Collection of best practices from National Energy and Climate Plans

LIFE20 GIC/HU/001660 –
LIFE BIO-BALANCE

Final version

THIS PROJECT IS FUNDED BY THE EU'S LIFE PROGRAMME

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or CINEA. Neither the European Union nor the granting authority can be held responsible for them.

Action	**C4.1**
Deliverable	**1 collection of best practices from NECPs**
Publicity	**Public, submitted**
Date	**December, 2022.**
Summary	**Best practices from existing NECPs were collected which can reduce, replace solid biomass energy use, or make it more efficient in the field of energy efficiency, energy poverty and heat&power sector.**

INTRODUCTION

About LIFE BIO-BALANCE

Co-funded by the European Union LIFE Programme, the overall aim of the Balancing solid biomass for climate neutrality in CEE countries (LIFE BIO-BALANCE) project is to support EU Member States to shift to a low-carbon and resilient economy by ensuring that solid biomass is produced and used sustainably at all levels.

It builds multi-stakeholder, multi-sector policy and knowledge sharing processes at the national and local level to ensure that biomass is balanced with other feasible alternatives and only solid biomass with a high sustainability safeguard is included in updated national National Energy and Climate Plans (NECP), Long Term Strategies and on local level in the Sustainable Energy and Climate Action Plans.

The aim of this collection

The Fit for 55 package requires more ambitious climate targets from Member States, which should be reflected in the revision process of the NECPs in 2023-2024. The higher renewable energy and greenhouse gas reduction target should not lead to decrease the carbon sink in the LULUCF sector, or further increase biodiversity loss. Therefore, it is essential that instead of relying more on forestry biomass, the new policy measures should be more relying on how heat demand could be decreased by energy efficiency, support firewood-dependent energy poor communities, and replace high-risk forestry biomass-based energy production by low-carbon renewable energy sources.

Existing NECPs already include measures which can support this goal, providing good practice which can be replicated by other countries as well. In this report, LIFE BIO-BALANCE assessed selected existing NECPs, and collected 15 good practices, click on to the topic to discover them:

- ENERGY POVERTY
- ENERGY EFFICIENCY
- HEAT AND POWER.

METHODOLOGY

Partners selected 14 NECPs, representing more than half of the existing ones. In the selection process, CEE countries were overrepresented, with the aim that good practice from these NECPs is likely to be more replicable by other CEE countries. The selected NECPs were the following: Austria, Bulgaria, Croatia, Denmark, France, Greece, Hungary, Ireland, Poland, Romania, Slovakia, Slovenia, Sweden. Then, methodology of similar collection, done by the LIFE Plan Up project was adopted. The scoring methodology was the following.

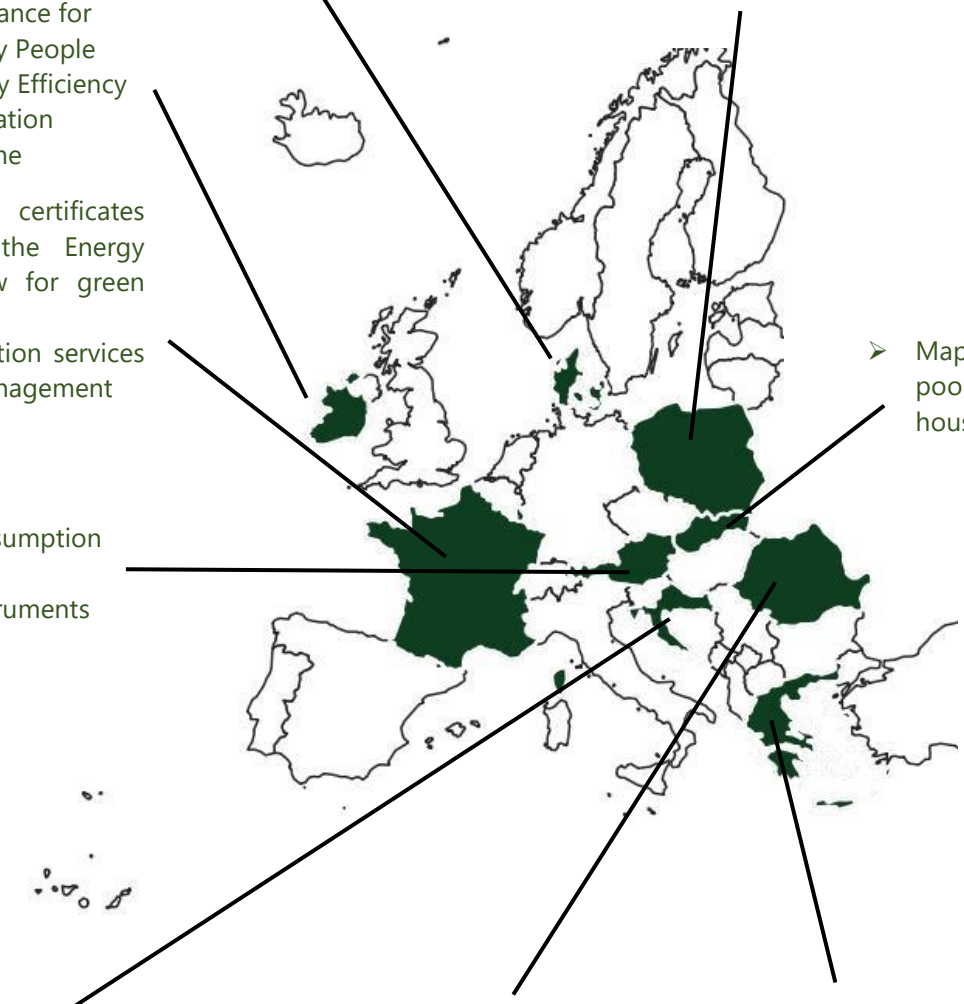
Topic	Criteria	Score	Score description
Relevancy	Is the measure relevant to the topic? (energy poverty, energy efficiency, heat & power)	1	low extent
		2	medium extent
		3	high extent
Replicability	Is it possible to replicate the measure in other - especially CEE - countries?	1	only with major changes
		2	yes, in the CEE region
		3	yes, EU-wide
Impact	Degree the measure is able to influence energy poverty/energy efficiency (not relevant for heat & power)	1	low extent
		2	medium extent
		3	high extent
	Degree of ability to reduce forestry biomass demand	1	low extent
		2	medium extent
		3	high extent
Feasibility	If it is a technical solution, is it mature enough to implement? - only relevant for heat & power	1	low extent
		2	medium extent
		3	high extent
	Degree of financial need for implementation	1	massive investment needed, long payback period
		2	investment is needed, but short (< 10y) payback
		3	only regulation change is needed
Adaptability	Degree to which the measure includes procedures for strategic revision and is able to adjust to changes and challenges	1	low extent
		2	medium extent
		3	high extent
Level of details	Is the description detailed enough to provide the score above with sufficient information?	1	low extent
		2	medium extent
		3	high extent

Altogether 113 policy measures were collected from the 14 documents. We have selected the best 15 policy measures per topic, and summarized each of them, then also analyzed the replication potential to CEE content. It is important to note that we only relied on the text of the NECP, and have not made any supplementary analysis. These best practices are presented in the following chapters, ranked by scores.

ENERGY POVERTY

(click on the title to navigate)

- Subsidy scheme to replace oil burners with heat pumps in buildings outside the district heating and gas grids
- Impact assessment of policies and measures
- Bonus for Single-dwelling Residential Buildings
- Thermomodernisation and renovation fund
- Housing Assistance for Elderly People
- Energy Efficiency Obligation Scheme
- Energy saving certificates foreseen in the Energy Transition Law for green growth
- Local intervention services for energy management
- Mapping energy poor households
- Clear consumption metrics
- Support instruments



- Programme for energy poverty alleviation
- Action plan for combating energy poverty
- Insurance as a tool in adapting to climate change

Special account for just transition in lignite-producing areas

- *Click to navigate back to Introduction*

THIS PROJECT IS FUNDED BY THE EU'S LIFE PROGRAMME

Clear consumption metrics			
Country	Austria	Under implementation	
Objective	While non-energy-poor households exhibit an average final household energy use of 18,200 kWh per year, this value for energy-poor households is 23,373 kWh (28% higher; for heating the final energy use is 49% higher). While in non-energy-poor households 66% of final energy is used for heating, in energy-poor households this share is 77%. The use of electricity is also 9% higher in energy-poor households than in non-energy-poor households.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 3
Why is it a good practice?	Dividing the consumption level into two groups shows how much more efficient it will be to subsidize the energy poor groups. Clear consumption metrics are critical for the efficient development of measures for reducing energy poverty levels. They serve to develop different support instruments – electricity tariffs by consumption levels, social tariffs, consumption-based subsidies, energy efficiency programmes targeting, etc.		
Relevancy for CEE region, replication potential	Replication of clear consumption metrics is easy and each country can do this, no matter the region. Countries in the CEE region in particular need to replicate the awareness of the effect of measures on vulnerable and energy poor households, so as to efficiently target them.		

THIS PROJECT IS FUNDED BY THE EU'S LIFE PROGRAMME

Action plan for combating energy poverty			
Country	Romania	Under implementation	
Objective	The Ministry of the Economy, Energy and the Business Environment collaborates with the Ministry of Labour and Social Protection, which is responsible for preparing the national action plan for energy poverty cases. According to the National Strategy for Social Inclusion and Reduction of Energy for 2015-2020 and to the Strategic Action Plan for 2015-2020, policies aim directly at reducing poverty and enhancing social inclusion in several key fields: social assistance and social security rights, energy poverty, employment, education, health, social participation and social services.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 3
Why is it a good practice?	Each country should have a clear Action Plan for combating energy poverty, which certainly needs to be regarded in the context of the other existing anti-poverty and social inclusion strategies. Having a Strategy for Social Inclusion and Reduction of Energy combines policy measures in both fields – social and energy policy – which is a great breakthrough and a good example for governments that still have even official conflicts and disagreement of the question of what policy is needed to address the energy poverty issue.		
Relevancy for CEE region, replication potential	Countries in the CEE region can easily replicate this measure and form the necessary working groups to elaborate combined social inclusion and energy reduction strategies.		

Impact assessment of policies and measures			
Country	Poland	Under implementation	
Objective	A special section in Poland's NECP analyzes the social impacts comprising the following macroeconomic categories in the perspective of the country's economic development until 2040: - real wage dynamics, - dynamics of disposable income of households, - growth of households' expenditures on fuels and energy and their share in income, with account taken of the income gap[1]. The model analysis of social impacts is carried out using the Mezzo-Impact model – the households' module, in which the results of calculations are influenced by a range of macroeconomic variables as determined in the CGE-PL model. They constitute the so-called 'driving force' (impulse) in the calculations of the assessment of the social impacts inherent in the implementation of the public policy instruments investigated by the Mezzo-Impact model.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 3
Why is it a good practice?	Having a good analysis of the social impacts of all policies is a key to the effective use of different public policy instruments. Few countries, if at all, have conducted such an in-depth analysis so far, which is worthy replicating and completely feasible for conduction in any country at any moment. The analysis presents the evolution in the share of fuel and energy expenditure in disposable incomes of households (until 2040) as estimated in the Mezzo-Impact model by the quintile groups and by fuel type. In addition, a red line in the graphs marks the energy poverty line as 'defined' for Polish households. In this way, the government knows well at any time how policies will affect the red line and how to impact specific fuel types in the lowest income groups.		
Relevancy for CEE region, replication potential	Countries in the CEE region particularly need to step on a good analysis before implementing different policies, as they have limited budgets but high levels of energy poverty and low rate of renovation. Applying the budgets in the most efficient way is critical for reaching targets. Setting specific policies and targets by fuel type in addition is important here, due to the large use of firewood for heating, and high levels of income poverty and inability to invest in other fuel		

[1] Using five quintiles: Nos 1 and 2 comprise the 40% poorest Households (Hh), quintile No 3 comprises middle-income earners – 20% of Hh, while No 4 and 5 include the wealthiest 40% of Hh, according to the GUS criteria adopted for 2015

	types. This practice allows for more effective policy making and awareness of the impact of policies. Synchronizing the monitoring of the evolution of the share of fuel and energy expenditure in the disposable incomes of households for countries in the region and even EU may be a good basis for the European Commission for future policies.

Bonus for Single-dwelling Residential Buildings		
Country	Poland	Planned for the 2021-2030 period
Objective	The Bonus for Single-dwelling Residential Buildings takes the form of a tax relief aimed at creating an incentive for the thermal modernisation of single dwelling residential buildings through the personal income tax. The current State budget support for thermomodernisation of residential buildings, consisting, amongst others, in granting a thermomodernisation bonus amounting to 20% of the loan taken out for a thermomodernisation project, has been insufficient to achieve the required effects in terms of energy efficiency improvements. The main purpose is to create an incentive for the thermal modernisation of single-dwelling residential buildings through the personal income tax. Expected average energy savings: 200 ktoe/year. The beneficiaries of the thermomodernisation bonus are personal income taxpayers paying the tax according to the tax scale, at a rate of 19% and as a lump-sum on recorded income, who are owners or co-owners of single-dwelling residential buildings, incurring expenses on thermomodernisation projects. A detailed list of types of building materials, equipment and services related to the supported thermomodernisation projects is set out in the Regulation of the Minister for Investment and Development of 21 December 2018. The thermomodernisation bonus is granted in particular for the following building materials, equipment and services: ■ window and door joinery, including windows, roof windows with assembly systems, balcony doors, garage doors, non-opening transparent surfaces, ■ building materials comprised in heating, domestic hot water and electric heating systems, ■ heat pumps, solar collectors or photovoltaic cells with accessories, ■ installation of the above-listed materials and equipment, ■ start up and control of the heat source, flue gas analysis, hydraulic control and balancing of the system, removal of the solid fuel-fired heat source	

Scores	Relevancy: 3	Replicability: 2	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 3
Why is it a good practice?	A good example is to have a specific measure for this housing segment. At the same time, a holistic approach is needed when budgets are insufficient for this specific segment requiring high investment cost but realizing return on investment for longer periods. In addition, this segment often is not included in the energy efficiency programmes, and putting a specific focus on it may lead to better overall results.		
Relevancy for CEE region, replication potential	Countries in the CEE region are specific with still having large shares of the population living in single-dwelling houses in small towns or rural areas. These households often are low income groups burning fire-wood in ineffective stoves. A specific focus is certainly needed, as well as diversification of the instruments for support.		

Thermomodernisation and renovation fund			
Country	Poland	Planned for the 2021-2030 period	
Objective	The main objective of the Fund is to provide financial assistance to investors carrying out thermomodernisation and renovation projects. Expected energy savings: 70 ktoe/year. Energy efficiency Beneficiaries: a thermomodernisation bonus is available to owners and administrators of: residential buildings; collective accommodation buildings; public buildings owned by local governments and occupied by them for public tasks; local district heating networks; local heat sources. Description/eligible activities: A thermomodernisation bonus is available for projects aimed at: ■ reducing the consumption of energy for heating and warm service water preparation in residential buildings, collective accommodation buildings, and buildings owned by local governments and occupied by them for the fulfillment of public tasks; ■ reducing the cost of obtaining heat delivered to the above buildings by connecting them to a centralized heat source in connection with the elimination of a local heat source; ■ reducing primary energy losses in local district heating networks and the local heat sources which supply them; ■ partial or full replacement of energy sources with renewable sources or using high-efficiency cogeneration, subject to energy consumption reduction requirements referred to in the Act.		
Scores	Relevancy: 3	Replicability: 2	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 3
Why is it a good practice?	The Energy Efficiency Directive recommends Member States to establish a national energy efficiency fund. The purpose of this fund is to implement energy efficiency measures, including measures under Article 8(3) and Article 22 as a priority in the group of people affected by energy poverty, vulnerable customers and, where applicable, people living in social housing. Having a specific component for owners or administrators of residential buildings in the beneficiaries, allows for further setting of a specific component for vulnerable and energy poor households.		
Relevancy for CEE region, replication potential	The detailed description of the fund's design and specific measures is very valuable for countries that have not designed funds for the building sector. In the CEE the presence of funds is limited, as well as their size. Countries can use this example to compare shares of population in energy poverty with target emissions and energy savings in the residential sector as a share in the total savings.		

Special account for just transition in lignite-producing areas			
Country	Greece	planned in the following programming period (2021-2027) through the corresponding NSRF and Rural Development Programme	
Objective	Special reference is made to financing development actions in Greek areas whose economy depends strongly on lignite extraction for power generation. These actions include two specific measures for reduction of energy poverty through encouraging the formation of energy cooperatives.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 2
Why is it a good practice?	The development actions to be financed in each annual cycle of allocation of the revenue from the auctioning of emissions allowances will be determined through an open public consultation on the basis of several axes that include energy poverty as follows: ▪ Development of clean forms of energy, funded by projects implemented by energy communities with the participation of natural persons, and/or local authorities and/or legal persons governed by private/public law, aiming to promote renewable energy sources and reduce energy poverty. This axis could include, inter alia, biomass/biogas projects, with the participation of local livestock cooperatives and generally autoproduction projects with the possibility of utilising existing energy infrastructure (e.g. distribution and/or transmission networks) ▪ Energy savings: Improving the energy performance of public/private buildings in compliance with the minimum energy performance requirements for buildings and tackling energy poverty. Prioritising the promotion of energy communities with the participation of local authorities as eligible entities.		
Relevancy for CEE region, replication potential	This practice can be replicated in countries in the region, as it is specific with its coal mines and coal-fired electricity generation. Securing enough finance for the development of energy cooperatives in the coal transition areas will quickly provide a support mechanism for several purposes – energy poverty reduction of consumers that cannot invest alone in renewable equipment, employment opportunities for those that can participate in the mechanism services provision, and replacement of fossil fuel power capacity with renewable for household's needs. These regions can also use eventual revenues from power production and sales for development of other agricultural or business projects to create more job opportunities.		

Mapping energy poor households			
Country	Slovakia	Planned	
Objective	Development and support of information systems for the collection and integration of data on the population and the subsequent use of this data in the assessment of energy poverty in the population		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 2
Why is it a good practice?	Mapping energy poor households is a frequent practice in countries that have policies and systems in place to address energy poverty. Such maps will have really good application for the development of renovation plans and social climate plans, serving as a basis for strategy development of measures and estimations of the investment needed and results to be achieved in terms of energy saving, emission and energy poverty reduction.		
Relevancy for CEE region, replication potential	This practice has high levels of replicability and adaptability in each country, as Eurostat provides good enough datasets with the SILC survey and each country has recently undergone a population census, which includes also data on the housing conditions and fuel type used for different purposes, including also a set of questions on the energy efficiency measures undertaken by households. Governments can easily have academics or consulting organizations developing the maps in the first place after the adoption of an official energy poverty definition, and therefore elaborate all relevant action plans and strategies.		

Programme for energy poverty alleviation			
Country	Croatia	Under implementation	
Objective	Indicators necessary to monitor the energy poverty will be identified and a monitoring system will be established, the implementation of energy efficiency measures in energy poor households will be co-financed, capacity building will be continued through local info centers, measures to combat energy poverty through the energy renovation of buildings.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 1
Why is it a good practice?	The recommendations on energy poverty of the European Commission require that countries apply a systematic approach for combating energy poverty, which starts with good planning and monitoring of the situation, building capacity for the implementation of measures and ensuring enough financial instruments for realizing the measures. As such, these steps are necessary for each country to decrease levels of energy poverty in the most efficient way.		
Relevancy for CEE region, replication potential	Countries in the CEE region rarely have a housing benefit component in their social protection systems, and therefore limited capacity to administrate large shares of the households, which comes with the adoption of energy poverty definition and gradual requirement for specific targets for energy and emission savings in the building sector. Replication of a good planning, development of co-financing mechanism, capacity building through also local info centers is easily replicable, as it is more soft measures, with low investment needed.		

Housing Assistance for Elderly People			
Country	Ireland	Under implementation	
Objective	Support for older people to upgrade their home, can include insulation and heating upgrades in some cases.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 1
Why is it a good practice?	Having specific programmes for different target groups is the best way to ensure results at small steps toward the big target. Ireland has developed a large range of programmes for each vulnerable group - elderly people, people with disabilities, people with respiratory conditions who own lower income households, lower income households using gas, etc. A separate programme is running for the upgrade of social housing.		
Relevancy for CEE region, replication potential	Funds for covering energy poor households are scarce in countries in the CEE, and the level of building renovation and decarbonization is particularly low. Despite the lack of details on the program, a good practice would be for countries to replicate the provision of separate programs for the biggest groups and in this way to guarantee enough capital investment support for the affected households.		

Energy saving certificates foreseen in the Energy Transition Law for green growth			
Country	France	Under implementation	
Objective	Through the energy saving certificates the expenses related to energy bills or the expenses related to improving the environmental quality and energy management of the homes are financed partially or fully. The check can help households to acquire a more efficient condensing boiler, to buy insulating materials or to install a double-glazed window, for example.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 2	Adaptability: 2	Level of details: 2
Why is it a good practice?	A good practice that needs to be replicated in all countries, is to allow households to choose and have the option to use the government's direct financial support for long-term efficiency measures, such as installing double-glazed windows or buying insulating materials.		
Relevancy for CEE region, replication potential	Countries in the CEE region can easily replicate this practice with priority for energy poor households, especially if they already have an official energy poverty definition, or provide some sort of social support – heating allowance, winter fuel payment, vouchers, etc. This will help turn part of the running cost into investment cost, and achieve more energy saving in these particular low-income groups.		

Local intervention services for energy management			
Country	France	Under implementation	
Objective	A unique platform for the identification of households in fuel poverty is in place. The social workers, energy suppliers, and anyone in connection with households in difficulty can report to this platform, physically and/or via telephone, in situations which they consider to be in concern. They carry out socio-technical diagnoses to the homes of households identified via this positive device. These visits allow: -to provide advice on use and behavior, in line with the reality of housing; -handing over or installing small equipment - low-cost energy savings: low-consumption light bulb, stand-by switch socket, window seal, etc.; -to understand better the situations of the families in order to orient them towards financial mechanisms adapted (renovation work programme, energy, social assistance, subsidies from local authorities, etc.).		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 2	Adaptability: 2	Level of details: 2
Why is it a good practice?	Capacity building with platforms for the identification and support of households in fuel poverty at the local level is important advice for each country. The diagnosis, consulting and low-cost intervention may be popularized in all countries, and particular budgets addressed to maintain such platforms in the long run.		
Relevancy for CEE region, replication potential	Countries in the CEE region in particular should replicate this measure and try to cover larger regions and shares of energy poor households. Local interventions can also help developing local funds and a network for support that can also help to build energy communities. Provision of consultant advice and small equipment is also easy to replicate, but securing long-term positions in each region will guarantee the supply of certified people for devoted work with this segment in particular.		

Energy Efficiency Obligation Scheme			
Country	Ireland	Under implementation	
Objective	Target for energy suppliers to achieve a % of their target among households in energy poverty		
Scores	Relevancy: 3	Replicability: 3	Impact: 2
	Feasibility: 2	Adaptability: 2	Level of details: 1
Why is it a good practice?	Energy efficiency obligation schemes are recommended as a measure to deal with energy poverty in the Directive for energy efficiency. Article 9 includes transmission system operators as potential obliged parties and allows Member States to require obliged parties to achieve a certain amount of energy savings in the group of vulnerable customers and end-users, people affected by energy poverty and, where applicable, people living in social housing. Member States shall implement energy efficiency obligation schemes or alternative policy measures, individually or in combination, or national energy efficiency fund-funded programmes or measures as a priority for people affected by energy poverty, vulnerable customers and, where applicable, people living in social housing. This practice is applied in many countries in Western Europe. In Austria, large energy suppliers are obliged to set up contact and advice centers, which also cover problems relating to energy poverty.		
Relevancy for CEE region, replication potential	This practice is a good example for countries in the CEE region, as so far, the mechanism has not been used, and the majority of the energy company obligations are accomplished only for businesses or municipality buildings and street lights. Exceptions are those that already include households. This measure can be part of a holistic approach with different instruments, as a complementary way to stimulate accomplishment of targets particularly for energy poor households and vulnerable clients.		

Insurance as a tool in adapting to climate change

Country	Romania	Planned	
Objective	Increasing the use by and access of various vulnerable groups (natural persons in poverty, farmers, SMEs) to insurance products against extreme events		
Scores	Relevancy: 2	Replicability: 3	Impact: 1
	Feasibility: 3	Adaptability: 3	Level of details: 1
Why is it a good practice?	With the increasing climate risk and number of natural disasters, the harms and financial damage will increase. Vulnerable people will have no ability to deal with this, and including insurance companies in the process will decrease the government's burden of investment, particularly in the agriculture sector, which will also secure the income of the affected groups.		
Relevancy for CEE region, replication potential	Countries with high levels of poverty are more vulnerable to climate change. This is due to their weaker capacity to adapt and mitigate the effects of climate change. An IMF report shows that the coefficient of climate vulnerability is seven times higher in developing countries. At the same time, every 1 percentage point increase in climate vulnerability leads to a 1.5 percentage point increase in inequality and poverty. As such, countries in the CEE in particular need to carefully consider risks and prepare all instruments possible, including insurance for vulnerable groups.		

Subsidy scheme to replace oil burners with heat pumps in buildings outside the district heating and gas grids			
Country	Denmark	Under implementation	
Objective	Subsidy scheme to replace oil burners with heat pumps in buildings outside the district heating and gas grids allocates DKK 20 million for each year in the period 2021-2024. The scheme is planned to be implemented as a subsidy scheme with the objective to replace oil burners with heat pumps in buildings located in areas without access to district heating or the gas grid.		
Scores	Relevancy: 3	Replicability: 2	Impact: 3
	Feasibility: 2	Adaptability: 2	Level of details: 1
Why is it a good practice?	It is important to have subsidy schemes for replacement of inefficient equipment such as oil burners. Despite that the usage of oil burners may differ in different countries, it is a good practice for having targets, budget, measures and effective approach for the gradual removal of this equipment and clear indication for the eligible regions (outside the district and gas grids).		
Relevancy for CEE region, replication potential	Countries in the CEE region may replicate this example for buildings within the coverage of gas grids, as an alternative to the high running cost of gas. Buildings that have canceled the usage of district heating due to the high service price and difficult bill control, but have well maintained internal heating installation, may also want to install heat pumps as an alternative to electricity, particularly in the coal production regions where income levels are low and region-based approach can be applied after the gradual remove of coal-fired electricity generation.		

Support instruments			
Country	Austria	Under implementation	
Objective	In Austria, the Federal Government and provinces have support instruments suited to directly or indirectly combating energy poverty. These include, in particular, minimum income instruments, housing subsidies (subject support) and building support granted for housing construction and renovation works. The latter is object-specific support, which in many cases may be supplemented by subject-specific characteristics (in particular, income ceilings, families, etc.). In addition to introducing a tiered, income-based subsidy, accompanying, awareness-raising measures of an organization-legal nature are also needed to improve access to independent and public information and advice, and to reduce organizational barriers for households in energy poverty.		
Scores	Relevancy: 3	Replicability: 2	Impact: 3
	Feasibility: 2	Adaptability: 2	Level of details: 1
Why is it a good practice?	Housing subsidies in Austria have supported households for many years, and now the level of energy efficiency is higher compared to countries in the CEE region, showing long-term results and effects from continued efforts in improving the building stock. Once the system is in place and working, to reach new targets faster the government introduces support instruments tailored specifically for the most vulnerable groups, together with information campaigns and reduction of the organizational barriers for households in energy poverty.		
Relevancy for CEE region, replication potential	Countries in the CEE region can easily replicate the introduction of a tiered, income-based subsidy together with all soft measures needed to motivate households for housing construction and renovation works. More details may be helpful regarding the scheme's specifics such as income thresholds, eligible activities, subsidies scheme, etc.		

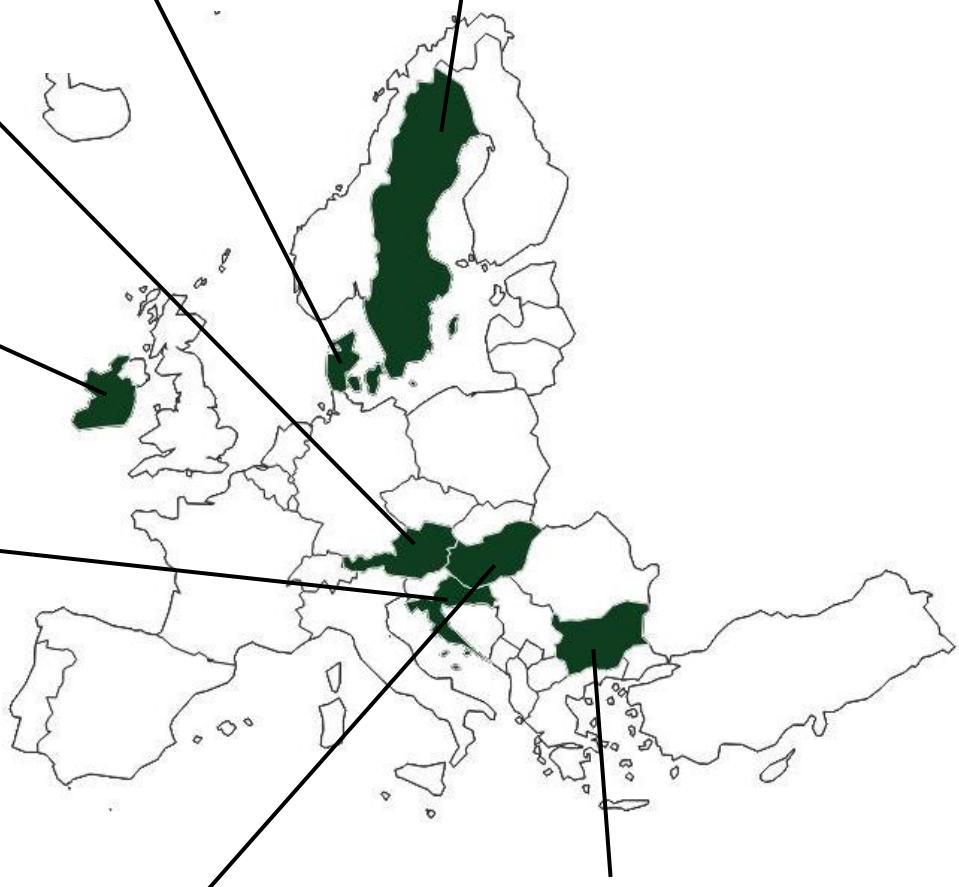
ENERGY EFFICIENCY

(click on the title to navigate)

- The Sustainable Building Information Centre
- EU financial support for energy efficiency in buildings
- Energy and climate advisory services

- Consumer information and training

- Double the renovation rate of residential buildings
- Pilot towns and villages
- Use of waste heat
- Buildings decarbonization



- Behavioural Economics Unit within SEAI

- Providing information on energy efficiency to the general public
- Energy renovation programme for single family houses
- Energy renovation programme for multi-apartment buildings

- Energy efficiency obligation scheme until 2030
- National mechanism for financing energy efficiency (NMFEE)

- Strengthening the National Energy Network

- *Click to navigate back to Introduction*

THIS PROJECT IS FUNDED BY THE EU'S LIFE PROGRAMME

Double the renovation rate of residential buildings			
Country	Austria	Under implementation	
Objective	Reduce energy demand of residential buildings via targeted funding for building renovation works in the form of investment grants, subsidized financing models and tax measures. Part-renovation in particular is also funded, but only if there is an overall thermal-energy renovation plan and the part-renovation works fit into the overall renovation plan. Accompanying measures: - awareness-raising activities and consultations (product-independent, funded and public), - enhanced energy performance certificates (e.g. a building and housing register), - spatial energy planning and housing development, - targeted qualification for architects, planners and craftspeople in order to create sufficient quantitative and qualitative capacities for the necessary implementation of measures.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 2
Why is it a good practice?	This action adopts a systematic approach across different levels of public administration on how to increase the renovation rate while also focusing on tangible results i.e. that the financed renovation works lead to measurable reduction of heat demand. Accompanying measures guarantee the success of the programme		
Relevancy for CEE region, replication potential	Residential building stock suffers from very poor energy efficiency in the CEE region, therefore increasing renovation rate is of great importance. Funding and comprehensive renovation programmes are badly needed. Several studies and surveys found that people would like to improve the energy efficiency of their dwellings, such programmes would be available.		

Providing information on energy efficiency to the general public			
Country	Croatia	Under implementation	
Objective	Increasing the level of awareness of the benefits of energy efficiency with the consequent change in behaviour and reduction in energy consumption by targeted information campaigns		
Scores	Relevancy: 2	Replicability: 3	Impact: 2
	Feasibility: 3	Adaptability: 3	Level of details: 3
Why is it a good practice?	The National Energy Efficiency Portal is the central point for current information in the field of energy savings in Croatia. The content of the portal is grouped around three fundamental drivers of change: citizens, the public sector and the commercial sector. The portal publishes all information on activities, advice, events, projects, tenders, news and obligations related to energy efficiency in the country. Targeted information campaigns, in particular energy renovation measures for buildings, and the bodies responsible for implementing these measures are also planned. Other information campaigns directed to the professional public (professional associations, academic community, non-governmental organizations, etc.) to inform them about the current issues and trends in the field of energy efficiency, including green building, circular economy and sustainable mobility.		
Relevancy for CEE region, replication potential	An easy-to-use, centrally maintained, public info-hub together with targeted awareness-raising campaigns could effectively engage the citizens and other stakeholders to mobilize efforts to save energy. Focused public campaigns proved to be very effective in post-socialist countries to mobilize the population for or against some specific issues.		

The Sustainable Building Information Centre			
Country	Sweden	Under implementation	
Objective	The Sustainable Building Information Centre's mission is to 'promote energy efficient renovation and building, using sustainable materials while minimizing the impact on the environment from a life-cycle point of view'.		
Scores	Relevancy: 2	Replicability: 3	Impact: 2
	Feasibility: 3	Adaptability: 3	Level of details: 2
Why is it a good practice?	Buildings are repositories for resources over many decades, and the design options largely influence the whole lifecycle emissions both for new buildings and renovations. By establishing the Center, information on renovation and resource and energy efficiency can be more easily accessible, coherent and quality assured for property owners and other relevant stakeholders in the renovation process.		
Relevancy for CEE region, replication potential	With the revised EPBD under the Fit for 55 proposal package, Member States need to consider the whole life-cycle performance of buildings. Having a public database and information center (a website) on research, results and experience tailored for all relevant stakeholder groups, can serve as a good example for replication and knowledge base for countries in the CEE region.		

EU financial support for energy efficiency in buildings			
Country	Sweden	Under implementation	
Objective	The EU promotes improvements in the energy performance of buildings through a series of financial support programs. Energy Efficiency Financing Facility (EEFF) was established in 2011, offering instruments for loans, equity and guarantees as well as support for technical assistance for project development.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 2	Level of details: 1
Why is it a good practice?	A specific facility dedicated to EU support programs on improving energy performance of buildings ensures targeting and efficient spending of EU funds. Providing various instruments for financing energy efficiency project development and combining financing with technical support are among the most effective tools.		
Relevancy for CEE region, replication potential	Although exact details are unavailable for this instrument within the Swedish NECP, learning from existing funding solutions and support programs is always relevant for all CEE countries. It is also the application of support for technical assistance that needs to be emphasized and looked at, as it is often an undeveloped and overlooked instrument among the region's member states.		

Pilot towns and villages			
Country	Austria	Planned	
Objective	Preparation/implementation of pilot projects for 'energy efficient towns/cities' and 'energy efficient villages'		
Scores	Relevancy: 3	Replicability: 3	Impact: 2
	Feasibility: 3	Adaptability: 3	Level of details: 1
Why is it a good practice?	Pilot towns and villages can test new ideas, showcase good practices in a tangible way and support other municipalities to follow their example through peer-to-peer learning.		
Relevancy for CEE region, replication potential	Leaders of municipalities in the CEE region might be keener to start new initiatives locally if they could see that the solutions are working already at other places. There are several, already existing examples prove this type of engagement route when one town starts something and the others follow the lead, e.g. 1 million tree movement, planting trees for every newborn, or the "nicest gardens" competition, etc. in Hungary that started in one settlement and then the example spread.		

Energy renovation programme for single family houses			
Country	Croatia	Planned	
Objective	Deep renovation up to the nZEB standard, reducing heat demand and energy consumption in apartment buildings and increasing RES usage and consequently reducing CO2 emissions		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 2	Adaptability: 2	Level of details: 2
Why is it a good practice?	It is a detailed and comprehensive programme to renovate single-family houses across the country, with all necessary checks and balances necessary to ensure that energy consumption is monitored before and after energy renovation. Moreover, the programme is accompanied by strong promotional activities and assured technical assistance to applicants. Furthermore, a special fund is established from which the costs will be reimbursed to energy poor households or households at risk of energy poverty, in order to remove the obstacle to securing a sufficient number of co-owner's consents for energy renovation.		
Relevancy for CEE region, replication potential	Residential building stock suffers from very poor energy efficiency in the CEE region, therefore increasing renovation rate is of great importance. Funding and comprehensive renovation programmes are badly needed. Several studies and surveys found that people would like to improve the energy efficiency of their dwellings, such programmes would be available.		

Buildings decarbonization			
Country	Austria	Planned	
Objective	Thermal energy renovation of building stock, improved efficiency of heating systems and provincial business advisory programmes.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 1	Adaptability: 3	Level of details: 2
Why is it a good practice?	Provincial business advisory programmes increase the share of efficient renewable energy sources and district heating/cooling systems for heating, hot water and cooling, including component activation, active use of hot water storage and buildings as storage for load balancing and load flexibility.		
Relevancy for CEE region, replication potential	Involving local businesses in the planning and execution of energy efficiency programmes is essential in the CEE region as they have a huge impact on how these programmes are realized. As the home renovation business sector is mostly composed of small companies and contractors closest to the people, their attitude makes a lot of impact.		

Behavioural Economics Unit within SEAI			
Country	Ireland	Under implementation	
Objective	SEAI (Sustainable Energy Authority of Ireland) has established a Behavioural Economics Unit (BEU) which is focused on encouraging measurable changes to homeowners' and businesses' energy behaviour, using the latest evidence from Behavioural Science and Economics; their work also helps inform policies through SEAI.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 1
Why is it a good practice?	An effective approach to increasing energy efficiency is to constantly monitor actual consumer's behaviour, get feedback from on-the-ground experience and adjust policies based on the results. SEAI engages frequently with consumers and business and carries out regular surveys of attitudes towards and perspectives on energy efficiency.		
Relevancy for CEE region, replication potential	A practice that explicitly builds policy on field experience and related feedback is a good base for success and an excellent example to learn from. A large number of measures has been implemented through the operation of SEAI (e.g. Building Energy Rating system which provides homeowners with information on the efficiency of their home as well as guidance on the steps they can take to reduce their energy usage and their costs, a Schools Education programme, an energy conservation campaign, a website that provides useful information on taking action on energy efficiency for consumers and businesses), where the implementation and practice is evaluated through engagement processes and regular surveys.		

Consumer information and training			
Country	Denmark	Under implementation	
Objective	The aim is to promote energy efficient solutions and purchasing and energy efficient behaviour among end-users. The information campaign focuses on end users with homeowners, the public sector, and commercial enterprises as specific focus areas.		
Scores	Relevancy: 2	Replicability: 3	Impact: 2
	Feasibility: 3	Adaptability: 3	Level of details: 1
Why is it a good practice?	The instrument comprises several different schemes, all having the aim of delivering relevant and practical information to end-users. It has a one-stop-shop scheme, which offers building owners comprehensive, expert advice throughout the energy renovation process. In another scheme training courses have been set up for craftsmen, construction engineers, architects. The Knowledge Centre for Energy Savings in Buildings is a service for craftsmen and educational institutions concerning energy efficiency improvements. The centre has worked with industry organizations within the area of mediating knowledge to its members, and provides on regular basis courses to support the general further education of craftsmen. Furthermore, educational efforts are carried out by the labour market training centres.		
Relevancy for CEE region, replication potential	One-stop-shops have clearly one of the most important roles in delivering targeted information to the right where implementation takes place. But the greatest value of this measure is the knowledge center for craftsmen. In the CEE region generally, the availability of a skilled workforce is insufficient to deliver the rate of renovations needed to achieve 2030 and 2050 targets. Thus, there is a strong need for setting up training schemes and support further education of workers within the industry and channel it into the labour market, to which the Danish experience can be a good reference.		

Energy efficiency obligation scheme until 2030			
Country	Bulgaria	Planned	
Objective	The aim of establishing the EEOS is to ensure the achievement of the total cumulative target for energy savings in final consumption under EED Article 7, for the period 1 January 2021 – 31 December 2030.		
Scores	Relevancy: 2	Replicability: 2	Impact: 2
	Feasibility: 3	Adaptability: 3	Level of details: 2
Why is it a good practice?	EEOSs have been introduced and implemented in several European countries and many of them have been operating for years. The Bulgarian EEOS have among their obligated parties' traders in solid fuels, which sell solid fuels in amounts exceeding 500 tonnes per year to final consumers.		
Relevancy for CEE region, replication potential	Although the Bulgarian NECP does not state whether the obligated parties must achieve a portion of their savings within the residential sector, the inclusion of solid fuel traders among the obligated parties may be a good approach towards reducing the use of forestry biomass as a heating source.		

Use of waste heat			
Country	Austria	Under implementation	
Objective	Use of commercial and industrial waste heat through a geographically tailored database of relevant heat sources and cost-benefit analyses.		
Scores	Relevancy: 3	Replicability: 3	Impact: 2
	Feasibility: 2	Adaptability: 3	Level of details: 1
Why is it a good practice?	A comprehensive collection of available waste heat sources can greatly support spatial heat demand planning. In places where biomass-fired boilers provide district heating, integrating alternative heat sources might reduce pressure on nearby forests.		
Relevancy for CEE region, replication potential	Info on local industrial and waste heat sources are usually not accessible to local stakeholders in a streamlined manner in the CEE region. If such a database would be available, it might lead to improved spatial planning and better use of available resources.		

Strengthening the National Energy Network			
Country	Hungary	Planned	
Objective	Provide free online and face-to-face consultation services to the public, involving at least the following areas of expertise: energy and engineering specialists, economic experts & architects.		
Scores	Relevancy: 2	Replicability: 3	Impact: 2
	Feasibility: 2	Adaptability: 3	Level of details: 2
Why is it a good practice?	Free consulting on home renovation can support homeowners in choosing the best strategy to improve the efficiency of their dwellings. It is an important option to avoid suboptimal solutions and thus missed opportunities in energy efficiency.		
Relevancy for CEE region, replication potential	There are many general misconceptions around building energy renovation and resistance against new technological solutions in public opinion especially among the elderly. A communication campaign along with a dense network of locally available consultation services can greatly help in making the optimal decisions during home renovation.		

National mechanism for financing energy efficiency (NMFEE)			
Country	Bulgaria	Planned	
Objective	The aims of the mechanism are in line with the aims of European financial institutions to expand access to competitive financing by enhancing: (1) the process of mobilizing private financing; and (2) the efficient use of grant assistance		
Scores	Relevancy: 2	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 2	Level of details: 1
Why is it a good practice?	The national mechanism envisages financing through different mechanisms and financial instruments, including credit lines, guarantees or combinations of the two. The engagement of local banks and international financial institutions in this financial initiative is anticipated under this measure. The NMFEE also envisages technical assistance for the implementation of energy efficiency projects, where the residential building sector is one of the targets.		
Relevancy for CEE region, replication potential	Another example of combining financial instruments with technical assistance, which have good potential in delivering energy savings within the residential sector.		

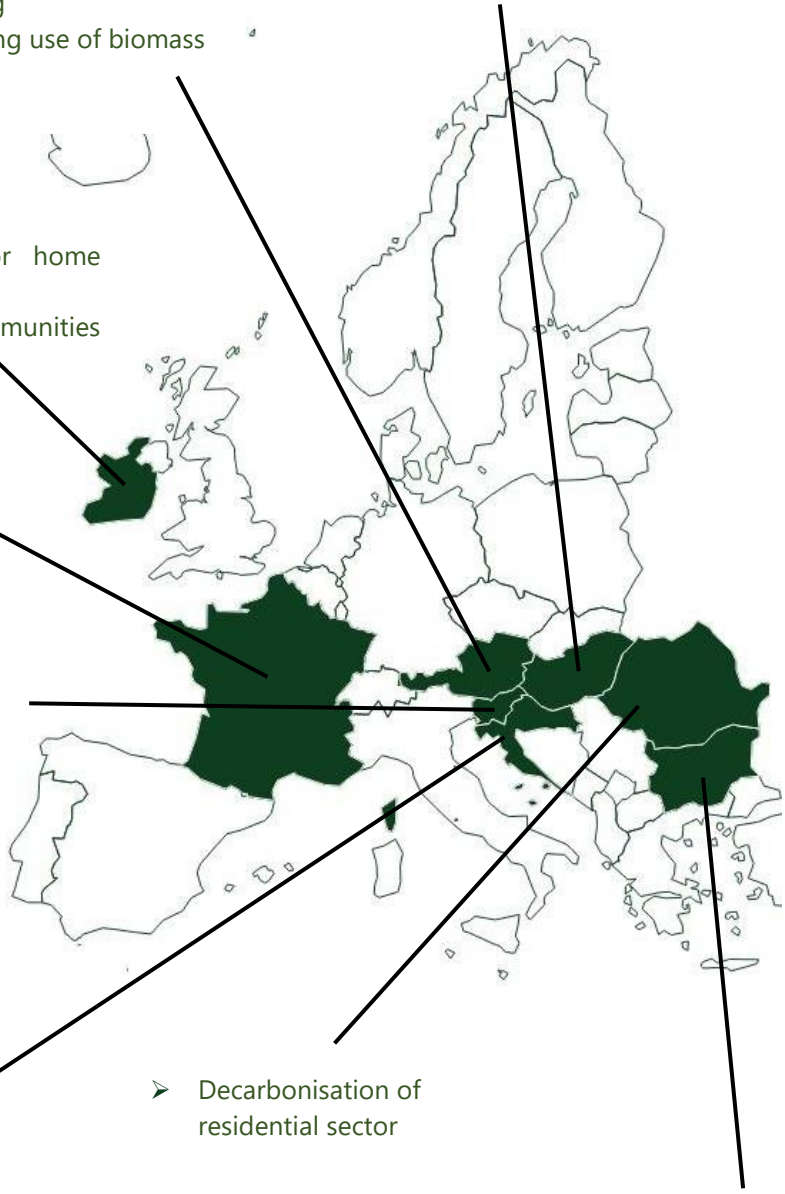
Energy and climate advisory services			
Country	Sweden	Under implementation	
Objective	The Swedish Energy Agency provides municipalities with Government funds so that they can give local climate and energy advice to private individuals and small businesses.		
Scores	Relevancy: 2	Replicability: 2	Impact: 2
	Feasibility: 2	Adaptability: 3	Level of details: 2
Why is it a good practice?	The local climate and energy advisers, which are present in nearly all Swedish municipalities, aim to provide objective and locally adapted information and advice about energy-efficiency measures, energy use and climate-related issues in buildings and households. The Swedish Energy Agency also gives financial assistance to the 15 regional energy offices which coordinate the energy and climate advisors. The offices work regionally with companies, county councils, municipalities and other bodies, for example on producing plans and strategies.		
Relevancy for CEE region, replication potential	It is the municipalities, councils, companies operating in the region that are most aware of the local conditions and needs. The most efficient use of funds and resources can happen when it is tailored for the specific demands. Decentralizing decisions on energy efficiency projects and bringing the solution to the source is an effective tool, which could be utilized in many CEE countries.		

Energy renovation programme for multi-apartment buildings			
Country	Croatia	Under implementation	
Objective	Reducing heat demand and energy consumption in apartment buildings and increasing RES usage and consequently reducing CO2 emissions.		
Scores	Relevancy: 1	Replicability: 3	Impact: 2
	Feasibility: 2	Adaptability: 2	Level of details: 3
Why is it a good practice?	With co-financing of up to 60% of eligible costs, and putting an emphasis on energy audits, energy certificates, project documentation and technical assistance in project preparation and implementation this programme is an effective way to reduce energy consumption of multi-family buildings. Energy renovation makes buildings more resilient to some of the effects of climate change, such as extreme temperature conditions.		
Relevancy for CEE region, replication potential	Only relevant in countries where multi-family houses use a lot of firewood (Bulgaria, Poland). In countries where it is not the case (e.g. in Hungary) the relevancy is low.		

HEAT & POWER

- Supporting the spread of heat pumps
- Mandatory feed-in tariff system for biogas production
- Green District Heating Programme

- '100,000 rooftops' flagship project
- Abolishing the tax on self-produced electricity
- Energy spatial planning
- Advantage for cascading use of biomass



- New regulatory standards for home heating systems
- Sustainable Energy Communities

- Heat Fund (Fonds Chaleur)

- Measures to promote electricity generation from RES

- Decarbonisation of residential sector

- Developing district heating systems
- Promoting the RES use for production of electricity and

- Introducing a national standard for the quality of fuels used in heating systems

- *Click to navigate back to Introduction*

THIS PROJECT IS FUNDED BY THE EU'S LIFE PROGRAMME

‘100,000 rooftops’ flagship project			
Country	Austria	Planned	
Objective	The ‘100,000 rooftops’ solar panel and small-scale storage programme is intended to encourage private individuals and businesses to make greater use of roof areas for photovoltaic modules.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 2
Why is it a good practice?	Increasing the share of PV production helps to substitute fossil heating solutions with electric methods, like heat pumps, which are more efficient. Moreover, focus will implicitly be on a combination of solar panels and storage by applying a self-supply rate as a ranking criterion for investment support.		
Relevancy for CEE region, replication potential	In future, buildings may not only have high energy standards but, in particular, will play an active role in providing energy and storing it for self-consumption purposes in Europe. To do so, the best possible use will be made of usable areas (on the roof and façades) of buildings for installations and integrated solar panels. Increasing the number of solar panels in conjunction with storage technology will also help to systematically reduce the pressure on the distribution and transmission network.		

Abolishing the tax on self-produced electricity			
Country	Austria	Under implementation	
Objective	This decision gives a tax advantage for energy produced and consumed by small-scale PV installations compared to other energy sources.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 3	Level of details: 2
Why is it a good practice?	Currently, the first 25,000 kWh of self-produced electricity is exempt from tax. As such, small-scale producers (private and smaller companies) currently benefit from tax relief. Commercial operators and private individuals will make more use of photovoltaic modules as well on their rooftops in order to produce energy. The tax on self-produced electricity was abolished as part of the reform of the tax system. This decision also gives a tax advantage for energy produced and consumed by PV installations within a community.		
Relevancy for CEE region, replication potential	Giving tax advantage for energy produced by PV systems is a good way to encourage self-produced energy usage and PV installations over other energy sources. In Austria other measures have already been taken to promote self-consumption, for example the investment support for photovoltaics was extended to include storage technologies. They also introduced community energy generation to which tax relief also applies. Due to the high levels of energy poverty in the region, it is good that these tax breaks are also used to encourage access to cheap energy and consumption by more households in energy cooperatives.		

Heat Fund (Fonds Chaleur)			
Country	France	Under implementation	
Objective	This measure is one of the main financial instruments supporting the investments in renewable heating.		
Scores	Relevancy: 2	Replicability: 3	Impact: 2
	Feasibility: 3	Adaptability: 3	Level of details: 3
Why is it a good practice?	In the time period 2009-2017 the fund had spendings of over 1.9 bln. EUR for supporting different costs such as heat recovery, heating networks, geothermal energy investments, solar thermal investments (roofs and major surfaces), etc. Through this fund an average aid rate of €4/MWh was offered which resulted in around €16/tCO2 avoided.		
Relevancy for CEE region, replication potential	Financial support for renewable heat generation helps fuel change on a national level: it prioritizes renewable energy and waste heat recovery instead of coal or other fossil fuels. It also prioritizes biomass over coal, but excessive biomass usage may raise sustainability issues. Financial measures are always easy to replicate, but can be hard to adapt at governmental levels.		

Introducing a national standard for the quality of fuels used in heating systems			
Country	Bulgaria	Planned	
Objective	The aim of this measure is to increase energy efficiency in the heating sector and to decrease the amount of air pollutants originating from heating methods in line with the National Air Pollution Control Programme 2020-2030.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 2	Adaptability: 3	Level of details: 1
Why is it a good practice?	The measure contains the introduction of a national standard for the quality of fuels used in heating systems, surrogating measures to lower humidity in firewood used in municipalities that do not meet air quality criteria (PM_{10}) and, tentatively, of a standard for the maximum humidity in firewood in line with the National Air Pollution Control Programme 2020-2030. It can take part in both increasing energy efficiency by optimizing the quality of heating fuels and improving air quality.		
Relevancy for CEE region, replication potential	Using heating fuel with insufficient quality is quite common in the CEE region which can lead to low energy efficiency as well as air quality problems during the heating season. Introducing a national standard for the quality of fuels, including the maximum humidity in firewood could solve two important problems at the same time.		

Supporting the spread of heat pumps			
Country	Hungary	Planned	
Objective	Encouraging and supporting the widespread use of heat pumps for heating and cooling.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 2	Level of details: 1
Why is it a good practice?	The plan is to install approximately 100 000 heat pumps until 2030 with an installed capacity of ~410-420 MW. Heat pumps can effectively substitute currently used individual heating-cooling devices as a much more energy efficient and non-polluting solution.		
Relevancy for CEE region, replication potential	Financial support for heat pump installation with non-refundable aids and awareness raising in fields of sustainable heating and cooling methods can be adapted and replicated EU wide. The replacement of fossil-based heating and cooling with electricity based on renewable energy sources and heat pumps can effectively work even in regions with infrastructures with a low utilization rate or which are not connected to the gas network.		

Energy spatial planning			
Country	Austria	Under implementation	
Objective	Energy spatial planning is an integral part of spatial planning which comprehensively addresses the spatial side of energy consumption and energy supply while leading to a reduction in potential for conflict and therefore greater acceptance among the public.		
Scores	Relevancy: 3	Replicability: 3	Impact: 2
	Feasibility: 2	Adaptability: 3	Level of details: 2
Why is it a good practice?	Energy spatial planning in particular enables innovative energy concepts to be implemented focusing on locally available and cheaper renewable energy, use of waste heat and integrated mobility systems. Analysis and localisation of energy consumption, energy storage and transport, and the potential for energy savings and recovery, offers vital insight into these areas from a spatial perspective with a view to climate friendly planning.		
Relevancy for CEE region, replication potential	Modern, integrated energy concepts in spatial planning can be used to make decisions on land allocation, investment in infrastructure and the allocation of funding, such as support for housing construction. It contains the major importance alongside the generation of energy from various renewable sources (biomass, geothermal, solar thermal, photovoltaic, wind, etc.) and highly efficient cogeneration. It is already successfully implemented in Austria. This kind of transformation of energy and mobility systems can be brought onto any market.		

Advantage for cascading use of biomass			
Country	Austria	Planned	
Objective	The aim of the measure is to create a system approach which considers that waste or residue and by-product recycling should be applied so the proportion of sustainable biomass plants can grow.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 3	Adaptability: 2	Level of details: 1
Why is it a good practice?	For both solid biomass-based and biogas-based energy generation technology, the same approach to raw materials will have to be adapted, whether relating to the generation of renewable electricity or renewable gas. The measure contains help for the grid both by the optimal use of existing high-efficiency installations and by bottleneck management regarding raw materials.		
Relevancy for CEE region, replication potential	Increasing the share of sustainable biomass is a clue for transforming the energy system in an environmentally-friendly way. Using more solid biomass or biogas for heating will not solve the fuel change issue in itself. It is almost as important, if not more, to apply bottleneck management EU wide for using raw materials in the most sustainable way possible.		

Developing district heating systems			
Country	Croatia	Planned	
Objective	Development and maintenance of centralized thermal systems		
Scores	Relevancy: 3	Replicability: 3	Impact: 2
	Feasibility: 3	Adaptability: 2	Level of details: 2
Why is it a good practice?	This measure envisages the maintenance and upgrading of existing DH systems, stopping the trend of disconnecting customers from the DH systems, introducing heat storage tanks for electricity, and completely using renewable energy sources for DHS as well as replacing existing DHS production with renewable sources (e.g. biofuels) together with use of heat pumps.		
Relevancy for CEE region, replication potential	Luckily, district heating systems have been identified as one of the priorities of the energy policy in Croatia. In the development and maintenance of DHS there is a significant potential to increase energy efficiency in the heating sector. Development of the production units, infrastructure and equipment at end-users also leads to increasing reliability and security of energy supply. Very similar measures are already under implementation in Bulgaria regarding the rehabilitation of heat transmission networks. Pre-insulated pipes in district heating systems can reduce losses even to 3% against the current average of 23.7%.		

New regulatory standards for home heating systems			
Country	Ireland	Under implementation	
Objective	The aim of this measure is to progressively phase out oil and gas boilers in existing dwellings through a combination of incentives, information and regulatory measures.		
Scores	Relevancy: 3	Replicability: 3	Impact: 3
	Feasibility: 2	Adaptability: 3	Level of details: 1
Why is it a good practice?	They already effectively banned the installation of oil boilers from 2022 and now comes the installation of gas boilers from 2025 in all new dwellings through the introduction of new regulatory standards for home heating systems. The aim is not only to phase out fossil fuels from the heating sector, but a simultaneous shift to alternative heating sources with targets of 600,000 heat pumps installed over the period 2021-2030.		
Relevancy for CEE region, replication potential	There are quite similar measures already implemented in Austria and in Denmark which shows well the replicability of this incentive. In Austria for example under the Federal Government's Climate and Energy Strategy (#mission2030), approximately half of the estimated 700,000 oil-fired heating systems currently in use are to be replaced by innovative energy systems powered by renewable energy or efficient district heating, in particular based on renewable energy sources. In this way, it will be possible to reduce greenhouse gas emissions by approximately 2 million tonnes per year.		

Sustainable Energy Communities network			
Country	Ireland	Under implementation	
Objective	The aim of the measure is to promote the role of local renewable energy communities and to encourage local actors to work together.		
Scores	Relevancy: 3	Replicability: 3	Impact: 2
	Feasibility: 3	Adaptability: 2	Level of details: 2
Why is it a good practice?	The Better Energy Communities (BEC) Scheme provides funding for community groups to improve the efficiency and the sustainability of energy use in their local areas. The aim of the scheme is to support projects at a community level, specifically seeking to test innovative and pioneering partnerships in order to reduce fossil fuel use, running costs and greenhouse gas emissions.		
Relevancy for CEE region, replication potential	It is an important goal to set out actions which support communities to take local action by linking to existing and new networks and clustering initiatives. A number of measures in the Irish Climate Action Plan focus on building awareness in local communities of their energy use and how to reduce it. The Climate Action Plan aims to expand the SEC Network to 1500 communities all over Ireland receiving support to plan for a sustainable energy future and reduce emissions.		

Measures to promote electricity generation from RES			
Country	Slovenia	Under implementation	
Objective	A wide set of financial and non-financial measures to promote electricity generation from renewable sources and increasing the capacity and expansion of the electricity distribution network for RES integration.		
Scores	Relevancy: 3	Replicability: 3	Impact: 1
	Feasibility: 2	Adaptability: 3	Level of details: 2
Why is it a good practice?	This group of measures applies a wide set of instruments including regulation, planning, financing, awareness-raising, or even government investment management. Among the measures we can find incentives for better network integration of RES generating devices and adaptation of consumption; promoting local energy communities; encouragement of investments and technologies for the conversion of electricity surplus from RES and the connection of networks for energy storage purposes; or promoting multi-purpose use of geothermal energy.		
Relevancy for CEE region, replication potential	The list of the proposed incentives is quite massive, there are some elements which can be easily replicated in countries of the CEE region and there are ones which are not so likely to adapt. However, they can still provide ideas for future planning processes. This set of instruments is really relevant because it not only supports the use of alternative energy sources and energy efficiency actions, but also drafts comprehensively the necessary legislative changes to remove obstacles.		

Mandatory feed-in tariff system for biogas production			
Country	Hungary	Planned	
Objective	The aim of the measure is to encourage biogas and biomethane production with the establishment of a mandatory feed-in system.		
Scores	Relevancy: 3	Replicability: 2	Impact: 3
	Feasibility: 2	Adaptability: 3	Level of details: 1
Why is it a good practice?	The increased use of biogas produced from agricultural waste, landfills and waste water treatment plants may also contribute to reducing natural gas imports and CO_2 emissions of natural gas consumption. They consider the production, purification of biogas and its feeding into the gas network to have major potential, with an average funding requirement, which may also contribute to meeting targets for increasing the use of renewable energy and decarbonisation.		
Relevancy for CEE region, replication potential	Since biogas may also supply cost-effective energy based on local resources to municipalities lacking a natural gas network or using the existing network at a very low rate, and economic activities enhancing the rural population retention ability can be built on biogas production, Hungary also plans to directly support such innovative investments. Energy from biogas may also be a viable option for municipalities lacking a natural gas network. It may be practical to establish a biogas power plant - considering all sustainability aspects - at these municipalities that would supply electricity either as a member of an energy community or as a market participant.		

Green District Heating Programme			
Country	Hungary	Planned	
Objective	Greening of the district heating sector by increasing recovery of geothermal energy, biomass and waste for heating/cooling.		
Scores	Relevancy: 3	Replicability: 3	Impact: 2
	Feasibility: 2	Adaptability: 2	Level of details: 2
Why is it a good practice?	Increased consumption of energy recovered from waste water treatment, landfill gas and agricultural biogas should play a key role in replacing natural gas and increasing use of renewable energy on the Hungarian heat market. Encouraging use of these resources will be developed for each larger district heating zone, based on a detailed analysis, in consideration of local characteristics. To implement the programme it is necessary to review current district heating price controls. The review of price controls will be followed by the establishment of conditions of competition on the district heat market.		
Relevancy for CEE region, replication potential	Hungary will also encourage the use of heat pumps and biomass burning in efficient individual heating equipment to satisfy the heating and cooling needs of modern buildings. The measure also proposes the establishment of biogas plants processing agricultural waste to both satisfy local heat demand and to feed in purified biomethane to the natural gas network. Regarding both solid biomass and biogas, it is very important to include sustainability angle.		

Promoting the RES use for production of electricity and thermal energy			
Country	Croatia	Under implementation	
Objective	This is a financial measure to provide financial incentives for the development of RES projects for electricity and heat production, implemented on a national level.		
Scores	Relevancy: 3	Replicability: 3	Impact: 2
	Feasibility: 2	Adaptability: 2	Level of details: 2
Why is it a good practice?	The Croatian energy market operator (CEMO) prepares three-year RES plans and announces tenders for assigning market premiums. The activities of reviewing and analyzing potential geothermal potentials and initiating the launch of bidding procedures to select the most suitable bidder for the exploration of geothermal waters for energy purposes will continue, as well as the application of the surplus energy absorbing model from self-supply plants and self-producing end-customers with possible investment support and the supplier's obligation to absorb surplus energy.		
Relevancy for CEE region, replication potential	The measure will ensure an increase in energy production and a share of RES in total energy consumption and, consequently, a reduction in greenhouse gas emissions. It also creates preconditions for the establishment of a monitoring system to meet the sustainability criteria and the expected reductions in greenhouse gas emissions from biomass plants. The measure is related to the dimension of increasing energy security, since the expected result of the measure is an increase in energy production from locally available sources and the development of the internal energy market. The use of RES is planned with the integration of climate change adaptation measures and strengthening of resilience, i.e. reduction of vulnerability of RES technologies to climate change.		

Decarbonisation of residential sector			
Country	Romania	Under implementation	
Objective	Phasing out fossil fuels and promoting the use of renewable energy in the residential sector.		
Scores	Relevancy: 3	Replicability: 3	Impact: 2
	Feasibility: 2	Adaptability: 2	Level of details: 2
Why is it a good practice?	It is a package of measures to achieve the decarbonisation of the residential sector: developing mandatory quality standards for energy conservation and improved energy efficiency, including heat insulation, lighting, use of air conditioning etc.; promoting the use of electricity in heating, in particular in households in the semi-urban and rural area, where the investment in high-efficiency air-soil heat pumps can be justified economically ; Promoting cooperation among the various stakeholders (municipalities, utilities companies, consumers etc.) to identify the adequate solutions and to streamline their objectives regarding decarbonisation of the residential sector.		
Relevancy for CEE region, replication potential	The measure also includes the preparation of information campaigns to define the emissions caused by various types of equipment or properties and involves public administration authorities. It formulates an important change in legislation which may be hard to replicate easily: implementing the draft law amending and supplementing Law No 372/2005 on the energy performance of buildings, which provides for an increase in the obligation to cover consumption of primary energy from RES from 10% to 30%.		