



EEnvest H2020 project GA #833112



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EEnvest Project Quality Self-Assessment Tool PQSAT

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PROJECT QUALITY SELF
ASSESSMENT

The Project Quality Self-assessment Tool is an easy to use (Excel based) questionnaire providing an indication on the quality of set-up and implementation of an EE project

- **Evaluates 6 Themes** covering typical processes and activities when implementing an EE project
- Each Theme includes **items or elements** (standards, activities, documentation, tools, best practices, approaches or procedures) that **need to be in place** to assure a well-conceived and well-implemented energy efficiency project
- Final **project scoring** reflects the level of Implementation of EE project best practises
- Time required to fill-out the questionnaire normally approximately one hour (must be knowledgeable about project)
- Almost all questions require a “Yes”, “No” or “Not Applicable” answer
- **Self-Assessment:** No control, verification nor testing or physical assessment of the answers





PROJECT QUALITY SELF
ASSESSMENT

Themes (activities) and elements

1 Design of ECM and energy savings calculations

- Energy audit
- Energy consumption baseline
- Energy savings modelling and calculations
- Interdependency calculations in case of multiple ECM

2 Implementation of ECM (Energy Efficiency Assets)

- Independency and expertise of the implementing parties (project co-ordinators, installers, contractors)
- Installation or implementation plan
- Roles and responsibilities of the installers and compliance requirements
- Operational performance verification
- Acceptance process and training of operators

3 Maintenance and operation of the Energy Efficiency Assets

- Maintenance service contract
- Independency and expertise of maintenance contractor
- Maintenance plan
- Roles and responsibilities of the maintenance contractor
- Issue logging and escalation
- Malfunctioning and non-compliance

4 Monitoring of the Energy Efficiency Assets and their energy consumption

- Performance monitoring and tracking methodology
- Performance Indicators
- Monitoring and management tools
- Training and performance monitoring

5 Measurement and verification of the energy savings

- Measurement and verification approach
- Use of M&V protocols
- M&V expertise and certification

6 Communication with and training (awareness) of users and/or occupants

- Approach for collection, verification and implementation of users' requirements
- Information process on the implemented ECM
- Energy awareness program



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Scoring methodology –Questions level

The relevant questions receive a score that can be obtained depending on the existence of the elements. The aggregated score of the elements is limited to the maximum score of the Theme.

Communication with and training
(awareness) of users and/or occupants

- Approach for collection, verification and implementation of users' requirements
- Information process on the implemented ECM
- Energy awareness program






6

THEME 6. COMMUNICATION WITH AND TRAINING (AWARENESS) OF USERS AND/OR OCCUPANTS			40	
31.	Does the project include a defined approach for collection, verification and implementation of users' requirements (e.g. comfort parameters, indoor air quality, illumination levels, operating hours,...)?	No	Please put question 31.a.through 31.d. to 'N/A'	20
31.a.	Does the users' requirements approach take into account legal compliance, existing standards and good practices?	Choose	Please put this question to N/A	5
31.b.	Does the user's requirements approach include periodic reviews for compliance with the users' requirements?	Choose	Please put this question to N/A	5
31.c.	Does the users' requirements approach foresee corrective actions in case of deficient compliance?	Choose	Please put this question to N/A	5
31.d.	Does the users' requirements approach include users satisfaction surveys to test compliance with users' requests?	Choose	Please put this question to N/A	5
32.	Is there a user information process dealing with the communication of the implemented energy efficiency improvements?	Yes		6
33.	Is there an energy awareness program (campaign) defined to optimise user and occupants' energy awareness and behaviour (e.g. training sessions, poster campaigns, brochures,...)?	No		14

PROJECT QUALITY SELF
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Label structure – Probability scale

The sum of the scores is represented in a 5-level probability scale indicating the probability that an EE project or Theme will achieve its objectives

	Very high probability	> 95% of maximum score
	High probability	between 85% - 94% of maximum score
	Reasonable probability	between 69% - 84% of maximum score
	Low probability	between 40% - 68% of maximum score
	Very low probability	< 40% of maximum score





PROJECT QUALITY SELF
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Project view of scores and labels

THEME		TOTAL SCORE
1.	Design of ECM and energy savings calculations	70
2.	Implementation of ECM (energy efficiency assets)	80
3.	Maintenance and operation of the energy efficiency assets	80
4.	Monitoring of the energy efficiency assets and their energy consumption	55
5.	Measurement and verification of the energy savings	45
6.	Communication with and Training (awareness) of users and/or occupants	40
GLOBAL SCORING		370

370/400	All of the themes have been adequately conceived and set up, with some minor flaws, almost always taking into account the highest standards, highest quality criteria and best practices. This level of conception and implementation indicates a <u>high probability</u> of the envisaged energy savings being reliable, consistent and achievable and the uncertainties surrounding the investment cost and future operation and maintenance costs being minimised.
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THEME		TOTAL SCORE
1.	Design of ECM and energy savings calculations	62
2.	Implementation of ECM (energy efficiency assets)	75
3.	Maintenance and operation of the energy efficiency assets	55
4.	Monitoring of the energy efficiency assets and their energy consumption	40
5.	Measurement and verification of the energy savings	35
6.	Communication with and Training (awareness) of users and/or occupants	40
GLOBAL SCORING		307

307/400	Most of the Themes, but not all, have been properly conceived and set up though not always following the highest standards, highest quality criteria and best practices. This level of conception and implementation indicates a <u>reasonable probability</u> of the envisaged energy savings being reliable and consistent and being achievable.
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EEnvest RISK ASSESSMENT REPORT

This project has received funding from the European Union's Horizon 2020 research and innovation programme under Grant Agreement n° 833112



EEnvest RISK ASSESSMENT REPORT

The indicator quantifies the investment deviation due to possible malfunctioning of the energy renovation measures adopted in the renovation project. Such expressed as a percentage of the planned investment.

For this specific project, the Damage indicator has been estimated as:

0.30 %

The gap indicator quantifies the energy performance deviation. It is expressed as a percentage of the calculated energy performance costs after the renovation project.

For this specific project, the estimated Energy gap is:

1.04 %

TIME

Payback time is the amount of time that the investment will take to recover the initial investment. The length of the investment time reaches a breakeven point.

For this specific project, the estimated Payback time is:

8 years

NPV

NPV is defined as the total duration of the project needed to achieve a zero NPV (Net Present Value) of the cost of capital.

For this specific project, the estimated Maturity is:

12 years

RATE OF RETURN (IRR)

The Internal Rate of Return (IRR) is the discount rate that makes the net present value of the specific project equal to zero.

For this specific project, the Internal Rate of Return is:

12.70 %

NET VALUE ON INVESTMENT (NPV/investment)

The Net Value (NPV) is the value of all future cash flows (positive and negative) over the lifetime of an investment discounted to the present. The NPV/investment ratio is a measure of profitability of the project.

For this specific project, the estimated NPV/investment is:

DISCOUNTED PAYBACK PERIOD (DSCR)

The Discounted Payback Period (DSCR) is an indicator of the project's ability to repay a loan. It is calculated as the ratio between the operative cash flows generated by the project and the cash flows for debt, lease, or other obligations (debt service, both for principal and interest) due in one year.

For this specific project, the DSCR has been estimated equal to:

0.71

ENERGY SAVINGS

The Energy Savings indicator is the difference between the actual energy consumption of the building (baseline) and the estimated energy consumption after the renovation. It includes heating, cooling, lighting and ventilation.

For this specific project, the estimated energy savings are:

2.36

JOBS CREATED

The Jobs Created metric refers to new jobs created as a result of the renovation project. It is based on a proclaimed BPIE study that states that per 1 million energy efficiency projects, 18 new jobs on average are created. It takes into account the location of the building (for example, country) and the amount of the investment.

For this specific project, the number of jobs created is:

23.5 jobs

SDG CONTRIBUTION

This KPI contributes to the following SDG targets: 8.2, 8.5, 9.1

For this specific project, the number of jobs created is:

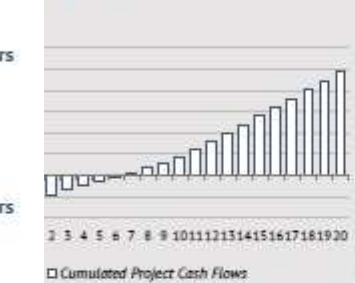
23.5 jobs

Model version: XXX - Date: XX/XX/XXXX

EEnvest RISK ASSESSMENT REPORT

1 - Cumulated project cash flows

This graph shows the cumulated cash flows of the project over time. The value for the years is calculated as the simple cash flow of that year and all the previous years. The graph below provides a more detailed view of the cash flows.



Graph n.2 - Project IRR Distribution

This graph shows the probability distribution of IRR. Each value on the horizontal axis has a probability value. The area underneath the curve sums up to 100% probability. The dark blue curve includes all risks, so it's more extended to the left, meaning that there is higher probability that the IRR is low. The light blue curve includes only financial risks, so it's more concentrated around the expected value.



MULTI-BENEFIT PERFORMANCE

NET EMISSION REDUCTION

The Net Emission Reduction Indicator estimates the decrease of the CO₂ emissions as a result of the renovation project. It is derived from the predicted energy savings and the conversion factor that varies from country to country as well as the energy used in the building.

For this specific project, the estimated Net Emission Reduction is:

21.35 kg/m²y

ENERGY SAVINGS

The Energy Savings indicator is the difference between the actual energy consumption of the building (baseline) and the estimated energy consumption after the renovation. It includes heating, cooling, lighting and ventilation.

For this specific project, the estimated energy savings are:

108.4 kWh/m²y

JOBS CREATED

The Jobs Created metric refers to new jobs created as a result of the renovation project. It is based on a proclaimed BPIE study that states that per 1 million energy efficiency projects, 18 new jobs on average are created. It takes into account the location of the building (for example, country) and the amount of the investment.

For this specific project, the number of jobs created is:

23.5 jobs

Model version: XXX - Date: XX/XX/XXXX

EEnvest RISK ASSESSMENT REPORT

TAXONOMY COMPLIANCE

The Taxonomy Compliance indicator defines whether or not the investment complies with the requirements defined by the EU Taxonomy. In specific, whether the project being financed has a minimum of 30% primary energy consumption reduction.

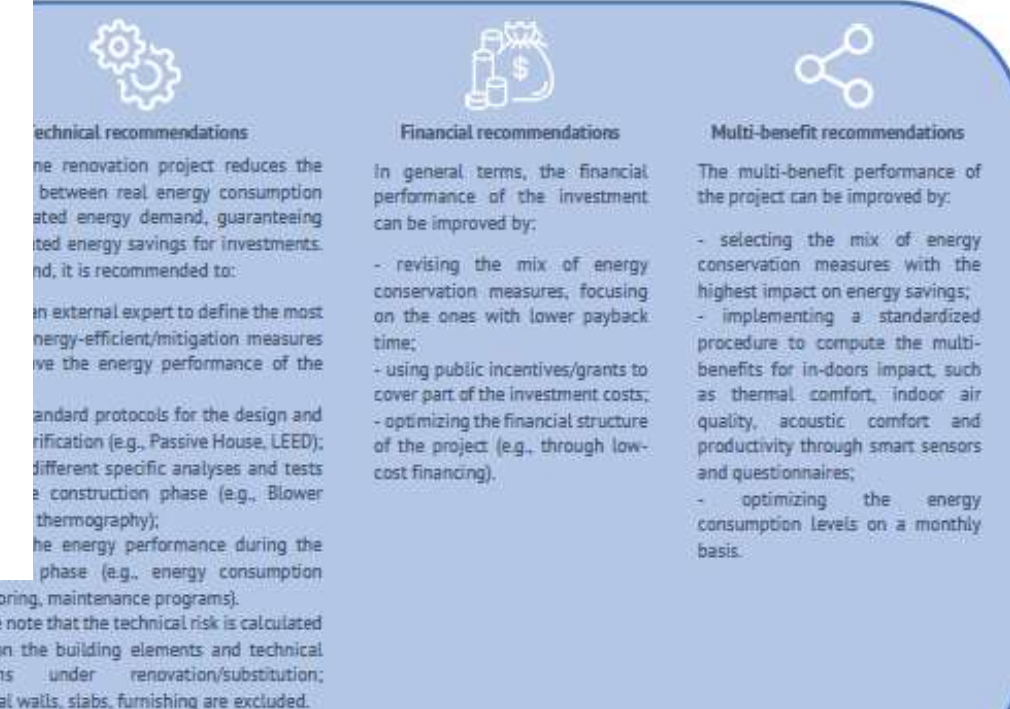
PROPERTY VALUE INCREASE

The Property Value Increase indicator brings light to the possible increment on the value of the property after the renovation project. This is also referred as the 'greemium'. In practical terms, it is possible to predict this increase before the renovation project. Therefore, this metric is able to provide a range of possible value increase backed-up by literature.

For this specific project, the Property Value Increase is:

SUSTAINABLE DEVELOPMENT GOALS (SDGs)

The SDGs indicator depicts to which specific SDGs the project contributes to. It is a qualitative indicator that shows the non-financial benefits of investing in the renovation project.



Project Quality Self-Assessment score:
High probability of reliable, consistent
and achievable energy savings. **370/400**



Thank you

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