



A cross-border region where rivers connect, not divide

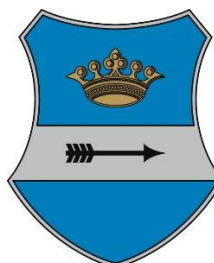


CO-EMEP * Improvement of cooperation for better energy management and reduction of energy poverty in HU-HR cross-border area

Energy poverty definition for HU-HR cross-border area

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1. Executive summary

Energy poverty is a wide spread problem with whom many European citizens face. The causes of energy poverty can be multidimensional, stemming from low incomes, poor quality homes, and energy inefficient appliances. The problem was recognized in Croatia and Hungary and it is proven that these two countries implement various initiatives in order to lift people out of energy poverty. However, adoption of comprehensive energy poverty mitigation policy would also result in incredible benefits for energy poor citizens. The first step in the whole process of establishing quality energy poverty mitigation policy is to define the term of energy poverty. Energy poverty is a quite a complex concept since its definition can vary according to the social, economic and geographical context.

Energy poverty is one of big challenges with whom many citizens face on a daily basis. Due to its complexity, when addressing energy poverty, it is crucial to ensure cooperation between wide range of experts who have the relevant knowledge in tackling this problem. Project partners recognized the existence of energy poverty in HU-HR cross-border area and since it isn't properly solved on national levels of project partners countries nor regional and local, decided to prepare an project idea (CO-EMEP – Improvement of cooperation for better energy management and reduction of energy poverty in HU-HR cross-border area) which main objective is improving the cooperation of all relevant stakeholders to jointly address the problem of energy poverty and increase the capacity and skills of all involved local and regional public institutions to reduce energy poverty in the HU-HR cross-border area.

One of project activities within project CO-EMEP which should be the starting point for other project activities is defining the concept and the term energy poverty for cross-border area so the main purpose of this document is to clarify the whole process of developing the definition of energy poverty for the HU-HR cross-border area within the CO-EMEP project. In order to proper define energy poverty, project partners ensured the cooperation with relevant experts in field of energy, social/legal welfare and local and regional government who contributed to the development of the definition and to the identification of the criteria for its definition.

The whole process of energy poverty definition development is clarified through five chapters and additional subchapters. The first step (elaborated within chapters 3 and 5) was to collect and analyze all available regulations and strategic documents regarding energy poverty and social welfare in order to explain how the legislative framework of the project partner countries is conceived and how the national, regional and local authorities of included countries address the problem of energy poverty. It can be seen that both countries developed and implemented some initiatives in order to tackle energy poverty but by now still didn't provide a clear definition of energy poverty in their national plans and strategic documents. Due to the lack of energy poverty definition at the national levels of the project partner countries, it can be concluded that project partners were free to identify and use those criteria to define energy poverty that they consider to be most relevant for the cross-border area. In one

point due to the complexity of the problem and the unavailability of most data project partners thought they would not find a definition that would be relevant for the whole cross-border area. Regardless, they managed to agree on a common definition of energy poverty.

Within chapter 4 project partners elaborated the whole social welfare system of their countries since current energy poverty policies are connected to social ones. Citizens in case when do not have enough means to cover their living needs, and are unable to provide them through work or income from property or other sources, they may be entitled to social welfare benefits. Access to clean and affordable energy is one of those need so every citizen have the right to have that. Croatia and Hungary need to develop a policy approach which will be able to support the transition from the current rising levels of energy poverty to a sustainable community with a greener and healthier future. Reducing energy poverty in Croatia and Hungary is part of on-going debates regarding policy interventions. Recognising the energy poverty phenomenon as a social or energy related issue is a key determinant of the type of policy measures that are put in place. The combination of suitable coverage of the policy interventions and targeting processes allows for households' energy needs to be met. While financial aids within social policy have a less distortive effect on competition and affect the most vulnerable consumers (such as low-income, single parents, unemployed, retired), they rely heavily on public expenditure. Mechanisms within energy policy (e.g. grants for energy-efficiency improvements, tax reductions for energy-saving investments) might better cover other policy areas related to environmental and health costs caused by living in inappropriate housing conditions.

For the purpose of developing a common definition, the project partners researched and presented the current state of energy poverty in Croatia and Hungary under chapter 6, where it was determined that there are several initiatives at the national level that are being implemented and planned to be implemented in the future to help the fight against energy poverty. Project partner agreed that only after identifying the total number of energy-poor citizens it is possible to define targeted energy poverty mitigation policies with positive effects on standard of living of energy poor citizens.

As mentioned before, during energy poverty definition development, project partners included relevant stakeholders from the field and ensured their cooperation through establishment of work groups and organization of work group meetings. The main purpose of these events was to ensure cooperation of work groups in identifying criteria to define energy poverty, then in defining the concept of energy poverty and in defining guidelines for local and regional government units to include measures to reduce energy poverty into future plans and strategic documents. The whole process of work group meetings organization as well as conclusions from each meeting are presented within chapter 7.

1. Sažetak

Energetsko siromaštvo je široko rasprostranjeni problem s kojim se susreću mnogi Europljani. Uzroci energetske siromaštva mogu biti višedimenzionalni, polazeći od niskih primanja, nekvalitetnih domova i energetske neučinkovitih uređaja. Problem je prepoznat i u Hrvatskoj i Mađarskoj te je dokazano da ove zemlje provode različite inicijative kako bi ublažile problem energetske siromaštva. Usvajanje sveobuhvatne politike ublažavanja energetske siromaštva bi rezultiralo nevjerojatnim koristima za energetske siromašne građane. Prvi korak u procesu uspostavljanja kvalitetne politike za ublažavanje energetske siromaštva je definiranje pojma energetske siromaštva. Energetsko siromaštvo prilično je složen koncept jer se njegova definicija može razlikovati ovisno o socijalnom, ekonomskom i geografskom kontekstu.

Energetsko siromaštvo je jedan od velikih izazova s kojim se mnogi građani svakodnevno suočavaju. Zbog složenosti, u njegovom rješavanju presudno je osigurati suradnju između širokog spektra stručnjaka koji imaju odgovarajuće znanje u rješavanju ovog problema. Projektni partneri prepoznali su postojanje energetske siromaštva u mađarsko-hrvatskom prekograničnom području, a kako taj problem nije ispravno riješen ni na nacionalnoj razini zemalja projektnih partnera niti na regionalnim i lokalnim, odlučili su razviti projektnu ideju (CO-EMEP – Pобољшanje suradnje za bolje upravljanje energijom i smanjenje energetske siromaštva u mađarsko-hrvatskom prekograničnom području) čiji je glavni cilj poboljšanje suradnje svih relevantnih dionika radi zajedničkog rješavanja problema energetske siromaštva i povećanje kapaciteta i vještina svih uključenih lokalnih i regionalnih javnih institucija na području smanjenja energetske siromaštva u mađarsko-hrvatskom prekograničnom području.

Jedna od projektnih aktivnosti projekta CO-EMEP koja bi trebala biti polazna točka za implementaciju ostalih projektnih aktivnosti je definiranje koncepta i pojma energetske siromaštva za prekogranično područje, pa je glavna svrha ovog dokumenta razjasniti cjelokupan proces izrade definicije energetske siromaštva za mađarsko-hrvatsko prekogranično područje u okviru projekta CO-EMEP. Kako bi pravilno definirali energetsko siromaštvo, projektni partneri su osigurali suradnju s relevantnim stručnjacima u području energetike, socijalne/pravne skrbi i lokalne i regionalne samouprave koji su pridonijeli razvoju definicije i utvrđivanju kriterija za njezino donošenje.

Čitav proces razvoja definicije energetske siromaštva pojašnjen je kroz pet poglavlja i dodatnih pod-poglavlja. Prvi korak (poglavlja 3 i 5) bio je prikupiti i analizirati sve relevantne zakonodavne akte i strateške dokumente koji se odnose na energetsko siromaštvo i socijalnu skrb kako bi se objasnilo kako je koncipiran zakonodavni okvir zemalja projektnih partnera i kako se nacionalne, regionalne i lokalne vlasti uključenih zemalja bave problemom energetske siromaštva. Može se vidjeti kako su obje zemlje do sada razvile i provodile nekoliko inicijativa u cilju suzbijanja energetske siromaštva, ali do sada još uvijek nije donesena jasna definiciju energetske siromaštva u nacionalnim planovima i strateškim dokumentima. Zbog nedostatka definicije energetske siromaštva na nacionalnim razinama zemalja projektnih partnera, može se zaključiti kako su projektni partneri bili slobodni identificirati i koristiti

one kriterije za definiranje energetske siromaštva za koje smatraju da su najrelevantniji za prekogranično područje. U jednom trenutku zbog složenosti problema i nedostupnosti većine podataka, projektni partneri su došli do potencijalnog zaključka da neće pronaći jedinstvenu definiciju koja bi bila relevantna za cijelo prekogranično područje. Bez obzira na to, uspjeli su se složiti oko zajedničke definicije energetske siromaštva.

Unutar poglavlja 4 projektni partneri su analizirali i pojasnili cjelokupni sustav socijalne skrbi zbog toga što su trenutne politike energetske siromaštva obiju zemalja integrirane sa socijalnim. Građani u slučaju kada nemaju dovoljno sredstava za pokrivanje životnih potreba te ih ne mogu zadovoljiti radom ili prihodom od imovine ili iz drugih izvora, mogu ostvariti pravo na socijalnu naknadu. Pristup čistoj i pristupačnoj energiji jedna je od potreba na koju svaki građanin ima pravo. Hrvatska i Mađarska moraju razviti odgovarajući politički okvir koji će moći podržati prijelaz na održivu zajednicu koju će karakterizirati zelena i zdrava budućnost. Smanjenje energetske siromaštva u Hrvatskoj i Mađarskoj dio je trenutnih rasprava na političkom nivou. Prepoznavanje fenomena energetske siromaštva kao socijalnog ili energetske pitanja ključna je odrednica za definiranje mjera. Kombinacija relevantnih aktivnosti na političkoj razini kao i ciljanih procesa omogućuje zadovoljavanje energetske potreba kućanstava. Iako financijska pomoć u okviru socijalne politike ima manje distorzivan učinak na konkurenciju i utječe na najugroženije skupine građana (poput siromašnih, samohranih roditelja, nezaposlenih, umirovljenika), ona se u velikoj mjeri oslanja na javne rashode. Mehanizmi unutar energetske politike (npr. bespovratna sredstva za poboljšanje energetske učinkovitosti, smanjenje poreza na ulaganja koja rezultiraju uštedama energije, itd.) mogli bi bolje pokriti druga politička područja koja se odnose na okoliš i zdravstvene troškove uzrokovane životom u neprikladnim stambenim uvjetima.

U svrhu izrade zajedničke definicije, projektni partneri su istražili i prikazali trenutno stanje energetske siromaštva u Hrvatskoj i Mađarskoj. U sklopu poglavlja 6 je utvrđeno da postoji nekoliko inicijativa na nacionalnoj razini koje se provode i planiraju se provoditi u svrhu smanjenja energetske siromaštva. Projektni partneri su se složili da je tek nakon identifikacije ukupnog broja energetske siromašnih građana moguće definirati ciljne politike ublažavanja energetske siromaštva s pozitivnim učincima na životni standard energetske siromašnih građana.

Kao što je već spomenuto, tijekom razvoja definicije energetske siromaštva, projektni partneri su uključivali relevantne stručnjake i osigurali njihovu suradnju kroz uspostavljanje radnih skupina i organizaciju sastanaka radnih skupina. Glavna svrha ovih događaja bila je osigurati suradnju relevantnih stručnjaka u procesu utvrđivanja kriterija za definiranje energetske siromaštva, u definiranju koncepta energetske siromaštva i u definiranju smjernica za jedinice lokalne i regionalne samouprave kako bi se mjere za smanjenje energetske siromaštva uključile u njihove buduće planove i strateške dokumente. Cjelokupni proces organizacije sastanaka radnih skupina kao i zaključci sa svih održanih sastanaka predstavljeni su u poglavlju 7 ovog dokumenta.

1. Absztrakt

Az energiaszegénység manapság egy széles körben elterjedt probléma, amellyel sok európai polgár szembesül és küzd meg nap mint nap. E jelenség okai rendkívül összetettek, ám főként az alacsony jövedelmekből, a rossz állapotban lévő lakóházakból és a nem energiahatékony berendezésekből, eszközökből fakadnak. A probléma meglétét Horvátországban és Magyarországon is egyaránt felismerték, melynek eredményeként a két ország különféle kezdeményezéseket indított az emberek energiaszegénységből való kiemelése érdekében. Ugyanakkor egy átfogó energiaszegénység-csökkentési politika elfogadása is hihetetlen előnyökkel járna az energiaszegénységgel küzdő polgárok számára. Ennek első lépéseként magának a fogalomnak a pontos meghatározására van szükség, azonban mivel ez meglehetősen összetett, meghatározása a társadalmi, gazdasági és földrajzi kontextustól függően változhat.

Az energiaszegénység egy olyan kihívás, amellyel rengeteg európai polgár szembesül a mindennapok során. Összetettsége miatt az energiaszegénységgel való küzdelemben elengedhetetlen a széleskörű együttműködés kialakítása azon szakemberek között, akik megfelelő ismeretekkel rendelkeznek a probléma területén. A projektpartnerek is felismerték az energiaszegénység meglétét a horvát-magyar határmenti térségben, és mivel sem országos, sem regionális és helyi szinten nem született megfelelő intézkedés e probléma megoldására, a partnerek úgy döntöttek, hogy megvalósítanak egy olyan projektet (CO-EMEP - A magyar-horvát határmenti terület energiaszegénységének csökkentése és a hatékonyabb energiamedzsment érdekében együttműködés kialakítása), amelynek fő célja a releváns érintett felek együttműködésének javítása, az energiaszegénység problémájának közös enyhítése, valamint az összes érintett helyi és regionális közintézmény kapacitásának és készségeinek növelése az energiaszegénység csökkentése érdekében a horvát-magyar határmenti térségben.

A CO-EMEP projekt egyik fő tevékenységként (amely a későbbi tevékenységek kiindulópontja is egyben), meghatározásra kerül az energiaszegénység fogalma a határon átnyúló térségben, így a dokumentum fő célja a fogalomkidolgozás menetének leírása. Az energiaszegénység pontos meghatározása érdekében a projektpartnerek együttműködést alakítottak ki az energetika, a szociális jóléti intézmények, valamint a helyi és regionális önkormányzatok releváns szakértőivel, akik hozzájárultak mind a definíció, mind a fogalmi kritériumok kidolgozásához.

Az energiaszegénység meghatározásának folyamata összesen öt fejezetben, és további alfejezetekben kerül bemutatásra. Az első lépés (a 3. és 5. fejezetben részletezve) a már meglévő jogszabályok és stratégiai dokumentumok összegyűjtése és elemzése volt az energiaszegénységgel és a szociális jóléttel kapcsolatban. Ennek eredményeképpen átfogó képet kaphattunk a két ország jogszabályi keretrendszeréről, illetve arról, hogy milyen mértékben foglalkoznak a nemzeti, regionális és helyi hatóságok az energiaszegénység problémájával. Látható, hogy mindkét ország kidolgozott és végrehajtott néhány kezdeményezést az energiaszegénység leküzdése érdekében, de nemzeti terveikben és stratégiai dokumentumaikban még mindig nem szerepel az energiaszegénység egyértelmű meghatározása. A definíció hiánya miatt a projektben résztvevő két ország esetében arra lehet következtetni, hogy a projektpartnerek szabadon meghatározhatták és

felhasználhatták azokat a kritériumokat az energiaszegénység meghatározásához, amelyeket a határon átnyúló térség számára a legrelevánsabbnak tartottak. A folyamat során egy ponton a probléma összetettsége és az adatok hiánya miatt a partnerség úgy vélte, hogy nem fognak tudni létrehozni olyan meghatározást, amely az egész határon átnyúló területre érvényes lehetne. Végül azonban sikerült megállapodniuk egy közös, mindkét térségre érvényes definícióban.

A 4. fejezetben a projektpartnerek áttekintették országaik teljes szociális jóléti rendszerét, mivel a jelenlegi energiaszegénységi politikák szorosan kapcsolódnak a szociális politikákhoz. A polgárok szociális ellátásra jogosultak abban az esetben, ha nem rendelkeznek elegendő anyagi forrással megélhetési szükségleteik fedezésére, vagy ha nem rendelkeznek munkaviszonnyal, vagyoni vagy egyéb jövedelemmel. A tiszta és megfizethető energiához való hozzáférés az egyik ilyen megélhetési szükséglet, amelyhez minden polgárnak joga van. Ennek tükrében Horvátországnak és Magyarországnak olyan politikai megközelítést kell kidolgoznia, amely képes lesz támogatni és elősegíteni az energiaszegénység jelenleg emelkedő szintjéről a zöldebb és egészségesebb jövőjű fenntartható közösség felé való átmenetet. Az energiaszegénység csökkentése Horvátországban és Magyarországon is már a politikai törekvések része. Az energiaszegénység társadalmi vagy energetikai kérdésként való elismerése kulcsfontosságú tényező a politikai intézkedésekben, melyek lehetővé tehetik a háztartások energiaigényeinek kielégítését. Míg a szociálpolitikán belüli pénzügyi támogatások kevésbé torzítják a versenyt és befolyásolják a legkiszolgáltatottabb fogyasztókat (például alacsony jövedelműek, egyedülálló szülők, munkanélküliek, nyugdíjasok), ez nagyban függ az állami kiadásoktól. Az energiapolitikán belüli mechanizmusok (például az energiahatékonyság javításához nyújtott támogatások, az energiatakarékossági beruházásokkal kapcsolatos adócsökkentés) jobban fedezhetik a nem megfelelő lakhatási körülmények között élés által okozott környezeti és egészségügyi költségekkel kapcsolatos egyéb szakpolitikai területeket.

A közös fogalom kidolgozása céljából a projektpartnerek meghatározták az energiaszegénység kockázatát és jelenlegi mértékét a két országban, és eredményeiket a 6. fejezetben ismertetik. Megállapítást nyert, hogy nemzeti szinten számos olyan kezdeményezés létezik, amelynek megvalósítása már folyamatban van, illetve tervezik a jövőre nézve. A projektpartnerek egyetértettek abban, hogy csak az energiaszegénységgel küzdő polgárok számának meghatározása után lehet olyan célzott energiaszegénység-csökkentő politikákat kidolgozni, amelyek pozitív hatással lennének a polgárok életszínvonalára.

Mint ahogy azt már korábban említettük, az energiaszegénység meghatározásának kidolgozása során a projektpartnerek bevonták a releváns érdekelt feleket is, és munkacsoportok felállításával, illetve munkacsoport találkozók megszervezésével biztosították együttműködésüket. Ezen események fő célja az volt, hogy közösen meghatározzák az energiaszegénység definícióját, annak kritériumait, illetve a helyi és regionális intézményeknek szóló iránymutatások kidolgozásába is bevontuk őket, akik így átfogó képet kapnak arról, hogyan foglalják bele az energiaszegénység csökkentését a jövőbeni terveikbe és stratégiai dokumentumaikba. A munkacsoport-találkozók szervezésének teljes folyamatát, valamint az egyes találkozók eredményeit a 7. fejezet tartalmazza.

2. Introduction

Energy poverty is a widespread problem across Europe, as between 50 and 125 million people are unable to afford proper indoor thermal and/or cooling comfort. In January 2019, European Energy Network issued a Position Paper on Energy Poverty in European Union where it is stated that the phenomenon is relevant for the European governance and policy strategy at different levels, having social, economic, political, environmental and health implications. Therefore, as a multidimensional problem it should be brought to the political scene of all European countries. By now only four European countries (France, Ireland, Slovakia and UK) have adopted an official definition for the same. Regardless of the fact that there is no official definition of energy poverty in many European countries, it has been recognized that households living in energy poverty spend an unreasonably high proportion of their income on energy and are unable to afford to meet basic energy needs.

There has been evidenced that there is no official definition of energy poverty concept nor in Croatia neither in Hungary even though the problem of the same has been identified. Furthermore, local and regional governments in the HU-HR cross-border area have the legal obligation to develop various energy efficiency and sustainable energy and climate action plans where they have to neglect the energy poverty problem. Although there is a legal obligation to develop documents that need to neglect this problem, practice shows that a relatively small number of local and regional governments in the cross-border area include energy poverty mitigation measures and activities in their planning and strategic documents. This presents the starting point in implementation of project **CO-EMEP – Improvement of cooperation for better energy management and reduction of energy poverty in HU-HR cross-border area** whose objective is to extend the cooperation of relevant range of stakeholders including also new actors when it comes to the problem of energy poverty and raise capacity and skills of the involved local and regional public institutions on the HU-HR cross-border area. The cross-border area that is affected by the project is Medjmurje County in Croatia and Zala County in Hungary, but it is planned to disseminate the project results outside the named regions. The most important activity and the output of the project and the starting point to all other relevant project outputs is the development of energy poverty definition in the HU-HR cross-border area.

Project partners within project CO-EMEP agreed on close cooperation in tackling energy poverty problem and development of energy poverty definition which will merge three most important drivers, which are **household income**, **energy cost** and **quality of home**. These three drivers build upon each other: low incomes make it hard to pay energy bills, increasing prices compound those income constraints and limit the funds available to live in energy efficient homes or upgrade to energy efficient appliances, resulting in wasteful use of costly energy.

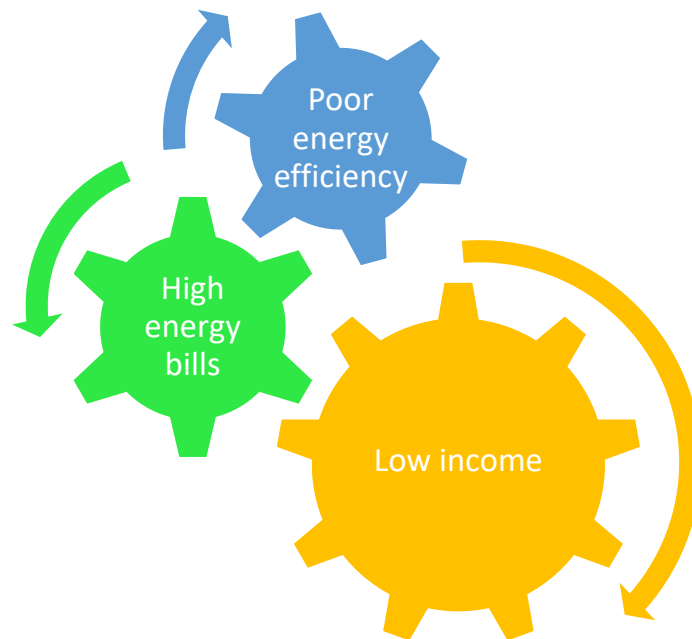


Figure 2.1 Key drivers of energy poverty

The main idea of this document is to elaborate the whole process of energy poverty definition for cross-border area development and also presenting it to project target groups. While developing the applicable definition for cross-border area, project partners included relevant stakeholders from both sides of the border who deal with energy poverty on daily basis and have tackled the problem on many levels, from European, to national, regional and local. Since estimating the extend of energy poverty with perfect precision is impossible, that should not be a distraction from the fact that it is a serious problem.

Without national guidelines, local and regional authorities are left to their own capacities in the process of identifying the precise number of energy-poor households. This realization led the project partners to work together to address the problem of energy poverty and at least partially provide support to local and regional government units in order to raise awareness of the problem in their administrative area and thus energy poverty mitigation activities make part of their strategic and planning documents. Through series of work group meetings with relevant stakeholders on both sides of the border and based on their own research, project partners agreed on common energy poverty definition which will be further elaborated in the following chapters of the document.

The definition of energy poor households in cross-border area is essential for targeting energy poverty mitigation policies which should be tailored to local contexts, in terms of climate, housing quality and the structure of energy costs.

3. Regulations and strategic documents regarding energy poverty

Addressing energy poverty has become a central policy priority for the European Union (EU). Through the years, EU adopted a series of packages which feature numerous policies and measures to monitor and address energy poverty which implementation will directly influence the improvements to the lives of million Europeans and boost climate change mitigation policies. Work commissioned by the EU has defined energy poverty as a set of conditions where individuals or households are not able to adequately heat or provide other required energy services in their homes at affordable cost.

Growing number of EU Member States have official definitions of energy poverty as well as supporting national policy frameworks to address the issue and acknowledge the scale of this socio-economic situation and its negative impact translated into severe health issues and social isolation. In the process of defining energy poverty, most countries adhere to the guidelines prescribed by the EU which is the case with Hungary and Croatia where energy poverty has been neglected as a problem whereas national energy poverty mitigation policies are based on the ones developed at EU level.

3.1. The influence of European Union regulations on legal framework of Croatia and Hungary in field of energy poverty

Energy poverty is very important topic which is brought to the political scene of EU and accordingly became recognizable as strategic commitment of many European countries. There is no unified global or European definition for the term energy poverty. It has different meanings depending on place and context of using it. However, the EU Member States (MS) have the obligation to assess the number of households in energy poverty due to the Regulation on the governance of the energy union and climate action.

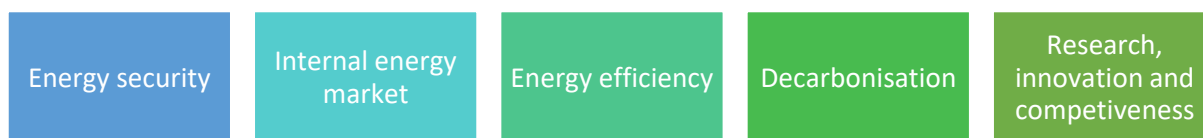


Figure 3.1 Key dimensions of EU energy policy

The terms of energy poverty and vulnerability have officially been presented and brought into mainstream of EU energy policy after the Lisbon Treaty, international agreement which was signed by EU MS on 13th of December 2007 and entered into the force on 1st of December 2009. The Lisbon Treaty was the main driving force in developing the Third Energy Package (TEP) which aims at improving the functioning of the internal energy market and resolving certain structural problems. TEP defined the following legal requirement to protect vulnerable consumers in energy markets (Directives concerning common rules for the internal market in natural gas

(2009/73/EC) and electricity (2009/72/EC)) which MS should meet within their legal framework:

- take appropriate measures to protect final customers;
- ensure that there are adequate safe guards to protect vulnerable customers;
- define the concept of vulnerable customers which may refer to energy poverty and to the prohibition of disconnection of electricity (gas) to such customers in critical times;
- ensure that rights and obligations linked to vulnerable customers are applied;
- take measures to protect final customers in remote areas.

The term of energy poverty is recognized in two, i.e., four key EU energy efficiency directives: Energy Performance of Buildings Directive 2010/31/EU (EPBD) and Directive amending the Energy Performance of Buildings Directive 2018/844/EU which requires that relevant actions to mitigate energy poverty have to be outlined in the national renovation strategies and also the Energy Efficiency Directive 2012/27/EU and Directive amending Directive 2012/27/EU on energy efficiency 2018/2002/EU that requires a share of measures to be implemented amongst vulnerable households, including those affected by energy poverty.

Finally, the role of renewable energy to help fight energy poverty through reduced consumption and lower supply tariffs has been recognized in the Renewable Energy Directive 2009/28/EU and Directive (EU) 2018/2001 on the promotion of the use of energy from renewable sources. Many MSs had to take action to address the issue of energy poverty at their national level by developing national action plans and other appropriate documents to tackle energy poverty, aiming at decreasing the number of people suffering such situation. Also, they should ensure the necessary energy supply for vulnerable consumers.

EU policies create a framework to shape MS approaches to energy poverty so every MS had to develop a framework regarding energy poverty in line with country actual needs. It is important to have in mind that the diversity of European national contexts considerably complicates the global understanding of the phenomenon of energy poverty. However, this global understanding is a key element of an effective fight against this problem. Hungary and Croatia as members of EU from 2004 and 2013 harmonized their legal framework and follow the EU policy in the area of energy poverty, so Croatian and Hungarian regulations and strategic documents regarding energy poverty are mainly based on EU energy poverty policies.

European Economic and Social Committee shared in 2013 an opinion on issue of energy poverty named “For coordinated European measures to prevent and combat energy poverty” and stated that energy security and solidarity commitment should be the key drivers in development of European policy for combating energy poverty and encouraging solidarity based on the recognition of a universal right of access to energy. Accordingly, the main aims of such policy should be following:

- to protect individuals from energy poverty and prevent their social exclusion;

- to take action to reduce the factors of structural vulnerability (by guaranteeing basic access to energy at reasonable and stable prices);
- to encourage everyone to assume responsibility for using sustainable and renewable energy resources (and ensuring the transition to a low-carbon society).

In the recent years, the seriousness of the problem of energy poverty has clearly attracted an extensive amount of scientific attention and advocacy work, calling for urgent action at EU and MS level. Although the EU has not adopted a comprehensive definition of energy poverty and energy vulnerable consumers, it has adopted a wide range of provisions to trigger and steer MS action in these fields. The EU approach requires from MS to adopt a comprehensive strategy, including energy and non-energy measures, to address the root causes of energy poverty and to alleviate the condition of energy poor and vulnerable consumers.

One very important initiative which is also focused on the issue of energy poverty is Covenant of Mayors. The Covenant of Mayors was launched in 2008 in Europe with the ambition to gather local governments voluntarily committed to achieving and exceeding the EU climate and energy targets. When officially joining the Covenant of Mayors, signatories commit to developing a **Sustainable Energy Action Plans** (SEAP) within two years. Many Croatian local governments (cities/towns, municipalities) joint the initiative and developed SEAP. SEAP is a key document that shows how the Covenant signatory will reach its commitment by 2020. It uses the results of the Baseline Emission Inventory to identify the best fields of action and opportunities for reaching the local authority's CO₂ reduction target. It defines concrete reduction measures, together with time frames and assigned responsibilities, which translate the long-term strategy into action. In 2014 The European Commission launched the Mayors Adapt initiative. Based on the same principles as the Covenant of Mayors, this sister initiative was focusing on adaptation to climate change. Mayors Adapt invited local governments to demonstrate leadership in adaptation, and was supporting them in the development and implementation of local adaptation strategies. In 2015 these two initiatives officially merged into new initiative The Covenant of Mayors for Climate and Energy. The signatories of the new initiative commit to developing a **Sustainable Energy and Climate Action Plans** (SECAP). SECAP is the key document that shows how signatories of Covenant of Mayors on Climate and Energy will reach its commitments by 2030 and defines concrete measures for both climate mitigation and adaptation, with timeframes and assigned responsibilities, translating the long-term strategy into action. A large number of Croatian local government units joined the initiative Covenant of Mayors for Climate and Energy and developed SECAPs for their administrative area. The development of SECAPs contributes to the energy transition which has long become a reality all over the world. The energy transition has become a global phenomenon affecting energy supply structures and the way citizens and companies can contribute to rapid decarbonization. The Global Covenant of Mayors for Climate and Energy, including all its global regions, has developed a new global Common Reporting Framework that integrates mitigation

and adaptation planning, monitoring and reporting in a single format and introduces a third area which deals with the issue of energy poverty which includes ensuring reliable access to safe, affordable and sustainable energy. In the near future, all signatories of the Covenant of Mayors for Climate and Energy will be obliged to define activities that address the issue of providing fair access to safe, affordable and sustainable energy, i.e., avoiding energy poverty. In the context of the development of SEAPs and later SECAPs, cities and regions are invited to identify the presence of energy poverty and, where relevant, to draw up a strategy to address the problem, identifying who is affected and what activities will be taken to help them. In order to facilitate the work of the signatories towards the integration of activities related to energy poverty, the following three questions should be answered¹:

1. Energy Poverty Assessment: Is my municipality/city affected by energy poverty?
2. Identifying vulnerable citizens: Who are the most vulnerable citizens in my municipality?
3. Designing activities: How can I create effective activities related to energy poverty?

3.2. Basic principles of regulating energy sector in Hungary and Croatia

Challenges in energy sector which Europe is facing include issues such as increasing import dependency, limited diversification, high and volatile energy prices, growing global energy demand, security risks affecting producing and transit countries, the growing threats of climate change, slow progress in energy efficiency, challenges posed by the increasing share of renewables, further integration and interconnection on energy markets.

These are all the challenges which Croatian and Hungarian governments are facing as well and which affect access to cleaner and affordable energy and consequently the fight against energy poverty. There is often a two-way relationship between the lack of access to adequate and affordable energy services and energy poverty. The relationship can be described as a cycle in which people who lack access to cleaner and affordable energy are often trapped in a re-enforcing cycle of deprivation, lower incomes and the means to improve their living conditions while at the same time using significant amounts of their very limited income on expensive and unhealthy forms of energy that provide poor and/or unsafe services. Access to cleaner and affordable energy options is essential for improving the livelihoods of the poor in developing countries. The lack of modern and affordable forms of energy affects economic productivity, time budgets, opportunities for income generation, and more generally the ability to improve living conditions.

¹ [1]

Accordingly, it could be concluded that sustainable economic growth is an essential prerequisite for overcoming energy poverty so every country should improve the access to cleaner and modern forms of energy and the services that they provide.

3.2.1. Hungary

Hungary as a country is poor in fossil fuel resources, but at the same time close to 90% of its total primary energy supply comes from fossil fuel and nuclear sources. Regardless, dependence on external fossil fuel and non-renewable resources is one of the most important issues facing energy and climate policy-makers. The most important goals of Hungarian energy policy are:

- the provision of affordable energy;
- long-term sustainability;
- supply security
- and economic competitiveness.

Special emphasis is placed on tackling the energy dependency of the country by means of energy savings; increasing the share of renewable energy sources; safe nuclear energy and the electrification of transport based on this; creating a bipolar agriculture (food production and energy-geared biomass production) and better integration to the European energy infrastructures.

In the context of energy saving and efficiency, the main focus is put on the household sector and the building stock. However, during the last few years, relevant policy support has been volatile (e.g., relevant policies had been announced and then re-called), sporadic, short-term with resources running out in days, and actual incentives have targeted the public rather than the household sector.

The competent institution to carry most tasks related to energy, i.e., energy poverty is The Ministry of Innovation and Technology (MIT). The fields of work covered by MIT are listed in the Figure 3.2.

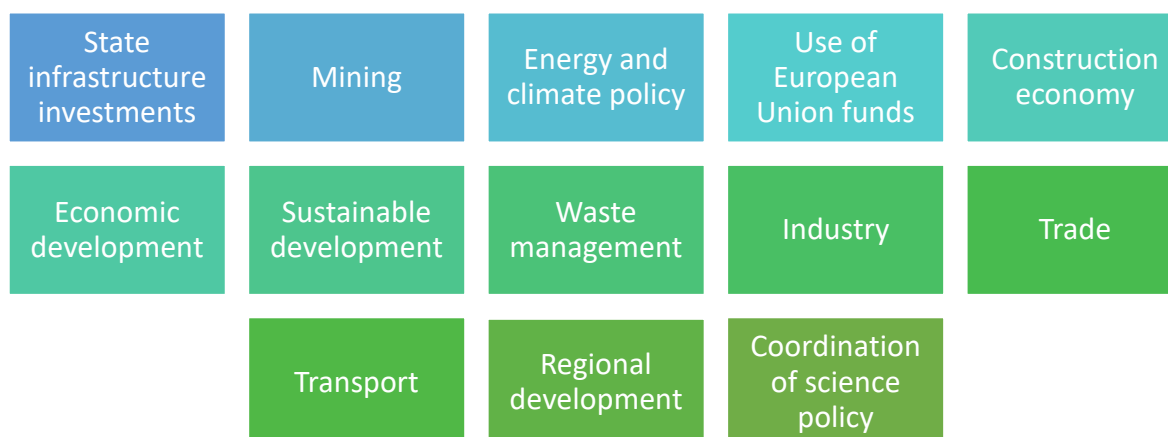


Figure 3.2 MIT fields of work

Within the scope of the responsibility for energy and climate policy, the minister establishes strategic conditions for sustainable economic development, energy efficiency and energy management, and drafts legislation relating to climate policy. Within the scope of his responsibility for industry, the minister draws up decisions supporting the spread of electromobility in Hungary, carries out tasks concerning the allocation and settlement of European GHG emission allowances in relation to the emissions trading scheme of the European Union, the operation of the emissions trading scheme, and arranges for their execution.

The process of regulating energy sector in Hungary is defined through National Energy Strategy 2030, Second National Climate Change Strategy, Renewable energy directive and National Energy and Climate Plan. [The National Energy Strategy](#) ensures the long-term sustainability, security and economic competitiveness of the domestic energy supply. Serving primary national interests, guaranteeing the security of supply, taking into account the least cost principle and asserting environmental considerations, it enables Hungary to contribute to resolving global issues to an extent proportionate to its international weight and as far as its resources allow. In order to achieve Hungarian goals, the document lays down five crucial efforts: increasing energy savings and energy efficiency, increasing the share of renewable energies, integrating the Central European grid network and constructing the required cross-border capacities, maintaining the existing nuclear capacities and utilizing the domestic coal and lignite resources in an eco-friendly manner for power generation.

In the process of development of the [Second National Climate Change Strategy](#) for the period 2018-2030, the goal was to create a national climate change strategy that sets objectives to address the long-term effects of climate change. This can be done in two ways. In line with international efforts, Hungary must reduce their greenhouse gas emissions and increase their carbon absorption capacity. These steps will contribute to an international cooperation regarding climate protection, which, if successfully implemented, will reduce long-term atmospheric concentrations of greenhouse gases, leading to a further reduction in the rate of global atmospheric temperature rise. In addition to reducing CO₂ emissions and increasing the absorption capacity, an objective assessment of the effects on the country's territory is also required. Adapting to the adverse effects of climate change is of national interest, given that climate change is still a measurable process that continues further. Pursuant to the Renewable energy directive, the mandatory share of renewable energy sources should have reached 13 % in the gross final energy consumption by 2020, but Hungary has voluntarily increased this value to 14.65 % in [the Renewable Energy Action Plan](#). During the current budgetary period of the EU, several operational programmes were launched in Hungary to support the environment, and climate and renewable energy sources, with a development budget of HUF 760 billion. The Government of Hungary considers the guarantee of energy supply, and as such, the security of the supply of natural gas to be a top priority. Hungary operates an adequate gas infrastructure to satisfy the stagnant, moderately declining rate of natural gas consumption. As a result of regulatory changes and infrastructure investments implemented in the past decade, a diversified supply model has evolved on the basis of multiple sources of supply.

At the end of November 2016, the European Commission published the so-called “Clean Energy for All Europeans” package, and called on the MSs to develop a National Energy and Climate Plan (NECP) in addition to several new climate and energy policy proposals, using a common methodology and creating a uniform content. According to the Commission, the NECP can be based on existing climate and energy strategies and action plans, but only if they are compatible with the EU's climate and energy policy goals up to 2030 and the greenhouse gas emission obligations arising from the Paris Agreement. Integrated planning involves the following dimensions of the Energy Union: decarbonization, energy efficiency, energy security, internal energy market, research, innovation and competitiveness. The main objectives of the new Energy Strategy and the National Energy and Climate Plan are to strengthen energy sovereignty and energy security, to maintain the results of utility cost reductions, and to decarbonize energy production. The realization of these goals is only possible through the combined use of nuclear and renewable energy. For countries poor in traditional energy sources, such as Hungary, energy sovereignty is a matter of prosperity, economy and national security.

The problem of energy poverty should be recognized on all levels including local and regional. According Multi-level governance and cross-sectoral cooperation to fight energy poverty, the opinion published by European Committee of the Regions in 2019, local and regional authorities are on the front line in the complex fight against energy poverty, as they can identify the citizens affected and pinpoint the specific causes of the problem and provide directly practical advice and guidance to citizens. They have key powers in relation to energy efficiency and energy production policy, through their own energy companies, housing associations, cooperation with the private sector, project funding, guidance, etc.

3.2.2. Croatia

Croatia has around four million inhabitants and rich potential for renewable energy and energy efficiency. By regulating energy sector national bodies seek to address “market failure” to deliver desired goods and to protect consumers, society and the environment. The primary driver for regulation infrastructure sectors (public service sectors) such as energy is generally to ensure proper competition and to prevent the growth of a dominant group or single utility services. In the following figure we can see the main motives for regulating energy markets.



Figure 3.3 Motives for regulation competitive energy markets²

² [8]

The energy sector in Croatia is regulated by a large number of acts and bylaws. Most acts in this area have been amended several times in recent years in order for national legislation to be harmonized with the EU acquis. The energy sector is one of the most important drivers of overall national economy. All efforts made in the development of this sector guarantee that the key role of energy for the development of Croatia in the future will be even greater. That is why the Croatian Government and the Ministry of Economy and Sustainable Development pay special attention to the development of the energy sector in Croatia.

The reform of energy sector in the Republic of Croatia began in July 2001, when a number of energy related acts was passed by the Croatian Parliament to implement the First Energy Package. By these acts the basic legislative framework for restructuring and reorganization of the energy sector was established. At the end of 2004, the Second Energy Package was implemented through the adoption of new energy related acts: amendment of Energy Act, the new Electricity Market Act and Act on the Regulation of Energy Activities and Production, Distribution and Supply of Heat Energy Act (it's no longer in force). As part of the process of harmonization of the Croatian legal framework with the Third Energy Package, in 2013 a new Electricity Market Act was adopted and, immediately after that, the new Gas Market Act. Due to the process of harmonization with EU rules, the new Energy Efficiency Act and the new Heat Energy Market Act were adopted. After the publication of the new energy package "Clean energy for all Europeans in 2016", Croatia started to align its national legislation with new European targets defined within this package.

The main act in regulating energy sector in Croatia is [Act on the Regulation of Energy Activities](#) (OG 120/12, 68/18) which regulates the establishment and implementation of the system for the regulation energy activities, the procedure for establishing the energy regulatory body and other matters of importance for the regulation of energy activities. Due to the Act on the Regulation of Energy Activities, the basic goals of the regulating energy activities are as follows:

- to ensure objectivity, transparency and non-discrimination in the carrying out of energy activities;
- to look after the implementation of the principle of regulated access to the network/system;
- to set the methodology for determination of tariff elements of tariff systems;
- to establish an energy efficient market and market competition;
- to protect energy customers and energy undertakings.

Regulation of energy activities in Croatia shall promote efficient and rational use of energy, entrepreneurship in the energy sector, investment in the energy sector and environmental protection. Regulation of energy activities shall be established in order to implement a system of regulated operation of energy undertakings in carrying out of energy activities, and especially those energy activities which are performed as public services and are in the public interest on the one hand, and in order to establish and

regulate the energy market on the other hand, all pursuant to the provisions of the **Energy Act** (OG 120/12, 14/14, 95/15, 102/15, 68/18) and bylaws regulating individual energy activities³.

The energy regulatory body in Croatia is The Croatian Energy Regulatory Agency (CERA) founded as an autonomous, independent and non-profit public institution who regulates energy activities, i.e., energy sector in Croatia. The founder of CERA is the Republic of Croatia and the founding rights are exercised by the Croatian Government. CERA is responsible for its work to the Croatian Parliament.

The Croatian energy policy and strategy are focused on the EU goals in terms of reducing greenhouse gas (GHG) emissions, increasing the share of renewable energy sources (RES), energy efficiency, security and quality of supply and development of the EU internal energy market, as well as available resources, energy infrastructure and competitiveness of the economy and energy sector. In the following table we can see the key EU energy targets which should be achieved till end of 2020 and 2030 and according to whom Croatia has to adapt while amending existing regulations.

Table 3.1 A comparison of key energy goals for 2020 and 2030

	Reduction of GHG emissions	Renewable energy sources	Energy efficiency	Interconnection
2020	20%	20%	20%	10%
2030	≥ 40%	≥ 32%	≥ 32,5%	14%

Due to new defined EU targets regarding energy transition to low-carbon in the following years some mayor changes in Croatian energy sector are expected. **The Energy Development Strategy of the Republic of Croatia until 2030, with a view to 2050** represents a step towards achieving the vision of low-carbon energy and ensures the transition to a new period of energy policy that ensures affordable, secure and quality energy supply without additional burdens on the state budget within state aid and incentives. The process of energy transition will be capital intensive, without incentive measures in terms of state aid, but with the expected greater involvement of the private sector/capital in financing renewable energy sources projects. The development of the Croatian energy sector in the future has to be adjusted according to global requirements in the context of climate change mitigation. Therefore, among other things, the Strategy represents the contribution of the Republic of Croatia to global climate change mitigation process. The energy transition cannot be achieved in isolation, so it is necessary to continue working on the goals of global reduction of CO₂ and other GHG emissions and to support the commitment of the EU to a single climate and energy policy.

³ [2]

3.3. Hungarian regulations and strategic documents regarding energy poverty

Due to its relatively small size and Hungary's highly centralised governance structure, most of the regulations with an impact on energy poverty can be found on the national level.

As outlined earlier, these feed into the European policy framework. In line with the European Union's goals and directives Hungary has three main strategies and action plans: the National Energy Strategy 2030, the Second National Climate Change Strategy and the National Energy and Climate Plan. These documents focus on increasing the security of supply, boosting economic competitiveness and decarbonising the economy. Since their adoption, already some tangible results have been achieved. National energy security has been increased by the installation of a number of new cross-border connections for both power and gas. The following table summarises the relevant national legislations.

Table 3.2 Hungarian national regulations

Act LVII of 2015	on Energy Efficiency
Government Decree No. 122/2015. (V. 26.)	on the Implementation of the Energy Efficiency Act
TNM Decree No. 7/2006. (V. 24.)	on the Determination of the Energy Specifications of Buildings
Government Decision No. 1849/2014. (XII. 30.)	on Energy-efficient Procurement
Act LXXXVI of 2007	on electricity
NFM Decree No. 25/2015. (V. 26.)	on informing energy consumers and market participants concerning energy efficiency
Act XVIII of 2005	on District Heating Services
Act XL of 2008	on Natural Gas Supply
Government Decree No. 189/1998. (XI. 23.)	on Central Heating and Hot Water Services
Government Decree No. 382/2007. (XII. 23.)	on the Procedures of the Authority Licensing Construction in the Electricity Sector
Government Decree No. 31/2014. (II. 12.)	on the Procedures of the Authorities Responsible for Licensing of Industrial Specific Constructions
Government Decree No. 210/2018. (XI. 20.)	on the Energy Labelling and Product Information of Products that Affect Energy Consumption

MEKH Decree No. 1/2014. (III. 4.)	on the Rate of the Administrative Service Fees of the Hungarian Energy and Public Utility Regulatory Authority and the Rules of Collection, Management, Registration and Refunding of the Administrative Service and Supervision Fees and Other Revenues
Government Decision No. 1601/2015. (IX.8.)	on Hungary's Third National Energy Efficiency Action Plan
Government Decision No. 1602/2015. (IX. 8.)	on Climate and Energy Awareness Raising Action Plan
OGY Decision No. 77/2011. (X. 14.)	on The National Energy Strategy
OGY Decision No. 23/2018. (X. 31.)	on the Second National Climate Change Strategy
	Hungary's National Energy and Climate Plan
to be prepared by the end of 2021	National Clean Development Strategy
OGY Decision No. 18/2013. (III. 28.)	on the National Framework Strategy on Sustainable Development
Government Decision No. 1073/2015. (II. 25.)	on the National Building Energy Performance Strategy
under preparation	Long-term Building Renovation Strategy

With respect to tackling energy poverty, local and regional (i.e., county-level) regulations have a very limited scope. The term “energy poverty” is not specifically mentioned in any of them, although a number of social measures do exist (e.g., provision of free fire wood for poor families).

3.4. Croatian regulations and strategic documents regarding energy poverty

In order to tackle energy poverty, this problem should be carried out at the national as well as at the regional or local levels in order to pay attention to the variations in socio-economic and ecological factors of a region which influence the success of any intervention in tackling energy poverty. Croatian regulations in regulating energy poverty are acts and relevant bylaws such as regulations, ordinances, decisions and rules.

For the first time, the concept and the status of vulnerable customer in Croatia was defined in the **Energy Act** (OG 120/12, 14/14, 95/15, 102/15, 68/18) following by the **Electricity Market Act** (OG 22/13, 95/15, 102/15, 68/18, 52/19) and the **Gas Market Act** (OG 18/18, 23/20). In the Energy Act, vulnerable consumer is defined as an energy final consumer from household category who, because of its social status and/or health

conditions, is entitled to energy supply under special conditions. Energy Act also stipulates the obligation in adopting the Regulation on criteria for achieving the status of vulnerable consumer (OG 95/15) which was adopted in September 2015. With this regulation the problem of energy poverty was positioned in the domain of social policy and thus equated with economic poverty. Regulation determines the criteria for acquiring the status of vulnerable consumer of energy from networked systems and the method of raising funds in order to ensure the supply of energy to vulnerable consumers through social support. Electricity Market Act and Gas Market Act prescribe the establishment and maintenance of the register of vulnerable customers. The register must contain the type of preferential treatment of the vulnerable consumer and the special rights that that buyer has in the status of vulnerable consumer. All above analyzed acts don't mention energy poverty as European Directives suggest, i.e., they don't define the status of vulnerable consumer with the help of energy poverty. Defining the term energy poverty instead of vulnerable consumer, would enable better identification of measures to mitigate the social consequences of new acts and lay down the foundations for measures that would have both social and environmental effects (the renovation of residential buildings of vulnerable consumers will result with increased energy efficiency, which at the same time will reduce the costs for energy and GHG emissions). Energy Efficiency Act (OG 127/14, 116/18, 25/20) was first enacted by Croatian Government in 2014. Energy Efficiency Act regulates the area of efficient energy use and development of plans at local, regional as well as national level to improve energy efficiency and their implementation. The main purpose of Energy Efficiency Act is to achieve the goals of sustainable energy development, to reduce the negative environmental impacts from the energy sector, improve energy security, meet the needs of energy consumers and meet the international obligations of Croatia in the field of reducing GHG emissions by stimulating energy efficiency measures in all areas of energy consumption. private sector, project funding, guidance, etc. According to Energy Efficiency Act regional government units have the obligation to develop Energy Efficiency Action Plans for three-year period and Annual Energy Efficiency Plans. Energy efficiency annual and three-year plans are more systematic presentation of energy efficiency measures prepared in accordance with the Energy Development Strategy, the fourth NEEAP, the Energy Efficiency Act and other relevant regulations. The main purpose of development of the three-year Energy Efficiency Action Plan and Annual Energy Efficiency Plans is to determine guidelines for the implementation of energy efficiency improvement policy through the realization of energy savings and respecting the energy needs of the region and the principles of sustainability and environmental protection.

In addition to acts, the national strategies play a huge role in tackling and combating energy poverty. The strategies which contain some references to energy poverty are Energy Development Strategy of the Republic of Croatia until 2030 with an outlook to 2050 (Energy Development Strategy), Low-carbon Development Strategy of the Republic of Croatia until 2030 with an outlook at 2050 (Low-carbon Development Strategy) and Long-Term Strategy for Mobilizing Investment in

Renovation of the National Building Stock of the Republic of Croatia (Long-term Renovation Strategy). These strategies are fundamental documents in the field of energy, energy refurbishment and climate change mitigation as well as in economic, development and environment field. In the Energy Development Strategy is stated that due to high investments that can pose a significant challenge for certain parts of the economy, it is necessary to link programs for the implementation of certain energy policy measures and the application of new technical and technological solutions with measures to reduce energy poverty. In this sense, it is necessary to develop, adopt and implement a comprehensive Energy Poverty Reduction Program, which will have the following components:

- a unique model for covering energy costs for energy-poor households;
- energy consulting for energy-poor households;
- energy refurbishment and energy efficiency improvement measures in energy-poor households.

Combining these three components of the Energy Poverty Reduction Program will enable a lasting reduction in energy costs in energy-poor households, improve their living conditions and reduce the allocations needed to provide assistance to such households. Energy Development Strategy promotes increasement of energy efficiency which will result in achievement of environmental benefits, reduction of GHG emissions, improved energy security, reduction of energy costs and ultimately combating energy poverty. This will lead to greater competitiveness, increased employment and increased economic activity, which will improve the quality of life of all citizens.

The constant increasement of energy prices for end consumers has a negative impact on citizens' personal consumption, but further encourages the implementation of energy efficiency measures and the development of small integrated photovoltaic systems for their own consumption. In order to solve this problem, in the Low-carbon Development Strategy it is stated that it is necessary to identify energy-intensive industry sensitive to rising energy prices and vulnerable energy consumers (energy poverty) and to develop programs to reduce the burden and strengthen resilience for industry and vulnerable consumers. The focus of the measures should be on the application of energy efficiency measures and usage of renewable energy sources for own consumption, in order to reduce the sensitivity to market prices. Renovating the building stock in Croatia is crucial in reducing energy poverty. According to Article 4 of the Directive 2012/27/EU on energy efficiency, amending Directives 2009/125/EC and 2010/30/EU and repealing Directives 2004/8/EC and 2006/32/EC (Directive 2012/27/EU) all MS are required to prepare their Long-Term Strategy for Mobilizing Investment in the Renovation of the National Building Stock (Long-term Renovation Strategy) and submit it to the European Commission. In June 2014, the Croatian Government passed the Decision on the adoption of the Long-Term Strategy for Mobilizing Investment in the Renovation of the National Building Stock of the Republic of Croatia.

While the above mentioned strategies deal with energy poverty, Sustainable Development Strategy of the Republic of Croatia deals with poverty in general and encourages the need to fight against poverty and social exclusion through the implementation of action plans and the introduction of EU social policy objectives into national policy through the participation of state administration bodies, regional and local government units, social partners, civil society organizations, scientific and professional institutions, social welfare institutions and the media. Energy Efficiency Act prescribes development of **National Energy Efficiency Action Plans (NEEAP)**. NEEAP is a comprehensive implementation document which defines the national energy efficiency policy for the three-year period and at the same time contains an assessment of the planned and achieved energy savings resulted from energy efficiency and renewable energy sources measures. In year 2014 according to NEEAP, Croatian Government enacted the **Programme of energy renovation of family homes 2014-2020** (Energy Renovation Programme) where it is stated that energy poverty is one of Croatia's growing problems which is a consequence of increases of energy prices, and, though there is still no clear definition, its existence is shown in the inability of many citizens to maintain adequate heating in their homes. It is recommended that the Ministry of Social Politics and Youth, as well as social welfare institutions become more involved in carrying out and co-financing measures for the most vulnerable citizens and in this way contribute to a solution to the problem of energy poverty with which a long-term reduction in state subsidies for energy expenses for the socially vulnerable citizens can be secured. Additionally, Energy Renovation Programme states that in carrying out these measures, local administrative units, together with social welfare institutions and competent bodies should provide additional funding for the socially vulnerable citizens, of up to 85% of the total investment expenses⁴.

Energy Renovation Programme was updated in May 2020 by giving special attention to energy poverty, i.e., by targeting vulnerable groups of citizens at risk of energy poverty. Energy Renovation Programme defines the publication of a public call for energy refurbishment of family houses for vulnerable groups of citizens at risk of energy poverty and sets out the eligibility criteria for applying to the public call. The aim of this part of the Energy Renovation Programme is to contribute to meeting the requirements of EU directives in a way that targets the most vulnerable group of citizens. In this sense, this part of the Energy Renovation Programme is a pilot project to combat energy poverty, which needs to be upgraded and expanded in the next period, in accordance with the future comprehensive definition of energy poverty and energy poverty measures. In this context, the basic criterion for participation in this part of the Programme is that the owner of the family house or a member of the household residing in the family house is a beneficiary of the guaranteed minimum fee. In June 2020, the Environmental Protection and Energy Efficiency Fund opened the public call for owners and co-owners of family houses in energy class D or lower, with a specific line of funding for vulnerable groups of citizens at risk of energy poverty. By adding social criteria social welfare centers were able to coordinate energy certifiers and help

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the most vulnerable citizens apply for funding. For the citizens who are at risk of energy poverty, renovation of their family houses is fully funded by the Fund for Environmental Protection and Energy Efficiency. An additional HRK 32 million was allocated for this purpose.

The Integrated National Energy and Climate Plan for the Republic of Croatia for the period 2021-2030 (INECP) builds on existing national strategies and plans. It provides an overview of the current state of energy sector and the energy and climate policy. It also provides an overview of the national targets for each of the five key dimensions of the EU and the appropriate policies and measures to achieve those targets, for which an analytical basis should be established. In the INECP, particular attention should be paid to the targets to be achieved by 2030, which include the reduction in GHG emissions, energy from renewable energy sources, energy efficiency and electricity interconnection. INECP also supports development of the Energy Poverty Reduction Program (EP Reduction Program) within the framework of which a model of support to affected households will be developed in order to combat energy poverty. According to INECP, EP Reduction Program should include measures to eliminate energy poverty with the following goals:

- provide energy consulting for all energy-poor citizens of the Republic of Croatia;
- establish a system of measuring and monitoring energy poverty indicators at the national level;
- establish a system of increasing energy efficiency at the level of energy-poor households and households at risk of energy poverty.

4. Overview of social welfare system and institutions dealing with socially vulnerable citizens in Hungary and Croatia

Croatia and Hungary, as welfare European countries, assure the right to assistance to all its citizens under the same conditions. Social welfare system includes a series of benefits and services aimed at securing subsistence to the persons who have been left without any subsistence means. It includes assistance such as financial support throughout social benefits and institutional care for people who are unable to take care of themselves or who cannot cover full costs of such care.

The structure of social welfare systems is different all across Europe, but they are deemed to have similarities such as social protection, ex-post benefits for traditional needs, large role for 'passive' transfers during non-employment (pensions, unemployment, disability, sickness, maternity, family dependents, etc.), target households with various family members, etc. In the following chapters social welfare systems as well as institutions dealing with socially vulnerable citizens in Croatia and Hungary will be presented, where their connection with energy policies aimed at combating energy poverty will be seen.

4.1. Hungary

The social welfare system in Hungary is regulated by Act III of 1993 on Social Governance and Social Benefits. This act contains the main rules concerning the structure and operational rules of the social care system. The law classifies services into two basic categories: basic social services and specialized services. Basic social services include the following:

- **village and homestead caretaking** – the purpose of the village and homestead caretaking service is to alleviate the disadvantages of small villages, to reduce the drawbacks resulting from the lack of institutions in peripheral settlements, to provide access to basic needs, public services and certain basic services, and to meet the needs both at individual and community level
- **providing food for those in need** – providing food (a hot meal once a day) as a basic social service must be provided by all municipalities for those in need. Meals can be either purchased or cooked in the municipality's kitchen, and people can consume their portions at the spot, take them away or ask to be delivered to their homes;
- **home helping** – all municipalities must provide home helping as a basic social service for socially deprived persons, who need help to maintain their independent living;

- **home helping with a signalling system** – operated by the Directorate-General for Social Affairs and Child Protection for socially deprived persons, who need help to resolve crises while maintaining their independent living;
- **family support** – a service provided to persons and families in need of help due to social or mental health problems or other crises in order to prevent the causes leading to such situations, to eliminate the crisis and to improve their basic life skills. Family support should include social, life and mental health consulting, the provision of access to cash and benefits in-kind and social services for people struggling with financial difficulties. Moreover, the organisation of access to social services, the organization of community development programs, and individual and group skills development, crisis management, and services to help families in difficult situations are all part of family support;
- **community care** – includes basic community care for psychiatric and addicted patients. It can be provided to support psychiatric or addicted patients in a residential setting to maintain independent living, further recovery and rehabilitation;
- **support service** – social service for the care of people with disabilities;
- **social work done in the streets** – the task of a street social worker is to help homeless people living on the streets and in public areas;
- **day care** – it should be provided to those who need help to maintain their independent living.

If the persons in need cannot be cared within the framework of basic social services due to their age, state of health or social situation, they shall be cared in a form of specialized care according to their condition and situation. The types of specialized forms of care are the following:

- **institutions providing nursing and care** – used to accommodate and care for people who are not able to provide for themselves or only with continuous assistance. These institutions shall provide meals at least three times a day, mental health care, a specified level of health care, as well as housing for the persons, and if necessary, they provide clothes and other textiles;
- **rehabilitation institutions** – to develop or restore the basic life skills of the residents of the institution (rehabilitation institution for psychiatric patients, for the disabled, for addicts, for homeless people);
- **institutions providing temporary accommodation** – provide full benefits for a maximum period of one year (care homes for the elderly, for the disabled, for psychiatric patients, temporary homes for addicts, for homeless people and night shelters);
- **residential homes** – institutions that accommodate 8-12, in exceptional cases 14 psychiatric patients, addicts or disabled, and provide care based on age, state of health and level of self-sufficiency.

In addition to social services, the system of basic child welfare services should also be mentioned. The system of child welfare services and benefits is regulated by Act XXXI of 1997 on the Protection of Children and Guardianship Administration. The legislation contains the basic rules for benefits, the forms of benefits and the operational requirements. The legislation classifies the child protection system into four main categories: cash and benefits in-kind, basic child welfare benefits, child protection services, and official measures. Basic child welfare services include child welfare services, day care for children, temporary childcare and the Safe Start Orphanage.

4.2. Croatia

Croatian social welfare system is based on the principle of subsidiarity, which implies the responsibility of the individual and the family for their own social security, and the role of the state is to help in this, with the aim of preventing, mitigating and eliminating social vulnerability. The social system in Croatia is mainly decentralized, which ensures the implementation of an effective poverty policy. This means that local and regional government units are entrusted with a larger number of public tasks and thus their financial, personal and organizational capacity to take on more serious tasks is strengthened. Social rights that are fully decentralized, i.e., financed by local and regional government units are as follows: housing and heating costs, financing of kitchen services and the operation of a shelter for the homeless. Local and regional government units can also provide funds for financial and social services to increase the scope of what is not defined by main social welfare act.

Before further analysis of the social system in Croatia, it is necessary to look at the statistics. According to the latest data from the Croatian Bureau of Statistics for 2019, the at-risk-of-poverty rate in the Republic of Croatia is 18.3%. The data from the Croatian Bureau of Statistics also follow indicators related to persons at risk of poverty or social exclusion, and it refers to both persons at risk of poverty and those who are severely deprived or, live in households with low intensity work. Very low work intensity refers to a situation in which persons live in households where no one works or works very little (able-bodied members work up to 20% of the total number of months in which they could work in the reference period). According to this indicator for 2019, 23.3% of persons in the Republic of Croatia were in such a position. In total, there are about 100.000 households in the Republic of Croatia in this vulnerable group, of which 32.5 thousand are single-member households and 68.3 thousand are households with two adults and two children⁵.

According to the established data, it can be seen that over 7% of the citizens of the Republic of Croatia live in conditions of severe material deprivation. This indicator refers to people living in households who cannot afford at least four of the nine items without significant problems, such as: they are not able to afford adequate heating in the coldest months, they are not able to afford a week of vacation away from home, they are unable to afford a meal containing meat, chicken, fish or a vegetarian

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equivalent every other day, they are unable to pay an unexpected financial expense or are late in paying utility bills, etc. In the following figure we can see the main principles of social welfare system in Croatia.

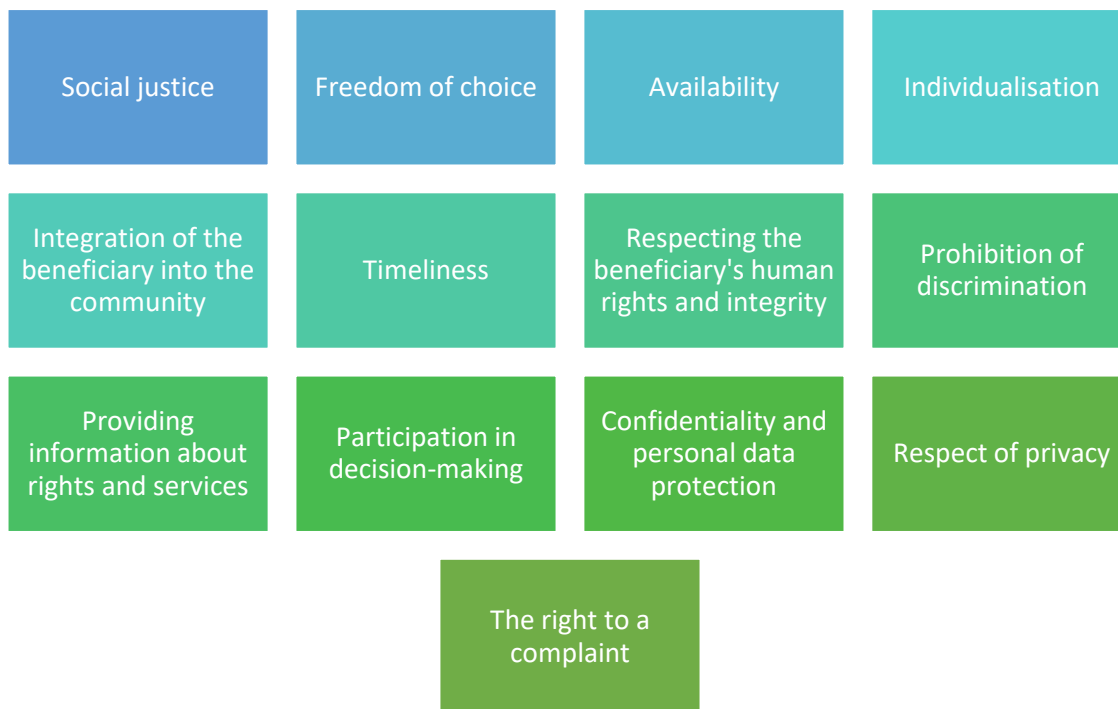


Figure 4.1 Principles of social welfare system in Croatia⁶

Beneficiaries, rights and conditions for their realization, as well as other issues of importance for social welfare, are defined by the **Social Welfare Act** (157/13, 152/14, 99/15, 52/16, 16/17, 130/17, 98/19, 64/20, 138/20). Beneficiaries of rights in the social welfare system pursuant to the Social Welfare Act are:

- single people and households who do not have sufficient funds to meet basic living needs and are not able to achieve them through their work, from property income, from the person liable for maintenance or in any other way;
- a child without parents or without adequate parental care, a young adult, a child victim of domestic, peer or other violence, a child victim of trafficking in human beings, a child with disabilities, a child and a young adult with behavioral problems, an unaccompanied child outside the place of his/her residence without the supervision of a parent or other adult responsible for caring for him/her and a foreign child found in the territory of the Republic of Croatia without the supervision of a parent or other adult responsible for caring for him/her;
- a pregnant woman or a parent with a child up to one year of age without family support and appropriate living conditions;
- a family that needs professional help or other support due to disturbed relationships or other unfavorable circumstances;
- an adult with a disability who is unable to meet basic living needs;

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- an adult victim of domestic or other violence and a victim of trafficking;
- a person who, due to old age or incapacity, cannot take care of basic living needs on his own;
- a person addicted to alcohol, drugs, gambling and other forms of addiction;
- homeless;
- other persons who meet the conditions prescribed by the Social Welfare Act.

Generally speaking, vulnerable groups, i.e., groups with an increased risk of poverty and social exclusion are those with low incomes (unemployed, elderly people without a pension, certain categories of pensioners, single-parent families), vulnerable ethnic minorities (Roma), people with disabilities and groups which are less numerous but face the challenges of extreme poverty (homeless, former addicts or prisoners) and others. It is important to emphasize that not all beneficiaries of rights in the social welfare system can be called “poor” because for some individuals (people with disabilities, the disabled, the sick) the use of social assistance is not necessarily closely related to low income, but high costs, as is the case with institutional treatments that require long-term care.

Citizens can receive social assistance in the form of cash or in-kind benefits and in the form of a care. In the current system, social services are provided by the state through a network of social welfare centers that have public authority to decide on the exercise of citizens' rights to social benefits and services on the basis of legal provisions. The rights in the social welfare system under Social Welfare Act are: guaranteed minimum fee, compensation for housing costs, compensation of heating costs, compensation for personal needs of accommodation users, one-time fees, fees related to education, personal disability allowance, allowance for help and care, career parent status or career status, compensation for the time before employment, social services (first social service, counseling and assistance, home help, psychosocial support, early intervention, assistance in inclusion in education and regular education programs (integration), stay, accommodation, family mediation, organized housing) and compensation for the vulnerable energy consumer. The recognition of the right in the social welfare system, except for compensation for housing costs and the right to heating costs, is decided by a decision of the locally competent social welfare center, as a rule according to the applicant's place of residence. The recognition of the right to compensation for housing costs is decided by the local government units and the City of Zagreb, in accordance with the provisions of the Social Welfare Act and special regulations. The recognition of the right to compensation for heating costs is decided by the regional government unit and the City of Zagreb, in accordance with the provisions of the Social Welfare Act.

The main institution within social welfare sector is the Social Welfare Center, a public institution that decides on social welfare rights and provides social services to particularly vulnerable groups of citizens. Minimum financial standards and criteria for financing material and financial expenditures of social welfare centers and heating costs for wood-heated users are determined by the [Decision on minimum financial standards and criteria for financing of material and financial expenditure of](#)

social welfare centers and heating costs for wood-heated users (OG 128/19, 148/20). Social services other than the social welfare centers provide following institutions:

- a social care home/community service center;
- home help center;
- associations, religious communities;
- other legal entities and craftsmen;
- natural persons as a professional activity;
- foster families.

The whole social welfare system in Croatia is computerized within application called SocSkrb which has been in use since 2011. SocSkrb is a computer application owned by Ministry of Labor, Pension System, Family and Social Policy which functions as a web application by which social welfare centers in Croatia are connected with each other and with Ministry of Labor, Pension System, Family and Social Policy. Each user of social rights or services has various socio-economic indicators entered in the application: household members, health status, employment status, education, risky behavior, housing status, active cash benefits and services from the social welfare system, data from records of income and tax receipts. administration, ownership of a vehicle or vessel, the existence of enforcement on accounts, etc. There is also the possibility of calculating the poverty index for a household or a single person, if all the characteristics are entered for an individual household. It is important to emphasize that Social Welfare Center can be a source of all necessary data, but only for the beneficiary rights or services of this Center.

5. Regulations and strategic documents regarding social welfare

Globalisation, technological change, aging population and changes to the world of work have made securing social protection for all, i.e., economic and social security, a major challenge. Improving the existing social protection systems is the priority of half of the principles of the European pillar of Social Rights – the European Commission's overarching social field initiative designed to serve as a compass for policies updating current labour market and welfare systems. The European pillar for social rights proposes the following⁷:

- promote the right for all children to have access to affordable early childhood education and care services of good quality;
- apply the right to social protection in the event of unemployment to the short-term unemployed and the self-employed and link them to public employment service;
- link everyone who lacks sufficient resources to access a minimum income to employment and other services that lead to labour market (re)integration;
- focus on the adequacy of pensions as a principle in addition to the 1992 recommendation on the convergence of social protection objectives and policies on old-age pension;
- secure access for all to timely, affordable and good quality healthcare;
- address the need for comprehensive measures to make the human rights-based approach to disability enshrined in the United Nations Convention on the Rights of People with Disabilities (CRPD) a reality;
- highlight the importance of affordability, adequacy and quality of long-term care, and beyond previous regulations and guidance, the promotion of community-based care;
- promote social housing (i.e., housing support, in kind) and housing assistance for everyone in need and not only those who lack financial resources;
- ensure access to available and affordable essential services (e.g., water, sanitation, financial, etc.) for all, including old people and people with disabilities.

5.1. The influence of EU regulations on legal framework of regulating social welfare system in Hungary and Croatia

While implementing the social pillar remains primarily the responsibility of the MSs, in close cooperation with the social partners, the European Commission has put forward several legislative and non-legislative initiatives to support this process in the

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area of social welfare. These initiatives include the proposal for a recommendation on social protection for all, including non-standard workers, responding to calls from the European Parliament and the social partners and stakeholders. The organisation and financing of social welfare systems is the responsibility of each MS. The models used in each MS therefore differ somewhat, while the EU plays a coordinating role to ensure that people who move across borders continue to receive adequate protection.

The main policy framework at EU level in the area of social welfare is the open method of coordination (OMC), which aims to promote social cohesion and equality through adequate, accessible and financially sustainable social protection systems and social inclusion policies. [The European Commission communication from 2005](#) outlined the objectives of the OMC, which include the following:

- making a decisive impact on the eradication of poverty and social exclusion;
- providing adequate and sustainable pensions;
- and ensuring accessible, high-quality and sustainable healthcare and long-term care.

[The European Commission communication on the renewed social agenda from 2008](#) aimed to reinforce the social OMC, introduce social impact assessments for European policies and also bring social, employment and economic policies closer together.

[The Europe 2020 strategy for smart, sustainable and inclusive growth](#) set targets to lift at least 20 million people out of the risk of poverty and/or social exclusion and to increase the employment rate of the population aged 20 to 64 to 75 %. The European Commission provides the MSs with financial and policy support to help them reach these targets and modernise their welfare systems. The social and employment situation of MSs is meanwhile monitored closely as part of the European Semester Winter Package: reviewing MS progress on their economic and social priorities.

For more than two decades there have been EU efforts to promote action among MSs to make social protection systems more responsive to the socio-economic challenges as well as to combat poverty and social exclusion. [The European Commission communication from 1992](#) promoted convergence of the Member States' social protection objectives and policies while proposal from 1997 called for further modernisation of social protection systems as a response to challenges such as the changing nature of work, the ageing of the European population, the new gender balance and the need to reform the coordination of national social security schemes for people moving within the EU. In the years following a lot of effort was put into aligning social and employment policies more closely. Social inclusion and issues relating to pensions, health and long-term care were streamlined within an integrated process in the European employment strategy and later in the broad economic policy guidelines.

[The Council recommendation from 2008 on active inclusion](#) pointed out that very basic points from the Council recommendation from 1992 on common criteria

concerning sufficient resources and social assistance in social protection systems have not been implemented. It therefore called on the MSs to review their protection systems according to these common principles. Finally, it called for adequate income support, inclusive labour markets, and access to quality services.

The 2013 social investment package was built on the lessons learnt from the difficulties implementing the 2008 recommendation. It reiterated the importance of a comprehensive approach to social policies, including targeted policies adjusted to people's needs, and social investment alongside social assistance and insurance. It thus promoted effective and efficient welfare systems in which strong social investment is coupled with protection and stabilisation. Following a rather active period between 1991 and 2004 there has been a period of stagnation, during which no major social directives have been ratified.

The 2017 European Pillar of Social Rights (social pillar) set out a number of key principles and rights to support fair and well-functioning labour markets and welfare systems; it is one of the policy developments relating to a deeper and fairer economic and monetary union, one of the ten European Commission policy priorities for the 2015 to 2019 period. Having been solemnly proclaimed and signed by Commission, Parliament and Council it has the potential to open a new chapter and introduce a new dynamic to the EU's social and employment policy. The pillar contains three main categories for action, one of which concerns social protection and inclusion.

Croatia and Hungary, as welfare countries, assure the right to assistance to all their citizens under the same conditions. Social welfare systems of both countries include a series of benefits and services aimed at securing subsistence to the persons who have been left without any subsistence means. They also include assistance such as financial support throughout social benefits and institutional care for people who are unable to take care of themselves or who cannot cover full costs of such care.

5.2. Hungarian regulations and strategic documents regarding social welfare

Hungarian government ensures the social security of citizens by operating a system of social benefits in cash, in kind and personal care. The services providing personal care are mandatory forms of care in all settlements, others are tied to a certain settlement size. The organization of services and benefits has undergone several changes since the change of regime:

- the first paradigm shift was when the organization of care for the socially deprived was delegated from central state power to local governments during the period of regime change. Responsibility for providing care, performance of tasks and regulation have also become decentralized. Municipalities also gained a great deal of autonomy in the creation of social services, and in the design, payment and financing of cash benefits;

- the second paradigm shift was when the problematic points of decentralization were already visible, and as a result, a process in the opposite direction began: during the Act III of 1993 on Social Administration and Social Benefits and its subsequent amendments, the system of benefits in cash had been already regulated and normative financing developed. The central state obliged local governments to provide more and more services and more and more services gained normative support, which covered the expenses to different extents;
- the third paradigm shift was the process of renewing social benefits in 2010.

The child protection effects of the social processes following the change of regime could no longer be managed with the previous benefits and institutional system. Fundamental conceptual and institutional modernization has also been made urgent by European integration efforts. In 1991, the National Assembly incorporated the UN Convention on the Rights of the Child into the Hungarian legal order (Act LXIV of 1991).

The above-mentioned trends have contributed to the adoption of the Child Protection Act. This finally happened on 22 April 1997. The Act XXXI of 1997 on the Protection of Children and the Administration of Guardianship entered into force on 1 November 1997. In addition to the definition of maintenance and operating tasks, the act also regulated the performance of methodological, information, training, research and international tasks. The National Institute for Family and Child Protection was established on the 1st of January 1998.

Following the act's enforcement, an organized structural transformation of institutions and benefits began, which ended in autumn 2003 with the first comprehensive amendment of the Child Protection Act and its implementing regulations. About five years after the enforcement of the Child Protection Act, the institutional structure of child protection benefits was transformed into an organizational system in line with the model prescribed by the Act.

However, a few years later, a process began in which, due to economic difficulties different variations appeared in each county. These variations were different from the model prescribed in the Child Protection Act.

From about 2005, a wave of institutional centralization started in the counties. Child protection centres have been set up, covering the entire care system in each county.

As of January 1, 2012, social and child protection institutions were given to state ownership.

The process continued by Act CXCV of 2012 on the take-over by the State of certain specialised social and child protection institutions providing specialist care and on the amendment of certain other acts. According to this Act, from 1 January 2013, the organization of temporary and long-term residential care for the disabled, psychiatric and addicted persons and the maintenance of institutions also became a state obligation.

From 1 January 2013, the tasks related to the maintenance and are exercised by the Directorate General for Social Affairs and Child Protection.

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Table 5.1 Hungarian regulations regulating social welfare system

Act CXXI of 2007	on the amendment of certain government regulations on social matters
Act III of 1993	on Social Governance and Social Benefits The purpose of the act is to determine the forms and organization of certain social benefits provided by the state, the conditions of entitlement to social benefits, and the guarantees of their enforcement in order to create and maintain social security.
Government Decree No. 191/2008. (VII. 30.)	on the rules of financing supporting services and community social services
Government Decree No. 92/2008. (IV. 23.)	on the basic examination of disabled persons, the rehabilitation aptitude test and the review of the condition of persons cared for in social institutions
Government Decree No. 90/2008. (IV. 23.)	on requesting additional support from the appropriation for 2008 for public employment organized by the local government
Government Decree No. 340/2007. (XII. 15.)	on the detailed rules regarding the use of experts and expert bodies in proceedings concerning personal care
Government Decree No. 353/2006. (XII. 23.)	on the advance available to gas and district heating suppliers in 2007
Government Decree No. 63/2006. (III. 27.)	on the claims for and determination of social benefits in cash and in nature, as well as detailed rules on disbursement
Government Decree No. 62/2006. (III. 27.)	on the rules for accounting for certain social benefits in cash
Government Decree No. 11/2005. (I. 26.)	settlement of payment obligations arising from certain housing loans debt
Government Decree No. 29/1993. (II. 17.)	on the fees of social services providing personal care
SZMM Decree No. 9/2009. (IV. 11.)	on the amendment of certain ministerial decrees in the social field
SZMM Decree No. 36/2007. (XII. 22.)	on the detailed rules for the examination and justification of the need for care and social need based on state of health
ESzCsM Decree No. 81/2004. (IX. 18.)	on the training and examination requirements of certain social service providers
ESzCsM Decree No. 60/2004. (VII. 6.)	on rules for the institutional admission of psychiatric patients and restrictive measures applied during their care

SzCsM Decree No. 9/2000. (VIII. 4.)	on the further training and examination of personal care providers
SzCsM Decree No. 8/2000. (VIII.4.)	on the operating records of personal care providers
SzCsM Decree No. 1/2000 (I. 7.)	on the professional tasks of social institutions providing personal care and the conditions of their operation
SzCsM Decree No. 9/1999 (XI. 24.)	on the access to social benefits, in particular personal care
SzCsM Decree No. 4/1999 (VIII. 6.)	on the professional secrecy of the Ministry of Social and Family Affairs and the institutions and public administration bodies under its management
National Social Inclusion Strategy II.	The main objective of the NSIS II is to contribute to the fulfilment of the most important goals of the country: economic recovery, reducing poverty, and strengthening social security. The objectives of the strategy contribute to the strengthening of Hungary's social and economic competitiveness.

5.3. Croatian regulations and strategic documents regarding social welfare

The Republic of Croatia, as a welfare country, assures the right to assistance to all its citizens under the same conditions. Social welfare system includes a series of benefits and services aimed at securing subsistence to the persons who have been left without any subsistence means. Social welfare system in Croatia is regulated through numerous multi-level acts and strategic documents. The main purpose of general multi-level regulations and strategic documents is to ensure the protection of the interests and well-being of socially vulnerable persons. The main general multi-level regulations include acts, regulations, decisions and ordinances.

The main act in regulating social welfare system is **Social Welfare Act** (157/13, 152/14, 99/15, 52/16, 16/17, 130/17, 98/19, 64/20, 138/20). Social Welfare Act as the basic act regulates the manner of performing and financing social welfare activities, principles, beneficiaries, rights, the procedure for exercising these rights and other issues of importance for performing this activity (professional staff in social welfare, data filling systems, inspection and administrative supervision). In addition to the Social Welfare Act, other important acts and bylaws governing the field of social welfare and social benefits in the Republic of Croatia are: **Family Act** (OG 103/15, 98/19), **Temporary Maintenance Act** (OG 92/14) and **Foster Care Act** (OG 115/18). Family Act governs marriage, the relations of parents and children, adoption, guardianship, the effects of an extramarital union between a man and a woman, and the procedures of the competent bodies in connection with family relations and guardianship. Temporary Maintenance Act determines the beneficiaries of the right to temporary alimony and regulates the acquisition of the right to temporary alimony and the amount of temporary alimony, jurisdiction, procedure for exercising the right, payment and

return of the amount of temporary alimony, financing, records and supervision and other issues important for temporary alimony. Foster Care Act regulates the issues related to foster care as a form of providing social accommodation services, conditions and manner of performing foster care and the rights and obligations of service users, foster parents, social welfare center and other legal entities participating in foster care support.

In 2015, after signing the Agreement on Measures in combating Energy Poverty by representatives of the leading electricity suppliers in Croatia **the Regulation on the Monthly Amount of Compensation for Vulnerable Energy Consumer, the manner of participation in settling the energy costs of the beneficiary and the actions of the competent social welfare centers** (OG 102/15, 140/15) was enacted. The Regulation defines the amount of compensation for the vulnerable energy consumer, the manner of participation in settling the energy costs of the beneficiary of the right to compensation for the vulnerable energy consumer and the actions of the competent social welfare centers regarding the recognition of the right to compensation for the vulnerable energy consumer. The fee for a vulnerable energy consumer is determined in the amount of up to HRK 200,00 (26,00 EUR) per month. The competent social welfare center issues a coupon for subsidizing the costs of electricity for the month in which the right to compensation for the vulnerable energy consumer is recognized to the user of the right to compensation for the vulnerable energy consumer.

Two important decisions relevant for calculation of the amounts of guaranteed minimum fee, supply needs of users and other rights from the social welfare system are **Decision on the basis for calculating the amount of the guaranteed minimum fee** (OG 114/14), **Decision on the amount of the living costs of users** (OG 9/19) and **Decision on the basis for calculating the amount of other rights from the social welfare system** (OG 114/14). The decisions were enacted according to Social Welfare Act. The basis on which the amount of other rights from the social welfare system is calculated is HRK 500,00 and the basis on which the amount of the guaranteed minimum fee is calculated is HRK 800,00. The amount of living costs fee of beneficiaries is determined by the type of beneficiary depending on the age and health status of the beneficiary and is proportional to the duration and scope of the service of accommodation with the foster parent in relation to the basis on which the amount of rights in the social welfare system is calculated. Another decision which should also be considered is **Decision on the amount of foster care allowance** (OG 9/19). The fee for the work of a foster parent who performs traditional foster care is determined depending on the number and type of beneficiaries, in relation to the basis on which the amount of rights in the social welfare system is calculated. In addition to above mentioned decisions, it is also important to mention **Ordinance on the manner of cooperation between the social welfare center and the services responsible for employment in the implementation of measures for the social inclusion of able-bodied beneficiaries of the guaranteed minimum benefit** (OG 66/15). This ordinance prescribes the manner of cooperation between the social welfare center and the employment service in implementing measures of social inclusion of able-bodied beneficiaries of the guaranteed minimum fee, in order to ensure timely and secure

exchange of data on beneficiaries related to assessing their needs and providing appropriate support, enable users to provide quality and efficient services based on individual needs, with a view to their employment and social inclusion.

Local and regional government units play a key role in combating poverty and social exclusion in their administrative area. According to Social Welfare Act, they are obligated to keep records on social welfare rights in their administrative area. This obligation is stated in the Ordinance on the content and manner of keeping records and documentation, as well as the manner and deadlines for submission of reports by local and regional government units (OG 35/19, 24/20). In addition, these records include data on right to compensation for housing costs, transport costs and right to compensate heating costs. As it was stated in the subchapter 2.2.2. within this document, local and regional government units enact relevant development documents (regional development strategies, implementation programs of local and regional government units) where they determine county/city/municipality goals and priorities in order to strengthen its development potentials, with special emphasis on the role of large cities and cities of county headquarters in encouraging development and the development of less developed areas. Most regional and local government units prioritize raising the quality of life and well-being of citizens, which includes poverty and social exclusion, i.e., encouraging the social inclusion of disadvantaged groups and reducing poverty, including energy poverty. According to Social Welfare Act, regional development units have to establish the Social Welfare Council for the purpose of planning and developing the network of social services and exercising the rights, obligations, measures and goals of social welfare in its administrative area. The Social Welfare Councils consist of various stakeholders from the public, private and non-profit sectors.

The Social Welfare Council proposes the social service development plan as a strategic document in the field of social welfare on the most vulnerable citizens. These documents serve as good basis for designing comprehensive social policies at regional level which goal is quality planning of social services and their effective implementation. The Social service development plan includes an overview of the socio-demographic and economic characteristics of the county, an overview of the social protection system with a description of institutional capacities and non-institutional social service providers according to beneficiaries. Based on the analysis of the capacity and availability of the social services network and the assessment of the specific needs of groups at higher risk of social exclusion, the priorities and strategic and operational goals for the development of institutional and non-institutional social services have been determined. The strategic development goals are harmonized with the relevant national and European framework in the field of social welfare, as well as with the county development documents and guidelines. Although regional planning of social services is regulated by act and based on the practice of drafting social plans (some counties have gone through this process twice), the biggest challenge remains the implementation, monitoring and evaluation of measures defined by the plans.

In addition to above mentioned legal acts and relevant bylaws, in order to determine the direction of development of the social policy of the Republic of Croatia, several strategic documents dealing with social welfare issues have been developed. Working group for the development and monitoring of the implementation of the strategy for combating poverty and social exclusion prepared the **Strategy for combating poverty and social exclusion in the Republic of Croatia** (2014 – 2020) in 2014. The Strategy is a fundamental document that enables a systematic and joint approach of all relevant stakeholders in solving the problem of poverty and social exclusion, while ensuring a minimum standard for the most vulnerable part of society, and preventing new phenomena of poverty and social exclusion. The strategy contains a brief and clear picture of the current state of poverty and social exclusion in Croatia, as well as the causes that led to this state and the social and economic projection as a basis for action. It is clearly stated who are the most vulnerable groups in society exposed to poverty and social exclusion, with the principle of orientation towards the individual and his needs. The Strategy defines eight strategic fields in combating energy poverty and social exclusion. One of them refers to housing and energy availability where it states that in accordance with the Energy Act, the status of vulnerable energy consumer should be granted to households defined by the competent social welfare institutions as socially disadvantaged (Regulation on criteria for achieving the status of vulnerable consumer). The Strategy also refers to the **Decision on the amount of the fee for the use of the space used by the production facilities for electricity production** (OG 84/13, 101/13, 72/15) in which it is stated that energy producers are obliged to pay a fee to local government units (cities/towns and municipalities). The Strategy states that the collected funds from this fee will be used to support social welfare programs as well as for assistance to energy vulnerable categories of citizens, which is only a recommendation stated in the Strategy. The Strategy encourages efficient energy management in building construction at the national, regional and local level as one of the key strategic measures. This could be achieved by establishing mechanisms to improve the energy efficiency in households in order to reduce the financial burden on citizens and ensure the availability of energy through subsidizing energy costs for households at risk of energy poverty.

In addition to above mentioned acts in regulating social welfare beneficiary rights and other issues within social welfare system, some other acts whose provisions can be also applicable to social welfare system. Acts from other areas such as pension, health care, employment, etc. which should be taken into account are: **Child Allowance Act** (OG 94/01, 138/06, 107/07, 37/08, 61/11, 112/12, 82/15, 58/18), **Pension Insurance Act** (OG 157/13, 151/14, 33/15, 93/15, 120/16, 18/18, 62/18, 115/18, 102/19), **Maternity and Parental Allowances Act** (OG 85/08, 110/08, 34/11, 54/13, 152/14, 59/17, 37/20), **Labor Act** (OG 93/14, 127/17, 98/19), **Employment Mediation and Unemployment Rights Act** (OG 16/17), **Free Legal Aid Act** (OG 143/13, 98/19). In addition to these acts an important role have **Decree on the amount of the minimum wage** (OG 106/19) and **Decree on the amount of the minimum wage for 2021** (OG 119/20) which will be in force from January 2021.

One relevant document refers to [Social Action Plan on understanding the social aspects of the Energy Community](#) (Social Action Plan). The Social Action Plans were intended to serve as a roadmap to develop and implement necessary measures to deal with social consequences in a socially responsible manner. The whole idea of developing this document came from the Treaty on Establishing the Energy Community which defines social stability alongside economic development as one of the primary interests for MS for which the access to stable and continuous energy supply is essential. Chapter IV of the Treaty (Articles 31 – 33) further promotes the social aspects of the energy acquis in the context of provision of energy to citizens and its affordability. During the implementation of the Treaty, i.e., the social consequences of its implementation, a [Memorandum of Understanding on Social Issues of the energy community](#) was adopted. He became the starting point for development of Social Action Plan on understanding the social aspects of the Energy Community. Croatia developed this document in 2013. which main goals are:

- improving the living and working conditions of workers in the energy sector, anticipating and resolving the negative impacts that the restructuring of the sector will have on them: protection of workers' rights, improvement of working conditions and protection at work, equal opportunities for men and women, education, rewarding improvements in energy efficiency at work and similar activities;
- encouraging social dialogue that will ensure the development of the energy sector in line with social needs, both on the production side (domestic producers, supply routes, renewable energy sources) and on the consumption side (energy efficiency, fiscal and tax policy), consumer information and education play a key role. The energy sector must provide a reliable, high-quality, available and affordable service. Special attention must be paid to the design of measures to protect the most economically vulnerable social categories.

Other specific regulations which are connected to social welfare system are [Strategic plan of Ministry of Demography, Family, Youth and Social Policy, Social Welfare Strategy for the Elderly in the Republic of Croatia 2017 – 2020, National Strategy for Equalization of Opportunities for Persons with Disabilities from 2017 to 2020](#) (OG 42/17) and [Ordinance on minimum conditions for the provision of social services](#) (OG 40/14 , 66/15). National Strategy for Equalization of Opportunities for Persons with Disabilities is a strategic document which directs the implementation of the policy towards persons with disabilities. Its main goal is to make Croatian society as sensitive and adapted as possible to the necessary changes in favor of equalizing the opportunities of persons with disabilities, i.e., to create conditions for their active inclusion and equal participation in society by preventing any discrimination and strengthening all forms of social solidarity. Ordinance on minimum conditions for the provision of social services prescribes the minimum conditions for the provision of social services (minimum conditions of space and equipment for providing services; type, and minimum content and scope of service in relation to an

individual beneficiary group) and the manner of work of the commission that examines their fulfillment (structure and duration of direct professional work with users, structure and duration of other jobs and conditions and minimum number of professional and other workers for a particular service).

In order to reduce the problem of poverty and social exclusion by measures and programs define within strategic documents that contain a number of goals and activities, it is necessary to provide the necessary resources and cross-sectoral action.

6. Energy poverty – current situation in Hungary and Croatia

As already stated in several occasions, there is no official definition of energy poverty in Hungary nor in Croatia. Regardless, the problem of energy poverty has been recognized at the national levels of both countries so now they have to provide a clear definition of energy poverty and set adequate objectives and targets to tackle the issue. This would enable a common understanding of energy poverty that would help improve the cooperation between the public sector, civil society and industry in both countries.

In the following subchapters the current situation in Hungary and Croatia regarding energy poverty is elaborated.

6.1. Hungary

Energy poverty is a Europe-wide challenge, as in the EU 57 million people are unable to properly heat their homes in the winter and 52 million are unable to pay their utility bills on time. Hungary is no exception from this. Hundreds of thousands are unable to properly heat their homes or spend an unreasonably high amount of their income on energy bills. Around 500 thousand households have utility bill arrears of more than 60 days, and more than 40% of them use wood (or even worse, coal) to heat their homes. The majority of these people can also be socially classified as 'poor'. Regarding energy efficiency, out of a building stock of 4.4 million, two thirds have low energy performance. Poorer families typically live in these not yet energy refurbished buildings. Most of them are caught by a vicious circle and need external help to get out of this situation.

Energy poverty is very much linked with the issue of air pollution of Hungary. People with low income typically heat their homes with (low-quality) wood or (equally bad quality) coal. Winter air quality is currently the country's biggest environmental problem. The country has already received an official warning from the European Commission for non-compliance of the air quality directive. There are three regions where the situation is especially bad – North-East (the valley of Sajó river), the agglomeration of the capital and the county of Baranya (former coal mining area).

The national government and municipalities are trying to combat energy poverty in a number of ways, of which the most important is social fuel distribution. Unfortunately, in practice this means the distribution of freshly harvested wood and low-quality lignite. Although burning wood can be considered as a renewable resource, usually freshly harvested wood is used for burning, which is highly air polluting and the heating value is half of the wood, which is dried for two years. Socially provided coal (i.e., nationally mined lignite) is very low quality. Just to compare, German brown coal has an ash content of 3.9%, sulphur content of 0.36% and chemical coal content of 65%, while Hungarian lignite has an ash content of 35-43% (!), sulphur content of 3.4-4.1% (!) and chemical coal content of only 33-54%.

Similar to other countries, Hungary faces the same dilemma: either keep on providing vast amount of never enough social support for poor families or invest into large-scale building refurbishment to help these families come out of the vicious circle. Research shows that significant financial obstacles against prevent efficiency investments for most households. 75-85% of Hungarian households do not have savings, and almost 80% of households planning to invest in energy refurbishment would not choose to take bank loans. Therefore, it seems well justified and necessary for the state to play a role in tackling the problem.

Theoretic calculations show that using a nationally administered revolving fund, the current ratio of 14-42% energy poor households could be reduced to 9% after energy refurbishment. In other words, the model calculations show that as a result of external thermal insulation and replacement of windows and doors, most of the households that were previously energy poor could escape energy poverty through the high amount of energy costs saved.

6.1.1. Definition and indicators of energy poverty

When energy poverty started to be recognised as an issue of its own on by European policy makers, attempts were made to find a uniform approach for the whole EU. In 2016 the European Commission has proposed the following definition: a household is considered energy poor if it is unable to pay for basic energy services (heating, cooling, lighting, mobility and electricity). That is, it cannot achieve a decent standard of living due to low income, high energy use and low energy efficiency. While this definition has been accepted in general, attempts to create a more specific definition have failed. This is due to the very different climatic, economic, social conditions across the EU. Therefore, the European Commission has suggested that each national government draft its own specific definition.

In Hungary, up to today, there is no officially endorsed definition. The first government document, which mentions and tackles this issue is the National Recovery and Resilience Plan. It vaguely refers to energy poverty as “those households, which own their own dwellings, have an income below the national average and have low creditworthiness”.

The first instance when energy poverty was systematically researched in Hungary was in a report published by the independent think tank “Energy Club” in 2011. The report has proposed the following definition for Hungary. “Those households can be considered to be energy poor if all the following three criteria are met:

- the total annual household income is less than 60% of the median income of Hungarian households,
- the annual cost of energy theoretically required to heat the dwelling to 20 °C and to produce hot water, and the ratio of total household income exceed more than twice the median of the actual declared data of all households, i.e., 34%,
- the energy rating of the building is worse than F.”

As no new definition has been proposed since then, and the current situation is essentially the same, this definition can be regarded as still valid.

6.1.2. Energy poverty public policies and suppression instruments

It was mentioned in the previous section that winter air pollution is currently the country's biggest environmental problem. Therefore, the government aims to tackle energy poverty hand-in-hand with air pollution. Although national policies focus on the entire country, in recent policies significant focus has been given to three priority regions, which have the worst situation both in terms of energy poverty as well as air pollution.

Although a range of related actions have already been implemented, the word 'energy poverty' was not explicitly mentioned in any government strategy or policy until the year 2021. The change has occurred with the development and endorsement of the country's Recovery and Resilience Plan. This action plan aims to provide access to renewably generated electric power and modern heating methods for energy poor families. This means the electrification of heating systems, the reduction of energy use (with the replacement of windows and doors) and the installation of photovoltaic systems. The implementation of this plan is about to start and in late May the national government has announced that in July it will open the call for proposals for the energy refurbishment of energy poor homes. This call has a budget of 450 million EUR and it will be open to families to the earlier mentioned three priority regions of the country. One household can claim up to 11,500 EUR of non-refundable financial support. With this financial mechanism the government expects to improve the living conditions of 35 thousand energy poor households. In an aim to reduce air pollution and increase the use of renewable energies altogether 175 MWp new photovoltaic capacity will be installed on the rooftops of energy poor families. As burning solid fuels for space heating is considered harmful in current EU policies, the call for proposal supports the installation of electric heating panels, infrared heaters and heat pumps. Up to 5 kW battery storage can be also financed. With regards to energy-efficiency door and window replacement is eligible.

Hungary has a relatively well-developed system to provide financial and in-kind support to those families whose financial conditions make it difficult for them to cover their utility bills or heat their homes to proper temperature. The majority of Hungary's energy poor (ca. 70%) live in a village or in a suburban setting. Therefore, a significant share of the regulations and social services focus to small villages. This is in line with other policy fields also, which recognise the adverse demographic trends in villages: migration to cities, aging of population, decreasing job and schooling opportunities.

6.2. Croatia

Energy poverty has become a rising problem in Croatia, as in most new EU Member States. Considering theoretical energy poverty line of 10%, the average households from first six deciles are struggling with the problem of energy poverty. The problem is additionally emphasized by the condition of residential stock because most of them are family houses and are built before 1980, which means high energy consumption for heating. These homes consume around 70% of the energy-related to utilities. Croatia believes that these homes' energy consumption can become closer to approximately 40%.

The assessment of energy poverty in Croatia by using the number of people and households that are beneficiaries of vulnerable consumer subsidies shows that approximately 3% of the total population are energy poor according to the existing legal framework in Croatia.

Like many other European countries, Croatia is also missing a systematic and adequate policy framework to tackle the problem of energy poverty. Currently, there is no distinction between energy and general poverty in Croatian legislation, and direct payments of utility bills are the only measure of help to (energy) poor households. Local and national authorities are lacking validated facts to make informed investments that would make a long-term impact on lowering energy demand, but also improving living conditions and quality of life of energy poor. Tackling the problem of energy poverty still remains within social policy and there is a need for systematic and long-term approach in dealing with this issue.

Based on Member State Report of the EU Energy Poverty Observatory⁸ back in 2018, 17.5% of Croatians were not able to afford their utility bills. In comparison, only around 6.6% of people in the European Union faced this challenge. The issue of energy poverty can seriously stress a family's budget, especially as Croatians facing energy poverty are more likely to be impoverished.

High utility bills are because of Croatia's chilly climate, which means families will want to spend more money on heating to ensure their homes are comfortable in the winter. Thus, Croatians pay a significantly higher amount for the same energy. This forces many families into energy poverty. The poorest one-fifth of Croatians spend about 12% of earnings on energy-related bills, whereas the poorest one-fifth spend only about 7% in the European Union.

6.2.1. Definition and indicators of energy poverty

Energy poverty in Croatia is defined as a social and environmental issue that places terrible physical and mental burdens on households. A lack of adequate heating and insulation and poorly fitted windows can cause mold, dampness and drafts, leading to respiratory illnesses and other ailments.

⁸ [4]

In Croatia, there is no comprehensive definition of energy poverty, nor are there methods for defining and monitoring energy poverty; however, there is public policy which concerns (in part) vulnerable consumers. Also, the term has been used in a few legislative and strategic documents. So, in order to tackle energy poverty, it is crucial to identify common indicators and criteria for assessing energy poverty and vulnerability and based on that collect comparable information and map the energy poverty. Defining energy poverty should be based on social, economic and energy criteria, such as inability to afford adequate levels of energy services and low energy efficiency of dwelling and appliances. However, a better coordination of energy and social policies are necessary to address both issues at the national, local and regional level.

According to Thomson, there are three key factors that influence the occurrence of energy poverty:

- **energy price** – the household is energy poor when it is not able to cover its energy costs, which are the product of energy consumption and associated energy prices (with the increase in energy prices, the energy poverty is rising);
- **household income** – income is the most significant factor affecting the occurrence of the energy poverty (regardless of the increase in fuel prices, excessive energy consumption or insufficient energy efficiency of housing, household which has a sufficiently high income will be able to meet its energy costs);
- **energy efficiency** – the thermal efficiency of housing has the greatest impact on energy costs of a household (inefficient housing requires considerably more consumed final energy to maintain the internal temperature than the energy-efficient housing. Due to higher consumption of final energy consumption in the household, the energy costs are also higher. Energy efficiency as a cause of energy poverty becomes significant when is observed in the context of lower-income households).

However, it is usually the interplay between these three factors, including personal factors that make a difference. Accordingly, high prices reduce the affordability of fuel. It can mean that low income families become less able to heat their homes to an adequate level. The cost of fuel for each household will also depend on household characteristics and their specific needs i.e., for a family with children, or an older person, or person with disabilities or long-term sickness that may need to heat their home for longer in the day, or to higher levels.

In reality, most low income families often have very limited choices over the type of fuels they can use, because they are trapped in poor housing. The thermal quality of the housing and the efficiency of the heating source will determine how much energy and fuel is needed to effectively heat houses to adequate levels.

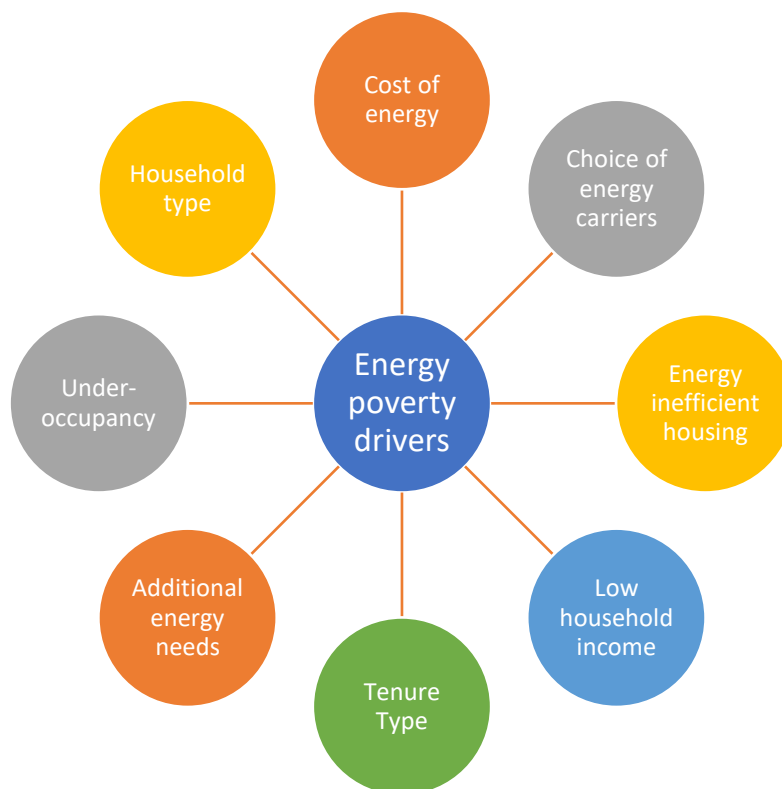


Figure 6.1 Energy poverty drivers

Source: Thomson and Shell, 2016

6.2.2. Energy poverty public policies and suppression instruments

Croatia defined the concept and status of vulnerable customer in 2012 in the Energy Act and in 2015 implemented first measures in a form of vulnerable customer subsidy. Until the adoption of the Directives of the Third Energy Package, Croatia was trying to alleviate the problem of energy poverty by energy tariffs lower than the market value and by the social allowance within the social policy system. Except the customers who were entitled to social allowance, there were no clear criteria for any kind of allowance for the energy consumption. Since the Third Energy Package does not allow energy prices below market value because it impedes the proper functioning of the energy market, Croatia has started to implement new measures in the field of social and energy policy.

According to existing legislation, by now several energy related social supports were developed and implemented at national and regional level. The Article 41 of the Social Welfare Act prescribes the compensation for housing costs which also includes the costs of rental, utility fees, electricity, gas, heating, wood and other costs. The right to compensation for housing costs is recognized to the beneficiary of the guaranteed minimum fee. The right to compensation for housing costs is recognized by the local government unit, up to the amount of half of the guaranteed minimum fee granted to a single person or household. Compensation for housing costs can be granted in two ways: in cash directly to the beneficiary or the local government unit pays partially or

full amount of the bill to the directly authorized legal or natural person who performed the service.

The Social Welfare Act also prescribes the compensation for the heating costs (Article 43) for beneficiaries of the guaranteed minimum fee who heat with wood. Such persons are provided with 3 m³ of wood once a year or approve a monetary amount to cover that cost in the amount determined by the responsible regional government unit. In order to provide funds for compensation for heating costs, the local government unit submits a request with data on the beneficiaries of the guaranteed minimum fee that is heated on wood to the responsible regional government unit.

Local and regional government units are, according to Article 43 of Social Welfare Act, obligated to keep records and documentation on the exercise of rights in the social welfare system as well as other rights from social welfare determined by general acts of local and regional government units.

Households who are currently in a position of material vulnerability and are therefore unable to meet some basic living needs have the possibility to request one-time settlement fee (for example electricity or heating bills). The social welfare centres grants the right to a one-time settlement.

All existing energy related social supports refer to financial assistance, which, although it helps citizens to some extent, does not solve the basic causes of life in energy poverty, nor its consequences. Accordingly, in order to reduce energy poverty, it is necessary to define mechanisms that aim not only to mitigate the inability to pay energy bills, but also those that mitigate all the consequences of energy poverty – impaired health and comfort of housing and that also combat its causes. Such a mechanism is the implementation of energy efficiency measures in vulnerable households. Croatian Government recognized the importance of energy renovation of single-family houses, especially those inhabited by families living in energy poverty so they implemented energy efficiency measure which refers to energy renovation of family-houses.

Family houses make up 65% of the housing stock in Croatia and are responsible for 40% of total energy consumption at the national level. Most family houses in Croatia were built before 1987 and have almost no or only minimal thermal insulation (energy class E and worse). Such houses consume 70% of energy for heating, cooling and domestic hot water preparation, and energy efficiency measures can significantly reduce their consumption, in some cases up to 60% compared to the current one.

Croatian Government, the Ministry of Construction and Physical Planning (now Ministry of Physical Planning, Construction and State Assets) and the Ministry of Environmental and Nature Protection adopted the Program for Energy Renovation of Family Houses, implemented by the Fund for Environmental Protection and Energy Efficiency (FEPEE). The goal of the Program is to increase the energy efficiency of existing houses, reduce energy consumption and CO₂ emissions into the atmosphere and reduce monthly energy costs, with an overall improvement in the quality of life. At the same time, planning such interventions implies the engagement of local companies

and experts, i.e., encourages economic activity. Amendments and adjustments to the Program were made for the first time in 2015 and for the second time in 2020. Following the adoption of the Amendments to the Program, the FEPEE in 2020 continued with the national funding of the Program for energy renovation of family houses. On 25 June 2020 FEPEE published two public calls one for citizens – co-owners of existing family houses of energy class D or worse in continental part of Croatia and C or worse in coastal part of Croatia and second for vulnerable groups of citizens at risk of energy poverty. Under the social criteria, set out in the Amendments to the Programme, social welfare centres coordinated certified energy auditors to help in the application process to the citizens most at risk of energy poverty. The envisaged energy renovation measures and the cost of energy auditors for this group of citizens will be fully financed by the FEPEE.

According to legal documents, there are some energy related social supports in covering some household's cost. They are more than welcome, but aren't enough to solve the problem of energy poverty, because they are based on the consequences and settlement of costs, and only secondarily on the cause or raising the energy quality of the home. Energy efficiency should be the first step in the fight against energy poverty because it contributes to reducing energy consumption and expenditure and has positive effects on the health and comfort of living. Measures to reduce energy poverty are both information and counseling, all of which point to the need for multisectoral action, in which direction public policies, plans and programs are moving. However, only in the intensified dynamics of their implementation, and with the assumption of continuous provision of funds, can the necessary social effects be achieved.

It can be concluded that while tackling energy poverty as social issue in Croatia it is important to primarily develop and use technical energy solutions followed by financial support mechanisms.

7. Common definition of energy poverty for cross-border area

During the years many possible approaches were used in defining energy poverty since this is a complex multi-dimensional phenomenon with complicated nature, roots and multiple impacts. It is important to distinguish the concepts of poverty in general and energy poverty. Energy poverty is a distinct form of poverty associated with a range of adverse consequences for people's health and wellbeing – with respiratory and cardiac illnesses, and mental health, exacerbated due to low temperatures and stress associated with unaffordable energy bills. In fact, energy poverty has an indirect effect on many policy areas – including health, environment and productivity.

Addressing energy poverty has the potential to bring multiple benefits, including less money spent by governments on health, reduced air pollution, better comfort and wellbeing, improved household budgets, and increased economic activity. Awareness of energy poverty is growing rapidly across Europe, and the issue is being increasingly integrated within the activities of the European Union, as evidenced by the European Commission's flagship legislative proposal Clean Energy for All Europeans announced on 30th November 2016. In accordance with the above, there was a need to build a specialized network of stakeholders and experts who will work together to define and address the problem of energy poverty on EU level and other government levels of all MS.

Based on this knowledge, project partners within the project CO-EMEP established a cooperation with relevant public and private institutions in order to include wide range of experts in development of energy poverty definition.

7.1. Establishment of project work groups with relevant experts in Hungary and Croatia

While working on development of energy poverty policy, project partners identified a numerous relevant stakeholders and experts from both sides of the border whose knowledge is also more than enough to develop a quality definition of energy poverty that will be applicable in the whole cross-border area.

Without good and quality guidelines at the national levels of project partner countries in defining energy poverty, project partners were left to their current capacities and knowledge in defining this complex phenomenon. In order to involve relevant stakeholders in the development of energy poverty, project partners established two national work groups with experts in the field of energy, local/regional authorities and social/legal welfare who were cooperating during the whole process of defining the term of energy poverty and developing guidelines for regional and local planners on how to include the mitigation of energy poverty in their plans and strategic documents.

In order to ensure the work of the work groups during the project implementation period, the project partners held total of six work group meetings (three in Medjimurje

County and three in Zala County) where they established cooperation with relevant experts and thus connect them to become part of the cross-border network. Their cooperation ensured the transfer of information, knowledge and examples of good practices in the field of energy poverty mitigation in the Hungarian-Croatian cross-border area.

7.1.1. Hungary

In Hungary, altogether three work group meetings were organised by Zala County Government: the first one on 30 October, 2020, the second one on 25 May, 2021, and the third one on 31 May, 2021.

The timing of these events allowed the organisation of all events in a face-to-face manner. All three meetings were held at the premises of the Municipality of Zala County. Participants represented municipalities, public institutions and the non-profit sector who closely worked on defining energy poverty and evaluating definition of energy poverty and developed guidelines for regional and local planners on how to include the mitigation of energy poverty in their plans and strategic documents proposed by Croatian partner and external experts.

All three events were opened by Mr. Imre Pácsonyi, vice president of the Zala County Assembly. Other speakers included CO-EMEP experts with relevant knowledge in the field.

7.1.2. Croatia

As stated in application form of the CO-EMEP project, in Croatia altogether three work group meetings were organized by lead partner, Medjimurje Energy Agency Ltd. All three meeting were organized in face-to-face manner in compliance with epidemiological measures prescribed by the Institute of Public Health and the Civil Protection Headquarters of the Republic of Croatia. First work group meeting was organized on 20th of October 2020, the second on 19th of February 2021 and the third work group meeting was organized on 11th of May 2021.

The participants of the meetings were relevant experts from field of energy, local/regional governments and legal/social welfare institutions who have relevant knowledge in the field and who deal with vulnerable citizens on a daily basis.

Since energy poverty is a highly complex social issue which is difficult to define and measure the purpose of first work group meeting organized in Croatia was to define course of action during development of energy poverty definition within project CO-EMEP. The main challenge when addressing the issue of energy poverty in development of cross-border definition is the poor quality and non-existence of relevant data so experts suggested to try to stick to the data available by the relevant institutions such as statistical offices, local distributors of electricity, natural gas, etc. The findings

from first work group meeting were good basis for development of energy poverty definition and its elaboration during second and third work group meeting.

The main topic of second work group meeting was the presentation and elaboration of energy poverty definition as well as the criteria relevant for its definition proposed by the Medjimurje Energy Agency Ltd. Participants generally agreed with proposed definition but they pointed out that the definition will cover a large population of citizens in cross-border area as well as the possibility that it will not be supported by relevant data because it will be difficult to collect them. Accordingly, there is a possibility to develop a new project idea that would be a continuation of the CO-EMEP project where the proposed energy poverty definition for cross-border area could then be analyzed in detail through additional research and analysis.

The main topic of the third and last work group meeting was energy poverty mitigation planning at the local and regional level. Participants tried to identify the challenges and obstacles with whom cities, municipalities and counties face on a daily basis and which prevent them from addressing the problem of energy poverty in a quality and effective way, as well as potential measures that could contribute to energy poverty mitigation at local and regional level (e.g., training of employees in municipalities, cities and counties to increase their capacities to provide basic energy advice to energy vulnerable citizens).

7.2. Results and findings from work group meetings with relevant experts in Hungary

The first event was the first opportunity that the work group members met and had a chance to discuss the subject of energy poverty. As it turned out, there was a rather limited knowledge of the subject within the audience, in fact practically none of them had any deeper knowledge about what the term 'energy poverty' meant. Therefore, the main aim of the first meeting was to bring about a general understanding of the subject and make sure that participants had the same approach.

The event started with the introduction of the CO-EMEP project. Its aim, activities and expected results were presented. Participants welcomed this new initiative. They found the various tasks well focused and relevant. As this is a relatively new subject in Hungary (e.g., energy poverty is not even mentioned in any government strategies), they highlighted the importance of launching such bottom-up initiatives instead of waiting for national-level impetus. They indicated that an important "unique selling point" of the project is its international character and looked forward to exchange experience with our Croatian counterparts.

The second presentation was a sort of "keynote speech", which gave a general introduction about energy poverty, the differences between poverty and energy poverty, and the criteria to determine who qualifies as energy poor. The presentation and the discussions focused on the fact that it is a European level problem, which is very much relevant in Hungary, too. It is a truly complex subject, with implications on

economy, health, environment, social services etc., therefore the discussions were aided by the multidisciplinary composition of the participants. The conclusions were that energy poverty is a subject of its own, i.e., it should not be considered merely as something relating to the energy field or society. It is time to establish it in the professional discussions on its own accord.

In the following part of the discussion the work group discussed the 'Guidelines on energy poverty mitigation planning'. First the general concept was presented, with a focus on how the reduction of energy poverty can be embedded in future plans and strategic documents. Until now none of the strategic plans of Zala county municipalities included energy poverty, therefore the release of such a guidance document was considered very helpful. It was also considered to contribute to the establishment of a uniform strategic approach in the county's settlements.

The event was concluded by the presentation of a Horizon 2020 project called *renoHUb*. This project is a large-scale demonstration project for the energy refurbishment of residential buildings in Hungary. Through the establishment of regional secretariats, it is expected to catalyse the refurbishment process and therefore directly contribute to the reduction of energy poverty. Participants expressed interest about benefitting from the upcoming secretariat services and hoped to hear about the progress of this project also in the upcoming work group meetings of CO-EMEP project.

The second work group meeting had a mixture of participants from the first meeting as well as some new participants. Therefore, the CO-EMEP project was introduced again. Then the conclusions of the first work group meeting were presented to the experts. As half a year passed since the first work group meeting, they found it useful to catch up with the activities and refresh what was said before. Those participants who were new to this event were also invited to use the secretariat services of the *renoHUb* project so that they can directly contribute to the reduction of energy poverty in their cities. Another project was also presented, dealing with the subject of energy poverty. As its implementation has recently concluded, the main research results and outcomes were also presented. (See details at <https://www.elosztoprojekt.hu/about-us/>).

Going one step further from the first meeting, in this work group meeting the definition of energy poverty and its criteria were discussed in more detail. Definitions from European, national and local level were reviewed, from which the most discussion centred around the one proposed by the CO-EMEP project, targeting the Zala – Medimurje cross-border region. The discussions triggered a need for some clarifications, therefore in follow-up discussions some questions were presented to the CO-EMEP coordinator, and then the Hungarian adaptability was reviewed accordingly (most importantly regarding the proposed EUR figures).

In the next speech the CO-EMEP public call for collecting applications of interested citizens – private house owners or co-owners in order to assess their energy poverty risk and/or energy poverty stage by implementing pilot actions was presented. This was the first time that the work group members could learn about details, therefore the

presentation was received well. Participants pledged to promote the call in their sphere of contacts. The guidebook for municipalities was also presented at this meeting. Although it is still not yet fully finalised, work group members and county municipalities will definitely have full access to the document.

Finally, the audience was informed about the establishment of the Hungarian-Croatian cross-border network. As a first step, 3-3 organisations adhered to it from both sides. Participants were encouraged to consider joining this network.

The third work group meeting followed the second one in one a week, but since there were some new participants also in this meeting, the main conclusions of the second meeting were presented. At the end of this introductory presentation a “breaking news item” was also shared: the Hungarian government has announced that it will launch a large-scale call for proposals to reduce energy poverty, as part of the country’s Recovery Plan. It will focus on three regions where energy poverty and air pollution are the largest.

The next presentation and discussion touched on the current status of the CO-EMEP call for private house owners. In addition to the previous week’s discussion, practical details were also given, e.g., the on-line call text and the registration form were introduced. Each item of the registration form was reviewed, and if needed, the rationale behind was also explained. Overall, the present experts found the call easy-to-understand and straightforward.

In the next part of the work group meeting the guidelines to reduce energy poverty were presented and discussed. Discussion subjects included a detailed review of the methodology, the main planning challenges, measure planning, stakeholder consultations, measure implementation, and finally measuring and monitoring of implemented measures.

Similar to the previous two work group meetings, this work group meeting also concluded with the presentation of a related European project. The Slovenian-Hungarian Interreg funded GreenReg promotes knowledge transfer and the implementation of energy-efficiency measures in the same cross-border region as the CO-EMEP project does. Linkages between the CO-EMEP and the GreenReg project were reviewed and participants were invited to benefit from thematic workshops and join the network of so called “Green Ambassadors”.

Overall, the three work group meetings have proved to be efficient to bring about a common understanding of the topic and to agree on the main approach to tackle the issue in Zala county.

7.3. Results and findings from work group meetings with relevant experts in Croatia

During the first work group meeting organized in Croatia lead beneficiary had the chance to discuss the problem of energy poverty with four experts in the field who presented them their vision of this phenomenon, whereas their input helped project

partners to define the course of action in defining energy poverty and development of guidelines for energy poverty mitigation planning for local and regional government units. The participants were very open in sharing their experience and knowledge while working on actions aimed at energy poverty mitigation. The main results and conclusions from first work group meeting in Croatia are the following:

1. energy poverty is not yet approached in a quality way at the national level and there is not enough data that could help in development of energy poverty definition and identify the relevant criteria for its definition (lack of data on real estate as well as on the use of real estate) and questionable timeliness of existing data;
2. public call for energy renovation of family houses owned by vulnerable groups of citizens at risk of energy poverty which was issued by Croatian Environmental Protection and Energy Efficiency Fund (EPEEF) is considered an unsuccessful measure in the fight against energy poverty because a very small number of applications were received, which resulted in non-use of all funds available within the call;
3. energy poverty as a complex problem is conditioned by a number of factors and not only social ones such as income, number of household members, recipients of social assistance which is considered the most important criterion for defining energy-poor citizens in Croatia;
4. social welfare system in Croatia is very complex due to large number of possible benefits which socially vulnerable groups of citizens can receive whereas workers in social welfare centres don't have relevant knowledge regarding energy poverty issue;
5. due to unavailability of data relevant for identification of energy poor households there is a need in establishing a cooperation between relevant institutions and centralized system which could provide the exchange of relevant data between these institutions (financial agencies, statistical offices, ministries responsible for social policy and economy and sustainable development, real estate offices, etc.);
6. possible criteria for defining energy poverty are the level of household income (median), energy consumption per usable area, energy class of the building, the ratio of the net construction area of the building and the number of household members as one of the criteria, energy costs, etc.;
7. there is a possibility that within the project CO-EMEP project partners won't be able to develop a definition of energy poverty that would be applicable to the cross-border area;
8. due to the lack of an official definition at the national level, project partners have the freedom to define at the regional level what energy poverty means for cross-border area;

9. due to the lack of national guidelines, there is a problem in identification of the criteria to be include in the development of the definition.

It was generally concluded that the project partners will face in the future a very difficult task in developing a definition of energy poverty that will be relevant for the whole cross-border area because the biggest problem they will face is related to the availability of relevant data.

Thanks to guidance from experts after first work group meeting, two potential definitions of energy poverty were developed and proposed at the second work group meeting but due to complexity of proposed definitions, i.e., availability of data that need to be collected in order to identify energy poor households these two definitions were abandoned.

The calculated energy costs exceed the total household income by more than 10%, provided that the building is energy class D or worse and that the household income does not exceed one average salary + 2.000,00 HRK for each subsequent household member.

Calculated and modeled energy costs after energy renovation plus the cost of energy renovation distributed over 20 years exceed the total household income by more than 15% provided that the building is energy class D or worse and that the household income does not exceed one average salary + 2.000,00 HRK by each subsequent household member.

Figure 7.1 Proposal of energy poverty definitions

Regardless of a good quality of these two proposed definitions (they include all relevant criteria for defining energy poverty) it was concluded that the data that should be collected in order to check the quality of these definitions are unavailable and thus the relevance of definitions is questionable. The lead partner was aware of the complexity of the above proposed definitions which is why they proposed a simplified version of energy poverty definition (Figure 7.2).

In the HU-HR cross border area, a household is considered to be energy poor if all of the following criteria are met:

- the annual costs for providing the basic needs of the living comfort (room temperature as around 20 – 22 °C) in a residential space exceed 15% of the total annual household income;
- the total monthly income of the household does not exceed the two median monthly salaries at the regional level + 270,00 € per each subsequent member of the household;
- the residential space, i.e., the building in which the household members live was built in the period up to 1987, and in the period after its construction no measures were taken to improve its physical properties in terms of energy efficiency.

Figure 7.2 CO-EMEP energy poverty definition proposal

The main point of this definition which was discussed during the second work group meeting is related to sources where the data within the definition could be found in order to check the relevance of the definition. The aim of the new proposal is to maximally simplify the definition of energy poverty with regard to available data. According to the new definition proposal, the data that need to be collected are as follows: total annual household expenditures needed to meet basic living comfort, amount of median, i.e., two median salaries at the regional level, year of construction and square footage of the building and possible reconstructions of the house in terms of increased energy efficiency. After identifying all possible data sources, it was concluded that it is necessary to establish a quality system of data exchange between different institutions and resolve the issue of personal data protection in accordance with General Data Protection Regulation (EU) 2016/679.

Among other conclusions it was agreed that energy poverty definition at national level isn't good enough because it does not include the households that are really energy poor. Poor citizens are likely to have enough income only to cover basic needs and are reluctant to invest in the energy renovation of their homes in order to improve their living conditions so the general idea was to propose a definition of energy poverty which will include, in addition to the social component, the energy component of energy poverty.

Another topic which was discussed during the second work group meeting was how to motivate the citizens to be involved in pilot actions of CO-EMEP project since the group of citizens which are in core of project activities in most cases will not admit that they face energy poverty or they do not have enough information about what energy poverty really is.

During the third work group meeting lead beneficiary presented all the findings from first and second work group meeting. Once again, lead beneficiary presented the final energy poverty definition which was briefly discussed since all participants agreed on

the proposed definition within CO-EMEP project. It was concluded that the definition will include a large number of citizens who are energy poor and that the new step would be to identify the number of energy poor households in order to develop a quality policy for energy poverty mitigation.

Since the work on energy poverty mitigation activities should be implemented in the future after the implementation of CO-EMEP project, during the third work group meeting the establishment of a cross-border network of relevant experts for energy poverty mitigation was discussed. From Croatian side the institutions who will join the cross-border network and thus continuously work on addressing the problem of energy poverty in the cross-border area are: Medjimurje Energy Agency Ltd, Regional Energy Agency North, Society for Sustainable Development Design and Society of social workers of Međimurje.

Afterwards, lead beneficiary presented the participants the public call for collecting applications of interested citizens – private house owners or co-owners in order to assess their energy poverty risk and/or energy poverty stage by implementing pilot actions. The pilot actions include development of energy audits and measurements of general building characteristics (thermographic measurements, blower door testing and U-value measurement) for identified energy poor households. To be in compliance with General Data Protection Regulation (EU) 2016/679, each applicant will have to give their consent on personal data processing while submitting their application on the public call within Application form for interested citizens – private house owners or co-owners in order to assess their energy poverty risk and/or energy poverty stage as part of the implementation of the project CO-EMEP.

After elaboration of the structure of guidelines for energy poverty mitigation planning, obstacles and challenges with whom employees of local and regional government units face and which prevent the inclusion of energy poverty mitigation measures in strategic and planning documents and identification of relevant measures to reduce energy poverty participants were discussed. All participants agreed that the structure of the guidelines is very well prepared and elaborated in great detail. The main conclusions on the guidelines for energy poverty mitigation planning are as follows:

- concrete funding mechanisms need to be established and made available to energy-poor citizens;
- educate citizens from the earliest age (already in kindergarten) about conscientious behaviour in energy consumption and care for the environment in order to create a new generation that will think and act differently;
- implementation of construction interventions in terms of increasing energy efficiency also states the implementation of simple measures such as education, implementation of simple savings measures, allocation of promotional packages such as LED bulbs, aerators, etc.;

- involve citizens in decision-making processes by organizing educational workshops, focus groups where they will be able to present their problems, receive advice from relevant experts, etc.;
- greater engagement and work by local and regional government units is needed, which again depends only on them, i.e., their existing resources (financial and human) and a sufficient level of motivation to focus their actions on reducing energy poverty.

7.4. Identification of main common criteria for defining energy poverty in HU-HR cross-border area

Energy poverty is often defined as the situation in which individuals or households are not able to adequately heat their homes or meet other required energy services at affordable cost, and as a problem it is present in many Member States. Multiple drivers of energy poverty, different households' responses, and policy impact make this a challenging problem to both understand and address. In order to measure the extent and severity of the problem, a variety of energy poverty criteria exist and are applied in several countries.

The insufficient understanding reflects the limited recognition of the issue in most Member States, at least by relevant national and regional authorities, and data available at the European level are insufficient to provide a comprehensive assessment. The criteria for defining energy poverty should have the following characteristics:

- support a definition of energy poverty that is broadly accepted across key stakeholders;
- the ability to be updated over time without excessive effort or cost;
- provide comprehensive spatial coverage, at least at national level but potentially for comparability of them across Member States.

Based on all relevant literature three groups of criteria for defining energy poverty could be proposed: social and economic criteria, technical criteria and energy criteria.

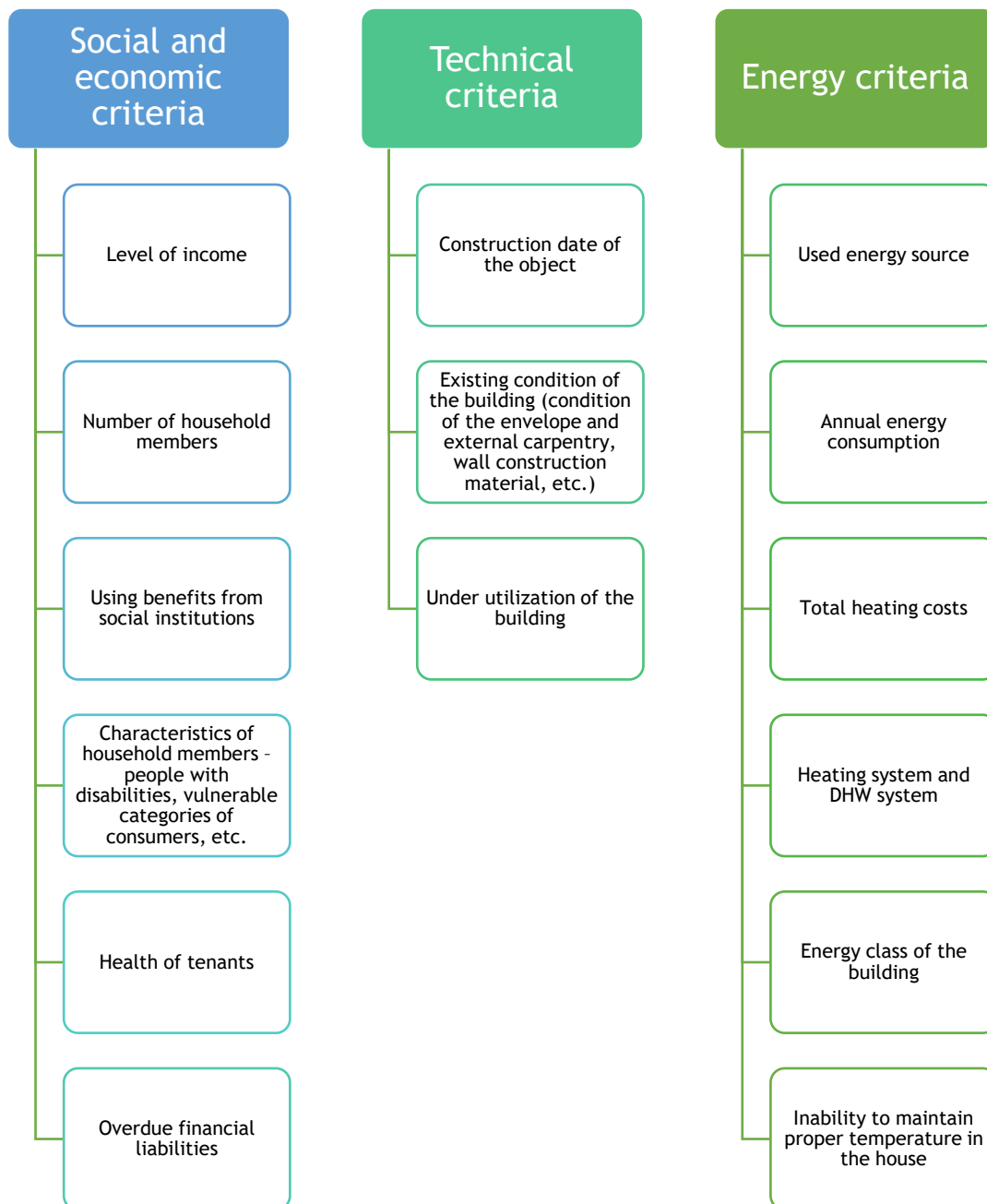


Figure 7.3 Identification of common criteria for defining energy poverty

First set of criteria concerns the relevant social and economic aspects of energy poverty. Energy poverty is a huge social problem because it is influenced by living conditions and household members characteristics. The main focus of this criteria are the citizens (household members, tenants), their level of income including social benefits and finally the characteristics of tenants living in energy poor household. The second group of criteria is referring to the current characteristics of the living space. The condition of a living space and its usage is directly influencing the energy poverty level. The final group of criteria is referring to the energy component which is mostly relevant for energy poverty issue. Energy criteria affects a range of issues relating to energy consumption levels, access to energy supply, and ability to improve building fabric. Energy consumption levels are impacted by building energy efficiency, size of households and the types and efficiency of heating systems available. The efficiency

of buildings (and necessary investment) can be affected by the tenure of those buildings (social housing, private rental or private ownership), and the building type.

Looking at the problem even deeper, it is possible to find more different criteria relevant for defining and determining the number of energy-poor citizens, because this is a very complex problem so while defining criteria it is most meaningful for policy-makers to support them in getting a high-level understanding of the problem, which can then be used to help develop and target policies and measures.

7.5. Common definition of energy poverty for cross-border area

Energy poverty is a form of poverty with adverse consequences for people's health and wellbeing. It represents a significant social problem, with potentially great future impact on the climate resilience of those affected. Most of the definitions provided in the literature mainly define energy poverty as the inability to keep a household adequately warm, but energy poverty is a much more complex and multidimensional concept. When analysing these definitions, it was concluded that there are three main drivers of energy poverty: low household income, high energy prices and inefficient energy performance of buildings concerning thermal insulation, heating systems and equipment. In order to be able to measure this phenomenon it should be clear that it should be defined first. Adopting a quality definition clearly restricts the range of possible measures to be adopted, but open issues still remain in terms of what dimensions and which data are included in the measure. Base on the definition adopted and the measurement option chosen, the same data could become useful or not. Energy poverty is a complex phenomenon and as such it requires a well-structured definition, capable to consider all relevant issues, and a corresponding measure, based on available data.

When discussing the relevant criteria for development a new definition for cross-border area these are the main criteria to be used for energy poverty definition: energy costs, household income, number of household members and characteristics of residential space (construction year and subsequent implementation of measures to increase energy efficiency of residential buildings).

While working on defining energy poverty within CO-EMEP project, it was concluded that it is necessary to develop a definition which will be applicable for the whole cross-border area. After the first Croatian work group meeting two definitions were proposed – and then abandoned, as their complexity made them impractical. In both cases this meant the complexity of data collection. For this reason, a new definition was proposed, which is easier to use and can be equally used in both sides of the border. This newly proposed definition was also used as a basis for selection of energy poor households to be included in implementation of pilot actions. To recap, the project proposes the following definition:

In the HU-HR cross border area, a household is considered to be energy poor if all of the following criteria are met:

- *the annual costs for providing the basic needs of the living comfort (room temperature as around 20 – 22 °C) in a residential space exceed 10% of the total annual household income;*
- *the total monthly income of the household does not exceed the two median monthly salaries at the regional level + 200,00 € per each subsequent member of the household;*
- *the residential space, i.e., the building in which the household members live was built in the period up to 1987, and in the period after its construction no measures were taken to improve its physical properties in terms of energy efficiency.*



In order to evaluate the proposed definition, it should be mentioned that this definition was developed with assistance of external experts from both project partner countries who deal with energy poverty on a daily basis and have relevant knowledge in the field. Have in mind the share of energy consumption and energy costs in households proposed by other energy poverty definitions here it is also used the 10%, meaning that the annual costs for providing the basic needs of the living comfort (room temperature as around 20 – 22 °C) in a residential space exceed 10% of the total annual household income. While discussing this criterion, it was concluded to decrease the amount from initially set 15% to 10% to narrow the population of energy-poor citizens. Both of the terms “total annual household income” and “median monthly salary” are expressed in net value since this is the amount that remains available to the household to cover all expenses. As suggested by external experts it was concluded to use median monthly salary, i.e., two median monthly salaries since the use of the median is better than average because income should be treated with caution in a way that considers the total equivalent income at the household level, not individual level. Furthermore, since some of the household members do not generate income through salary but through some other sources (pension, child allowances, maternity benefits, social assistance and other benefits, etc.) the idea is to use an increase of 200,00 EUR for each subsequent household member to ensure equality in identifying energy-poor households based also on number of household members. According to the recommendation of our experts from the social welfare centre, and given the amount of benefits that can be obtained when using the services of the social welfare centres, it was agreed that this amount should be 200,00 EUR. In order for someone to be able to use the services of social welfare centres in Croatia and Hungary and be able to receive the benefits they provide they must also meet certain

conditions. The amount of the benefits depends, as it does in many countries, on a large number of factors, so it was agreed on using maximum amount of benefits that can be granted to users of social care centres in Croatia. At median rate, 200,00 EUR is currently worth 69,200 HUF. Considering the economic conditions of Zala county and the national social support services, this amount seems to be reasonable to be used for Hungary also. Project partners were aware of the fact that it is not possible to be fair to all households but the general intention with this was to be as fair as possible to different types of households with regard to the number and characteristics of household members (single-household, household with two pensioners, family with two parents and two children, household with four employed members, etc.).

Since energy performance characteristics of the buildings are very important criteria in identifying the level of energy poverty, project partners agreed to include this criterion into the definition also. In 1987 the first regulation regarding the thermal protection of buildings were defined so it was agreed that buildings build before 1987 have significantly worse characteristics than today's energy efficiency standards. Buildings from this period have been built with all available materials, but it has to be taken into consideration that many of them were built in such way that they hadn't met regulations on thermal protection from this time period. Because of the mild regulations and failure to enforce regulations, the consumption of heat in residential buildings from this time period is still considerably higher than today's standards. Equally, the project's experts have confirmed that using 1987 as the delineation date is also valid for Hungary.

Since energy efficiency should be seen as a measure to suppress energy poverty and raise the quality of life of building users, it was agreed to define and include into the definition that in the period after construction no measures were taken to improve building physical properties in terms of energy efficiency. For the purpose of developing the energy poverty definition, it was necessary to separate energy poverty from poverty in general. Private house owners/co-owners who are poor will most likely not invest in energy renovation of their homes especially in case they don't receive financial support from external funding mechanisms. Poor households can barely meet all the life necessities with the existing income, so they will most likely not be interested in investing in increasing energy efficiency of their homes in the future. Some of the energy-poor households, with slightly higher incomes and the use of external financial sources, will be interested in implementing energy efficiency measures in their homes and thus increase their living standard. It is recommended in the future to develop a project idea that will be a continuation of the CO-EMEP project as part of which field research and additional analyzes will be conducted to determine the relevance of the definition for the cross-border area.

8. Conclusions and future recommendations

After insight into the functioning of the energy sector in Croatia and Hungary and defined policies aimed at energy poverty mitigation, it can be concluded that these are two countries that invest a lot of effort in combating this problem. It also can be said that a number of national initiatives exist that contribute to the reduction of energy poverty in Hungary in Croatia. However, in spite of European level progress since 2010, the term is not specifically used in relevant legislation and no specific measures exist that directly focus on reducing energy poverty. It is therefore very much recommended to embrace this topic in the next round of revisions of the current regulatory framework. By tackling energy poverty, countries can make progress in a number of areas simultaneously, be that climate protection, social improvement or economic objectives.

In order to create the preconditions for defining energy poverty, determining the exact number of energy poor citizens/households and create adequate energy poverty mitigation policies in Hungary and Croatia, it is necessary to implement a series of interrelated activities which include raising awareness, situation analysis and creation of public policies in the field of energy poverty. In order to reduce energy poverty in Croatia and Hungary, the national governments should actively work on development of energy poverty policy which will be effective. By now, in regulating energy poverty issue Croatian and Hungarian government enacted numerous regulations whose main purpose is to prescribe certain obligations regarding the definition of the term energy poverty and the role of relevant institutions in its reduction. The main role of these regulations is to transpose the energy poverty obligations defined in the European directives into national legislation. They also prescribe the development of certain strategic and planning documents which will encourage reduction of energy poverty at national, regional and local level.

So far, in both countries a number of methodologies have been proposed to define energy poverty, but the debate on what constitutes energy poverty and what indicators should be used to monitor it is continuing. Regardless of the methodology for defining energy poverty, which is important to statistically monitor changes in society and assess policy performance, as a first step it is necessary to establish systems to protect those citizens/households who are at risk of becoming energy poor.

First step in the battle against energy poverty is to develop energy poverty definition which will help to identify the number of energy poor households and thus quality policy for energy poverty mitigation. Croatia and Hungary, as already stated recognized energy poverty as major problem with whom their citizens face on a daily basis. Although the problem of energy poverty has been recognized at the national level of both countries, at the local and regional level this problem has not been sufficiently addressed. Based on this, this project idea with the main goal of improving the cooperation of relevant institutions at the local and regional level in order to solve the problem of energy poverty was developed.

Within this document, project partners presented the whole process of developing energy poverty definition. In order to develop a definition which will be relevant for the whole cross-border area it was necessary to analyze the legal background, i.e., legal framework for defining energy poverty and social welfare since they are connected. In order to understand the Croatian and Hungarian regulations related to energy poverty and the social welfare system, it is necessary to look at the regulations prescribed by the European Commission and how they influenced the legal framework of project partner countries. By evaluating this, project partners in cooperation with relevant experts agreed on common criteria for defining energy poverty as well as the energy poverty definition for cross-border area. By developing energy poverty definition, project partners have successfully mastered the first step in developing a quality energy poverty mitigation policy.

In order to ensure the cooperation with relevant experts, project partners organized series of work group meetings with established work groups. The participants of the meetings were relevant experts from field of energy, local/regional governments and legal/social welfare institutions who have relevant knowledge in the field and who deal with vulnerable citizens on a daily basis. The establishment of the work groups as well as the organization of these meetings was necessary to connect relevant experts to ensure their cooperation in identifying criteria by which to define the term energy poverty. During these meetings project partners worked on development of energy poverty definition and guidelines for energy poverty mitigation planning for local and regional government units.

Eventually, project partners developed a common energy poverty definition for cross-border area which was used as a starting point for defining and implementing the public call for collecting applications of interested citizens – private house owners or co-owners in order to assess their energy poverty risk and/or energy poverty stage by implementing pilot actions.

It can be concluded that energy poverty is a cross-sector issue which requires immediate action from both social and energy actors. In order to continuously work on energy poverty mitigation on both sides of the border some additional steps should be done. The future recommendations regarding energy poverty mitigation in cross-border area are listed in Figure 8.1.

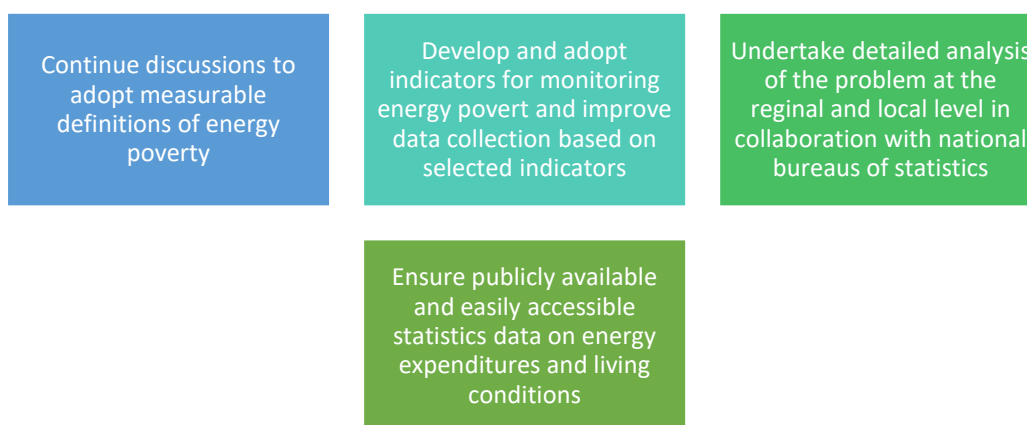


Figure 8.1 Future recommendations regarding energy poverty mitigation

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