IMPLEMENTATION OF THE CIRCULAR ECONOMY IN AGRICULTURAL PRODUCTION AND THE POSITION OF THE COUNTRYSIDE TO STRENGTHEN NATIONAL ENERGY SECURITY

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Abstract: Especially in connection with the crisis events of February 24, 2022 (aggression of the Russian Federation in Ukraine), the importance of ensuring national energy security is growing within the economic policy of the state. The restructuring of the energy system is also related to this strategic goal, where the trend of the future is greater use of local alternative renewable sources. The participation of agricultural production areas and the position of the countryside can also contribute to this. In this context, a certain possible way of solving lies in the implementation of a circular economy in the use of energy waste in the framework of agricultural production (both plant and animal) in rural areas. The waste of the mentioned sector of the economy meets the required standards of renewable resources for the decentralized production of energy commodities (mainly electrical and thermal energy) and the subsequent creation of an energy mix. Circular technologies set in this way also fulfill ecological goals in the context of the challenge of sustainable development in rural areas. For these reasons, the issue is also closely related to energy decentralization, resource diversification, self-sufficiency, national security and the independence of the Czech economy from fossil resources. As part of the support of important economic interests of the state, a synthesis of economic, environmental, social and security effects can be observed. In this context, the article demonstrates the multifunctional importance of agriculture for the national economy.

Keywords: circular economy, energy security, energy use of biowaste in agriculture

JEL Classification: A14, B41, Q01

INTRODUCTION

Especially as a result of the armed aggression of the Russian Federation in Ukraine (from February 24, 2022), the phenomenon of energy security is gaining importance in the Czech economy and throughout the European Union. An integral part of the aforementioned security concept is the search for alternative sources, to which the application of circular technologies in agricultural production can make a significant contribution. In its essence, this is the energy use of bio-waste, which is naturally related to agricultural plant and animal production (Cecchi & Cavinato, 2015). As part of its specific technological process, it produces a whole range of bio-waste, which includes the processing of biomass from forest waste into wood chips, residues from agricultural production, as well as waste from households - common municipal bio-waste, industrial residues of sugar, starch or certain types of fruit, waste from fields and gardens, leftovers of unused food and feed. From the point of view of economic and ecological efficiency, the mentioned bio-waste is a suitable raw material for the production of energy commodities, such as primarily wood chips and biogas. Subsequently, the products created in this way can be used mainly for the

production of heat and electricity, or biofuels as substitutes for fossil fuels in transport (Walmsley et al., 2019).

The strategic goal of every state is to ensure the maximum independence of its economy from the import of energy raw materials from abroad and to achieve at least partial energy self-sufficiency within its capabilities (Graczyk-Kucharska, 2021). However, it is also necessary to perceive the energy system comprehensively within the framework of the dichotomy - domestic - foreign source and also as an intermediate level within the European Union, etc. This is logical, since dependence on another member country of the European Union will probably be safer from a geopolitical point of view than it was on Russian federation since 2022. Traditional energy sources based on massive sources of electricity from coal and nuclear power were at their peak until the end of the 20th century, green sources from the sun and wind were considered more of a supplement. In connection with the reduction of carbon dioxide emissions, which contribute to global warming, the further development of nuclear energy was considered. There is still no uniform attitude towards these tendencies within the European Union. A typical example is Austria, where the law banning the use of nuclear energy entered into force in 1978 (Pelinka, 1983).

The Czech, but also the European electric power industry works within the framework of the strategy of strengthening energy security in an ecological direction. This results in the shutdown of large non-green power plants and their replacement by green production, including through circular technologies (Akanbi et al., 2020). The established method of producing energy commodities in the form of associated agricultural production activities within rural settlements represents an ideal way of fulfilling the strategy of sustainable development, i.e. focusing on economic, environmental and social goals (Korhonen et al., 2018). At the same time, this way contributes to strengthening energy self-sufficiency in more remote areas.

1. THEORETICAL STARTING POINTS

The paper focuses on the implementation of the circular economy within the energy use of waste (as renewable resources) in agricultural production. In this context, its main goal is to inquire whether the mentioned implementation can, under current conditions, contribute to the strengthening of the energy security of the state, or if there are other positive benefits within the national economy, regions and agricultural business entities (Capellán-Pérez et al., 2020). At the same time, every tool, means, and knowledge has its possibilities, but also limits of applicability.

The concept of a circular economy within the rational use of natural resources consists in environmental protection, which has been a government economic policy strategy in developed countries since the 1960s. A significant impetus to environmental protection activities came from publications that dealt with human impact on the environment and predicted catastrophe caused by the complete depletion of resources or excessive pollution. Examples can be found in works by Carson (2009), Ehrlich (2015) and Meadows et al. (1972) and others. In mentioned papers, attention was paid to the conflict between limited resources and exponential economic and population growth.

Since the above-mentioned period, environmental issues have fundamentally become an interdisciplinary thematization of the relationship between society and the environment, nature and lifestyle, and the associated possible social, political and economic consequences of environmental problems. In this way, a link was created between the economy and the environment, from which raw material resources enter the economy and serve as a repository for the generated waste. In this context, a relatively new branch of environmental economics emerged, which is the subject of theoretical interest in social economics. The aforementioned field usually perceives the level of environmental protection and economic growth as contradictory quantities, where in order to support one, the other must be reduced (Beckerman, 1992).

However, there are also different currents of thought that differ in their understanding of the environment and in the recommended tools for its protection, and this is precisely the circular economy (Bilan et al., 2020). Its essence lies in technological applications within the framework of connecting material flows and maintaining their value in the cycle for as long as possible. Materials that would thus become waste in the existing linear economy are reused or recycled. In order for the implementation of the mentioned technologies to be possible, it is necessary to take these facts into account already in the design and production phase (Galvão et al., 2018).

It is therefore not possible to think in the dimensions of a circular economy if the pace of resource extraction creates uncertainty for future generations as to whether they will be able to exist within the same production and consumption parameters as in the present (Velenturf et al., 2019). For that reason, it is necessary to use the energy of renewable sources, which also includes the potential of waste, which under other conditions would represent a source of environmental devastation. From the point of view of the region's economic policy, it depends on strategic decisions on the choice and deployment of appropriate circular technologies for the energy and Carson use of waste (Carson, 2009). However, a significant part of waste is generated in connection with agricultural production (both plant and animal). Recycling waste at the place of origin is economically efficient. For this reason, agricultural enterprises are ideal for this. For these reasons, the transformation of agriculture, which so far represents one of the biggest threats to the environment, from the local to the global level, is undoubtedly a great challenge of the 21st century that cannot be neglected. In developed countries, the development of rural areas and sustainable agriculture has justifiably received increased attention in recent decades. It is the topic of multifunctional development of the agricultural landscape, the definition of ecological, economic and social aspects of agriculture and especially their mutual relations (Nátr, 2011).

With the help of various methods (analysis, inductive and deductive inference, synthesis and generalization), the circular use of energy waste in agriculture is characterized on the basis of input data (Table number 1). In its essence, this is an issue of interest in the framework of renewable energy sources. If the reality of the geographic position, area and natural conditions of the Czech Republic is added to the area of research being monitored within the framework of the use of renewable resources, it can be stated that renewable resources, together with the use of energy waste from agricultural production and other activities within the framework of innovative circulation trends, will probably never achieve a fundamental share in the creation energy mix in the Czech economy. These claims can be substantiated by a number of determinants of the potential possibilities of the Czech Republic. The latter is a small country without the possibility to plant its territory with crops used as biomass. The waterways are also limited, without access to the sea for the construction of tidal power plants, the solar intensity does not reach an adequate level, the wind does not reach as strong intensity as on the coast in northern Germany. However, in the conditions of the Czech economy, energy utilization of waste clearly contributes to the strengthening of environmental safety in the context of sustainable development. Together with energy, this is a subject of significant economic interests of the state (McSweeney, 1996).

For the above-mentioned reasons, the interdisciplinary approach of social sciences and humanities (especially economics, economic policy, environmental and regional policy, rural and security studies) prevails during processing. This approach is also applied to the current development trend of the energy security of the Czech economy in connection with the emerging era of Industry 4.0 (Šetek & Petrách, 2017).

Energy source	Czechia	Slovakia	Hungary	Austria	Germany	Poland	France
Nuclear power plants	36,6	54,3	51,2	0	13,0	0	70,4
Brown coal	35,2	3,5	10,3	0	19,5	26,1	0

Tab. 1: Comparison of the share of non-renewable (NS) and renewable sources (RS) in the electricity production of the Czech Republic and selected members of the European Union in 2021 (in %)

Gas sources	10,4	13,7	29,2	16,1	10,4	8	6,4
Black coal	3,2	1,3	0	0	10,3	50,4	0,8
Total NS	85,4	72,8	90,7	16,1	53,2	84,5	77,6
Biomass	3,1	3,1	3,8	2,6	7,8	1,2	0,6
Hydropower							
plants	4,7	15,5	0,6	65,2	4,7	1,8	11,9
Photovoltaic							
power plants	2,9	2,1	0	1,6	9,4	2,9	2,7
Wind power plant	0,9	0	2,1	12,6	22,8	9,6	6,9
Other renewable							
resources	3,0	1,8	0,8	1,6	1,5	0	0,3
Other	0,1	4,7	2,0	0,3	0,6	0	0
Total RS	14,6	27.2	9.3	83.9	46.8	15.5	22,4

Source: Council of the Energy Regulatory Office. 2022

2. DISCUSSION

2.1 Waste in agricultural production as an alternative source for the production of energy commodities

Renewable resources represent a whole range of raw materials and technologies, and the main goal of their use is to replace fossil (non-renewable) resources, mainly coal, oil and natural gas. It is waste from agricultural production, as a part of renewable resources, whose properties are particularly suitable for the decentralized production of energy commodities (mainly electricity and thermal energy), which, of course, requires more of their construction near settlements. This leads to the inevitable interaction of the investor with local agricultural enterprises and residents. For this reason, the dislocation of circular technologies within the region depends on the technology of local agricultural business entities on the one hand and consumers on the other. Within the framework of the circular economy, this is a wide range of technological use of renewable resources for the production of energy commodities. This is the energy use of the entire range of bio-waste in agricultural (plant and animal) production, possibly also in the food industry (Berrada & Loudiyi, 2016). In this context, the conditions are also created from the point of view of economic efficiency within circular technologies for cogeneration, i.e. the combined production of electrical and thermal energy in municipalities of interest. Compared to conventional large-capacity sources of electricity production (such as nuclear, thermal or, for example, hydropower plants), circular producers are much more flexible and efficient (Stevovic et al., 2021).

For the reasons mentioned above, the implementation of the circular economy in the production of strategic energy commodities also makes it possible to adapt to the local conditions of the regions, thus significantly increasing the efficiency of energy transformation (Malik et al., 2022). The lower need for transmission contributes to higher efficiency of the entire system and offers the opportunity to use any available energy, including renewable energy. This simultaneously fulfills economic, ecological and social goals within the regions as well as requirements in the context of sustainable development within the national economy.

2.2 Agriculture, energy and circular economy in the subject of national security interests

Directing one's own development belongs to the basic natural aspects of the existence of human society. If these activities are to stand on a rational basis, it is impossible to do without forecasts representing realistic, scientifically based ideas of future development. Within these ideas, all sectors of the economy cannot be neglected. It is certain that each sector and area occupies its specific strategic positions in ensuring national security. Agriculture and energy, linked to circular economy implementations, are no exception. A clear proof of this is the theoretical concept of the Copenhagen School. Its beginnings date back to the turn of the 80s and 90s of the 20th century, when, based on a study of the world, it argued that it was necessary to expand the then concept of military security to address political, economic, energy, environmental and social issues within the framework of national and global security (Buzan et

al., 2003). From the mentioned period, a "broader" concept of security can be observed in the history of security sciences, which is also extended to include other non-military sectors with five sectors (military, economic, social, political and environmental). It can be stated that the mentioned security sectors correspond to the basics of fulfilling Maslow's pyramid of human needs, applicable not only to individuals, but also to the whole society (Šetek, 2018).

Ensuring sources of basic food for the population for their nutrition, even in moments of emergency, is one of the key tasks of the national security system. This task consists primarily in the collection and storage of certain groups of food commodities of plant and animal origin, and it can be ensured in two ways - either by permanent purchase and creation of stocks of necessary food goods from foreign sources, or by using them from own resources, from the production of domestic agriculture. From the point of view of ensuring food security, as an integral part of national security, according to the knowledge gained, especially at the start of the third decade of the 21st century (the covid-19 pandemic and the war in Ukraine), it can be stated that the main priority is to ensure the required needs primarily from own resources. In addition to the aforementioned strategic goal of ensuring national food security, agricultural production can also contribute to strengthening energy security. This represents one of the basic strategic directives of the state's energy policy, whose current endeavor is the cleanest possible production of energy commodities (especially electrical and thermal energy) (Wapner, 1995). Reducing carbon emissions, combating climate change - these are the topics that determine the direction of current energy (Grimston et al. 2001). They mainly talk about the use of water, solar and wind power plants, but there are of course other renewable sources that lie somewhat in the shadow of these, namely biogas and biomass (Berrada & Loudiyi, 2016). Their production can be ensured through the implementation of a circular economy within agriculture.

The circular economy is fighting for the aforementioned trend, it is often defined as a zero-waste concept. Its essence lies in technological applications within the framework of connecting material flows and maintaining their value in the cycle for as long as possible (Androniceanu et al., 2021). Following the model of natural ecosystems, it proposes closing material flows in functional and never-ending cycles, drawing energy from renewable and sustainable sources, and creating sustainable products and services (Bag et al., 2021). Materials that would thus become waste in the existing linear economy are reused or recycled. Although the emphasis is mainly on material utilization and recycling, as a way to achieve the goals of waste management, an important role can also be played by supporting the energy use of waste, or bio-waste, which is generated in agriculture.

Since roughly the beginning of the 1970s, the concept of energy security has been widely used in the world economy and national security strategies. A certain impetus for this would be the term "oil peak - turning point", i.e. a state when the world economy is experiencing a decrease in energy mineral resources - fossil fuels (Newbert, 2018). In this context, there is also talk of the so-called Hubbert curve (after the American geologist King Hubbert), which means that reserves are at their peak in the given period, and that extraction will gradually decrease (Schröder et al, 2020). The extraction of energy commodities was related to their price growth in the world economy, so some important exporters began to use oil and natural gas in particular as a certain "weapon" in their foreign policy.

Based on the above-mentioned facts, the starting point for creating the state's energy security is its economic policy. In the above case, its goals are to protect the producer and the consumer from the potential risk of e.g. blackout, shortage, etc., which can lead to e.g. household energy poverty, etc. At the same time, it also addresses the possible potential risk of instability within the functioning of the economic system (typical enormous inflationary growth). These are events associated with February 24, 2022 and the following, but also preceding, especially from the end of 2021, as a result of the emptying of European natural gas reservoirs with subsequent shocks to the energy markets. The basis of the energy security of the national economy is determined by its energy base, which is determined by the state of raw energy commodities, production, distribution, energy infrastructure (electricity transmission system, oil pipelines,

gas pipelines, steam pipelines...), final consumption, import and export of energy commodities (Correia et al., 2022). From the point of view of energy security, the main energy commodities of strategic importance for the economy still include electricity, oil, natural gas and thermal energy.

Another concept of energy security is very closely related to the phenomenon of ecological security, which clearly fits into the theoretical concept of the Copenhagen Safety School, which has been formulated since the mid-1980s (Buzan, 1997). Since then, based on the study of the world, the original concept of military security has been expanded to address political, economic, environmental and social problems within the framework of national and global security.

On the basis of the analysis of some selected concepts of energy security within the framework of the fulfillment of the goals of the economic policy, a clear conclusion of its nature can be reached. This consists in access to a sufficient amount of reliable energy at an acceptable price with due regard for the quality of the environment. The implementation of circular technologies in the framework of industrial and agricultural production in the production of electrical and thermal energy can also contribute to the fulfillment of these goals (Chowdhury et al., 2022).

One of the basic strategic goals of the implementation of the circular economy is the reduction of negative externalities resulting from the production, use and disposal of products. The aforementioned attitude can contribute to restructuring in the production of energy commodities. The main tool for the development of restructuring consists in the liberalization of the energy market, which should create a competitive environment as a necessary condition for dynamic development (Grafström & Aasma, 2021). The technical means for this are decentralization, diversification and technical innovation (Shennib & Schmitt, 2021). At the same time, the integration of these means can contribute to the concept of smart energy, which represents one of the basic pillars of the Smart Region concept (Marrucci et al., 2021). It mainly includes the use of renewable energy sources, elements of smart networks (the so-called smart grid) in the electricity distribution system in the region, intelligent management of energy consumption, including energy management of buildings and intelligent management of city services, especially public lighting. Smart energy is closely linked with other pillars of the Smart Region concept – the environment and mobility (Graczyk-Kucharska & Hojka, 2021).

In this context, the circular economy points out that any natural systems are capable of evolutionary development in a positive direction. When talking about the biomimetic aspect of the circular economy, nature is imitated in terms of the efficiency of resource use and the creation of sustainable ecosystems (MacArthur, 2013). Understanding the system is key if we want to make changes within such a system. Ignoring or misinterpreting trends, processes, the functioning of things and the degree of real human impacts on the socio-ecological system can lead to catastrophic results (Valenčík & Wawrosz, 2019).

2.3 Energy communities to support decentralization

The ecological benefits of decentralization tend to be associated also with beliefs of positive economic and social nature. In these contexts, decentralization should fundamentally reduce unemployment in the economy. Referring to sociological and social psychological theories, environmental authors emphasize that small communities where almost everyone knows each other mean the strengthening of social responsibility and group cohesion (Pileček et al., 2013), as there are manifestations of willingness to participate in social life (Proka et al., 2018). There are deeper relationships within interpersonal interaction, which contributes to deepening the spiritual dimension of the individual. From this, we can also expect an appropriate ecological compensation for the reduction of the material level and social satisfaction. In this one can also see the essence of the "price" for decentralization, which is inevitable in small groups (Bourdieu, 2011). The validity of the mentioned statement can be seen in the theory of the social field, which is defined as an autonomous part of space that follows its own rules and is structured by its own system of distribution of forms of capital (Häuberer, 2011).

The above factors can also be applied to ways of supporting the decentralization of energy through communities. Their form can be very diverse - they can arise at the level of apartment buildings, neighboring districts, and municipalities. They are also involved in a number of different activities in the energy market – from electricity generation to electricity storage to providing grid flexibility. The essence of the energy community is that existing consumers of energy, such as households or municipalities, become producers and sellers themselves and then share the energy among themselves. Surpluses can be sold to the network. Micro-communities also operate in energy communities within the region. These can be agricultural enterprises that, through the recycling process of biowaste, can produce electricity and thermal energy to ensure their production process, and any surpluses are used by users (households, other enterprises) in their surroundings. The most important representative of community energy in the Czech Republic is undoubtedly municipal and municipal renewable energy sources. This type of community energy is the most represented in our country both in terms of the number of projects and also in terms of the size of the share in the total production of electricity and heat. In the Czech context, this is practically the only example of community energy (Pechancová et al., 2022).

A rich tradition in electricity production has been represented in the Czech Republic since the beginning of the 20th century by energy cooperatives (Johanisová, 2012). At that time, the Czech countryside was gradually electrified and electricity began to be used for agricultural work as well. Many cooperative power plants realized even then that coal reserves are not inexhaustible. Therefore, they often used the energy of water streams. Since its establishment, Czechoslovakia has been among the most developed countries in the world within the framework of energy cooperatives. After World War II, over 2,000 cooperative power plants operated here (Schweitzer et al., 1988). As a result of the events of 1948, the aforementioned forms of business were completely suppressed. Similar principles of the mechanism of operation of cooperative power plants, where renewable energy sources (including circular ones) are operated by a group of citizens, farmers and local entrepreneurs and thus represent integral parts of community energy, are commonly applied in the Western European area. The reason for this is a whole range of factors, such as lower costs of electricity production, the proximity of energy sources, etc. The aforementioned traditions of Czech cooperatives in the production of electricity from the period of the First Republic and the proven methods of the aforementioned business in the Western European area are currently a challenge for the Czech Republic to innovations, including the context of the implementation of the circular economy in the mentioned area.

The mentioned cooperatives can be characterized as autonomous and democratic associations of natural and legal persons created for the purpose of energy production and distribution. Their goal is to ensure the supply of affordable, sustainable energy, as well as the involvement of community members in local development. In simple terms, an energy cooperative can be described as a consumer-led power plant. Members jointly invest the share needed to purchase, install and operate renewable energy sources. They become co-owners of the resource and consumers of the produced energy, and sell any surpluses either to other residents of the village and the surrounding area, or to the network. The income from the sale is then distributed back to them in a proportional amount, and any additional profit usually goes to the cooperative fund, from which community activities are financed, such as the care of public space, cultural events, educational activities, charity projects, etc. (Koirala et al., 2016). In this way, economic, environmental and social needs are intertwined. The "cradle" of energy cooperatives is Scandinavia, from where this method of energy production is spreading to other countries. Outside of the countries of northern Europe, the cooperative principle in energy is mainly used by the United States of America and is also beginning to gain traction in Australia, Germany, Canada, Great Britain and many other economies (Heras-Saizarbitoria et al., 2018). In the Czech context, cooperative ownership and cooperative management have many forms, but cooperatives have not yet been implemented in the renewable energy sector. Foreign experience and domestic traditions from the first half of the 20th century clearly show that the cooperative model is not only applicable in this field, but also advantageous.

2.4 Institutional theory of regional rural development for the justification of the implementation of circular technologies

In connection with the implementation of circular technologies for the production of energy commodities in rural agricultural enterprises, there are three main approaches to its development: exogenous development, endogenous development and mixed exogenous - endogenous development. The exogenous model of rural development is based on interventions from outside, it tends to be exported outside the region, which is its significant benefit within the macroeconomic dimension.

Conversely, the endogenous model is based on development within the region, using local impulses and local resources. The benefits of this model are retained in the local economy (Woods & McDonagh, 2011). Following this breakdown, we also distinguish between exogenous and endogenous factors of development. Exogenous factors determine the framework, they are not direct actors, but they still affect rural development (location, environment, legislation, etc.). Exogenous factors cannot function effectively without endogenous ones, the most important role is played by the local actors of development, whose activities influence the character of the countryside. In addition, there are other actors acting in different ways - they can support development or, on the contrary, hinder it - acting in opposition (Binek et al. 2009). From the above-mentioned contexts, it is therefore necessary to introduce the theory of production districts within the institutional theory of regional development. The latter sees the source of prosperity in a high-quality social, cultural and institutional structure and a non-hierarchical system of cooperation of small businesses (Blažek & Uhlíř, 2020) as is the case with agricultural producers of energy commodities. Moreover, this approach attributes success to a collective sense of belonging, traditional values and trust. Following is the theory of learning regions, which considers learning as a key ability for the competitiveness of regions. When each region has at its disposal certain relational assets - specific capabilities and skills of a non-transferable nature that are important for its development. Knowledge and the ability to innovate are key to regional growth. Emphasis is placed on non-transferable knowledge, which is acquired through experience and participation in a specific matter and is also tied to the institutional characteristics of the territory through a network of contacts (Jabbour et al., 2019). It is mainly about creating favorable environmental conditions for the implementation of innovations (Kumaraswamy & Garud, 2018). The environment here refers to the network of relationships (between businesses and their surroundings), but also the framework for business activities (institutional structure, political culture, social values, etc.). The role of the public sector here does not consist only in the distribution of financial resources, but is seen mainly in the role of mediator, moderator and also an important co-creator of consensus.

CONCLUSION

The production of energy commodities has many crossroads and decisions on its way, which will especially affect the price of services within the energy market. Proponents and opponents of the implementation of circular technologies in the production of energy commodities in agricultural production sectors within the framework of a sustainable development strategy usually differ in how they evaluate the macroeconomic effects of environmental measures (Markkula & Kune, 2015). These are without a doubt a phenomenon that has gained popularity together with the requirements for the protection and creation of the environment. Due to the prevailing uncertainty after the start of the third decade of the 21st century surrounding energy supplier entities, tools to strengthen the state's energy security can also be seen in the aforementioned implementations, especially through diversification and decentralization in the production of the aforementioned strategic commodities.

It is certain that the implementation of circular technologies and the use of renewable resources is determined by a number of factors of the national economy, such as area, geographical location and natural conditions. However, the most important contribution of the mentioned innovative trends can be seen in the ecological benefits. For these reasons, the energy use of waste in agricultural production means additional resources, the use of which will contribute to strengthening independence from exhaustible raw materials and supporting participation in the diversification and decentralization of the production of energy commodities. Using the example of the Czech Republic, it is clear the use of secondary raw materials in the energy industry will be one of the main priorities in the future as well. An energy policy set up in this way will bring many possibilities for meaningful "win-win" projects. That is, those that can bring profit not only to the business sector, but mainly to the quality of the environment. In order to meet these goals, state support will be necessary for companies that will use products containing secondary raw materials and recycled materials.

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