

The Circular Economy and Services of General Economic Interest

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Summary: 1. Interdisciplinary topics. – 2. The 2018 European directives on waste. - 3. The direct influence of European environmental policy and related discipline. – 4. The definition of the circular economy in our legal system. - 5. Environmental sustainability objectives and the new purpose of utilities companies. - 6. Local authorities and the new strategic role for public-private companies. - 7. Final considerations.

1. Interdisciplinary topics.

The European Circular Economy model and 2018 regulations on waste are not limited to this sector but anticipate the recent and wider European policy of the *Green New Deal* (2019/2020). This model imposes incisive measures on economic activities and the management of public services of general economic interest for environmental sustainability. There are inevitable direct consequences for competences of local authorities, the industrial policy of service management companies and for citizens-users.

The new paradigm of the “circular economy” goes beyond the boundaries of the administrative action of mere waste management to protect the environment and includes the entire industrial process of design and production of goods. It becomes also an instrument of industrial policy, capable of guiding and attracting investments, generating value; this model that cannot be confined in the scope of the environmental protection, but necessarily includes the social, educational and financial profiles inherent in the overall redefinition of European industrial policy.

Therefore, the efficient use of resources is necessary for environmental reasons to reduce their consumption and the resulting ecological deficit, so the circular economy becomes, at the same time, an objective of industrial plans and the competitive market.

Law innovations on the circular economy coming from the European Union lead to address the problems of sustainability beyond simple conservation and the aim is not only to invest more in environmental protection, but to push towards regeneration for which, in short, the environment is

characterized as a real driving force for economic development. Circular economy programming is subject to continuous study and adaptation for gradual and efficient solutions¹.

It is so necessary to overcome the traditional model of relationship between business and consumers; recently, environmental protection objectives involving businesses, users and the sector regulator have been added, under the EU law and soft law. In this context, we examine the Italian legal measures and the possible role of public and private subjects involved in the gradual implementation of the circular economy in the perspective of management solutions by means partnership, public-private companies of adequate size.

2. The 2018 European directives on waste.

The first recital of directive 2018/851/EU states that waste management in the EU should be improved and transformed into sustainable management of materials to safeguard the quality of the environment, to protect human health, to ensure the prudent, efficient and rational use of natural resources and to promote the principles of the circular economy².

Despite other different references to the circular economy, in this directive just mentioned and in others transposed by the Italian legislative decrees, there are no further definitions or contents useful for the interpreter. In addition, there are obvious problems of adaptation of our legal system that are not solvable only with the transposition of the 2018 directives, if we consider the legal schemes of administrative and economics national law and the competences of the public bodies involved are

* The article examines some of the issues outlined in the paper presented for the IIAS 90 th. Conference, *Public Governance for Climate Action*, December 15-18, 2020, and published in *Federalismi*, 2021, n. 7.

¹ See these key documents: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, 27 May 2020, COM (2020) 440 final, Adjusted Commission Work Program and Annexes 1 and 2; The Just Transition Mechanism (Commission proposes a public loan facility to support green investments together with the European Investment Bank, 28 May 2020); Communication COM/2020/98: A new Circular Economy Action Plan for a cleaner and more competitive Europe; Final Circular Economy Package; Proposal (COM(2020)0080, Report 22 September 2020) for a regulation of the European Parliament and of the Council establishing the framework for achieving climate neutrality and amending Regulation (EU) 2018/1999 (European Climate Law); Communication COM/2019/640 from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, The European Green Deal, 11 December 2019.

² See A. MASSARUTTO, *Un mondo senza rifiuti? Viaggio nell'economia circolare*, il Mulino, Bologna, 2019; F. MUNARI, *L'economia circolare e le nuove regole dell'Unione europea sui rifiuti*, in *Studi sull'integrazione europea*, 2019, n. 1, 77 ff.; P. VERRI, *Il regime autorizzatorio "end of waste", tra dato normativo e legittime tensioni verso la "circular economy"*, in *Riv. giur. ambiente*, 2019, 171 ff.; A. SIMONE, *L'economia circolare non è il riciclo*, in *Riv. giur. ambiente*, 2019, 671 ff.; D. BIANCHI (a cura di), *Economia circolare in Italia, La filiera del riciclo asse portante di un'economia senza rifiuti*, Edizioni Ambiente, Milano, 2018; E. BOMPAN – I. N. BRAMBILLA, *What is circular economy*, Edizioni Ambiente, Milano, 2018; S. SCARPELLINO, *La parabola dei rifiuti, Da problema e risorsa, La sfida dell'economia circolare*, Aracne, Roma, 2018; P. LACY, *Waste to wealth, The circular economy advantage*, Palgrave Macmillan, London, 2015, translated in Italian ID., *Circular economy, Dallo spreco al valore*, Egea, Milano, 2016; for considerations that anticipated the current context, see G. CERRINA FERONI (a cura di), *Produzione, gestione, smaltimento dei rifiuti in Italia, Francia e Germania tra diritto, tecnologia, politica*, Giappichelli, Torino, 2014; G. F. CARTEI (a cura di), *Cambiamento climatico e sviluppo sostenibile*, Giappichelli, Torino, 2013.

obsolete. More generally, the implementation of the circular economy could be an opportunity to innovate public legal instruments applicable to the economy.

It is therefore necessary to refer to the various documents and directives that accompanied the birth and the diffusion of the idea of the circular economy in Europe. At first the “*European Union Action Plan for the Circular Economy*” (December 2, 2015) by which the European Commission approved and proposed the package of directives for the transition from the linear and traditional economy to the circular economy. The action plan defines 54 measures to “close the circle” of the product life cycle: from production and consumption to waste management and the secondary raw materials market. In addition, it identifies five priority sectors to accelerate the transition along their value chain (plastics, food waste, essential raw materials, construction and demolition, biomass and biological materials).

Another relevant document of the European Commission is the “*European strategy for plastics in the circular economy*” (January 16, 2018) and the directive 2019/904/EU on single-use plastics (also called SUP directive, Single Use Plastics) approved on May 21, 2019. The directive aims to prevent and combat marine litter and sets stricter rules for the types of products and packaging that are among the ten pollutants most often found on European beaches. The new rules prohibit the use of certain disposable plastic products for which there are alternatives on the market. The European Commission also approved on 12 October 2018 the document “*A sustainable bioeconomy for Europe: strengthening the link between economy, society and the environment*” with the aim of improving and increasing the sustainable use of renewable resources in order to addressing climate change and promoting sustainable development.

This first phase of the European Union ended with the “*Reflection paper towards a sustainable Europe by 2030*”³ by which the Juncker Commission ended its mandate by launching the debate on the future of Europe, on the preparation of the Agenda strategy 2019-2024 of the European Union and the priorities of the European Commission. The reflection paper focuses on the transition to sustainability and includes the transition from a linear traditional economy (extract, produce, throw away) to a circular economy, the correction of imbalances in our food system, energy of the future, buildings and mobility⁴. The growing availability and affordability of various materials and products have simplified our lives and contributed to raising the standard and quality of life in the EU, the document reads.

³ See European Commission COM (2019) 22, 30 January 2019; “*Report on the implementation of the Circular Economy Action Plan*”, 4 March 2019, COM (2019) 190 final, and other documents in www.ec.europa.eu and in www.circulareconomy.europa.eu; “*The Circularity Gap Report*” 2018, 2019 and 2020, in www.circle-economy.com.

⁴ On low carbon transition for energy and transport in Europe see D’M. COFFMAN – R. CARDINALE – J. MENG – Z. MI, *Ecological Transition*, in F. CERNIGLIA – F. SARACENO (eds.), *A European Public Investment Outlook*, Open Book Publishers, Cambridge, 2020, 163 ff.

We can identify a *second phase* of the circular economy that has started with the new European Commission chaired by Ursula Von der Leyen who claimed to aim for World leadership on sustainable development and on 11 December 2019 presented the *Green New Deal*⁵. Through this new plan, the European Commission gives a significant boost to the green transition and indicates a detailed stringent roadmap and actions for transition to the circular economy, stimulating the efficient use of resources, halting climate change, counteracting loss of biodiversity and reduce pollution.

The European *Green Deal* affects all sectors of the economy, with a commitment to propose targets for separate collection, waste reduction, reuse and recycling, as well as other specific actions such as extended producer responsibility in priority sectors such as commercial waste, textiles, plastics, electronics, construction and food. The investment plan is impressive and is divided into three dimensions: mobilize at least € 1,000 Billion of sustainable investments over the next ten years and incentives to unlock and redirect *public* and *private* investments, making sustainable finance a pillar of the financial system; the Commission will provide *support to public authorities* and promoters (private subjects, private or mixed companies) in the planning, design and implementation of sustainable projects.

As part of the *New Green Deal*, President Von der Leyen announced the European strategy that was (and will be) expressed into many acts and plans⁶ and today the most advanced documents on environmental sustainability come from the European Union, which has become the politically and legally most committed entity in this direction.

All these documents mentioned above are crucial for the useful elements of in-depth analysis of the new European environmental policy, but there is a significant problem of gradual and effective understanding of the common objectives in the internal legal systems, especially if we consider that not only a legal adjustment is required, but a broader cultural evolution of the industrial sectors and, in particular, of the industry of public services of general economic interest and technological innovation strategies. Thus, the reforms of the disciplines for the different sectors is only one aspect,

⁵ On US experience and proposals of reforms (2019) for decarbonisation of economy that has influenced European initiatives see E. B. BARBIER, *How to make the next Green New Deal work*, in *Nature*, 2019, n. 565, 6. For some references to the debate, see K. ARONOFF – A. BATTISTONI – D. ALDANA COHEN – T. RIOFRANCOS, *A planet to win: why we need a green new deal*, Verso Books, London, 2019; A. ATIL ASICI – Z. BÜNÜL, *Green New Deal, A Green Way out of the Crisis?*, in *Environmental Policy and Governance*, 2012, n. 22, 295 ff.; E. B. BARBIER, *Global Governance, The G20 and a Global Green New Deal*, in *Economics*, 2010, n. 2, 1 ff.

⁶ January 14, 2020: Green Deal and Just Transition Mechanism Investment Plan; March 4, 2020: Proposal for a European climate law to ensure a climate-neutral European Union by 2050; March 8, 2020: Action plan to finance sustainable growth; March 10: A new industrial strategy for Europe; 11 March 2020: A new action plan for the circular economy. For a cleaner and more competitive Europe; 20 May 2020: EU Biodiversity Strategy for 2030. Bringing nature back into our lives; May 20, 2020: A “From producer to consumer” strategy for a fair, healthy and environmentally friendly food system; June 18, 2020, Regulation (EU) 2020/852 of the European Parliament and of the Council on the so-called taxonomy of sustainable finance; 8 July 2020, Adoption of EU strategies for the integration of energy systems and for hydrogen; 17 September 2020, Presentation of the 2030 climate goals plan.

since more widely the innovations must be introduced in national policy choices and in the objectives of industrial plans.

3. The direct influence of European environmental policy and related discipline.

Directives on waste and the circular economy are also law in Italy with the legislative decrees of September 3, 2020, n.116, n. 118, n. 119 and n. 121, published respectively on 11, 12 (second and third) and 14 September 2020. These are the legislative decrees transposing the European package of measures on the circular economy that amended the before directives⁷ on waste and landfills.

The topic that we want to deal with is the definition and contents of the circular economy, repeatedly referred to also with particular emphasis in Italian legislative decrees, to understand general rules and measures.

Regarding purposes of waste management law, “the effectiveness and the tools that constitute the fundamental elements” have been introduced with Article 1, paragraph 1 of the legislative decree n. 116/2020 “for the transition to a circular economy⁸”; in the subsequent paragraph 7 it declares to want to “proceed towards a circular economy with a high level of resource efficiency⁹”. Other references are in article 2 of the same legislative decree n.116/2020 which introduces the national program for waste management which must contain “the identification of homogeneous flows of functional and strategic waste for the circular economy¹⁰” and “the definition of a national plan of communication and environmental knowledge on waste and circular economy¹¹”. The following article 3 of the same legislative decree n. 116/2020 aims to “favor the transition towards a circular economy¹²”. This purpose is also reiterated in Article 1, paragraph 1, letter a), of legislative decree n. 121/2020 which amends Article 1, paragraph 1, of the legislative decree n. 36/2003 on waste landfills.

The objectives of the new regulation on waste are the first concrete objectives that our legal system sets for the transition to the circular economy, and, in particular, for the latter, they are considered strategic by both Italy and the European Union, as later they will say. This framework involves the regulated market for services of general economic interest¹³ that include the waste, water and energy sectors and thus the broad scope of the circular economy. Therefore, market rules will also have to take into account the generalized innovation policy. Moreover, the approach does not only concern

⁷ See the directive on waste (2008/98/EC) and the special directives on packaging waste (1994/62 /EC), landfills (1999/31/EC), waste electrical and electronic equipment, so-called WEEE (2012/19/EU), end-of-life vehicles (2000/53/EC) and waste batteries and accumulators (2006/66/EC).

⁸ New article 177, par. 1, legislative decree n. 152/2006.

⁹ New article 181, par. 4, legislative decree n. 152/2006.

¹⁰ New art. 198-bis, par. 3, letter g, legislative decree n. 152/2006.

¹¹ New art. 198-bis, par. 3, letter h, legislative decree n. 152/2006.

¹² New articles 218, par. 2, and 237, par. 1, legislative decree n. 152/2006.

¹³ See E. BRUTI LIBERATI – F. DONATI (a cura di), *La regolazione dei servizi di interesse economico generale*, Giappichelli, Torino, 2010.

waste management, but is more general as it relates to the water and resources of all productive activities that must be gradually planned in ways that are compatible with the environment and in order to combat climate change.

The Italian discipline is articulated, so we consider only some general aspects that seem to characterize it and constitute the starting point for circular economy strategies. The objectives of the new waste regulation “to move towards a circular economy” are numerous and with different deadlines¹⁴; the main ones are listed in paragraph 4 of the new Article 181 of legislative decree n. 152/2006. The objective is then to simplify the secondary raw materials market and, to this end, it is expected that those who use, for the first time, a material that has ceased to be considered waste and that has not been placed on the market or that is a material on the market for the first time after it ceases to be considered waste, must ensure that the material meets the requirements under the applicable legislation on chemicals and related products¹⁵.

In order to establish itself, the circular economy will need a reference market, economic instruments and useful tools for its growth, which are not only the regulatory ones of the State. To the prescriptive and regulatory instruments, typical of the legal technique, the new discipline combines those of the market that are described in the new Annex L-ter to legislative decree n. 152/2006 which contains a detailed list of possible public intervention tools in the economy and other measures for waste sectors.

There are a lot of measures, such as taxes and restrictions for landfilling and incineration of waste which incentivize prevention and recycling, leaving landfilling as a less preferable waste management option, punctual tariff schemes that burden waste producers about the actual quantity of waste produced and provide incentives for the source separation of recyclable waste. The aim to reduce of unsorted waste is achievable by tax incentives for the donation of products, in particular food, extended producer responsibility schemes for various types of waste and measures to increase their effectiveness, cost-efficiency and governance, or through deposit-refund systems and other measures to encourage the efficient collection of used products and materials, sound planning of investments in waste management infrastructure. Other schemes relate to EU funds and sustainable public procurement to encourage better waste management, the use of recycled products and materials,

¹⁴ By 2020, the preparation for reuse and recycling of waste such as paper, metals, plastics and glass from households, and possibly from other sources, to the extent that such waste streams are similar to household waste, will be increased overall at least 50 per cent in terms of weight; by 2020, the preparedness for reuse, recycling and other types of material recovery, including backfilling operations using waste to replace other materials, of non-hazardous construction and demolition waste will be increased to at least 70 per cent in terms of weight; by 2025, the preparation for reuse and recycling of municipal waste will have increased to at least 55 percent by weight; by 2030, the preparation for reuse and recycling of municipal waste will have increased to at least 60 percent by weight; by 2035, the preparation for reuse and recycling of municipal waste will have increased to at least 65 percent by weight.

¹⁵ New Article 184-ter, par. 5-bis, legislative decree n. 152/2006

economic incentives for local and regional authorities, aimed at promoting waste prevention and intensifying separate collection, while avoiding support for landfilling and incineration¹⁶.

Another important aspect of the Italian law is the extended producer responsibility¹⁷, which was already contained in the “framework” Directive 2008/98/EC on waste that was implemented in domestic law¹⁸. The Directive 2018/851/EU and the legislative decree n. 116/2020 incorporated its contents in order to internalise the end-of-life costs of the product by including them in the price of the product itself and to encourage producers, when designing their manufactured products, to take greater account of their recyclability, reusability and repairability.

The legislative decree n. 116/2020, thus modifies art. 178-bis and in general Part IV (on waste management) of legislative decree 152/2006, establishes, even at the request of a party, extended producer responsibility regimes and refers to future decrees, for each individual extended producer responsibility, the requirements and measures include the acceptance of returned products and waste remaining after the use of those products and the subsequent waste management. So for financial responsibility for such activities as well as measures to ensure that any natural or legal person who professionally develops, manufactures, transforms, processes, sells or imports products (product manufacturer) is subject to extended producer responsibility. The producers pay a financial contribution so that the same covers the costs for the products that the producer places on the national market¹⁹.

Compliance with the obligations deriving from extended producer responsibility is subject to the supervision and control of the Ministry of the environment and the protection of the territory and the sea, which, after the establishment of the new National register of producers²⁰ collects the data, analyzes the financial statements and carries out as a comparative analyzes, the determination of the

¹⁶ Other measures are phasing out of subsidies contrary to the waste hierarchy; the use of fiscal measures or other means to promote the dissemination of products and materials that are prepared for re-use or recycled; the support for research and innovation in advanced recycling and reconstruction technologies; the use of the best techniques available for waste treatment; public awareness campaigns, in particular on separate collection, on the prevention of waste production and on the reduction of dispersion, the integration of these issues in education and training; the coordination systems, including digitally, of all the competent public authorities involved in waste management; the promotion of ongoing dialogue and cooperation of all parties involved, voluntary agreements and transmission of information by companies.

¹⁷ The extended producer responsibility (EPR) is a concept formulated by the “Organization for Economic Cooperation and Development” (OECD) in the 1980s and since 2008, thanks to European directives, introduced into environmental law: each producer of manufactured goods is “made responsible” for the impact of his product downstream of production on the environmental system, therefore for its circulation and its end. It aims to raise awareness of the costs induced in terms of final waste and to encourage conscious and virtuous behavior from the origin, that is, from the design of the product, assuming the foreseeable costs of its circulation in those of production to reduce the quantity and harmfulness of waste. This approach urges the so-called eco-conception of the product, that is the ecological design (or eco-design), based on the preventive consideration of the subsequent environmental impacts.

¹⁸ By inserting art. 3, paragraph 1, legislative decree 3 December 2010, n. 205 and art. 178-bis of the so-called Environmental Code, legislative decree 3 April 2006, n. 152.

¹⁹ New article 178-ter, par. 3, legislative decree n. 152/2006.

²⁰ New article 178-ter, par. 8, legislative decree n. 152/2006.

environmental contribution, checks that the objectives are achieved and verifies the correct implementation of the new regulations²¹.

The Italian discipline is complex and certainly analytical because of many aspects of the circular economy; several profiles can be linked to the issue of land use containment and urban regeneration. Land consumption is an effect of the linear economy that procures, produces, consumes and disposes of and containment through reuse can only be achieved by adopting circular economy mechanisms that can self-regenerate²².

The central goal is the implementation of these measures in the context of the pandemic crisis, especially in the waste and recycling sector; however, a medium-long term strategy would be needed whose content considers the future beyond the emergency²³. In addition, strategies inevitably need financing (mainly European funds) and legal schemes to be implemented; the current instruments of the internal order for economic activities do not seem to be adequate even in a situation of “normality” for the existing forms of public intervention in the economy. Therefore, extensive reforms are necessary on the impetus of the EU and in implementation of European disciplines or, even better, in direct application for the need of uniformity precisely in the perspective of transition to the circular economy.

Finally, the Italian regulatory authority for energy, networks and the environment – Arera²⁴ - will certainly play an additional important role to adopt new incentive mechanisms for companies, in order to encourage the reuse of resources (water, energy, waste) and green solutions according to the rules examined. Furthermore, probably new tasks could be assigned to the European Agency for the Cooperation of Energy Regulators (ACER).

4. The definition of the circular economy in our legal system.

²¹ New article 178-ter, par. 6, legislative decree n. 152/2006.

²² See M. PASSALACQUA, *Politiche pubbliche e strumenti giuridici per rigenerazione e riuso di aree industriali dismesse*, in M. PASSALACQUA – B. POZZO (a cura di), *Diritto e rigenerazione dei brownfields, Amministrazione, obblighi civilistici, tutele*, cit., 13 ff. In the perspective of the circular economy, the disused industrial site is not a waste, but a valuable asset that can regenerate itself, provided that its original use has been programmed to adapt to future reuse.

²³ For some considerations on possible strategic decisions, see S. VENIER, *Non sacrificare l'economia circolare sull'altare della ripresa economica*, in www.rivistaenergia.it, 28 maggio 2020. For example, the collapse in the value of “secondary” raw materials, especially plastic, penalises the recycling chain, which is essential for the circular economy and Italy has focused many investments on it.

²⁴ Since 2018 the “Autorità per l'energia elettrica, il gas e il Sistema idrico”, an independent administrative authority established by the law n. 481/1995, is named “Autorità di regolazione per energia, reti e ambiente (Arera)” after the law n. 205 of December 27, 2017, which assigned functions of regulation and control of the waste cycle, including differentiated, urban and assimilated waste. For this sector the competences conferred are carried out with the same powers and within the framework of the principles, purposes and attributions, including those of a sanctioning nature, established by the founding law. See ARERA – ANSA, *Venticinque*, Arera, Milano, 2020, in www.arera.it; F. MERUSI – S. ANTONIAZZI (a cura di), *Vent'anni di regolazione accentrata di servizi pubblici locali*, Giappichelli, Torino, 2017.

The notion and contents of the circular economy are present in the Ministry of economic development (MISE), decree 11 June 2020 and not in a legal act of implementation of EU law²⁵; in fact, even if the legislative decree n. 116/2020 was hailed as a real revolution that marks the entry of the circular economy into our legal system, in the new Italian discipline there is no a definition, although it is repeatedly cited as the finality of the waste legislation must pursue. The purpose of supporting transition to the circular economy and objectives of the new discipline seem uncertain without a specific definition of the model contents.

The only normative definition is found in an annex to the Ministerial decree of 11 June 2020 aimed at the reconversion of production processes within the circular economy with funding for 210 million euros. In Annex 2 of the Ministerial decree we read that “circular economy means an economic model in which the value of products, materials and resources is maintained for as long as possible, and the production of waste is reduced to a minimum”.

The concept is generic and non-binding because it is not of a legislative level, but it helps to understand and confirm that the circular economy has a lot to do with waste and the need to manage it as a resource. To concretely understand what is meant by circular economy, the ministerial decree itself is in any case helpful through the indications provided to access funding.

According to the decree, industrial research and industrial development activities contribute to the introduction of innovative models aimed at the productive reconversion of economic activities within the circular economy relating to product and process innovations in terms of efficient use of resources and waste treatment and transformation, including the reuse of materials with a view to circular or “zero waste” economy and environmental compatibility (eco-compatible innovations). Other goals concern the systems, tools and methodologies for the development of technologies for water supply, rational use and sanitation and innovative technological tools capable of increasing the lifetime of products and making the production cycle more efficient and other sectors²⁶.

Furthermore, the Ministerial decree also describes in detail the areas relating to the phase of the value chain: design, production, consumption, waste management and, for example, for production innovative models referring to the procurement of resources, their use in production and the generation of waste during the entire life cycle of the product, such as the reuse of secondary raw

²⁵ See d.m. 11 giugno 2020, *Progetti di ricerca e sviluppo per l'economia circolare*, in www.mise.gov.it. For Italian Government documents see www.gov.it and www.politicheeuropee.gov.it. V. anche E. ZANCHINI - M. ALBRIZIO (a cura di), *Un green deal per l'Europa, Le idee e le sfide per rilanciare il progetto europeo, Rapporto annuale di Legambiente*, Edizioni Ambiente, Milano, 2019.

²⁶ Other references are prototype design and experimentation of integrated technological models aimed at strengthening industrial symbiosis paths, for example, by the definition of a systemic approach to the reduction, recycling and reuse of food waste, to the development of integrated water cycle systems and the recycling of raw materials. The experimentation of new intelligent packaging models (smart packaging) that also include the use of recovered materials; multi-light material selection systems, in order to increase the recovery and recycling rates of small and light materials.

materials or the replacement or reduction of the presence of dangerous substances for health in the materials used. For production processes are required efficient use of resources, development of technologies and innovative industrial production lines in which waste or by-products of one industry become factors of production for another. While for consumption there are innovative models, also by the use of digital platforms, product-as-a-service models, based inter alia on leasing, and subscription schemes in which manufacturers retain ownership of the product or responsibility for its performance for the entire life cycle; the sharing of products and infrastructures may be considered forms of “collaborative economy”²⁷.

In this sector, the law provides measures of integration for the waste management and enhancement within the production and consumption processes, the separate collection and logistics of products and materials. In addition, rules refer to the recovery of materials from waste, production residues for reuse and recycling and to recovery and enhancement of organic waste, biomass residues and organic sludge, such as food, feed, nutrients, fertilizers, bio-based materials or chemical raw materials.

So, the legislation of 2020 is defining the circular economy and its contents with difficulty and delay, but there is no lack of Italian documents²⁸ that address the issue since 2017. On 13 December 2017, the joint document of the Ministry of the environment, land and sea protection and the Ministry of economic development was published “*Towards a circular economy model for Italy*”, with the aim of providing a general framework on circular economy as well as to define the strategic positioning of our Country, in continuity with the commitments adopted under the “*Paris Agreement on climate change*”, the “*United Nations 2030 Agenda on sustainable development*”, in the G7 and in the European Union. This document constitutes an important element for the implementation of the broader “*National Strategy for sustainable development*” (2 October 2017) and addresses the transition phase towards the circular economy and the need to rethink the waste sector²⁹.

On 14 May 2019 the Presidency of the Council of Ministers presented the update of the “*National Bioeconomy Strategy*” which shows that the Italian bioeconomy is ranked third in Europe, after Germany and France, with an annual turnover of approximately 330 billion euros and 2 million jobs.

²⁷ See footnote 3.

²⁸ See the “*Italian Bioeconomy Strategy*” which was promoted by the Presidency of the Council of Ministers in collaboration with the Ministry for economic development, the Ministry of agriculture, food and forestry, the Ministry of education, university and research, Ministry of the environment, land and sea protection, conference of regions and autonomous provinces. The document aims to define a transition towards the circular economy, integrating the bioeconomy and circular economy models, within a vision in which the production and use of renewable bio-resources, as well as their conversion into high added value, is part of a circular system that makes economic activities more profitable and sustainable in the long term.

²⁹ “The concept of “refusal”, although in the past it has allowed the solution of problems that cannot otherwise be solved” - the document reads - “is no longer relevant if we go towards a policy of minimizing waste. The challenge of the transition to the circular economy is to consider what is now waste as an element, a “brick” for a new production cycle”. The Italian *New Green Deal* was announced in the “2020-2022 Draft Budgetary Document” as a synergistic public investment plan with private ones to direct the fight against climate change, the development of the circular economy and the strengthening of social and territorial cohesion.

Italy is also second in Europe in terms of research and innovation and often the first in terms of richness in biodiversity and innovative and quality products placed on the market.

Private and mixed companies are obviously directly involved and committed; in a recent initiative (September 2020), some local public utilities companies and other economic entities³⁰ have established the “*Alliance for the circular economy*” (promoted since 2017), launching a new document the “*Position Paper 2020*” of intents for the implementation of circularity in Italy and a new model of sustainable development.

Therefore, in our legal system there are several normative references, documents and specific initiatives that allow us to focus on the main issues; however, the discipline is complex and its implementation will certainly be difficult, especially if we consider that the innovations are part of a system that highlights several reform needs concerning administrative law (procedures and competences of public and local authorities) and intervention in the economy³¹. There are important questions about how circular economy innovations can be implemented through existing legal instruments, as well as the appropriate management of economic resources.

5. Environmental sustainability objectives and the new purpose of utilities companies.

Technological and “cultural” innovations and green policy are also changing previous objectives, already known, promoted by EU acts; for example the *Smart City*³² model, a modern city sensitive to needs of the inhabitants for the public services offered, is towards the evolution in *Circular City*, as an urban context of economic and environmental sustainability in which public services are provided according to innovative criteria of adequacy and saving of resources, reduction and regeneration of

³⁰ These entities include “Gruppo Hera (Bologna)”, “Enel”, “Cassa Depositi e Prestiti”, “Intesa San Paolo”. See S. VENIER - S. VERDE, *Hera Group: The Path Towards Shared Value and Circularity*, in A. GILARDON (ed.), *The Italian Utilities Industry*, Springer, Berlin, 2020, 139 ff.; see the web site: www.gruppohera.it, *Hera for the Circular Economy*. Hera s.p.a. is the Dow Jones Sustainability Indices (DJSI) Industry Leader, based on its S&P Global ESG Score for the dimension and criteria level, as emerges from the report 13 November 2020 that provides an overview of the performance of the Multi and Water Utilities industry.

³¹ For public law instruments and the relationship with EU law, see S. CASSESE (a cura di), *La nuova Costituzione economica*, Laterza, Bari-Roma, 2012, VI ristampa 2020; C. FRANCHINI, *La disciplina pubblica dell'economia tra diritto nazionale diritto europeo e diritto globale*, Editoriale Scientifica, Napoli, 2020; G. DURANO, *Poteri autoritativi tra interessi pubblici e regole del mercato, Alla continua ricerca degli equilibri comunitari*, Giappichelli, Torino, 2018; F. MERUSI, *Il sogno di Diocleziano. Il diritto nelle crisi economiche*, Giappichelli, Torino, 2013, 83 ff.

³² See S. ANTONIAZZI, *Smart city: inquadramento giuridico, evoluzione e gestione dei servizi pubblici locali*, in www.federalismi.it, maggio 2019; ID., *Smart City: quadro generale di atti, programmi e competenze di livello sovranazionale, nazionale e locale*, in G. F. FERRARI (a cura di), *La prossima città*, Mimesis, Milano, 2017, 479 ff.; ID., *Smart City nell'esperienza italiana: l'intreccio di riferimenti normativi, di competenze degli enti territoriali e il ruolo delle società di gestione di servizi pubblici*, in V. AGUADO i CUDOLÀ - Ó. CASANOVAS i IBÀÑEZ (Dir.), *El derecho a la ciudad: el reto de las Smart Cities*, Atelier, Barcelona, 2018, 171 ff.; F. GASPARI, *Smart City, Agenda urbana multilivello e nuova cittadinanza amministrativa*, Editoriale Scientifica, Napoli, 2018; T. FAVARO, *Dai brownfields alle Smart Cities. Rigenerazione urbana e programmazioni digitalmente orientate*, in M. PASSALACQUA - B. POZZO (a cura di), *Diritto e rigenerazione dei brownfields*, cit., 169 ff.; M. R. MAUGERI, *Smart contracts, smart grids e smart metres: i nuovi orizzonti nel mercato dell'energia e la tutela del consumatore/prosumer*, in G. D. COMPORTI - S. LUCATTINI (a cura di), *Orizzonti del diritto dell'energia. Innovazione tecnologica, blockchain e fonti rinnovabili*, Editoriale Scientifica, Napoli, 2020, 13 ff.

waste, renewable energy solutions, integrated circular water service³³ (water recycling), etc. These objectives affect the production process and the relationship with customers and, in particular, smart cities will play a role in the low-carbon transition by changing consumer demand for public transport instead of private vehicles. The new industrial policy must necessarily coordinate profit objectives with the purpose of improving environmental conditions. In the context of competition, technological innovation and the adaptation to the law and guidelines of the European Union, inserted in institutions expressing a World policy (environment, climate change and emergencies) of the most advanced Countries, play a central role. The industrial plans of the service management companies are certainly conditioned by the regulatory context and by the European *Green Policy*, although characterized by very ambitious goals and achievable only gradually, which is certainly more linear than the national one, moreover based on interventions and legal schemes³⁴ that are not adequate for fast innovations.

In fact, legal schemes often conflict with reality, with the consequence that law, instead of rationally dominating it, complicates reality because it is characterised by inadequacy in the face of faster development of economics. For the national system, there are dubious issues pertain to the adequacy internal discipline and industrial policy which should (in theory) offer solutions for a *gradual transition* to the circular economy. The complexity of the objectives can only entail a *necessary collaboration/participation* of local bodies (holders of skills), enterprises of adequate size, citizens as customers and the Italian regulator Arera, which acquires the role of implementing the European and national transposition regulations by means specific enforcement solutions.

The public services market is currently “oriented” by the EU: the aim is the protection of environmental interests, in addition to the protection of consumers through specific disciplines for contractual relations. In Italy, the Arera adopts more advanced solutions than the incentive for renewable sources³⁵, such as the so-called “White certificates”, negotiable energy efficiency certificates, establishing annual obligations and objectives in proportion to the quantity of distributed resources, assigned to energy distributors. The purpose of the mechanism is energy saving and in Italy it proves to be the best tool for the cost/effectiveness ratio with effects on the costs indicated in consumer payment invoices for the services provided (optimization of electricity consumption,

³³ The water industry, due to complexity of supply, requires a highly innovative business model for technologies, often not known to users whose attention is focused more on costs than quality, see S. VENIER, *Dare acqua al domani*, in www.amicidellaterra.it.

³⁴ For various forms of traditional intervention in the economy, State holdings, rescue of companies in crisis and industrial policy according to plans for specific situations without an overall strategy see A. AVERARDI, *Potere pubblico e politiche industriali*, Jovene Editore, Napoli, 2018.

³⁵ On renewable energy sources, see F. LUISIO, *I sistemi di incentivazione della produzione di energia elettrica da fonte rinnovabile. Una valutazione critica dei diversi modelli disponibili e sperimentati*, in G. D. COMPORTI - S. LUCATTINI (a cura di), *Orizzonti del diritto dell'energia. Innovazione tecnologica, blockchain e fonti rinnovabili*, cit., 143 ff.; A. GALLIANI, *Innovazioni necessarie per consentire la diffusione delle fonti rinnovabili per la produzione di energia elettrica nel rispetto degli obiettivi europei*, ivi, 153 ff.

management of *smart grids*). These complex systems are obviously based on the acquisition of investments in innovative technological structures, data schemes and on the participation of consumers.

In recent years, companies are constantly engaged in public promotion of their activities in the reference area as a stable and lasting model according to the latest technologies, modern methodologies consistency with environmental protection, accreditation through involvement in international institutions and associations³⁶ which pursue objectives of modern industrial production respecting the environment and the circular economy. The current trend is the search for *effective collaboration* in the relationship with the user; a service company not committed to environmental objectives, runs the risk of being excluded from the market and “sanctioned” by the regulator and users. Recently, an Italian multiservice company has placed on the market “green bonds” of relevant economic value for innovative projects and the most advanced management and service delivery technologies, in line with the objectives of circular economy and environmental sustainability (management of waste, water system resilience, water regeneration).

The “purpose” of companies, “the reason of the existence of a company”, includes environmental and socio-economic challenges with new reporting and transparency commitments in relations with users, in addition to the contractual legal relationship³⁷. There are various elements for a new corporate culture, considering the reflections on the business model for objectives of the United Nations Agenda 2030, the production of services, which use resources and common goods, and on contractual relations with consumers.

Adequate dimensions of the management companies are crucial for their evolution, because they know territories and shareholders are local authorities, in order to support the infrastructure of services, new management models for the regeneration of resources and sustainable and participatory development, capable of to attract funding for green solutions.

³⁶ In the *Ellen MacArthur Foundation* website, there are various and in-depth definitions of circular economy such as “is a generic term to define an economy designed to be able to regenerate itself. In a circular economy, the flows of materials are of two types: the biological ones, capable of being reintegrated into the biosphere, and the technical ones, destined to be revalued without entering the biosphere” and other analysis in specific papers.

³⁷ See S. VENIER - F. M. BOCCHI, *Misurare il valore condiviso: l'evoluzione necessaria nel reporting delle imprese*, in *Harvard Business Review*, 2019, 70 ff.; S. VENIER, *Il Turning Point dello sviluppo sostenibile*, in www.astrolabio.amicidellaterra.it; ID., *Gli effetti della trasformazione tecnologica sui sistemi industriali*, in *Harvard Business Review*, 2018, 74 ff. Purpose, communication and reporting are central aspects; the purpose (the reason of the existence of a company; smart use of energy, efficient use of resources, innovation and contribution to develop) is different from the mission (sector activities) and is connected to strategic goals of circular economy. On 28 April 2021, the Hera Group Shareholders' Meeting resolved to amend the Statute of regarding the “purpose”: “The Company implements a business model with the objective of creating long-term value for its shareholders through the creation of value shared with its stakeholders. To this end, the Company organises and carries out business activities also with the aim of fostering social equity and contributing to the achievement of carbon neutrality, to the regeneration of resources and to the resilience of the system of services managed, to the benefit of customers, of the territorial ecosystem of reference and of future generations (Hera for the Planet, for People and for Prosperity)”.

6. Local authorities and the new strategic role of public-private companies.

It is necessary to rethink and to reform the skills of local authorities³⁸ and the measures of the regulator for a greater consideration of public-private partnership solutions and the role of utilities companies (often mixed companies³⁹). In fact, through investments for technological innovation, companies are directly responsible for transition to the circular economy, considering the limited public resources and the need of private investments.

There are many questions for Italian case: do local and regional authorities⁴⁰ have adequate means and resources to implement the new European policy? Will the role of the Arera Authority become more relevant and need additional skills? In our system, could the administrative entities implement the EU law and policy? Especially for the regulation relating to waste management.

The overall picture of the complex objectives highlights that the participation of public authorities, private entities and mixed companies and the collaborative involvement of consumers are crucial for the concrete implementation of the new economic model⁴¹.

7. Final considerations.

The transition to the circular economy involves very complex issues that cannot be resolved in the medium term, as it necessarily requires new European disciplines and national legislative innovations (the Italian system is certainly not adequate⁴²), EU funding and an innovative strategy for internal industrial policy.

The “transition” must be *co-managed*, precisely in the public services sector involving resources that are commons, through interaction between companies (private and public-private entities), local authorities, users. It is necessary to spread the dialogue between the stakeholders to connect territorial

³⁸ In the Italian legal system, a study group was recently set up for the reform of the administrative functions of local authorities (July 2020), but there is no formal notice of a draft. About “collaborative cities” and the production of goods and services, the role of local authorities and needs of a law reform see essays in VV. AA., *Politiche e strumenti per le città collaborative*, in *Istituzioni del Federalismo*, n. 4, 2019.

³⁹ See S. ANTONIAZZI, *Società miste e servizi pubblici locali, Esperienze nazionali e modello europeo*, Editoriale Scientifica, Napoli, 2017.

⁴⁰ However, for some years now, some Regions have adopted specific and interesting regional legislation on supporting circular economy, waste reduction and resource management, financing plans see l. reg. Emilia-Romagna, 5 October 2015, n. 16 and l. reg. Toscana, 7 August 2018, n. 48.

⁴¹ On macroeconomic challenges including climate change, see J. TIROLE, *Economia del bene comune*, cit., 213 ff.

⁴² In recent years, the legislature has (slowly) adopted complex, but not entirely incisive, reforms, especially in the field of public administration. Moreover, theoretical studies of administrative law are still, for the most part, focused on the cult of traditional categories, far removed from the transformations taking place, from EU law and other European systems, or on specific technical questions. However, the need for widespread cultural innovation concerns all sectors, given the complexity of the real issues to be examined in a broader perspective. Studies about topics of constitutional law, European administrative law and economics are certainly more evolved for the institutions, bodies, phenomena considered and the method of comparison.

and commercial strategies for the benefit of citizens, in order to create qualified communities with sustainable economies and promote shared results. So, the circular economy seems to be an excellent model for the protection and enhancement of common goods through technological and cultural innovation.

The environmental and social responsibility of a company can be oriented towards the production of a “shared value” by winning the engagement of customers and citizens. The main tool is the constant and punctual public communication of projects and results, essential to solicit the attention and sharing aimed at the necessary change expected by society and the environment. In this way, the value in a broad sense, not only economic, of activities and services is shared and goes beyond the traditional scheme of roles.

Furthermore, the most suitable scheme for the management of local public services sector is the public (local authorities, communities, citizens) - private (private and mixed enterprises) partnership model, in the sense of extensive collaboration and not only with reference to the legal instruments and to public-private partnership in a technical sense. This scheme is already operational in some areas and needs to be improved for a *collaborative governance* including the local authorities, public utilities companies, citizens-users and interventions of the regulator.

Consequently, a new institutional subsidiarity is affirmed in a new economic and social context in which public entities and individuals face many challenges related to the environment to search for new solutions on climate changes through relations between national, regional, European levels and private sector. The public-private partnerships should develop new skills and sustainable solutions through territorial and financing strategies to improve actions, financial arrangements and incentives to adapt public services and private or mixed enterprises to low-carbon production.

It is in this context that the question of public authority intervention in economic activities comes into play, in order to understand whether it is possible to discern any coherent design for guiding industry of recent years. The overcoming of the interventionist State model certainly did not entail a complete waiver of the exercise of public powers. However, relations between State and industry are characterised above all by frequent requests for intervention by this sector for a clear Government orientation as basis for industrial enterprise plans; in addition, heterogeneous and uncoordinated actions are due to the constant difficulty of pursuing an overall plan of strategic management of industrial development and forecasting of public initiatives even in the medium period. This situation also applies to the utilities industry.

In practice, the highly critical issue is the public regulation of conditions for industry exercise, given that public power mainly regulates and promotes productive activities through various instruments and occasional interventions without assuming a leading role. Obviously, this scheme is under

discussion and urgently needs to be innovated in the current health and economic crisis and in the perspective of the implementation of the circular economy, which is characterised by a decisive commitment of the public authorities.

Finally, this intricate and gradual path requires adequate economic and technical resources, a clear internal political direction without ambiguity in implementing European policy and a stable discipline based on legal certainty.

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