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SUSTAINABLE DEVELOPMENT AND ITS IMPACT ON MARKETING OF COMPANIES IN THE ENERGY BUSINESS

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ABSTRACT
The objective of this report is to analyze how the idea of sustainable development has influenced energy over the last decades and has led to changes in marketing of companies supplying and distributing energy to end consumers. The report dwells on the 'sustainable energy development' term and on the criteria for its assessment. It points out regional and state pieces of legislature on sustainable energy development and the stage of their implementation in Bulgaria. The following tasks are set in the report: 1) to outline the main marketing approaches of companies in the energy sector; 2) to trace general trends in the future marketing development of above mentioned companies. Methods used for the accomplishment of those tasks are: analysis and synthesis; induction and deduction.

Key words: sustainable development, energy, marketing, companies, impact

Introduction to Sustainable Development

In 1987, the United Nations released the Brundtland Report, which included what is now one of the most widely recognised definitions for sustainable development: "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs."(1) According to the same report, the definition consists of two key concepts:

- The concept of 'needs', in particular the essential needs of the world's poor, and
- The idea of limitations imposed by available technology and social organization on the environment's ability to meet present and future needs.

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vcThe term 'sustainable development' in its modern sense was first used by the Club of Rome in March 1972 in its epoch-making report on the 'Limits to Growth', written by a group of scientists. Describing the desirable 'state of global equilibrium', the authors claimed to be *'searching for a model output that represents a world system that is: 1. Sustainable without sudden and uncontrolled collapse; and 2. capable of satisfying the basic material requirements of all of its people.*'(2)

Although the idea of the Club of Rome for zero economic growth maintenance was discarded as unacceptable, it gave way to a new concept of economic growth, per se one that is not focused on formal economic figures and indices but takes into consideration the level of current essential needs of the population that can be met by available resources. Most importantly, it suggests that the needs of future generations should not be compromised by the unlimited needs of the current generation that is capable of utilizing all available natural resources. The level

of satisfaction of those needs had to be measured by new means replacing GDP, GNP and purchasing power parity. Lately new indices are being used to measure quality of life, namely GDP per capita of the population, labour productivity per capita, standard of living, human capital development, environmental sustainability, social inclusion, critical infrastructure, access to health care and education, safety, etc. In 1972 Bhutan introduced the so called Gross National Happiness index (GNH) and an increasing number of countries have adopted it for their own population since.

Sustainable Energy Development and Bulgarian Legislature

The term 'sustainable energy development' comes up for the first time in Bulgarian legislation in the Renewable Resources Energy Act from 2011. It is used to assess material criteria of sustainable development in three aspects:

- competitive social and economic development;
- environment and polluting emissions in the atmosphere;
- energy development ensuring energy supply.

In fact, the implementation of European acts and by-laws on sustainable development dates back to 1981 when Bulgaria ratifies the Geneva Convention on cross-border air pollution at far distances. Other acts regulating the environmental aspect of sustainable energy development since that first step are:

1. The **Energy act** from 2003 which, among other things, promotes efficient use of energy, natural resources and combined generation of electricity and heat (the so-called co-generation plants) 'under the guaranteed protection of the life and health of citizens, the property, the environment, the interests of consumers, and the national interests'(3);
2. The **Energy Strategy of the Republic of Bulgaria till 2020** from 2011 which targets renewable energy and focuses on clean and low-emission energy;
3. The **National long-term program for promotion of renewable energy resources 2005-2015** which targets 16% renewable resources energy share of the total energy consumption in Bulgaria by 2020; The **National long-term program for the promotion of biofuels consumption in transport 2008-2020**; **International fund Kozloduy**; The **Bulgarian energy efficiency fund;**
4. **Act on renewable and alternative energy resources and** biofuels from 2009;
5. The **Energy Efficiency Act** from 2008;
6. **The European Constitution,** Par. 3 Art. 3 and **Directives 2001/77, 2004/8, 2003/30, 2009/28** concerning promotion of renewable energy resources, its application in transport and its use in the internal energy market; promotion of biofuels and co-generation plants;
7. **The European scheme for trade with emission quotas of greenhouse gas.**

In theory, the above mentioned pieces of legislation have the following positive effects:

- Free of charge joining to the grid for Renewable Energy installations;
- Guaranteed purchase at preferential prices of energy produced by renewable sources;
- Preferential financing conditions for 'green' energy projects;
- Facilitated administrative procedures and clear and transparent pricing methodology;
- Production of 100% clean energy;
- Independence from external energy suppliers;
- Energy efficiency and environmental positive effects, monitored by SEWRC and regulated by the Energy act in compliance with European requirements;
- Substantial reduction of energy pricing subsidies;
- Liberalization of the energy market, free access for consumers to all energy suppliers and stimulation of highly effective combined energy production facilities;
- Termination of long-term contracts with heat and power stations in favor of renewable energy suppliers and co-generation plants;
- Attraction of foreign investment in local energy-intensive productions that would enhance Bulgarian compatibility on the international market in the long-run.

In reality certain drawbacks appeared in the pricing mechanism and SEWRC regulation.

There are unclear points in the pricing of natural gas and electricity which harm consumer interests according to experts in energetics. Critics of the work of the State Energy and Water Regulatory Commission claim their strategy is not long-term oriented but depends on the political situation and is often used as social policy. Example of this is the implementation of an additional fee for highly effective combined energy production facilities on July 1st 2010 (the basis of which remained unclear) which caused sizeable financial losses to all industrial energy consumers. Price premiums for 'grid access', 'unrecovered costs', 'transportation fee' and fee for highly effective combined co-generation of heat and electricity energy are puzzling for consumers but they all constitute the final consumer burden. That burden is about to increase furthermore in the future, as, according to the Chairman of SEWRC Ms Evgeniya Haritonova the electricity price is likely to go up as of the 1st of July 2013. This will happen in case price premiums on exported energy price for 'brown energy' and 'unrecovered costs' that currently stimulate Bulgarian exporters, stop being calculated. It is not surprising, therefore, that the overall public image of companies within the energy sector in Bulgaria and the promoted idea of sustainable development implemented at the expense of bill payers is predominantly negative. It seems like the feeble attempts to market the idea are not successful.

According to a research provided by the Association of Producers of Ecological Energy the volume of installed renewable energy sources (RES) drops sharply after its initial peak in 2010(4) (**Table 1 – Installed RES capacities**).

The statistics in the table come to show that government policy conducted through the National Electricity Company NEK EAD has made a U-turn realizing that either: a. renewable energy prices are not set at the right level or b. participants in the process of energy distribution, supply and consumption have not been prepared to pay higher prices for energy produced according to European standards.

Yet another obstacle in the process of liberalizing of the energy market and its adoption to European requirement appears to be the fact that Bulgaria does not have an energy stock-market and its implementation time remains unknown. It is expected that medium- and high-voltage electricity consumers will be granted the ability to choose their own energy supplier by the end of 2013 by means of 3-sided agreements (involving the Electricity System Operator as the national grid owner). Energy in public utilities, however, will remain outside the scope of control for physical consumers and they will not be able to switch from one energy supplier to another (price-takers in a monopolized market).

State role in green energy pricing and promotion

As to the correct pricing, state intervention is a must. Markets for natural resources (renewable or not) are considered to be imperfect. The reason for that assumption is the uncertainty of their future supply and demand which makes calculation of their fair value difficult. Society can choose between their current or future consumption but that choice is a subjective one and could harm the interests of future generations, hence distribution and consumption of these resources is not an optimal one. Moreover, the capital protection principle of sustainable development says that renewable sources should only be used to the extent of their natural restoration ability. The government has the most complete information of that extent, which is why decisions on pricing of some resources are considered optimal when taken centrally.

As to the promotion of sustainable development in general and green energy in particular, marketing initiatives should also be taken up by the government. Sustainable development is the responsibility of the State to its citizens to provide for a safe, stable and healthy environment. It is therefore necessary for the government to create social awareness of the rights and obligations of individuals, public sector and business entities.

Marketing practices and tendencies for sustainable development promotion

But how do you market a more expensive green energy in times of depression when the medium Bulgarian is hit by inflation and frozen remuneration? The following tendencies could

be witnessed with respect to marketing of sustainable energy development in Bulgaria:

- Marketing initiative – while electricity distribution companies quote sustainable development in their mission statements and PR initiatives, the government through its state-owned electricity companies gets increasingly involved in sustainable development promotion by means of various EU programs and funds;
- Broad mass media coverage of new eco-friendly projects taken up by both privately-owned and public energy companies including:
  - Increased electricity generation from hydroelectric power plants and pumped-storage stations of hydroelectric power plants, wind turbines and photovoltaic facilities at the expense of reduced generation from thermal power plants (See **Table 2 - Electricity Generation in Bulgaria in 2020 from nuclear, thermal and renewable power plants)**(5);
  - More efficient use of generation capacities such as combined heat and power cogeneration plants or combined cooling, heat and power trigeneration plants;
  - Reduction of greenhouse gas emissions and other pollutants from thermal power plants and hazardous waste management programs;
  - Projects aiming at decrease of electricity transmission losses and more economic use of energy sources;
  - Application of new environmentally friendly technologies in all stages of energy production, distribution, transmission and supply.
- Attempts of electricity supply and distribution companies to achieve general positive mass media presence by means of public relations in general and reputation management in particular; mass media are involved as intermediaries between the companies' interests and society;
- A tendency for gradual increase of marketing budgets of companies in the energy sector in general; maintenance of in-house sales force and its expert training and education. This tendency is undisputed if traced back from 2004 – 2005 when energy distribution companies were still state-owned and none of them had communication expert or unit. It is also expected to accelerate by the end of 2013 when Bulgarian energy market is about to be liberalized and energy companies will be competing by marketing means for medium- and high voltage electricity consumers.
- Attempt to promote added value to the end consumer in terms of energy produced with minimal negative environmental, social and economic impact on the region. All electricity distribution companies already offer electricity consumption analysis for medium-voltage and high-voltage grid users as well as expertise and support for optimizing that consumption and its 24-hour distribution. Such services are expected to become an increasingly important tool for attracting new customers in the liberalized energy market.
- Increasing online and social media circulation of energy companies and their sustainable development programs, along with typical activities such as publicity events, speaking opportunities and outbound communication to members of the press;
- Asymmetrical PR model wherein energy companies delicately try to influence general public opinion of its activities by means of media releases, search engine optimization, blogs and micro blogging.

DISCUSSION

The above mentioned practices and tendencies provide at least a *prima facie* evidence that government and private energy sector have started working on the promotion of sustainable development. European legislation has been partially adopted in Bulgarian law and compensation mechanism for green energy generation has been set in SEWRC regulation. The numbers in **Table 1**, however, suggest that 'green' energy produced from renewable energy sources has dropped sharply in the first quarter of 2013 because of an unexpected change in the National regulator's policy. Further work will be needed on a governmental level to establish a correct and socially acceptable price of renewable sources energy and then on distribution companies' level to present it to end consumers in such a way as to avoid social discontent. Marketing in the energy business therefore is yet to start playing in important role in sustainable development promotion.

Table 1. *Installed RED capacities*

INFO

Installed RES capacities

according to the guarantees of origin, issued by SEDA till 12.04.2013

№	RES source	Installed capacities by year							Total installed capacities until 12.04.2013 (MW)
		2007	2008	2009	2010	2011	2012	2013	
1	HPP above 10MW	1 968,83	0,00	0,00	0,00	0,00	86,30	0,00	**2 055,13**
2	SHPP	179,62	6,92	12,68	22,86	21,89	22,54	3,00	**269,51**
3	Wind PP	26,61	90,39	87,81	298,41	22,80	131,00	2,00	**659,02**
4	PV PP	0,02	0,45	9,09	29,21	172,78	721,04	1,10	**933,69**
7	Biogas under 1MW	0,29	0,00	0,00	0,00	5,52	15,83	0,00	**21,64**
		2 175,36	97,75	109,58	350,47	223,00	976,71	6,10	**3 938,98**

Note: HPP – Hydroelectric power plants;
SHPP – Small hydropower plants;
Wind PP – Wind power plants;
PV PP – Photovoltaic power plants.

Table 2. *Electricity Generation in Bulgaria in 2020 from nuclear, thermal and renewable power plants*

Electricity Generation (TWh)	**2005**	**2020**
Nuclear1.	18.6	22.3
RES	4.31	5.8
Thermal power plants, including biomass	21.1	21.6
Total	44.0	49.7

Electricity Generation (%)	**2005**	**2020**
Nuclear	42.3%	44.9%
RES	9.8%	11.7%
Thermal power plants, including biomass	47.9%	43.4%

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