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Energy and Culture

Energy and Culture. Perspectives on the Power to Work, ed. Brendan D., (2006), Ashgate Publishing Company, Burlington.

Buzar S. (2007), *Energy Poverty in Eastern Europe. Hidden Geographies of Deprivation*, Ashgate Publishing Company, Burlington.

Human beings can be described as producers and consumers of energy. Anthropologists remind us that human beings as a species rely for survival on the transformation of energy; from food to brains and brawn; from brains and brawn to mechanical acts like turning, drawing and so on, including every invention the mind has ever conceived, or that people have put into practice, to make cohabitation healthful and convenient. They also remind us that the processes involved in these transformations are multifaceted. Human beings are also producers and consumers of culture. Let us focus on the definition of the social phenomenon called *culture* – it is everything, material and non-material, which was created by human beings and society. Analyzing such a definition one can easily see that *producing and consuming energy* is part of culture. As Stefan Buzar states, *whichever explanatory approach is taken, it is clear that the policies that help promote energy poverty are a product of a complex interaction between the cultures and interests of different institutions in the energy, social and housing domains*. What is more, the energy situation of the region is defined by cultural and institutional variables (that is why different regions face different energy problems). According to the World Bank, *while the challenge in most of the developing countries is to expand infrastructure and service delivery, East European and Central Asian countries are struggling to prevent the existing energy system from failing*. The problem of the connection between culture and energy seems to be especially important – and on the other hand, uncared for

– in Eastern Europe and Asia. The analyzed problem should be seen as a priority target, as – according to the International Energy Agency (IEA) – access to energy services is a key component of alleviating poverty and an *indispensable element of sustainable human development*.

The connection between culture and energy is shown in two books describing the phenomenon of energy. *The first is a collection of articles entitled Energy and Culture. Perspectives on the Power to Work. "Energy and Culture: the two themes are inseparably linked in human experience, and so they are joined in this book,"* which were collected and edited by Brendan Doodley. In May 2004, specialists in political science, economics, statistics, history, art history, chemistry and others, from Canada, the USA, Bulgaria, Hungary, Germany and elsewhere, converged in Bremen, Germany to discuss the past, present and future of energy from the widest transdisciplinary point of view. Despite the wide variety of themes in the collection and despite energy being seen from different points of view, the perspectives have something in common, though. The authors try to situate energy in its human context. They stress that *context* may mean different things to different specialists. To economists, it may mean a set of variables in some way related to the chief ones under study. For instance, the chief variable *efficiency* may be calculated in the light of the related variables *population density, prevalent industries, and distribution of energy-saving appliances*. To historians, the context may be a set of unrepeatable path-dependent conditions and circumstances, often purely qualitative, often unquantifiable. Besides the theoretical difficulties mentioned above, the authors try to show their analyses put in the human and cultural context.

The book consists of fourteen articles which are divided into six chapters: Energy and History, Energy and Politics, Energy and Science, Energy and Lifestyle, Energy and Risk and Energy and Opinion. Because the scope of the work is quite wide, we would like to direct the reader's attention to four most essential issues:

- energy transitions
- energy and sustainable development
- legislative framework for renewable sources of energy
- energy and risk.

The second book, entitled *"Energy poverty in Eastern Europe. Hidden Geographies of Deprivation"* focuses¹ on the energy situation in Eastern and

¹ Using relational understanding of the interaction between society, economy and space, institutional and evolutionary systems of thought, which emphasize the path-dependency of decision-making processes in societies undergoing rapid social change.

Central Europe and the Former Soviet Union countries. It consists of two parts. The first (chapters: *Gaps in Theory and Policy: Tracing the Roots of Energy Poverty and Patterns of Domestic Energy Deprivation Across the Post-Socialist Space*) provides a general overview of energy poverty, focusing on the background historical context for its emergence and the situation on the ground. The second part presents case studies of energy poverty in the Czech Republic and Macedonia that can be seen as a comparative study of the two countries with different economic and political situations. According to the conclusions, domestic energy deprivation is a function of low equivalent incomes, which stem from a wider array of social exclusion related processes. As should be mentioned, the problem of energy poverty is part of a wider perspective that concerns deprivation and barriers in human development. Those problems should be addressed by questions related to the policy background of energy poverty and the broader socio-economic reasons (cultural and institutional factors), as well as by examining the everyday perspective focused on micro-scale experiences.

Stefan Buzar declares that the key premise of his book is *that the two post-socialist energy crises are underpinned by the common predicament – the 'hidden geography' of energy poverty. As he claims, there is a wide body of evidence to suggest that ECE (Eastern and Central Europe) and FSU (Former Soviet Union) countries are facing an escalating energy poverty problem, due to their specific social and physical conditions (such as: cold climates, temperature inversions, the removal of universal socialist era energy price subsidies and falling real incomes post-1990).*

A conceptual apparatus for capturing the political and physical invisibility of post-socialist energy poverty in ECE is provided by the concept of *'hidden geography'* that stresses *little policy attention confined in private domestic spaces beyond public gaze*. According to his studies, the introduced concept of *'energy poverty'* – defined as *the inability to heat the home up to a socially and materially necessitated level. A household is considered energy poor if the amount of warmth in its home does not allow for participating in the lifestyles, customs and activities which define membership of society – is still absent from mainstream language of decision-makers and experts in Europe.*

According to Stefan Buzar, Eastern Europe and the FSU *urgently need an academic study of energy poverty with deeper concern of its connection with culture. This subject was at the beginning of his work virtually unknown in continental Europe. Buzar claims that energy poverty is far more complex and has multiple facets which extended like tentacles throughout the economy, society*

and the built environment. One of the main problems in conceptualizing energy poverty in post-socialist countries is *the lack of an integrated theoretical understanding of the interdependencies of social, energy and housing reforms.* There are not only analytical gaps in theoretical and policy analyses of this problem, but also a *lack of a distinctively geographical conceptualization of energy poverty and lack of studies beyond the domain of macroeconomic analyses, political interaction and showing the living experience of poverty at household level.*

Buzar's book claims that an improved understanding of energy poverty in post-socialism will only be possible with increasing awareness of the importance of organizational and social processes in constructing the spaces of social exclusion. *Energy poverty arises out of the inadequate co-ordination of energy, social welfare and housing policies. The key problem is the lack of properly targeted social assistance programmes, as well as the inadequate support frameworks for energy efficiency in the domestic sector.* The book aims at the non-conformity of energy poverty with income based inequality measures.

Studies provided in Buzar's book showed that *broader social, institutional and spatial issues were simply not on the agenda.* This is baffling especially when we remark that many broader problems faced by the Eastern European countries are directly linked to this problem. Stefan Buzar named only some of them: general non-payment for energy services, the financial insolvency of energy companies, inadequate investment in building maintenance, as well as social exclusion and marginalization.

Buzar complains that social theory and efforts in this area of study lack an integrated theoretical understanding of the problem – the relationship between social policy, energy efficiency, institutional cultures and cold homes require further elucidation. As Buzar concluded, *moreover there are no standardized measurement frameworks for energy poverty and no consistent systems of data gathering, which makes it difficult for experts to undertake cross-sectional studies, and activists to increase public awareness [...] and there is insufficient knowledge about the kinds of policy framework needed to address the problem.*

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In the first part of *Energy and Culture. Perspectives on the Power to Work*, there is an article by Martin Melosi. The author tries to develop the concept of *energy transitions* as a category for understanding the past, present and future of

energy cultures. The concept of *energy transitions* analyzed by Melosi is based on the notion that a single energy source, or even group of related sources, dominated the market during a particular period or era, eventually to be challenged and then replaced by another major source or sources. According to him, the concept can help researchers understand the evolution of human material culture, economic growth and development, the utilization of resources and social organization. Utilized too narrowly, however, it may merely provide a convenient instrument for segmenting energy history within a one-dimensional chronology. In the article, the researcher attempts to explain that the most beneficial way to utilize the conceptual tool of *energy transition* would perhaps be to see this concept as a study of a fluid process, rather than understanding it as a pretext for establishing rigid barriers between specific energy eras. It is said that, potentially, energy transitions can help to clarify how energy development and use influence and are influenced by the technical, economic, political, environmental and social forces that shape society.

Energy transitions can be used as the basis for historical arguments in two ways: (1) quantitatively – by measuring changes in energy consumption, or (2) qualitatively – by evaluating the impact of new sources of energy on various aspects of life. The quantitative approach yields a simple periodization of energy history based on peaks and troughs of wood, water power, coal, petroleum, natural gas and nuclear power. Using his conception and methodology, Melosi shows the reader that the history of transition energy can be divided into three epochs: *First transitions* (the use of wood and coal is dominant), *Second transitions* (oil as a main source of energy) and *Third transitions* (nuclear power and natural sources of energy). He adds that the supposed advantages of one energy source over another, given the demographics of the time, have never been the sole cause of change; nor has any period been characterized entirely by a single source – instead, in each period some combination of older and newer sources usually came into play.

In conclusion he says that *...a deeper examination of past energy transitions might be useful in looking toward the future if for no other reason than for exposing the complexity of such changes. If history teaches us anything on this subject it is that transitions are not simply exercises in swapping fuels and changing technologies, but disruptive events with the potential to remake societies in fundamental ways.*

Access to sources of energy has often been mediated by politics, as researchers note in the section on *Energy and Politics*. In modern societies, energy policy requires continuous negotiation involving industries, labour

organizations, non-governmental organizations, and the general public. Two authors, Jurgen Friedrich Hake and Regina Eich offer a broad overview of the concept of *sustainable development* and its status in the literature since the so-called Brundtland Commission in 1987. In this article Hake and Eich show that the term Sustainable Development plays a major role in the debate on social development extending into the future.

Further in the article they claim that although agreement upon a valid set of indicators has proven particularly difficult, nonetheless there is substantial agreement about the necessary limitation of anthropogenic material inputs into existing *ecological cycles*. In a globalised world, environmental damage is measurable by costs to the economy. This issue should not entirely crowd out the equally important issue of maintaining secure energy supplies for the future, as has so often happened in recent debates, for instance, in Germany. They aim at expressing the concept of the need to make constant economic growth coexist with the preservation of the environment, while at the same time maintaining social justice.

The starting point for this debate is the statement that, although social development in the past has brought prosperity for many people, a much greater proportion of mankind still lives in poverty in substandard conditions. Closely related to this status description is the view that both the nature of present-day economic activities and the current patterns of behaviour and consumption in the industrialized countries are not suitable as a model for future development, and actually might have serious repercussions on ecological, economic and social subsystems. The concept of sustainable development thus links the issue of conserving the natural basis for life for future generations to the desire for economic prosperity and social development of the people living in the present.

Providing useful energy for eight to twelve billion people in the future, of which a large percentage will probably live in conurbations with several million inhabitants each, has several geopolitical dimensions, which should not be ignored. Ending the article, the authors claim that unequal geographical distribution of global energy reserves and the demand, which strongly deviates from this distribution, require a flexible and also robust system of international trade and supply relations.

It is said that if new energy sources are to be effective, they must be adopted and applied by people, and environmental protection begins with the individual citizen. Thus *Energy and Lifestyle* are closely linked, also in the contributions to the section bearing this name. The reader can find that patterns of energy use

depend on behaviour that is as much rooted in geographical and cultural as in chronological contexts in Bulgaria. Antoaneta Yotova notes that some programmes have been developed to increase the relatively minor role played by renewable resources, but there are significant obstacles. The author shows that electricity is already highly priced and investment is costly. Political engagement to carry out the more environment-friendly provisions of the Law of Energy (2003) is weak, and there is little information or encouragement among the general public to incite officials to more decisive action. Only the country's planned entry into the EU and the obligatory adherence to the Kyoto protocol and the EU targets are likely to bring about change. The solution to this problem involves developing a policy of using renewable energy mainly by establishing a suitable legislative framework.

The text claims that according to the present Bulgarian Law of Energy (LoE), in force since the end of 2003, renewable energy sources are ... *solar, wind, hydro and geothermal energy, waste heat, energy from vegetable or animal biomass, including biogas, energy from industrial and municipal solid waste which are renewing without visible exhaustion when used with definite power*. This definition of renewables includes all types of such sources available in the country, but in practice, only hydro energy is used as a primary energy source for electricity production in Bulgaria. The share of hydro energy in the country's electricity generation has varied between 7–8 per cent in recent years. Further, the researcher stresses the general legislative framework for the use of renewables in the country. She claims that it is the basis for analyzing the real situation, in this respect focusing on the obstacles that hamper the faster and more effective penetration of renewables. After a short description of the Bulgarian energy sector and of its present renewables, the obstacles to the use of renewables are described and analyzed.

Finally, she claims that the rational use of natural resources, energy resources in particular, has become a matter of great interest in both economic and political agendas since the second half of the last century. According to Yotova, environmental considerations have been added because of serious concerns about the impact on the environment due to the economic development of modern societies. She also adds that the energy-economy-environment complex is now being examined in policy studies, in regard to related policies, strategies, programmes, plans, etc. *In the energy policy field, the renewables as an option that meets, to the greatest extent, the requirements for environmentally compatible and sustainable energy development, receives more and more attention on global, regional, national and local scales.*

Culture influences the way people weigh potential benefits and evaluate certain risks, as well as the way they react to the same perceived risks. Differences in risk perception, connected with certain behaviours, appear to be culturally based; and these differences have a strong impact on the position people take regarding the energy problem. Furthermore, cultures of risk in particular places change over time and vary across social groups. From the emergence of hydroelectric power to the building of nuclear reactors, new sources of energy have often raised issues concerning the risk to populations and the environment. Opening the section on *Energy and Risk* Michalis Lianos points out what he sees as the well-advanced dangerization of our life-world. The sensation of uncertainty derives as much from actual risks as from perceived ones. Very real risks to our planet's survival and ours have induced the sensation of uncertainty that permanently accompanies the 21st-century consciousness. This situation, Lianos suggests, should encourage us to adopt the *environmental horizon*, taking into account humanity's responsibilities as a standard in political, social and economic interaction.

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In his book, "*Energy poverty in Eastern Europe. Hidden Geographies of Deprivation*" Stefan Buzar investigates ways in which the theory of post-socialist transformation *has conceptualized the interdependence of energy pricing, poverty and demand-side energy efficiency in the countries of the former Eastern bloc*. He revisits the multiple theoretical, discursive and decision-making incongruences that contributed to the emergence of energy poverty in this area and claims that the academic literature on this subject lacks knowledge about the interaction between state energy and social policies, the condition of the housing stock, and the spatial extent of social deprivation. Then the socio-spatial variation of energy poverty factors in ECE and FSU are investigated. In conclusion Buzar *points to the importance of institutional and regulatory legacies in determining the nature and extent of social policy responses to energy sector reforms*. He distinguished relying on von Hirschhausen and Walde's² stylised outcomes of energy restructuring:

- The 'Post-Soviet mixed economy' including FSU states (*they are a blend of incoherently functioning elements of a market economy and straightforward state planning*),

² They analysed the generic of patterns energy transformation that provides a useful conceptual framework for situating the supranational geographies of energy reform in region.

– The ‘Caspian state economy’ comprising Caspian FSU countries (*characterized by an autocratic, clan-based regime based upon a strong state involvement in the economy*),

– The ‘Reforming Central/Eastern European market economy’ consisting of ECE states which have *largely adopted the formal institutions of a market economy or have at least given a binding commitment to do so in the future*.

Buzar claims that these patterns indicate the patterns of energy efficiency policies, the patterns of electricity reform and social support mechanisms for energy price increases in ECE and FSU countries. On this basis (mixing types) he classified states as:

– Pervasive geography of energy poverty (some Former Soviet republics and the Balkans),

– Potential geography of energy poverty (Central Asia, Caucasus and Russia) or

– Insular geography of energy poverty (Central Europe, the Baltic States).

Buzar presents *the institutional (re)production of inequality* using analytical approaches taken from economic geography, institutional economics and political economy, sets out a broader relationship between governance frameworks and energy poverty and shows the institutional background of the energy poverty, social welfare and housing sectors in Macedonia and the Czech Republic. He looks at the organizational and political dynamics that have shaped the evolution of energy raising the question about the relationship between the emergence of domestic energy deprivation and decision-making patterns in the relevant policy domains. This chapter shows the *lack of properly targeted social assistance programmes* in many ECE countries, as well as the *institutional inadequacy of support frameworks for energy efficiency in the domestic sector*. As Buzar stated, *cross-referencing the institutional contexts of energy, housing and social welfare policies in [...] [Macedonia and the Czech Republic] opens the space for connecting energy poverty with the path-dependencies of post-socialist transformation*. Again he uses von Hirschhausen and Walde’s identification of three political layers within the post-socialist transformation: formal institutions, informal institutions and the ‘societal consensus about the economic system’ combined with strategic-relational state theory.

Buzar investigates the socio-demographic extent of energy poverty among the populations in Macedonia and the Czech Republic and explores the role of housing infrastructure and urban/rural socio-economic disparities in the production of energy poverty. He uses ‘consensual’ and ‘relational’ understandings of poverty and deprivation to argue that energy poverty patterns do not

always conform to poverty structures in general and states that *the territorial and organizational contingencies of energy poverty are encased in a multi-layered geography of institutional traps, spatial inequalities and household practices* and points to the existence of a direct link between energy poverty, increasing energy prices and falling real incomes. He argues that *the conditions found in Macedonia and the Czech Republic could be replicated elsewhere, in countries where a 'pervasive' or 'insular' geography of energy poverty factors is present.*

Buzar's next goal was to examine everyday practices of energy consumption at the household level focusing on micro perspective. Conclusions were based on ethnographic data gathered during on-site research in Macedonia and the Czech Republic. Buzar connects *the decreased energy utility of energy poor households to the loss of socio-spatial capabilities, that is, the inability to use personal knowledge, skills and fixed housing capital as a means of maintaining well-being.* He also states that *the institutional production of energy poverty is reinforced by the geographies of residential energy use among disadvantaged households.*

In conclusion he uses previous inferences to discuss broader theoretical and practical issues caused by the hidden geographies of energy poverty in post-socialist countries. The author develops a theoretical framework for establishing the social, economic and political implication of the problem, which consists of three layers emphasizing the relations between structural, economic and spatial legacies and organizational cultures and decisions:

- the first component requires a background review of the energy, housing and social welfare reform process,
- the second stage requires an analysis of the structure and size of energy poverty,
- the third component *deals with the driving forces of energy poverty, as well as the institutional and socio-spatial conditions at different scales.*

Buzar states that *many of the main structural problems in the energy sectors of transformation states are linked to energy efficiency, poverty and affordability.* He also shows the problem from the perspectives of neoliberalism, globalization and the post-welfare state.

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We like to think of social science as having begun, some time in the last two centuries, as the product of a specific series of developments within Western

civilization. It now belongs to everyone, and its practitioners across the globe may contribute to formulating the questions we need to ask, and the research methods we need to explore. Widely varied as our separate social science disciplines may be, Max Weber defined the classic problem shared by all of them as follows: to analyse the scarcity of means. In modern times, the problem is largely understood in terms of resources and availability, of which a considerable portion is contained within the energy and culture. The presented books are an attempt to put every social science together and try to explain and understand the connection between two phenomena – energy and culture. Energy poverty also raises human rights issues problems: to name but a few: energy poverty and “petro-politics”, gender and energy poverty, energy and human development issues.

The UN has described expanding access to sustainable energy services as essential to bringing its Millennium Development Goals (MDGs) to fruition. Its Development Programme’s work centres on “*six thematic practice areas, selected because of developing country demand: poverty reduction, democratic governance, sustainable energy and the environment, crisis management, ICT, and HIV/AIDS*”. Access to energy is a component part within UNDP’s approach to sustainable energy. Its priorities on sustainable energy involve: promoting rural energy services, strengthening national policy frameworks, promoting clean energy technology, and increasing access to financing for energy.

Those problems should also be investigated with “cultural lenses”, as the reviewed books clearly show the importance of cultural factors in creating and winding down “energy poverty”. There is a need for incorporating into these studies and mainstream policy reforms – as the reviewed books claim – evolutionary and institutional understandings of economic change. Studies should incorporate a balanced mix of qualitative and quantitative methods.