

REPUBLIC OF RECYCLING – POLAND LEADS IN THE EUROPEAN STRUGGLE FOR RENEWABLE ENERGY GOALS

The European Commission has recently turned ideas of the circular economy into 10 new indicators to monitor the policy implementation process in the Member States. This is the following stage of the implementation of the strategy which should ensure the EU's energy self-sufficiency without increasing resources extraction. Yet the European ambitions are not to be fulfilled so easily. The initiative's success will heavily depend on attitudes and actions taken by EU's citizens in their daily lives – from purchase and waste management to investments.

Thanks to data reaching up to 2006, the information collected by Eurostat shows not only the current situation, but also main trends in the analysed sectors. Along with publication of the indicators, the Commission proposed harmonisation of the methodology for given categories, so that in the future comparability of data would not be questioned. In addition, the proposal for the next EU budget is to ensure money for programs improving the data collection system in this particular area of the economy.

The indicators are grouped into the following categories:

- Production and consumption
- Waste management
- Secondary raw materials
- Competitiveness and innovation

Production and consumption

This category of data relates to the way of managing raw materials by individual and institutional consumers. In other words, European Commission pays particular attention to the extent of which the Community is dependent on the import of given raw materials essential for the European economy. The second issue addressed by this category is the volume of waste produced. The third factor is the so-called "green" public procurement, i.e. the percentage of orders that meet environmental requirements. The last one is statistics on the quantity of food waste, i.e. the amount of food thrown out by consumers. Among the presented statistics we should mainly focus on 2 facts. Firstly, only in five cases out of 24 of key raw materials used in the EU industry the self-sufficient rate is above 50%, and only in one case - Indu - net exports can be observed. This corresponds to our previously published analysis on rare earths imported mostly from China [1]. The second interesting observation derived from data is Poland's second position in the category of generated municipal waste per capita, just after Romania. In 2016 we produced 307 kg of waste per person, while the infamous leader in this category - Denmark - produced as many as 777 kg. **Waste management**

While the previous set of indicators focused on the amount of waste generated and on the

Community's self-sufficiency, in this section attention is given to waste management. Therefore, the data in the section subjects the recycling rates for various types of waste. Besides, indicators grouped in the section allow to conduct an analysis on specific streams of waste, like packaging, bio-waste, e-waste, etc. Since this part of statistics seems to be easily measured compared to others, majority of the EU goals in scope of the circular economy relates to raising the level of recycling of specified materials. Currently the average level of all types of recycling, excluding mineral waste, stands for 55% while only 32% for e-waste and up to 88% for construction and demolition waste. It is worth noticing that at the time of adoption of the package in 2017, Member States committed to reach 55% of municipal recycling by the end of 2025 and 60% by the end of 2030 to ultimately achieve 60% by the end of 2035. Today the value is 46% for EU and 44% for Poland. Germany set the right example in reusing municipal waste at the level of 66,1% annually. Heads of Member States also decided to introduce goals for packaging of various materials to reach by the end of 2025: · 55% for plastic packaging · 30% for wooden packaging · 80% for ferrous metals · 60% for aluminium cans · 75% for glass bottles · 85% for cardboard boxes In total, recycling of packaging being used in EU shall raise from 66% at the moment to 70% in the next 8 years.

Secondary raw materials

The key idea behind the circular economy is reusing raw materials once used for production of certain goods. For this reason the fundamental part of the statistics is to monitor to what extent materials are recovered, reprocessed and added to the economic cycle as secondary raw materials. In addition, remembering the crisis with plastic waste in the Community, where an unexpected Chinese import embargo triggered a major problems in the largest European countries, the second element measured in this part of the data is trade in renewable raw materials between Member States and the rest of the world.

As can be seen from the data, Europe has a room for significant improvement in the area of reusing materials. The current ratio of recovered materials to total materials used in the European economy stands at 11,4%. Poland's result is slightly above the European average and it is equal to 12,5%. Netherland seems to be a champion in the race where up to 26,7% of total used materials comes from recycling.

Competitiveness and innovation

Assessment of the macroeconomic importance of the branches concerned is the last piece of the puzzle. Therefore Commission proposed measuring such variables like number of employees, added value or level of the private investments in the sector as showing its real influence on the European economy. The last factor grouped in the category is the number of patents obtained in the field of recycling, recovering materials and rare minerals as well as innovations in circular economy.

According to data from 2014, 3,9 mln people work in circular economy which generated 141 bln EUR, 6,1% more than in 2012. Private investments in economic sectors relevant to the circular economy reached 15 bln EUR in 2015 which shows its huge potential for growth with the European support. Moreover, the EU has registered 364 patents annually, which is 35% higher compared to 2000. Polish scientists have patented 35 of inventions which ranks Poland on the 3rd place in total number and on the 8th in number of patents per 1 mln inhabitants.

Future and evaluation

The proposal will now go on to be discussed at the third Circular Change Conference in Maribor, Slovenia, on 11 May, where circular metrics and indicators used for projects assessment implementation are expected to be the main topic. From the political perspective the Circular

Economy Package will now face a final voting in the European Parliament and European Council which may take place in May.

Apart from motives lying behind the implementation of the policy - which was not always the concern for more effective reusing of materials and cleaner waste management but more often short-term political interests and lobbying (as I wrote in one of my previous articles) - circular metrics proposed by Brussels sheds Poland in good light in many aspects.

In more than half of the indicators our country is placed above the European average and in a few we already reached target outputs. Paradoxically, this fact may suggest imperfection of the indicators proposed by the Commission since they do not cover waste incineration or other practices that waste resources and harm the environment.

Undoubtedly, demands of better assets managements, increasing the EU's energy independence, and promoting environmental awareness in communities are worth developing. However, facing the challenges regarding the package, it is not sure if the EC' radical proposal in terms of raw material resources management is only a kind of wishful thinking. Regardless of motivation, it is worthwhile to monitor next stages of implementing the Circular Economy Package since its provisions are important for everyday life of the EU' citizens.