b>		
Rent 1	302.367 €	4%
Rent 2	226.776 €	3%
Rent 3	302.367 €	4%
		0%
		0%
		0%
		0%
		0%
		0%
...		0%
<b>Total Rents</b>	<b>831.510 €</b>	<b>11%</b>
<b>Recurring revenues</b>		
Subscriptions	1.738.613 €	23%
		0%
		0%
		0%
		0%
		0%
		0%
		0%
...		0%
<b>Total Rents</b>	<b>1.738.613 €</b>	<b>23%</b>
<b>TOTAL</b>	<b>7.559.185 €</b>	<b>100%</b>



**Revenues (Inputs)**

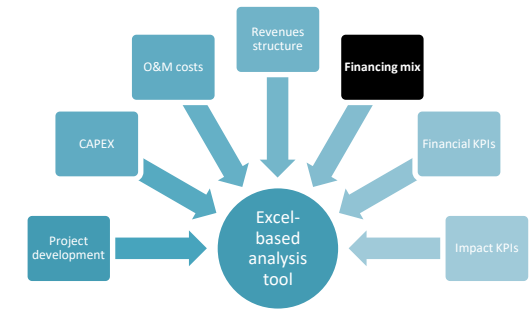
*The Users can define:*

- Revenues items
- Annual amount

## Revenues assumptions

Country	Spain
Project type	H2020 EUCF
Project Sectors	Renewable energy production infrastructure
Squared metres (Only for public, commercial & residential buildings , Building integrated energy systems and District heating and cooling)	0
Project Start Year	2023
Revenues and operating expenses start year	2025
Project Termination Year	2044
Project Lifetime (yrs)	20
Debt Maturity	15
Investment Period (yrs)	3
HYP. Revenues (Annual Growth %)	5,00%
HYP. Costs (Annual Growth %)	3,00%
HYP. Dividends (Pay Out %)	80,00%
HYP. Subsidies	20,00%
HYP. Public Funding	20,00%
HYP. Equity	60,00%
HYP. Debt	40%
Opening fee	0,50%
Equity investors targeted yield	10,00%
Initial Cash (%)	5,00%
D/E min to equity release	0,50x
% equity release	10,00%
Equity distrib from year	7,00

## Project Assumptions & Financing Mix



### Simplified input table

Country & Project type  
Project and Debt maturity  
Costs / Revenues evolution

### Project parameters

Subsidies & Public contributions %  
Debt / Equity %

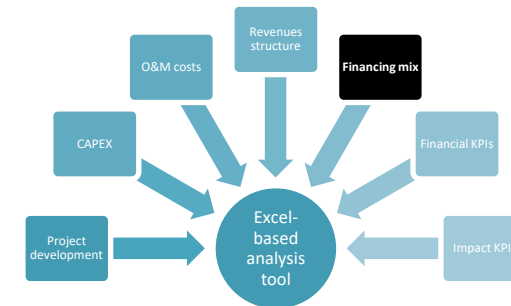
Debt repayments	VERO	0,00 €
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Debt repayments	FALSO	579.803,11 €
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### Debt repayment control

- In Assumptions sheet the debt repayment check indicator is key to verify whether the input figures ensure project financial sustainability
- In particular situations (i.e. low equity %; low subsidies %, high costs vs revenues) where the debt repayment is not achieved, the Users can change some items to increase:
  - initial cash%
  - subsidies and/or public funding %
  - equity %



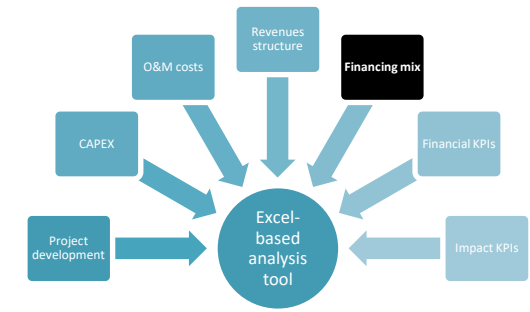


## FINANCIAL OUTPUT

PROFIT & LOSS STATEMENT	2023	2024	2025	2026	2027	2028	2029	2030
For the year ended 31 December	1	2	3	4	5	6	7	8
In EUR								
<b>Revenue</b>	0 €	0 €	7.559.185 €	7.937.145 €	8.334.002 €	8.750.702 €	9.188.237 €	9.647.649 €
<i>Revenue Growth (%)</i>				5%	5%	5%	5%	5%
<b>Operating Costs</b>	0 €	0 €	-2.656.941 €	-2.736.650 €	-2.818.749 €	-2.903.312 €	-2.990.411 €	-3.080.123 €
<i>Costs Growth (%)</i>				3%	3%	3%	3%	3%
<b>Gross Margin (proxy EBITDA)</b>	0 €	0 €	4.902.244 €	5.200.495 €	5.515.253 €	5.847.390 €	6.197.826 €	6.567.526 €
Amortisation, depreciation and impairments	-183.548 €	-917.741 €	-1.835.483 €	-1.835.483 €	-1.835.483 €	-1.835.483 €	-1.835.483 €	-1.835.483 €
<b>Total expenses</b>	-183.548 €	-917.741 €	-4.492.424 €	-4.572.132 €	-4.654.232 €	-4.738.794 €	-4.825.894 €	-4.915.606 €
<b>Results from operating activities (proxy EBIT)</b>	-183.548 €	-917.741 €	3.066.761 €	3.365.012 €	3.679.770 €	4.011.908 €	4.362.344 €	4.732.043 €
Interest income								
Interest expenses	-122.889 €	-602.805 €	-1.166.050 €	-1.084.292 €	-1.035.700 €	-983.283 €	-926.742 €	-865.752 €
<b>Net finance expenses</b>	-122.889 €	-602.805 €	-1.166.050 €	-1.084.292 €	-1.035.700 €	-983.283 €	-926.742 €	-865.752 €
<b>Profit before income tax</b>	-306.437 €	-1.520.546 €	1.900.712 €	2.280.720 €	2.644.071 €	3.028.625 €	3.435.601 €	3.866.291 €
<b>Income tax expense</b>	0 €	0 €	-18.432 €	-570.180 €	-661.018 €	-757.156 €	-858.900 €	-966.573 €
<i>Effective Tax Rate (%)</i>	25%	25%	25%	25%	25%	25%	25%	25%
<b>Profit after income tax</b>	-306.437 €	-1.520.546 €	1.882.280 €	1.710.540 €	1.983.053 €	2.271.468 €	2.576.701 €	2.899.718 €
Dividends	0 €	0 €	1.505.824 €	1.368.432 €	1.586.442 €	1.817.175 €	2.061.361 €	2.319.775 €
Pay out (%)	0%	0%	80%	80%	80%	80%	80%	80%

## Profit and Loss Statement

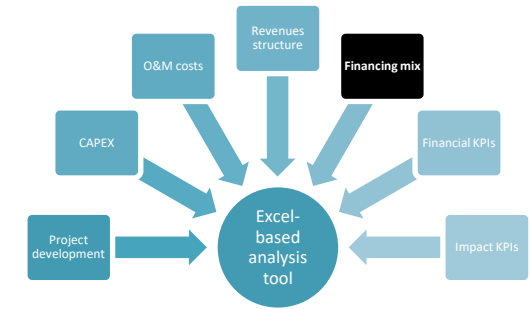
## FINANCIAL OUTPUT



		1	2	3	4	5	6	7	8
		2023	2024	2025	2026	2027	2028	2029	2030
<b>CASH FLOW</b>									
EBIT	141.849.017 €	-183.548 €	-917.741 €	3.066.761 €	3.365.012 €	3.679.770 €	4.011.908 €	4.362.344 €	4.732.043 €
TAXES	-32.733.072 €	0 €	0 €	-18.432 €	-570.180 €	-661.018 €	-757.156 €	-858.900 €	-966.573 €
<b>NOPAT</b>	<b>109.115.944 €</b>	<b>-183.548 €</b>	<b>-917.741 €</b>	<b>3.048.329 €</b>	<b>2.794.832 €</b>	<b>3.018.753 €</b>	<b>3.254.752 €</b>	<b>3.503.443 €</b>	<b>3.765.470 €</b>
D&A	36.709.652 €	183.548 €	917.741 €	1.835.483 €	1.835.483 €	1.835.483 €	1.835.483 €	1.835.483 €	1.835.483 €
<b>CF - INVESTMENTS</b>									
CAPEX	-36.709.652 €	-3.670.965 €	-14.683.861 €	-18.354.826 €	0 €	0 €	0 €	0 €	0 €
<b>CF - INVESTMENTS</b>	<b>-36.709.652 €</b>	<b>-3.670.965 €</b>	<b>-14.683.861 €</b>	<b>-18.354.826 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>	<b>0 €</b>
<b>FREE CASH FLOW</b>	<b>109.115.944 €</b>	<b>-3.670.965 €</b>	<b>-14.683.861 €</b>	<b>-13.471.014 €</b>	<b>4.630.315 €</b>	<b>4.854.235 €</b>	<b>5.090.234 €</b>	<b>5.338.926 €</b>	<b>5.600.953 €</b>
<b>CF - DEBT</b>									
NEW DEBT	14.683.861 €	1.468.386 €	5.873.544 €	7.341.930 €	0 €	0 €	0 €	0 €	0 €
Initial Cash Endowment	2.823.819 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €
DEBT SERVICE (Interests + Principal + Opening Fee)	-25.600.588 €	-177.523 €	-880.273 €	-1.738.521 €	-1.701.811 €	-1.701.811 €	-1.701.811 €	-1.701.811 €	-1.701.811 €
<b>CF - DEBT</b>	<b>4.114.682 €</b>	<b>4.993.271 €</b>	<b>5.603.409 €</b>	<b>-1.701.811 €</b>	<b>-1.701.811 €</b>	<b>-1.701.811 €</b>	<b>-1.701.811 €</b>	<b>-1.701.811 €</b>	<b>-1.701.811 €</b>
<b>CF - SHAREHOLDERS</b>									
Dividends	-80.020.961 €	0 €	0 €	-1.505.824 €	-1.368.432 €	-1.586.442 €	-1.817.175 €	-2.061.361 €	-2.319.775 €
NEW EQUITY	22.025.791 €	2.202.579 €	8.810.316 €	11.012.896 €	0 €	0 €	0 €	0 €	0 €
Equity refund	-22.025.791 €	0 €	0 €	0 €	0 €	0 €	0 €	0 €	-2.202.579 €
<b>CF - SHAREHOLDERS</b>	<b>2.202.579 €</b>	<b>8.810.316 €</b>	<b>9.507.072 €</b>	<b>-1.368.432 €</b>	<b>-1.586.442 €</b>	<b>-1.817.175 €</b>	<b>-2.061.361 €</b>	<b>-4.522.354 €</b>	<b>-4.522.354 €</b>
<b>NET CASHFLOW</b>	<b>21.002.076 €</b>	<b>2.646.296 €</b>	<b>-880.273 €</b>	<b>1.639.467 €</b>	<b>1.560.072 €</b>	<b>1.565.981 €</b>	<b>1.571.248 €</b>	<b>1.575.754 €</b>	<b>-623.212 €</b>
<b>CUMULATIVE NET CASH FLOW</b>	<b>2.646.296 €</b>	<b>1.766.023 €</b>	<b>3.405.490 €</b>	<b>4.965.562 €</b>	<b>6.531.543 €</b>	<b>8.102.791 €</b>	<b>9.678.545 €</b>	<b>9.055.333 €</b>	

## Cash Flow Statement

## FINANCIAL OUTPUT

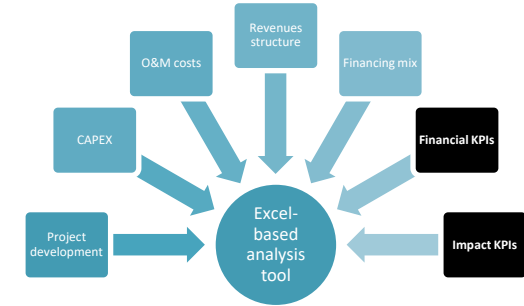


FREE CASH FLOW		WACC		8,36%		RV Growth (%)		0,1%	
	1	2	3	4	5	6	7	8	
FCL	2023	2024	2025	2026	2027	2028	2029	2030	
EBIT	141.849.017 €	-183.548 €	-917.741 €	3.066.761 €	3.365.012 €	3.679.770 €	4.011.908 €	4.362.344 €	4.732.043 €
TAXES	-32.733.072 €	0 €	0 €	-18.432 €	-570.180 €	-661.018 €	-757.156 €	-858.900 €	-966.573 €
NOPAT	109.115.944 €	-183.548 €	-917.741 €	3.048.329 €	2.794.832 €	3.018.753 €	3.254.752 €	3.503.443 €	3.765.470 €
D&A	36.709.652 €	183.548 €	917.741 €	1.835.483 €	1.835.483 €	1.835.483 €	1.835.483 €	1.835.483 €	1.835.483 €
CAPEX	-36.709.652 €	-3.670.965 €	-14.683.861 €	-18.354.826 €	0 €	0 €	0 €	0 €	0 €
<b>FREE CASH FLOW</b>	<b>-3.670.965 €</b>	<b>-14.683.861 €</b>	<b>-13.471.014 €</b>	<b>4.630.315 €</b>	<b>4.854.235 €</b>	<b>5.090.234 €</b>	<b>5.338.926 €</b>	<b>5.600.953 €</b>	

	1	2	3	4	5	6	7	8
Discount Factor	0,922843799	0,851640676	0,785931317	0,725291842	0,669331078	0,617688035	0,570029572	0,526048256
NPV Projections	-3.387.727 €	-12.505.373 €	-10.587.292 €	3.358.330 €	3.249.090 €	3.144.177 €	3.043.346 €	2.946.372 €
Residual Value	-44.483.351 €	-177.933.403 €	-163.236.589 €	56.108.384 €	58.821.763 €	61.681.510 €	64.695.060 €	67.870.204 €
NPV RV by year	-41.051.184 €	-151.535.323 €	-128.292.747 €	40.694.953 €	39.371.234 €	38.099.931 €	36.878.097 €	35.703.002 €

NPV residual value @2044	22.911.352 €
NPV Total Project	45.025.707 €

# FINANCIAL & ESG OUTPUT



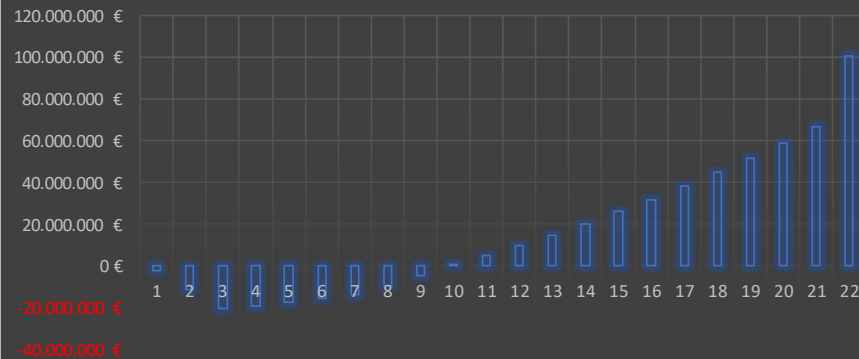
## Financial Metrics

Internal Rate of Return (IRR)	15,88%
PayBack Period (Years)	10
Net Present Value (NPV)	45.025.707 €

## ESG Metrics

CO2 avoided (tonnes)	354.831
Energy Savings (kWh)	2.100.215.657
Energy produced (kWh)	2.100.215.657
Energy Savings (€)	541.645.618 €
Job creation (number of jobs)	1.017
Investment value (€)	56.476.387 €

Pay Back (Cumulative Cash Flow)



## Financial KPIs & Impact KPIs

## FINDINGS

Preliminary exam of ICs evidenced some numbers inconsistencies like:

- High size investments paired with low size of revenues
- Revenues < costs
- Zero revenues
- This model may help IC Sponsors to “fine-tune” their projects

## OUTCOME

Doubts about figures / mismatching between original language documents and ICs summary file

Single projects valuation to undertake upon model validation

# ICs Preliminary findings and outcome



**EUCF**  
European City Facility



ENERGYCITIES



Climate Alliance



adelphi



FEDARENE



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