



The Netherlands - Technical Framework

When considering an energy efficiency retrofit within your national housing market, a wide plethora of consideration needs to be made. Below, we list key findings to facilitate your analysis of the retrofit investment. More details and backgrounds can be found on the website www.rentalcal.eu.

Residential buildings and building types in the Netherlands:

- The Dutch housing market contains over 7 million dwellings, of which around 45% is rental housing.
- The rental stock is rather old, 75% has been built pre-1980.
- Over 80% of the rental stock belongs to the regulated social housing category.
- The market based rental housing stock comprises only 5% of the total stock.
- An average Dutch home offers over 105 square meters of floor space spread over four rooms.
- Dutch homes are rarely demolished, less than 1% of existing stock is being added every year with new construction.
- In general, homes pre-war are constructed with traditional brickwork techniques and wooden floors. Post-war homes are constructed with industrialised building processes and prefabricated elements and concrete floors.
- Most old homes have undergone at least one round of modernisation. The average EE of a pre-1964 building increased from the original F label to a D label.
- Dutch homes in general use gas as energy source for heating and DHW.

Energy saving measures and investment costs in the Netherlands:

- The most responsible for the decrease of energy consumption in the Netherlands is the space heating, where the main factors are better insulations in the houses and more efficient boilers.
- The insulation is usually applied in the thermal envelope of the building, but it can also be applied inside the building.
- The most common insulation applied to walls and floors is polyurethane foam. The most common insulation used in roofs is stone wool.
- Windows can be replaced by double glazing or triple glazing windows.
- Two of the most common systems measures are the installation of new high-efficiency condensing gas boiler replacing an older combi model and the installation of combi air heat pump replacing an older combi system or condensing boiler + geyser.
- The best cost-effective method of organising the energy-efficiency improvements of a building is a thoroughly planning with them alongside the future maintenance and repair of the construction.

Energy performance calculation methods in the Netherlands:

- The most important requirement on energy efficiency is the EPC. The EPC is a scale assessing the overall energy efficiency of a building taking into account building characteristics, installations, systems and standard user behaviour.
- Besides calculation methods, tools for investment profitability calculations and assisting with building retrofits are freely available for private individuals and for professionals.

DATE: 18.04.18