CLEAN

Regional Context Assessments Report Summary

The focus of CLEAN project - supporting the uptake of technologies and open innovation to meet EU energy efficiency targets for buildings in Europe's regions, is highly relevant in relation to the impact that COVID-19 has brought, considering both positive and negative sides.

Scope of the regional context analysis: analyzing the challenges and the potential opportunities in addressing energy efficiency in buildings in the context of COVID-19, the support measures took by authorities in this regard and their transformation potential into new policy instruments.

Approach of the regional context analysis carried out in the 9 CLEAN regions:

The 1st part of the regional context analysis integrates:

- a general overview of the COVID-19 impact in addressing energy efficiency in buildings at international level

- a more in-depth analysis of the positive & negative effects of COVID 19 in relation to energy efficiency in buildings addressed at national, regional and/or local levels and the reaction of authorities to the pandemics

The 2nd part of the regional context analysis focuses on:

-identifying support measures related to improving energy efficiency in buildings

-identifying the opportunities for contributing to improving existing policy instruments or developing new policy instruments.

This is a summary of the main findings of the CLEAN partners in their regions, with a focus on the opportunities for new policy instruments supporting energy efficiency in public buildings in the context of COVID-19.

International Context

Our society and economy are changing as our lifestyles shift in a world recovering from Covid-19.

COVID – 19 had a serious impact also on the efforts to improve energy efficiency in buildings. Shifts in energy demand from public to residential buildings occurred during the crisis in all regions. Progress made to use more efficient energy sources slowed because of the pandemic impact. This threatens progress in addressing climate change, air pollution and access to clean energy in all regions. The pandemic, coupled with social distancing and remote working, reduced energy consumption in public buildings by 10%, but increased energy consumption in residential buildings/houses by 20%. Time spent at home increased energy consumption in households, leading to complex energy demand shifts, e.g., heating use increased electricity consumption by 40% in Mar/Apr 2020. Technical energy efficiency improvements were delayed since lockdowns and social distancing curtailed partner access to buildings. As the economy re-opens, public buildings will become more energy intensive due to the need for higher ventilation rates to reduce Covid-19 transmission risks. Economic uncertainty in regions could further delay investment in buildings resulting in ageing, inefficient buildings operating for longer.

While the governments are working to face these challenges, new local and regional instances stand out. A sustainable recovery throughout Europe calls for a reduction of the existing gaps between regions. Energy efficiency qualifies as one of the sectors with a greater potential to supporting economic recovery and decarbonisation simultaneously.

In this context, the European Commission is planning to update the energy efficiency directive, which includes targets for building renovation and the energy efficiency standards they should meet. A first draft proposal would require countries to implement measures to cut their final energy consumption by 1.5% each year from 2024 to 2030, nearly doubling the current requirement of 0.8%. That could be achieved by better insulating buildings or installing more energy efficient heating and cooling systems.

Europe currently renovates just 1% of buildings to save energy each year. The EC hopes countries will use the COVID-19 recovery fund to launch a wave of green renovations. Building renovation boosts local jobs as well as improving the welfare of the inhabitants and cutting down on greenhouse gas emissions, making it a popular idea for using up recovery money.

Regional Contexts - Positive & negative effects of COVID-19

Positive Effects

- Energy efficiency becomes more relevant for citizens due to the increase of electricity consumption and water consumption in the residential sector. In addition, taking into account the increase of energy prices during 2021 and 2022, energy efficiency is even more important.

- The impact of climate change has been evident during the pandemic, which will imply greater action in the field of sustainability, renewable energy and energy efficiency in coming years.

- Energy efficiency will have to take into account in a more global way aspects related to comfort, indoor air quality and its implication in health (air conditioners, ventilation, air renovations, humidity, CO2, etc.).

- Due to pandemic restrictions and teleworking, a reduction of vehicular mobility had taken place, which implied lower CO2 emissions improving air quality in the cities.

- Greater awareness of climate change, impact of mobility, greenhouse gas emissions and energy efficiency in citizenship and all economy sectors in general.

- Significant reductions of energy consumption and CO_2 emissions have been registered in industry, services and public buildings.

- Acceleration of the digitalization of education and public services, that will continue to be use even after pandemic to simplify and innovate the obsolete approaches in the field.

- Renovating and energy upgrading of buildings is considered one of the most ambitious ways to restart economy after lifting the restrictions, considering that construction and renovation sectors have always been a key factor of economic development.

- Shift to remote work is considered as a positive change. Remote work brings many opportunities for remote regions of long-distances

  In Finland, the statistics show that COVID-19 cut the private vehicle traffic by 4 % in 2020 and it is estimated that remote work will cut the private vehicle CO2-emissions by 125 000 tons annually in 2030. If 10 % of all the work force in North Karelia would work one day remotely per week, it would save 830 tons of CO2 equivalent emissions per year.

  The shift to remote work will also benefit employers as they can decrease the volume of conventional centralized office space. The trend is towards smaller offices where employees can come when in need, e.g., for meetings that require physical presence. This trend is already visible in Finland together with the increase in the use of digital services and shared use premises.

Negative Effects:

- In general terms energy efficiency has taken a backseat in importance during the most complicated months of health crisis of the pandemic Covid-19.

- The crisis has triggered changes to behavior and markets that are also adding uncertainty about energy efficiency progress. For example, the unprecedented drop in aviation transport demand could change the energy intensity of international travel and freight forever, depending on how the aviation industry recovers after the pandemic. Meanwhile, increased rates of teleworking are changing the way we move around cities. Such changes could reduce energy intensity in some instances but increase it in others.

- Delayed investments in more efficient technologies

- Covid-19 measures such as natural ventilation coexist in offices, among other spaces and facilities, with air conditioning systems operating at their highest performance to the detriment of energy efficiency and higher CO2 emissions.

- The crisis of Covid-19 with severe impact in many economic sectors, among the increase of energy prices, could enlarge energy poverty in citizens.

- The huge pressure on hospitals with effects on delaying modernisation/retrofitting works, high consumptions and risks of overcharging the electricity systems especially in Romania

Opportunities for new policy instruments

1.1. Border, Midland & West Region, Ireland

ERNACT aims to influence the implementation of the new Regional Operational Programme 2021-2027 for the Northern & Western Region, specifically priority 2 - low-carbon and climate resilience. It will do this by making submissions for new projects that focus on retrofitting and improving energy efficiency and renewables in buildings and homes in the region over the next decade, playing a major role in Ireland's economic recovery from the impact of Covid-19. This is a highly labour-intensive sector and can also create high-quality, sustainable jobs in local communities. The Good Practice learning and knowledge transferred from CLEAN, through its Regional Action Plan, has already provided input into the development of the new ROP 2021-2027. This programme has a target of 100,000 homes in the region advance retrofitted over its lifetime.

1.2. Region Västernorrland, Sweden

Possibility to apply for fundings to work with areas within sustainable development with goals to reach new policy instruments. The processes for these questions are long and will take time.

1.3. Donostia/San Sebastian, Basque Country, Spain

Some of the positive effects of Covid 19 have meant the greater importance of energy efficiency and climate change in the general public, while the energy costs in buildings and in the use of ventilation and air conditioning facilities has increased. This represents an opportunity to develop policy instruments that promote energy efficiency in buildings in the residential sector, as well as in public buildings, offices and industries. More specifically in the field of energy efficiency in buildings, it can also be considered as a moment of opportunity to continue developing policies that promote energy retrofitting.

In addition, the higher energy prices boost the adoption of energy efficiency measures, so the current moment seems especially appropriate to work on new energy efficiency policies and new policies to regulate and limit the increase of energy prices.

Finally, the involvement of citizens in the field of energy efficiency through changing their habits is also very important. Therefore, the promotion of actions and new policies to encourage and train citizens in energy efficiency and better use of resources represents an opportunity.

1.4. North-East Region, Romania

Iasi Municipality is currently developing to the new Green City Masterplan in partnership with EBRD. EBRD Green Cities programme aim is building a better and more sustainable future for cities and their residents, identifying and prioritizing environmental challenges, which are then connected with sustainable infrastructure investments and policy measures.

One of Romania's largest cities, Iasi, will improve the energy efficiency of public buildings thanks to a €20.5 million loan from the European Bank for Reconstruction and Development (EBRD). The EBRD loan will finance the energy efficiency upgrading of 15 public buildings and the reconstruction of a bus and tram depot, designed and equipped for a new urban transport fleet that currently includes 32 trams and 44 electric buses. The depot infrastructure will support low-carbon transport in the city and enable the operation and maintenance of the current and future urban transport fleets. The renovation of buildings and the integration of energy-efficiency and renewable-energy measures in the upgraded depot will lead to energy savings of approximately 34 per cent.

Iasi intend to influence to the future programming period of the new Regional Operational Programme 2021-2027 with the expertise acquired the Good Practice learning and knowledge transferred from CLEAN, also from the implementation the Green City Masterplan. The Municipality will continue to develop new projects by making submissions for new proposals that focus on retrofitting and improving energy efficiency and renewables in buildings and homes.

1.5. Normandy, France

In addition to putting housing and energy savings back at the center of household concerns, the Covid-19 crisis can be seen as an opportunity to promote eco-materials and bio-based materials. Indeed, among the most interesting effects of this crisis, the fact that materials such as earth, hemp and straw have resisted shortages.

This resilience can be attributed to the fact that these materials are very locally available and therefore protected from the vagaries of international markets.
It would therefore be interesting, within the framework of political instruments, to grant them better recognition from a technical and insurance point of view.

1.6. Campania Region, Italy

According to National Agency for Energy and Environment (ENEA), the Superbonus is a great opportunity to promote building requalification, foster better living conditions and energy use at home, allowing the reduction of energy bills, producing a positive impact, improving comfort, health, energy security and resilience of all home occupants. Furthermore, ENEA hopes that this incentive will contribute to achieve the 2030 energy saving objectives and will accompany the country's energy transition with robust demand in the construction sector, which also contributes to GDP growth.

1.7. Region of Crete, Greece

Following the example of Minoan Energy, such initiatives could be transformed into policy instrument for supporting low-income families in Crete, which face nowadays the severe threat of energy poverty.

Moreover, innovation could play a significant role in phasing the challenges of energy efficiency in buildings during a pandemic. Policy makers could support the cooperation of business and innovation centers for producing innovative solutions. The good practice of PCNano Materials start-up company should be strongly supported in several ways by Greek Authorities, since innovated ideas may create competitive business schemes and play a significant role on the growth of Greek economy.

1.8. North Karelia, Finland

The Regional Council of North Karelia will address the Regional Strategic Programme for 2022-2025 (POKAT2025) as part of the CLEAN Additional activities project focusing on issues relating to energy efficiency and the use of renewable energy resources in the built environment. POKAT2025 was approved by the Regional Council Assembly on the 13th of December 2021. POKAT2025 acknowledges the need for locally produced energy based on renewable sources and improving the energy-efficiency and the reliability of energy supply in the region The implementation of POKAT2025 will continue in 2022 in thematic working groups of regional stakeholders that will focus on the core themes of the programme. Climate and energy is one of the themes of the thematic working groups. The learning outcomes of the CLEAN project will be considered in the work of the Climate and energy working group for the benefit of the region.

1.9. Savinjska Region, Slovenia

Slovenia is also very much in favor of renovations and investments to increase energy efficiency in buildings and, regardless of the Covid situation, constantly encourages and supports the increase of energy efficiency of buildings, both public and private, as well as in the economy. It does this through public tenders for grants, with favorable funding for entrepreneurs and also with reimbursement of investment costs for households. It is expected that public tenders for energy rehabilitation and energy efficiency will be published in the future as well.

The “ZERO 500 Program” project, which is aimed at low-income households facing energy poverty, is also being implemented. Based on a public call, the Eco Fund will grant non-refundable financial incentives to eligible investors, amounting to 100% of the eligible investment costs for the implementation of investments in energy efficiency measures. A non-repayable financial incentive may be granted for investments in the following measures:

- thermal insulation of the roof and / or ceiling;
- thermal insulation of the facade;
- installation of energy efficient windows and / or entrance doors;
- replacement of the hot water treatment system with a water heater with solar energy receivers;
- replacement of an inefficient hot water treatment system with a heat pump water heater;
- installation of local ventilation with waste air heat recovery.