

# TECHNICAL DUE DILIGENCE ANALYSIS OF THE EFFICIENT SYSTEM FOR USERS (SEU)

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## Overview

Development of renewable energy technologies in Italy has been aided by a variety of policy and support measures such as incentives (1). In the last years a new opportunity for solar plants development has been introduced by means of the Efficient Systems for Users (SEU). According to the literature, SEU are production and consumption simple systems which are composed by a sole producer with a direct and private connection to consumption unit, and can be installed in an area used or owned by the customer with a connection to the national grid (2). In this study, a SEU plant located in the central area of Italy has been analysed.

## Methods

Before investing in power plants, investors, operators, owners, insurers and developers have to understand and mitigate all risks which could compromise a project's profitability (3). In this paper, Technical Due Diligence (TDD) has been employed in order to assess the final viability of the SEU plant under investigation, both from administrative, technical and economic point of view. In particular, permits, engineering features, economic and financial aspects were analysed. In the following figure the TDD approach is shown:

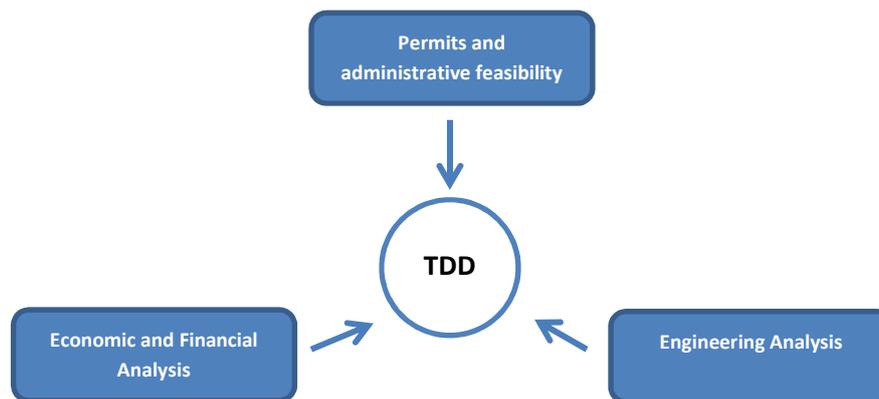


Figure 1 Technical Due Diligence (TDD)

## Results

The SEU in exam is composed by a solar roof plant (320 kW) as Production Unit (PU) and a big-store as Consumption Unit (CU). At the date of the inspection, the PV plant is connected and under operation. The plant has been realized in fully compliance with the authorized project, respecting all the prescriptions from the permits. Among the engineering parameters, the actual efficiency ( $\varepsilon$ ) – one of the most important indicators to investigate the performance of solar power plant – has been investigated, and its yearly value is evaluated around 74%. The total electrical energy produced by the plant is fully sold to CU through an energy supply contract with the customer. Royalties, operative costs, taxes, maintenance and services agreements were also analysed in order to understand the SEU's total profitability.

## Conclusions

TDD is a strategic methodology for evaluating and investigating the new business or investment opportunity. This study shows the benefit of using TDD approach in SEU analysis as well. The results indicate that under certain conditions, this project can be profitable.

## References

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