



# Conclusions

KONRAD-ADENAUER-STIFTUNG



## ENERGY POVERTY IN MACEDONIA AND THE REGION

9 October 2013

*The conference was jointly organized by Konrad Adenauer Foundation and Analytica Think Tank*

The aim of this conference was to be a common platform in which state institutions, municipalities, civil society organization, donors, companies and experts from Macedonia and the region discuss the meaning of energy poverty in Macedonia; and outline possibilities, policies and solutions for addressing it in an effective and sustainable way as for example with energy efficiency measures. The idea behind this conference was to be an open and inclusive forum for discussing the ever challenging issue of energy poverty with the overall aim of contributing to raising awareness among the decision makers and the wider public about the importance of discussing energy poverty and addressing it in a suitable way.

The target group of this conference was the relevant state institutions, local authorities, civil society organizations, donors and the private sector working in the energy area. Present at the conference were representatives from the Ministry of Economy, Energy Agency, municipality of Karposh, City of Skopje, EU Delegation in Macedonia, representatives from the private sector as EVN, donors as UNDP, civil society representatives from Macedonia and the region, experts and professionals in the area.

Main topics of discussion were the concepts and definitions of energy poverty in Macedonia and the region; and measures and examples of addressing energy poverty.

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**CONCLUSIONS AND RECOMMENDATIONS FROM THE SESSIONS**

There are few definitions of energy poverty. Some definitions describe it as inability to ensure adequate heating in the dwelling and inability to have access to other essential energy services at a reasonable price; as problem of affording daily needs including water, hot water, lighting, heating, cooling, processing of food and the use of communication devices for obtaining information; or lack of capital to meet the expenses of energy services. A more specific definition defines energy poverty as a condition where households are living in inadequately heated homes, which can mean that the average daytime indoor temperature of the dwelling is below the biologically-determined limit of 21 °C necessary to maintain comfort and health.

However, what is common understanding is that energy poverty is a complex and multi-dimensional problem. In fact, there is no need of global definition of energy poverty, since it is different from country to country. Poverty is contextualized. Also, energy poverty needs to be distinguished from general poverty, as energy poverty is comprised of a mix of factors. The UK has defined energy poverty as a state in which the household spends more than 10% of its income on fuel use in order to heat its home, but this definition is not applicable to the Balkan region since this percentage in this region is higher.

Similarly to energy poverty, the EU uses the term vulnerable customers (in the literature vulnerable consumers is also used with the same meaning) without defining it in the third legislative package for the internal gas and electricity market, since it was considered appropriate that this definition needs to be defined at national level, thus it needs to reflect national characteristics. Countries of the region of Western Balkans have some kind of definition of vulnerable consumers; there are different criteria, however most common are households with low income, health problems and special needs. Macedonia does not have definition on vulnerable consumers.

Reasons for energy poverty can be grouped into economic (unemployment, low household income, small pension or small social welfare and high energy prices) and technical (low energy efficiency of appliances and of buildings and lack of access to energy sources). In fact, explained in the context of the Western Balkan region, the transformation into market economy has brought reforms such as increasing energy prices which triggered the issue of energy poverty. The artificially low electricity price during the previous system was responsible for widely used electric heat (which is a big waste of energy), abandonment of district heating (also related to the fact that consumption is metered at the level of apartment buildings) and energy wasteful practices (the residential sector is a big energy consumer). Also, there has been rapid increase in the use of biomass (mostly fuelwood), a phenomenon which can be seen as indicator of increased energy poverty, and which use is often related to the known problem of deforestation and its use for heating purposes is usually done inefficiently (if used in old heating stoves). Also, there is structural problem contributing to energy poverty which is the global volatility of prices of primary energy due to existence of monopolies. Other factors of energy poverty specifically for Macedonia are also that there are limited alternatives for heating (under-developed gas distribution network), lack

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of energy efficiency policy implementation and no definition of energy poverty. Important indicator is also the average heating area per household for Bosnia and Herzegovina for example, since heating is paid per m<sup>2</sup> and is not based on energy consumption.

Consequences of energy poverty are reduced commodity of living, worsened health, affected income, lower chances of prosperity (at micro/households level) and increasing energy import and energy dependence (at macro level). One simple example of the costs of energy poverty is that the external cost (health expenses etc.) of the Serbian electricity company is approximately 3.5 billion EUR. Most vulnerable groups to energy poverty are: citizens with low income, single parent households, pensioners, households that use electricity for heating, poor people in rural areas, unemployed, disabled, people with long-term illness, mental health problems and similar. There has to be criteria for energy poor; therefore from the third energy package of EU comes the obligation to define vulnerable customers by 1 January 2015. However, EU demands vulnerable customers to be narrowly defined.

By signing the Memorandum of Understanding on Social Issues in the context of the Energy Community, Macedonia has obliged itself to introducing concrete measures for reducing energy poverty. Macedonia has introduced in September 2010 the Program for Subsidizing Energy Consumption targeting eligible recipients of social welfare and permanent financial support. The massive social protest against the energy price increases in 2012 in Macedonia under the slogan of AMAN<sup>1</sup> which lasted for 5 months and mobilized more than 13 000 citizens to sign a citizen initiative for the purpose of amending the Energy Law, has shown that a larger part of the society has been affected by the increase of energy prices. This is also visible from the data of the State Statistical Office presenting the subjective opinion of citizens on their ability to keep their home adequately warm: 51,6% is percentage of households were able to keep their homes adequately warm in 2012; showing that half of the citizens could be affected by energy poverty, which is much larger percentage than the general poverty data (30,4% was the percentage of poor people in 2011). According to a study of Bouzarovski<sup>2</sup>, energy poverty in Macedonia may include up to 61% of all households in the country, affecting also the middle class households in Macedonia.

Measures for tackling energy poverty are: energy efficiency measures, planning for social housing and energy infrastructure, state subsidies for the poorest categories of citizens (best if considered to be a temporal measure), use of renewables for heating and raising awareness and education (directed towards the vulnerable consumers) as well as reducing transformation and transmission losses. Energy poverty needs to be main indicator of success of any energy policy and to be prioritized in national strategies. Tackling energy poverty is important in order to bring the country on a sustainable path. Macedonia has small consumption per person of electricity, but the matter is that citizens reduce their comfort and usually in winter do not heat the whole of their home.

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<sup>1</sup>Paraphrased translation for AMAN is: "It is enough".

<sup>2</sup>Stefan Buzar, Energy poverty in Eastern Europe: Hidden Geographies of Deprivation, (2007). The author is Lecturer at the University of Birmingham.

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The measures undertaken against energy poverty must not affect the electricity price and competition must not be distorted. "To learn how to fish, not to give them fish" is what needs to be done, meaning that as the energy prices will rise, people will need to learn how to use energy efficiently and not to be given subsidies that will in fact encourage them to continue with their wasteful energy practices. The upcoming energy liberalization will demand higher energy prices and electricity price has to remain cost-reflective. EVN, the Macedonian electricity distribution company, had activities for raising awareness on efficient energy use; educational trainings for vulnerable consumers in which more than 1000 households participated; and educational activities on efficient energy use for primary school pupils. This company's interest in promoting efficient use of energy is because it wants to prevent electricity theft and to enable consumers to pay their electricity bills. Positive implemented example in the area of renewables is the project of the Ministry of Economy to subsidize solar collectors - the positive financial benefits from instalment of a solar collector are yearly savings of 13 344 denars (217 EUR) for one household.

The state can tackle energy poverty through increased domestic energy production but also with increased employment. The goal is to reduce the costs for energy import. A concrete example of dealing with energy poverty is the state to invest in order to enable switching to new technology implemented as an action through persons that are already employed in the state organs and municipalities. One example is changing old light bulbs (2 each 100W) with 2 each 15W in 550 000 households, which will cost 3,3 Million EUR, the investment will be returned in 4 months, period of instalment will be 1 year; the state will save yearly 10 Million EUR from reduced import of electricity; the persons that will implement this can be from the municipalities, from ELEM (Macedonian electricity generation company in state ownership) etc. Another example is installing solar collectors for 550 000 households which will cost 190 Million EUR and the funds will be returned in 6 years.

Municipalities have wide spectrum of measures for reducing energy poverty at local level. For example, municipality of Karposh undertakes set of financial, technical and infrastructural measures against energy poverty. One financial measure is subsidizing energy efficient buildings and use of renewables – model only used by municipality of Karposh for supporting new energy efficient buildings which also use renewables on its territory: the municipality has issued 73 construction permits that entail this kind of subsidy; total average monthly expenses for heat and electricity for apartment of 60 m<sup>2</sup> are approximately 50 EUR which is 70% less than same size apartments which are connected to district heating and do not have energy efficiency measures. Another financial measure is improving energy efficiency of old collective buildings; the new Program for energy efficiency 2013-2015 of Karposh envisages improving energy efficiency of 163 old collective buildings with investment of more than 484 Million denars. Technical and infrastructural measures undertaken by municipality of Karposh is building gas network in the municipality as alternative for heating including cogeneration for public objects, schools and kindergartens; target group are all consumers in the municipality, costs for construction of the gas system is 3 to 5 Million EUR; expected effects are more than 40% reduced costs for heating compared to district heating. Problems that municipalities face in combating energy poverty are lack of finances for covering the capital projects (no Energy Efficiency Fund yet, lack of convenient



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bank credits) as well as lack of complementary joint local and state measures. Related to the lack of funds, donors in Macedonia have not been very keen to give funds for projects on energy poverty as noted by the civil society organizations working in the area. The City of Skopje actively participates in reducing energy poverty by various set of measures: timely employment of social category of citizens in public enterprises under its authority, implementation of energy efficiency measures in objects under authority of the City, gasification of high schools, reconstruction of facades of buildings in the center of the city, widening boulevards and streets, buying new buses, creating conditions for using more bicycles, education on energy efficiency in the City's Info center etc.

The Macedonian energy strategies envisage good measures against energy poverty such as: improving energy efficiency in the households of the socially vulnerable consumers, education and promotion of energy efficiency, solar collectors, improving energy efficiency in social housing, block tariffs for electricity, introducing metering in district heating, replacement of fuelwood stoves with energy efficient stoves, and similar; however many of them are not implemented. The households also have to invest themselves in energy efficiency in order to tackle energy poverty.

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