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ESTIMATION OF THE ENERGY POTENTIALS FOR THE REGION OF PRIZREN AND PROPOSAL SELECTION ON TECHNOLOGY, PROCESSES AND EQUIPMENT

Veis ŠERIFI[1], Mirsad TARIĆ[2], Žana DŽUBUR[3]
[1] SaTCIP Ltd, Vrnjačka Banja, Srbija, E-mail: serifiveis@gmail.com
[2] Faculty of technical science, Kosovska Mitrovica, E-mail: mirsadtaric@hotmail.com
[3] Faculty of Civil Engineering, Mostar, E-mail: zana.dzubur@unmo.ba

***Abstract*—**Use of natural resources to economic activities, including biodiversity that represents the foundation of life on Earth, under the pressure of the man, his desires and neglect, is alarmingly pressed and in an advanced stage destroyed. The increasing environment pollution is a major disturber of the pace of modern life, and a waste that is daily produced, should be eliminated as a problem of disruption and thread to life on Earth, if used as a resource and exploited as a huge energy potential.

In the region of Prizren, research has shown that it is possible to build up a plant that would allow the production of thermal and electric energy by incineration of municipal solid waste, mainly of organic origin. This paper provides an overview related to the calculation of the energy resources, proposal selection of technology, processes and equipment.

***Keywords*—**energy potentials, municipal solid waste, bio-diversity

I. INTRODUCTION

DETERMINATION of the long-term goals of biodiversity conservation and diversity of landscape, protected values of nature and method of implementation, in accordance with versatile social and economic development, as well as the Action Plan for Biodiversity is based on the Strategy between (2011-2020). The aim of the strategy is to show all open issues concerning to biodiversity and create a framework of aims and activities and better coordination, giving priority to programs and providing strategic approach for the development of future initiatives related to biodiversity conservation, sustainable development based on the use of natural resources, creation of income and gain from the use of biodiversity equally. Strategy enables and aims to fulfill tasks under the Convention of International Trade in Endangered Species of Wild Fauna and Flora *(**CITES** - **C**onvention on **I**nternational Trade in **E**ndangered **S**pecies)*, the Convention for the Protection of the World Natural and Cultural Heritage *(**WHC** - **W**orld Heritage **C**onvention)* (Paris 1972), the Convention on Wetlands *(Ramsar Convention)* and the Convention for the Protection of Migratory species of Wild Animals *(**CMS** - **C**onvention on **M**igratory **S**pecies)*, harmonization of legislation on protection of the nature under the Habitats Directive (1992) and Birds Directive (1979) [1, 2, 11, 12, 15, 19, 27-30].

The Prizren region is very rich in plant species, much higher than in other European countries, with about 13 species of plants, or about 200 that grow only in the Balkans. Unfortunately, human activity has affected about 24 species of plants. Favorable conditions for plant variety created the conditions for a high degree of diversity of animals, about 46 species of mammals are of regional and global importance. Some species of water birds have disappeared as a result of the destruction of wetlands, pollution, degradation of rivers and river beds and water exploitation. The biodiversity of the river ecosystem is severely reduced, particularly in terms of the type of fish. An obvious example is in poor biodiversity of the Hydro Power Plant of Dikanca in the municipality of Dragas [1, 2, 11, 12, 15, 19, 27-30].

The modern age has contributed that the amount of the municipal solid waste, created by human hands, to be grown rapidly and simultaneously and represents an inexhaustable source of energy. The developed countries of Western Europe, the USA, Japan, Australia with a seventh of the population, produce a third of the world's waste. In these countries, waste management, recycling and processing, are presented more than 80 %, controlled disposal of 49 %, and of 6 % uncontrollable. The New York City holds a record with a daily throwing of 24.000 tons of various kinds of waste at a distance of several thousand kilometers or 9 times higher amount than the own mass of the man during the year. Generation of waste in developed countries is 1,4 kg/per capita/day, and in midlle-income and developing countries is 0,2-0,7 kg/per capita/day. By countries varies daily and annual

mass per capita. In OECD countries, the annual increase of waste is 1,7 %, in EU countries is 1 %. The Western European Countries are faced with the household municipal waste from approximately 400 kg per capita at the annual level.

The Prizren town consists of 74 settlements with 16.970 households, while the 12.733 are involved by organized waste collection or 75 %. The Prizren region includes 221 settlement and 386.628 inhabitants, with the percentage of municipal waste collection by 84 %. Total volume in other regions of the 2011th amounted to 582.000 tons, an average of 335 kg/per capita/year. The Pristina region generates 1,3 kg/ per capita/day, while in other regions of 0,8 kg/per capita/day, or an average of 0,9 kg/per capita/day. In the region of Mitrovica the percentage of collection is 29 % in the period from 2007 to 2008. year. Total increase in waste generated for year 2011. compared to 2010. amounts to 20 %. The Dragas urban population in the system of organized waste collection accounts for 95 % and 53 % in rural. The structure of the municipal waste in all regions is as follows: 73 % of organic waste, paper, 23 % polyester 3 %, and 1 % rubber [4, 20-26].

In the area of Belgrade, the city waste is generated and it includes the municipal waste, industrial and agricultural, which has significant energy value and can be considered as a renewable energy source. Daily is collected and disposed 1.500 tons of garbage, or 18.000 tons, including the suburban municipalities around 550.000 tons of waste a year. According to research, the structure of municipal solid waste is composed of about 70 % of the fuel and is suitable for the production of energy or burning, or the heating value of 16 to 26 MJ/kg. Based on forecasts and estimates of energy potential is anticipated that after the 2015th the recycling will be represented by 25 % and lower heating value of residual waste from the 8-9 MJ/kg, and the estimated energy potential of waste including the lower heating value of non-recycled waste is 9,27 MJ/kg. Power plant that would burn all the daily quantity of waste collected in the city area should meet the capacity from 85 to 140 MWt or MWe 30-50, a total power plant in suburban plant would be about 20 to 35 MW_t or MW_e 5-9 or, due to economic aspect (transport would be impossible) in suburban municipalities should be built up small power plant with capacity of 5 to 10 MW_t, with the electrical part of the 1-2 MW_e. Combustion could be without previous recycling or recycling within the plant, then there could be taken into account the combined production of heat and electricity [10, 17].

The amount of municipal waste generated in the city of Zagreb (2010.) amounted to 353.000 tons per year, which is about 67 % of bio-degradable. The annual theoretical energy potential of municipal waste is estimated at 12 PJ, with an average calorific value of 7,5 MJ/kg or 2,8 % of total annual energy consumption. And, according to the "Green Paper", the Energy Strategy of the Republic of Croatia is provided at 40 MW of the installed capacity in the thermal power plant at municipal waste to 2020th year, according to the plan in the 2015th year about 410,000 t_{GIO}, in 2020th about 490,000 t_{GIO}, in 2030th about 560,000 t_{GIO}, and this would estimate the energy usage [9].

In Europe, 18 % of the waste is burned, 49 % goes to landfills, 33 % is recycled or composted. The level of use of the renewable energy in Serbia is very low, except for the utilization of large water flows in large hydro power plants. A renewable energy potential is more than 4,89 Mtoe per year, which is about half of the annual consumption of primary energy. In 2007th. year is produced about 0,810 Mtoe in large hydropower plants and 0,026 Mtoe of biodiesel which is about 18 % of the total potential. After a significant decline in energy consumption in the early nineties, the period of the 2011th in Serbia is characterized by its increase. The 2011th surpassed the level of in 1990. and consumption is 16,19 million tons of oil equivalent (Mtoe). Primary energy consumption by fuel in comparison to 2010. increased energy consumption by 4,2 %. Of the total primary energy consumption in the 2011th, it is estimated that 32 % is secured from net imports, and decreased by 1,5 % compared to 2010. year. In the structure of primary energy consumption, in the 2011th dominates share of fossil fuels with 89 % (coal accounts for 53 %, oil 24 % and gas by 12 %). The share of renewable energy to 11 %. From the standpoint and environmental protection and energy security, it is evident that in the last few years is increasing share of renewable energy sources [1].

Consumption of coal and lignite in the 2011th amounted to 8,54 Mtoe, and constantly increasing since 1990. at an average annual rate of 0,4 % compared to 2010. consumption increased by 10 %. Share in total primary energy consumption in the 2011th to 52,8 % and is also continuously increasing since 1990.

Power plants using lignite (forecasts for Kosovo regions are that are sufficient quantities of 1.000 years) as fuel is a significant polluter of the environment, is not an example of an ideal source of energy and that each ton of combusted coal release one ton of carbon dioxide with outdated energy system and low energy efficiency. Many researchers and experts fear that the project "Kosovo C", funded by the World Bank, will create unbearable pressure on the environment with a high population density of 220 inhabitants per km^2, with limited water resources and reduced arable land surfaces per capita [1, 27-30].

Total consumption of petroleum (crude oil and petroleum products) in the 2011th is 3,90 Mtoe is the same as the 2010th, but significantly lower as compared to 5,44 Mtoe from 1990th (average per year has declined by 1,57 %). The share of oil in energy consumption in the 2011th amounts to 24,12 %, and is gradually reduced since 1990. year [17].

The share of natural gas in energy consumption is almost unchanged compared to 2010. and amounts to 12,34 %, but decreased from 14,3 % in 1990. On the other hand, the total consumption of natural gas in the 2011th was 2,00 Mtoe, which is more than the consumption in 2010. by 7,8 %, but has been declining since 1990. at an annual rate of 0,6 %. Total consumption

of renewable energy in the 2011th amounts to 1,79 Mtoe, and it is lower than the consumption in 2010. to 13,83 %, but it is also on the rise since 1990. at an average annual rate of 4,17 %. The share of renewable sources in energy consumption is significantly increased from 4,7 % in 1990. year to 13,22 %. In 2010., that dropped to 10,93 % in the 2011th. The final energy consumption in 2011 was 9,29 Mtoe, and increased compared to in 1990.to 2,9 %, and with respect to 2010. year by 4,5 % [1].

Obtaining energy from renewable sources is reduced in 2007. compared to 2006., and amounted to 5,67 %, while the EU set a target of 12 % of primary energy production from renewable sources.

Measures and activities of the EU in achieving strategic objectives in the energy sector are based on the January (2008th) passed Energy and Climate package – "20-20-20" by [16]:

1) *Reduction of greenhouse gas emissions (GHG) by 20 %,*
2) *Increasing the share of renewable energy to 20 %.*
3) *Increasing energy efficiency (saving of primary energy) by 20 %.*

II. PRESENTATION AND DISCUSSION OF RESULTS AND CALCULATION OF ENERGY POTENTIALS

Survey of municipal waste was carried out according to the DPSIR model, which was adopted by a group of countries of the OECD, Eurostat, the European Environment Agency (EEA) and also is based on the register of environmental indicators according to EEA [1, 27-30].

The purpose of the authors' research on the amount of municipal waste generated in period of 2007. - 2012th year, is to provide information on municipal waste, according to: the type of waste and collected amounts and to provide a basis for monitoring of municipal waste in the future in this sector, as well as to present solid waste as energy potential, respectively resource [20-26].

TABLE 1 and Fig. 1, present the results for many years of reaserch of the author's study by the period from 2007 to 2012. year, where is presented the amount of the collected waste per months and years in the region of Prizren.

TABLE I: TABULAR OVERVIEW OF GENERATED MUNICIPAL WASTE IN THE REGION OF PRIZREN (2007-2012) [20-26]

Year.	Months												Summary
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	
2007.	2.483	1.964	2.395	2.854	3.408	3.324	3.967	4.591	3.921	2.973	3.443	2.462	37.785
2008	3.096	3.029	3.168	3.765	3.820	3.675	4.550	4.804	4.608	4.258	3.594	3.755	46.122
2009.	3.020	2.840	3.420	4.252	3.947	3.744	2.503	4.841	5.004	2.111	4.032	3.726	43.440
2010.	3.139	3.065	3.810	4.328	4.375	4.477	5.103	6.009	5.726	5.959	6.380	5.106	57.477
2011.	2.747	2.680	2.758	3.306	3.098	3.470	3.512	3.363	2.786	2.524	2.161	1.973	34.378
2012.	3.286	2.943	4.375	3.979	4.239	3.642	4.933	4.941	4.291	3.758	3.440	3.062	46.889
											Total amount		266.091

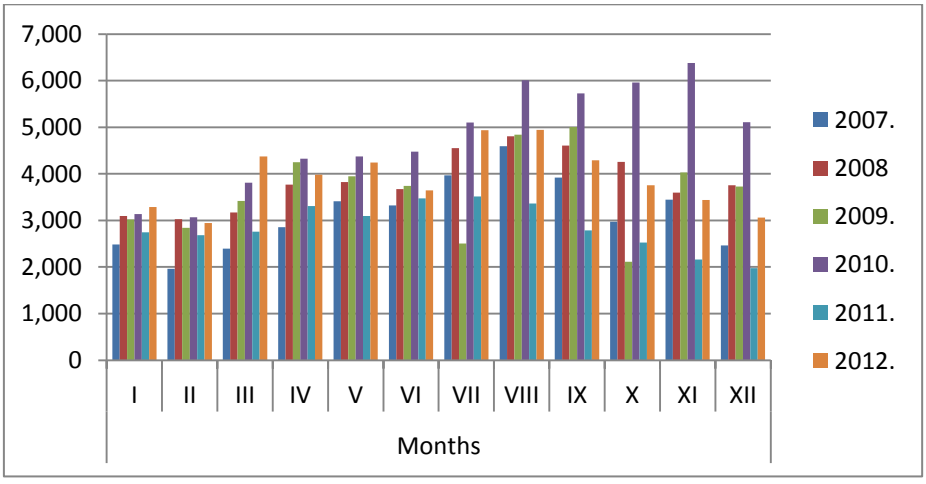

Fig. 1: Graphical display of generated municipal waste in the region of Prizren

We will mention some of the characteristics of the municipal solid waste as followed [4, 8]:

1) *density: 100-1200 kg/m^3 (incompressed 170-300 kg/m^3), (compressed into vehicles for transport 180-450), (compressed at the dumps to 750 kg/m^3). The density decreases from year to year due to an increase in the share of minor components: paper and artificial components, which causes problems in the collection, transport and disposal,*
2) *the mass share of moisture: 30 % (in winter and spring period), 50 % (in summer and autumn period)*
3) *the value of the lower heating value of waste: 4000-9000 kJ/kg, the main carriers of thermal power:*
4) *artificial materials, Hd ≈ 40000 kJ/kg,*
5) *waste paper, Hd ≈ 18000 kJ/kg,*
6) *organic waste, Hd ≈ 19000 kJ/kg.*

Increase in value of the lower heating power causes problems in built up plants for combustion.

To obtain 1 kWh of electricity and 1,24 kWh of heat are needed the following amounts of renewable energy sources [4, 8]:

1) *5 to 7 kg of biological waste,*
2) *5 to 15 kg of garbage,*
3) *8 to 12 kg of manure and organic waste,*
4) *4 to 7 m^3 of municipal waste waters.*

The volume of the collection of municipal solid waste in the Prizren region for 2003rd in a city amounts in 630 m^3 per day or 13.860 m^3 per month what would energy calculation to amounts to 1.417.500 MJ/kg per day or 31.185.000 MJ/kg per month [4, 20-26].

Previous studies of the energy potential of biomass and waste wood for the region of Prizren was done in 2010th year, where we present the calculation of energy potential: Thermal power of biomass, according to the characteristics of the fuel table, according to internal documents, is about 15 MJ/kg. while the average mass per cubic meter of considered biomass from the Prizren region is about 150 kg/m^3. Calorific value of 1 m^3 of waste mass is 2.250 MJ/m^3. Based on this ratio, calorific value of total potential of biomass, which could be collected throughout the whole territory of Prizren region, is 98.840 m^3 x 2.250 MJ/m^3, where is obtained 222.390 GJ. Calorific value of wood waste, according to internal documents, is about 15 MJ/kg. The average weight per cubic meter of wood waste in the Prizren region is 500 kg/m^3. Calorific value of 1 m^3 of wood waste is 7.500 MJ/m^3. Calorific value of the total potential waste wood that could be collected in the Prizren region is about 15.000 m^3 x 7.500 MJ/m^3 = 11.250 GJ. From the results could be concluded that the energy potential of the Prizren region is promising and provides a guarantee of success for the venture plant for biomass and waste wood as an energy potential. The carried out analysis shows that the energy potential of biomass in the Prizren region are important: the potential of waste biomass is 222.390 GJ and 11.250 GJ of waste wood. In addition to all the advantages of using biomass and waste wood in the Prizren region, to this energy source is not given an emphasis [4, 20-26].

Calculation of energy potential in this paper will include the municipal solid waste and observed period with the outcomes from 2007 to 2012. year.

To obtain 1 kWh of electricity and 1,24 kWh of heat, the required amount of renewable energy sources, respectively of municipal solid waste is 5 to 15 kg. If for the calculation of the energy potential we adopt medium amount of 10 kg, then based on the total mass at the annual level per year 2012. is of 46.889 tons, and the average amount per month is 3.907,4 tons, while the average daily amount is of about 130,25 tons. If you assess the volume of the m^3, based on current research, the next relationship should be 46.889 t x 1.5 = 70.333,5 m^3 that corresponds to the density of the compacted material from 50 to 60 %, and it is necessary to add about 15 % of an inert material for covering the deposited waste, and that is 64.706,82 t. If we take into account the collected municipal solid waste in the period from 2007 by 2012. year, then it is a quantity of 266.091 tons, or 319.309,2 m^3. And if you calculate an upcoming period in the period of 20 years, then the amount of municipal waste would be (take the middle value contentious period from 2007 to 2012. from 44.348,5 tons) 886.970 tons or 1.330.455 m^3. Likelihood to increase the generated municipal waste per capita is real, and the increase in population, which further guarantees that it is a significant amount of municipal waste as a potential resource.

The calculation of the energy potential is related to the thermal power of one kg of municipal solid waste (Bar - Montenegro) and it has taken an average of 11.235 kJ/kg, while for the paper is 13.490 kJ/kg, biotope is 9.300 kJ/kg, waste food is 7.560 kJ/kg, plastics is 26.960 kJ/kg, wood is 16.050 kJ/kg, textile is 15.350 kJ/kg and rubber/leather is 19.538 kJ/kg. For each municipal waste is necessary to determine the lower heating power through laboratory, and for the Prizren region we considered the mean and the approximate values of the experience of the cities of Belgrade, Zagreb and Bar. We will assume that the heating value of municipal solid waste is about 11 MJ/kg.

Municipal solid waste may be of different composition and size. It consists of organic material (combustible material) and the inorganic (incombustible) substances. The particle size may vary, from dust to the bulky material, such as furniture, different household appliances and apparatus. The average calorific values of typical municipal solid waste is about 11 MJ/kg. Determination of calorific value and other characteristics of municipal solid waste is defined in the standard to CEN/TS 15359 - Solid recovered fuels - Specification and classes [2].

For the operation of plant for incineration of the rated electrical power of 1 MW is required during 24 h about 45 tons of municipal solid waste. According to the analysis conducted in the U.S. cities could provide about 10 % of the electricity needs of municipal solid waste. By using incineration reduces the area needed for the disposal of municipal solid waste, and the prices of these areas is continuously going up [2].

TABLE II and Fig. 2, provide an overview of the energy potential of the Prizren region presenting the overall collected waste, with supposed compact waste and potentially obtaining of electricity and heat.

TABLE II: TABULAR OVERVIEW OF THE ENERGY POTENTIAL CALCULATION OF THE PRIZREN REGION (2007-2012)

Year.	Total collected municipal waste (t)	Compact municipal waste (m^3)	Potential obtaining of electricity (kWh)	Potential obtaining of heat (kWh)	Calculation of the energy potential (MJ/kg)
2007.	37.785	56.678	3.778.500	4.686.000	415.635
2008.	46.122	69.183	4.612.000	5.719.000	507.342
2009.	43.440	65.160	4.344.000	5.387.000	477.840
2010.	57.477	86.216	5.747.700	7.128.000	632.247
2011.	34.378	51.567	3.438.000	4.263.000	378.158
2012.	46.889	70.334	4.689.000	5.814.000	515.779

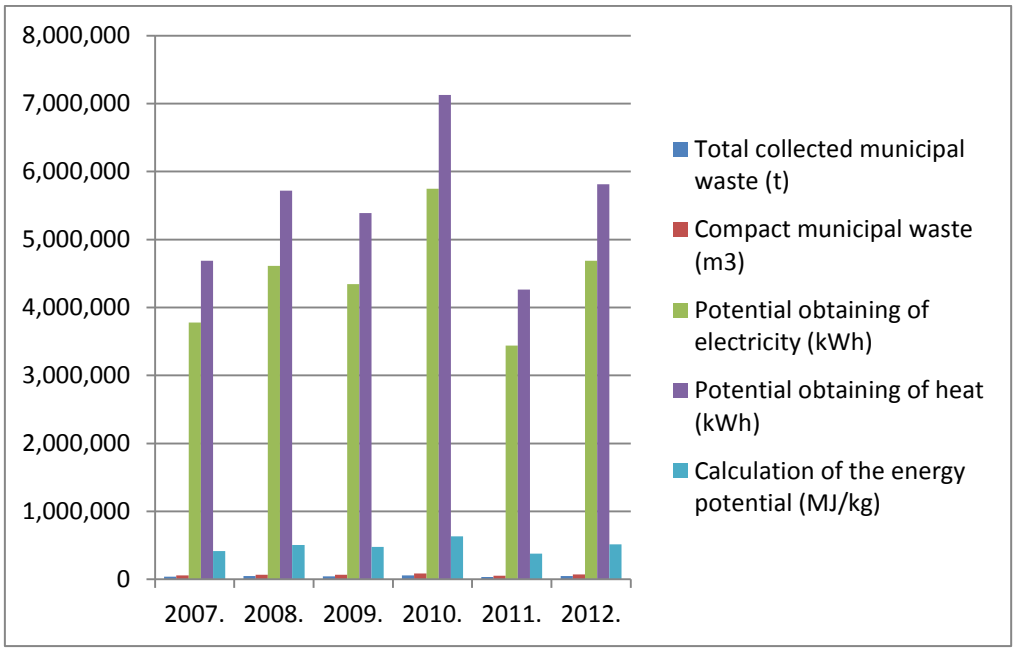

Fig. 2: Graphical overview of the energy potential calculation of the Prizren region (2007-2012)

III. PROPOSAL SELECTION OF TECHNOLOGY, PROSESSES AND EQUIPMENT

Technologies in which can be used biomass as a fuel, especially combustion technologies are relatively simple, while the preparation of biomass (waste collection, briquetting, packaging, distribution and storage) is somewhat more complex process [3, 5-7].

The proper selection of technology, process and equipment depends on characteristics, such as:

1) *daily, monthly and annual mass of the created waste,*
2) *trend of waste production in recent years, as well as predictions in the future,*
3) *morphological and chemical composition,*
4) *values of the lower heating power and changes within a certain period,*
5) *fractional composition, characteristics of grinding and the like.*

Mass and composition of waste depends on many factors: climate, economic development of the observed region, size of the city (area, number of population, density of settlement), the way of living and social specificity, mode of collection and transportation of solid waste, types of industrial processes from which derives the waste.

Types of biomass [18]:

1) *forest residues and waste,*
2) *agricultural residues,*
3) *residues from the processig of agricultural*

products,

4) *energy crops and*
5) *biomass from municipal solid waste.*

In accordance with the Directive of the European Union and Counsel of Europe No. 2003/03/EC from 08.05.2003, according to Article 2: „Biomass is defined as the biodegradable parts of products, wastes or residues from agriculture, forest waste and waste of related industries, as well as the biodegradable parts of industrial and municipal waste.“

If the solid waste is used as fuel or for processes of further processing, it is necessary to know the following characteristics:

1) *The results of the technical analysis (mass share of moisture, volatile components, unburned components, fixed carbon),*
2) *The value of the melting temperature of the ash,*
3) *The results of elementary analysis, ie. Mass share of (carbon, oxygen, hydrogen, nitrogen, sulfur, mineral components (ash), moisture, heavy metals, ...)*
4) *The value of the lower heating power.*

TABLE III presents the total number of power plant related to waste with an average capacity of the incineration of municipal waste in some European countries [9]. Fig. 3 shows the anaerobic digestion of biodegradable organic waste - biogas power plant, in which is presented the technique of anaerobic digestion in biogas plants - digestion, where is produced biogas and digester, and Fig. 4 shows an incinerator with swirling fluidized bed – Rowitec [13]. Fig. 5 shows a schematic representation of the mechanical-biological treatment of municipal waste, where it gets fuel from waste, the use of industry and energy with heating value of 13-19 MJ/kg [13].

TABLE III: PRESENTATION OF THE NUMBER OF POWER PLANTS WITH AN AVERAGE CAPACITY OF INDIVIDUAL COUNTRIES IN EUROPE [9]

Countries	Total number of power plants related to waste	Processed waste Mt/yr	Average capacity of plant for incineration of municipal waste (m^3 t/yr)
Austria	5	0,88	178
Belgium	17	1,64	141
Denmark	32	3,24	114
France	123	11,25	132
Germany	58	13,18	257
Italy	49	3,47	91
Netherlands	12	5,18	488
Portugal	3	1,00	390
Spain	11	1,86	166
Sweden	28	3,13	136
Great Britain	15	3,17	246
Norway	21	0,79	60
Switzerland	29	2,97	110

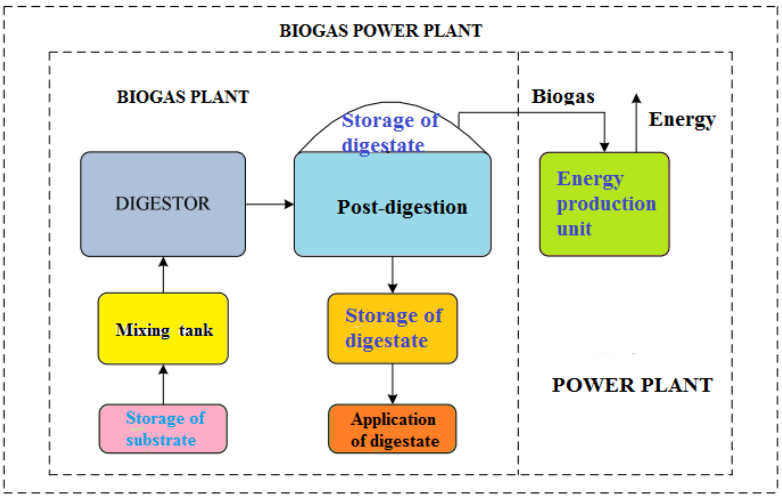

Fig. 3: Schematic overview of biogas power plans [9]

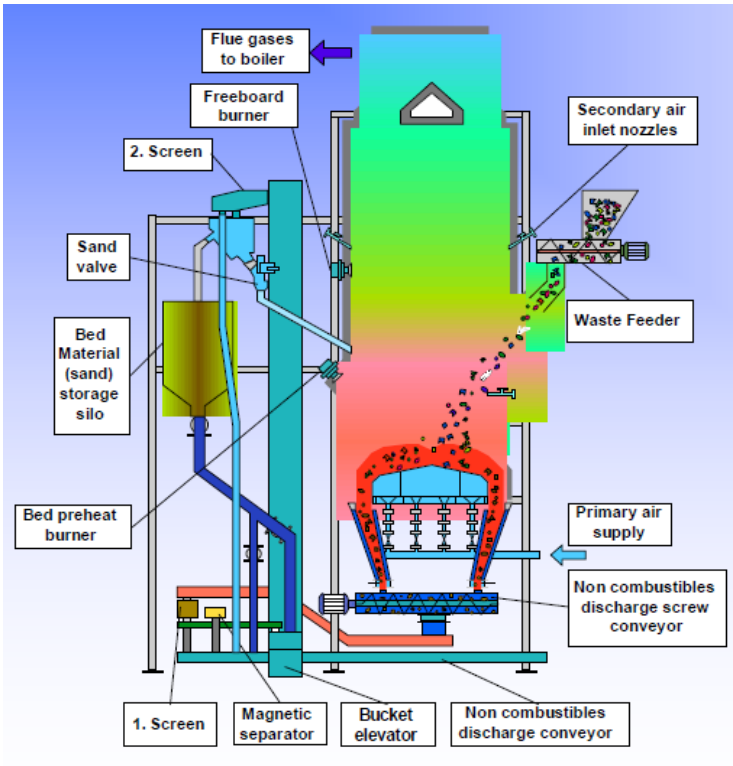

Fig. 4: Incinerator with swirling fluidized bed – Rowitec [13]

In addition to above-mentioned variant, the followingof good listed technology is certainly MBT technology, which can be applied in the region of Prizren.

MBT technology involves two processes: mechanical (M) and biological (B) treatment of waste, where the different elements of M and B process can beconfigured in various ways in order to obtain a wide range of specific objectives [9]:

1) *maximizing the amount of renewable raw materials (glass, metals, plastics, paper, etc.);*
2) *production of compost;*
3) *production of high-grade solid fuels from waste (SRF) of defined proporties;*
4) *production of biostabilized materials for disposal;*
5) *production of biogas for production of heat and/or electricity.*

In addition to seperation of some useful materials contained in municipal waste are passing through treatment of mechanical preparation (shredding and pelletizing, crushing and grinding, screening and other methods of mechanical seperation, seperation due to the action of electromagnetic forces) prior to biological treatment.

Biological treatment (bio-drying, biostabilisation, composting, anaerobic digestion) is performed aerobically or anaerobically (with or without the presence of oxygene), including the combined use of the two methods (Fig. 5).

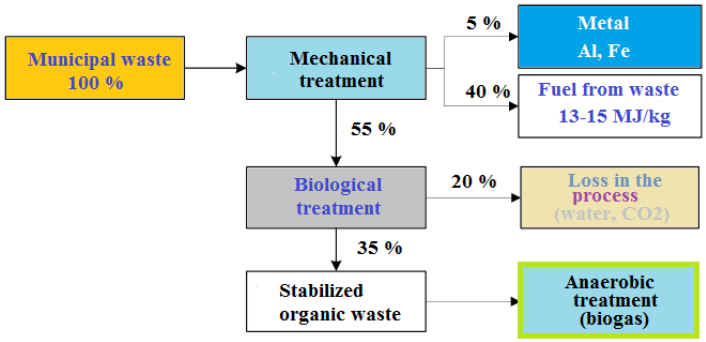

Fig. 5: Schematic overview of mechanical-biological treatment of waste [14]

Many environmental activities in the Prizren region, as well as in other regions, are performed without an environmental permit and applicable licenses and thereby cause damage to river beds, destruction of the landscape

and biodiversity. Total number of operators who are engaged in quarrying and processing of stone is 463 of which 265 are illegal while less than half or 198 are provided with environmental approval. Exploitation of limestone, sand and gravel are dealt 150 companies who are supplied with licenses, and about 65 companies are without licenses. These companies put pressure on the conservation of biological and landscape diversity through degradation of river and forest ecosystems [20-30].

Water resources are scared in comparison with the need for water, with unequal spread in time and space, which represent a limiting factor for future economic development.

The main identified problems involve [20-29]:

1) *there is a loss of aquatic biodiversity of flora and fauna as a result of water pollution from urban, agricultural and industrial pollution;*
2) *insufficient amount of water, especially during dry periods;*
3) *dam safety is potential problem with significant effects on biodiversity and*
4) *building for the production of hydropower and gravel extraction pose a threat to aquatic biodiversity.*

There is no ideal source of energy, because even an energy classified as „renewable“, such as hydropower or bio fuels can have a serious negative impact on the environment and on the lives of local communities. Therefore, the possibility of using the municipal solid waste is a good suggestion of sustainable improvement of environmental protection, but also a resource to obtain heat and electricity, respectively a good energy potential.

IV. Conclusion

Assessment of future state:

Based on current knowledge, the current state of the economy, as well as plans for its recovery and future development, in the next-coming period can be expected:

1) *increase of the total mass of solid municipal and industrial waste,*
2) *the morphological composition to be similar with the composition in most of the Central European countries,*
3) *a slight decrease in the share of metals in municipal solid waste,*
4) *a significant increase in the share of artificial materials (packaging, plastics, rubber, etc.),*
5) *almost unchanged share of glass and glass containers,*
6) *increase in the share of paper, paper towels and other products from wood fibers,*
7) *increase in heat capacity, as a result of the proceeding features,*
8) *significant differences in the share of organic components in the waste by region.*

Based on these findings we conclude that the municipal solid waste in the present and future is a great resource for exploitation of energy potential, ie heat and electricity, and also a way to reduce the impact of pollution on the environment. Construction investment is justified by the possibility of strengthening the economy in the Prizren region, and is reflected in the investment of the plant for the treatment of municipal solid waste [23, 24].

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