

Note: For the purpose of the example how to use the calculator, we can use similar example to the one from D.T4.2.1, page 36. (I have just adapted the figure for capital costs from 100.000 EUR to 90.000 EUR, so that the project was refundable without subsidies; it is also important to realise that our BOOSTEE-CE online calculator is simplified, results are rounded and may slightly differ from figures provided by highly professional EE calculators.)

We consider a fictional EE project with investment costs 90.000 EUR into heat insulation, boiler room renovation and installation of FVE on the roof of reconstructed buildings. This project generates annual energy savings 6.000 EUR on costs per heating compared to the situation before reconstruction as well as it has annual revenues from energy sales (FIT for instance) 4.000 EUR. Annual operational and other costs combined are 3.200 EUR. There is 20 years project life-time period expected. The discount rate is 3%, the very low level which might be tenable just for the public sector.

Overview of input data:

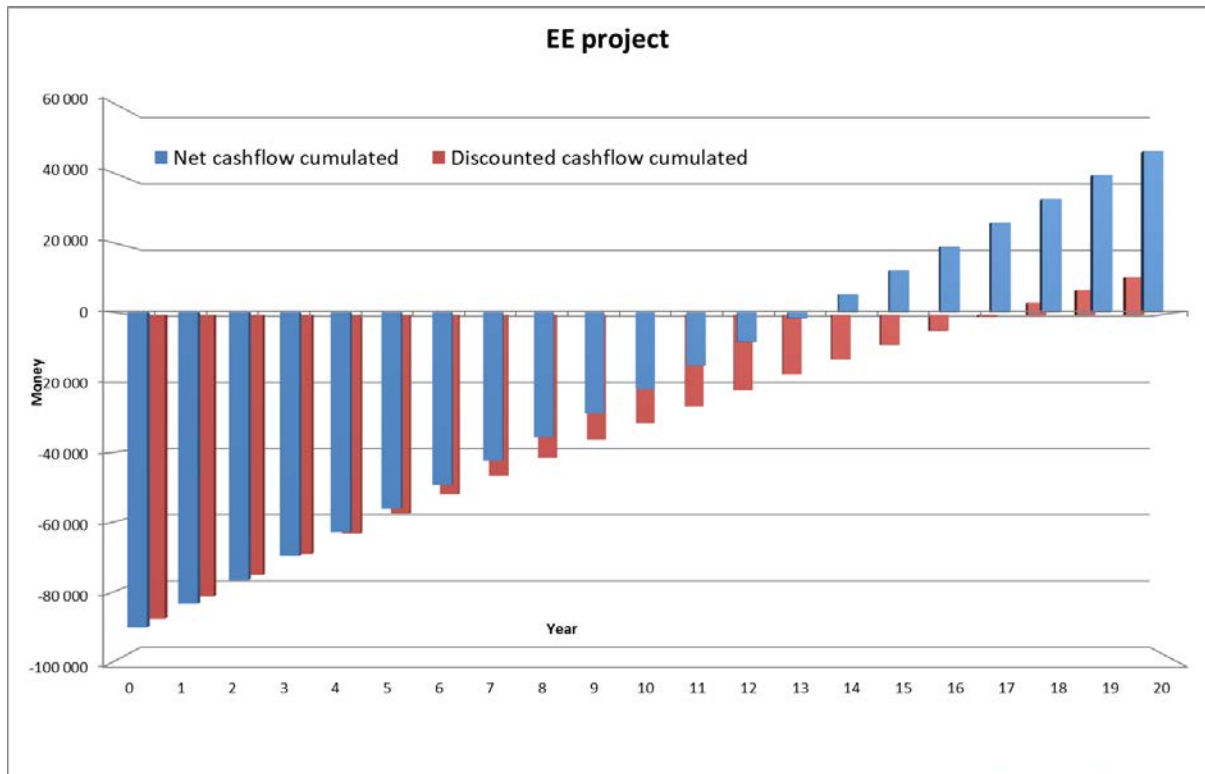
Input	Value
Capital Costs	€90.000
Annual Energy Savings	€6.000
Annual Revenues	€4.000
Annual Operational Costs	€3.000
Other costs per year	€200
Discount Rate	3%
Investment Lifetime Period (informative figure, included in the calculator by default)	20 years

If data from the table from above are put into the online calculator, following results will display:

Indicator	Value
Net Present Value (20 years)	€11 167
Internal Rate Ratio	1,26%
Simple Payback Period	14 years
Discounted Payback Period	18 years

As NPV is higher than 0 EUR, the project is advisable to implement, IRR is just low but still reasonable for the public sector. The simple payback period is 6 years shorter than the investment lifetime period, when considering the discount rate 3%, the payback period is just two years shorter than the investment lifetime period.

Graphical display of results obtained:



During the calculation, we didn't consider any loans or subsidies as it would make the calculation tool far more complicated as well as demanding for its users who are not supposed to be financial experts. If grants and subsidies are involved, the NPV and IRR are increasing and payback periods are shortening, on the other hand, loans affect the investment the opposite way, i.e. when you are co-financing the investment project with a loan, the NPV and IRR are decreasing and payback periods are extending. The concrete example of how grants and subsidies have the effect on EE project profitability are analyzed in detail in D.T4.2.1 Transnational methodological framework, page 36 – 40, or online - <https://oneplace.fbk.eu/en/financing-energy-efficiency/financing-energy-efficiency/transnational-methodological-framework/financing-models-for-energy-efficiency/conventional-models-of-ee-projects-financing/effects-of-subsidies-and-loans-the-case-study/>