TOOL TO ASSESS PUBLIC INVESTMENTS
SHORT GUIDE

Introduction

Tool to assess public investments to support industry's low-carbon transition (D.T1.4.3) is the final result of an analysis of public investments addressed to industry low-carbon transition projects (D.T1.4.1) and the identification of quality and quantity criteria to be applied for the assessment analysis (D.T1.4.2). It's considered being one of the project outputs (O.T1.4).

In the next project phase, the Tool will be adapted to local conditions of each participating region. To this end the Methodology to test the tool to assess public investments for industry's low carbon transition (D.T2.2.3) will be developed.

Tool design

The tool is designed as an Excel-based calculator that can be used for ex-ante analysis of a planned financial programme. Based on basic input data (budget, measures, funding rate), it enables to calculate potential energy savings and decrease of emissions as well as unit costs of these savings. At the same time, it is able to estimate a use of budget allocation (overspending x underspending) and investment generated.

Table 1: Input and output data

Input data	Output data
Expected budget (allocation) of the programme	Expected use of allocation
Types of saving measures	Expected investment cost
Sectors addressed	Expected energy savings
Allocation per type of measure	Expected decrease of emissions
Rate of co-financing	

How to use the Tool

Input data

The user is expected to fill in the cells marked with light orange colour.

First, a title of the programme and budget allocation shall be inserted.

Then, the user has a possibility to include characteristics of up to 10 specific saving measures that are going to be supported by the programme. For each measure, the following information and data shall be specified:

- Type of the measure;
- Target sector;
- Budget allocation (% of total allocation);
- Rate of funding (in %).

For the Type of the measure and the Target sector, the user can choose form the options listed in Table 2 and Table 3.

Table 2: Types of the measure

Energy management
Installation of economizer behind the boiler
Installation of photothermic systems (for heat production)
Installation of photovoltaic systems (for electricity production)
Installation of frequency convertors
Installation of combined heat and power unit
Installation of biomass boiler
Installation of forced heat recovery ventilation
Installation of heat pump in industry
Installation/exchange of compressors
Replacement of atmospheric gas boiler with condensation boiler
Replacement of fossil fuels (vehicles M1, M2, M3, N1 and L) with electricity
Replacement of fossil fuels (vehicles M1, M2, M3, N1 and L) with electricity
Replacement of solid fuel boiler with heat pump
Replacement of convector heater with infrared heating
Replacement of convector heater with heat pump

Replacement of coal boiler with gas boiler
Replacement of coal boiler with coal boiler
Electrical traction power supply switch from DC to AC
The switch from individual transport to public transport
Circulation pump control
Reduction of energy intensity of electrical appliances
Reduction of losses in heating system
Thermoinsulation of technology
Acceleration of renewal of vehicles M1
Acceleration of renewal of vehicles M2 and M3
Acceleration of renewal of vehicles N1 to N3
Outdoor lighting - LED installation
Replacement of lighting LED80 with LED110
Replacement of gas cooking plate with electrical one
Replacement of existing lighting with LED lighting
Exchange of transformer
Waste heat recovery
Replacement of hot water heater with heat pump
Building thermo insulation
Implementation of recovery in railway
Implementation of recovery in public transport
Change of technological processes

Table 3: target sectors

Households
Transport
Energy
Industry
Services
Public administration
Agriculture

Note 1: Not all combinations of measure/sector are possible, which the Tool indicates, and does not perform a calculation for this measure.

Note 2: The Tool indicates if the sum of allocations per measures is lower or higher than 100% (i.e. different from the total budget allocation). Nevertheless, the calculations are performed in this case.

Output data

The Tool calculates an **expected use of allocation** in EUR. If the allocation is expected not to be fully used, the user has a possibility to decrease % of allocation and/or increase the rate of funding. (It is vice versa in case the allocation is expected to be overdrawn.)

Complementarily, **expected investment costs** of implemented projects are calculated.

The Tool then calculates **expected energy savings** generated by the implementation of the projects, and **decrease of GHG emissions** (in particular – CO_2, CH_4, N_2O, and CO_{2eq}).

All this data are calculated separately for each of the saving measures, as well as for the whole programme (table on a bottom).

Hidden calculations

In order that the described calculations are performed and the outputs expressed, there are additional data inserted and calculations performed "inside" the Tool. For each type of a saving measure and a sector, they include namely the following:

- Investment per GJ saved;
- Measure lifetime;
- Saving potential;
- Emission decrease potential.

These data can vary among countries and regions as they are dependent on particular economic and market conditions, and energy mix.

Next steps

In the next project phase, the "hidden data" will be identified for each partner country/region, and the Tool will be adapted on these conditions. To this end the Methodology to test the tool to assess public investments for industry's low carbon transition (D.T2.2.3) will be developed.