

# RECOVERY AND SUSTAINABILITY PLAN FOR EUROPE AND THE CONSTRUCTION BRANCH

YATCHKO IVANOV<sup>1,2,\*</sup>, ANA YANAKIEVA<sup>2</sup> AND ROBERT KAZANDJIEV<sup>2</sup>

<sup>1</sup>*European Polytechnical University,  
23, St. St. Kiril and Metodiy St., 2300 Pernik, Bulgaria,  
e-mail: yadir\_1@abv.bg*

<sup>2</sup>*Institute of Mechanics,  
Bulgarian Academy of Sciences,  
Acad. G. Bonchev St., Bl. 4, 1113 Sofia, Bulgaria,  
e-mails: aniyanakieva@imbm.bas.bg; robert@imbm.bas.bg*

**Abstract.** The construction branch is a substantial issue of EU development, but it is also the biggest consumer of natural resources, and a carbon emitter. Its position in the EU Plan for recovery and sustainability poses many essential problems. The main challenge herein is the expedient reset of EU post-COVID 19 activities in conformity with the new requirements for energy efficiency of buildings and reduction of energy poverty. The construction branch also faces issues such as transformation from a carbon emitter to a carbon absorber; preservation of natural resources; operation within a circular economy; use of digital technologies, and active participation in the EU transformation as outlined in the EU Green Deal.

The present paper proposes an attempt to analyze and assess the position and role of construction in the execution of the EU plan for recovery and sustainability. Reaching the main objectives would enable the sector to become one of the engines of economy development, thus building a healthier and more ecology-friendly society in Bulgaria.

**Keywords:** Next Generation EU, COVID 19, recovery and sustainability, energy efficiency, natural resources.

## 1. INTRODUCTION

The 21<sup>st</sup> century successfully began with the development of Industry-4, initiated by one of the greatest discoveries of the 20<sup>th</sup> century – the computer, giving start to the information technologies, digital transformation and artificial intelligence. The methods of communication, advertisement and control of

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\* Corresponding author.

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all human activities changed. Information technologies and digitalization are already available at home, in the office, in networks and for control of public transport. Yet, parallel to those useful innovations, the COVID-19 pandemic outbreak, rapidly becoming a global problem and resulting in a drastic change of people's lives and behavior, economy, human contacts, human health care.

The new situation was accounted for by the EU institutions and the global problem imposed the necessity of teaching global lessons including the understanding of a necessity of entire transformation of the way of life, and rapid recovery of economy and the EU Green Deal after the pandemic overcome [1]. Note here the statement of Klaus Schwab [2], founder and CEO of Davos Forum, who specified that a new approach in education, social contracts and labor conditions should accompany the current changes. Last but not least, new investments in people and environment were needed [3].

To overcome the COVID-19 issues and recover economy, the institutions introduced new methods of control and correction, and adopted new laws for circular economy, climate, energy, energy consumption of buildings, biodiversity, agriculture, innovations. The EC objective was to guarantee economy recovery as well as attaining sustainable development and Europe's transformation into the first climate-neutral continent by 2050.

## **2. CONTENTS AND OBJECTIVES OF THE PLAN FOR EUROPE'S RECOVERY AND SUSTAINABILITY**

Parallel to the above-specified measures, a plan for Europe's recovery and sustainability was launched. It covers a long-term budget of the EU, and is the biggest project of stimuli ever financed in Europe together with the Next Generation EU [4]. The European Parliament approved EUR 2.018 trillion for post-COVID EU recovery to guarantee the building of a more ecology-friendly, digital, and sustainable Europe, and 50% of that colossal amount of money aims at modernization via: (a) studies and innovations; (b) fair climate and digital transition including the Fund for Fair Transition and the program "Digital Europe"; (c) preparedness, recovery, and sustainability including the Mechanism of recovery and sustainability and the new EU-Health.

The Plan especially focuses on: (a) fighting climate change – a 30% share of the funds are set aside for that purpose; (b) protection of biodiversity and gender equality.

The popular initiative Next Generation EU functions together with the Program and is worth EUR 800 billion. Those funds will support the overcoming of the COVID-19 economic and social damage, attaining a more ecological-

friendly, digital, and sustainable Europe better prepared to face future challenges. The following components are among those of the Next Generation EU: a mechanism of recovery and sustainability with a budget of EUR 723.8 billion, and the initiative “Recovery Assistance for Cohesion and the Territories of Europe” (REACT–EU), with a guaranteed EUR 50.6 billion. Note that EUR 338 billion of the total sum is free of charge.

Mrs. Ursula von der Leyen, President of the European Commission, gave the best definition of the Plan. She stated that the Recovery Plan transforms the current enormous challenge into a possibility to not only support recovery but also invest in our future. The European Green Deal and digitalization will stimulate employment and growth, the sustainability of our societies, and environmental fitness. This is the hour of Europe. Our will to act should be commensurable to the challenges we face [6].

The main objectives of the Recovery and Sustainability Plan are to support the economic and social recovery from the crisis initiated by the COVID-19 pandemic and generate a more sustainable, fair, and successful economy. To fulfill those tasks, the government designed many measures and reforms aiming not only at the recovery of the potential for economy growth but also at its development and increase. In the long run, this would yield attainment of the strategic goal of convergence of the Bulgarian economy and equalizing the local income to the mean levels of EU income. Simultaneously, the Plan lays the foundations of a green and digitalized economy within the context of the ambitious European Green Deal.

### **3. STATE OF THE BRANCH**

#### **3.1. Within the EU**

Construction is one of the biggest employers in Europe [7]. It provides 9.9% of the gross domestic product and 54.9% of the gross fiscal equity. It also provides jobs to 14.9 million employees amounting to 6.4% of the total employment in Europe and to almost 29.3% of the industrial employment. Moreover, it generates 18 million jobs engaging directly or indirectly 43.6 million employees (one construction employee is equal to two employees of other branches). There are also 3.1 million operating companies. Statistics shows that 1 Euro spent for construction generates 3 Euro in the total economy. In other words, construction is one of the most important engines of EU economy occupying an important position and playing an essential part in the realization of the Green Deal and the attainment of EU sustainability.

### 3.2. Locally

Data from the Chamber of Builders in Bulgaria (CBB) [8] show that 7.5% of the construction companies listed in the Construction Professional Register ceased their activities during the first five months of the current year. According to the prognoses, new 500–600 companies (15–17%) will stop operation in the next 2–3 months. The reasons for those unfavorable developments are non-payment to companies and an almost a year denial of funding for new projects. Small companies not having monetary resources will be most affected. Average and big companies with denied bank financing also experience difficulties. Data prove decrease by 23.9% in public contracts and 22.4% in working contracts. According to data by the National Statistics Institute [9] construction production for the first quarter of 2022 dropped by 14.1% or LV 2.68 billion. Moreover, civil engineering production dropped by 16.4%, and construction of buildings by 12.4%. Those results will negatively affect the branch as one of the leaders of local economy.

Issues of concern are also: decrease by 21.2% of new material assets provided by construction companies; a drift towards rise of labor cost by 6.6% (LV 402.5 million) during the first quarter of the current year, as well as the imposed rise by 10.7% of the hourly wage during the first quarter of 2022 as compared to the first quarter of 2021 [10].

Note that the construction branch struggles to operate even in crisis, achieving success during the first quarter of the current year, where the number of issued building licenses increased by 9.2%, construction of new buildings – by 17.1%, and commissioning of new buildings – by 26.7% [11].

Considering Parliament's failure to approve changes to the Public Procurement Act, Bulgarian Construction Chamber concludes that the lack of indexing of deals with public contractors jeopardizes the operation of the entire branch. This would be fatal for small, medium and large companies, and for the 200 thousand employees in the branch, who provided 10% of the local gross domestic product until recently [12].

Construction also faces setbacks regarding the rise of the cost of building materials – cost of steel fiber reinforcement rose by 60%, wood cost – by 150%, cost of insulating materials – by about 50%. There are also setbacks in material supply. There is no mechanism of indexation of the building operations, too.

#### **4. COHERENCE AND OBJECTIVES OF NATIONAL RECOVERY AND RESILIENCE PLAN OF THE REPUBLIC OF BULGARIA**

Four main pillars support the National recovery and resilience plan [13]: Innovative Bulgaria (measures in the fields of education, digital skills, science, innovations, technologies, and interrelations between those components); Green Bulgaria (focus on sustainable control of natural resources); Connected Bulgaria (competitiveness and sustainable development of local areas, improvement of the transport and digital connectivity); Fair Bulgaria (focus on disadvantaged people). Construction is part of the fourth pillar – Green Bulgaria. It has the following components: low carbon economy, biodiversity, and resilient agriculture. The branch concerns a low-carbon economy. Its main objective is reduction of the carbon footprint and economy energy intensity, and back-up of the green transition by the implementation of measures to increase the energy efficiency of residential, public, and business buildings, as well as promotion of energy generation from Renewable Energy Sources (RES).

Reforms concern:

- Establishment of a National decarbonization fund;
- Facilitation and increase of the efficiency of investments in the energy efficiency of multi-family residential buildings;
- Formulation of definitions and criteria for “energy poverty” of households in the Energy law;
- Energy efficiency of buildings;
- A program financing individual measures for energy from RES in single-family and multi-family buildings;
- Energy efficient public systems for external artificial light;
- Mechanisms of financing projects for energy efficiency and RES and energy bills;
- One desk service;
- Stimulation of electricity from RES;
- Digital transformation and development of information systems and real-time systems for the Energy Regulator under a low carbon economy;
- Preparation and adoption of a National road map improving the unleashing of potential for the development of hydrogen technologies and mechanisms of hydrogen supply;
- A scheme supporting pilot projects for the generation of green hydrogen and biogas;
- Liberalization of the electricity market;

- Development of low carbon economy and founding Commission for energy transfer and preparation of Road map to climate neutrality;
- Energy decarbonization \*;
- Establishment of public enterprise “Conversion of charcoal regions”;
- Improvement of the corporate management of state-owned energy companies;
- Scheme supporting a minimum 1.4 GW from RES and batteries;
- Launch of the exploitation of geothermal energy in Bulgaria for electricity and heat generation;
- National infrastructure for storing electricity from RES (RESTORE).

The Plan for the recovery and resilience of Bulgaria should guarantee free EC financing amounting to EUR 6.3 billion. Funds amounting to LV 1 189 503 are in support of the energy recovery of the residential housing stock (in conformity with the Mechanisms of Recovery and Resilience – MRR), LV 236 226 (from national public financing), and LV 70 618 (from private financing). Funds amounting to LV 617 656, LV 123 531, and LV 235 200 are in support of the resilient energy renovation of the nonresidential building stock.

Except for those funds provided by the Program for recovery and resilience, the Ministry of regional development and public works plans financing of the following activities [14]:

- Launch of public service contracts for major and current repairs of 3000 km roads;
- Decision for a second bridge over Danube (Russe or other);
- A project study for “The Black Sea” highway with tunnel “The Balkans”, and a respective connection via a second bridge parallel to the Khan Asparoukh Bridge;
- Expanded conceptual design of future highway “Rila” (connecting the Republic of North Macedonia and Bulgaria via highway “Struma” (Dupnitsa–Samokov–Ihtiman, highway “Trakia” and northern extension to the highway “Hemus” – ring;
- Conceptual project for a high-speed motorway or highway “Sofia–Montana” with tunnel “Petrohan” and connection to the high-speed motorway Vidin–Botevgrad;
- Building the highway “Struma” – a section through Kresna gorge.

Note also that MRDPW plans deep renovation of buildings [15] conforming to Program “Regional development 2021–2027” and considering two priorities:

- Priority “Integrated urban development”, including the largest communities: Sofia, Plovdiv, Varna, Burgas, V. Tarnovo, St. Zagora, Blagoevgrad, etc. Planned financing of LV 400 million.

- Priority “Integrated development of territories”, comprising 40 communities including Vratsa, Montana, Lom, Lovech, Troyan, Gabrovo, G. Oryahovitsa, Sevlievo, Razgrad, Svishtov, Silistra, Dobrich, Targovishte, Shumen, Kazanlak, Svilengrad, Harmanly, etc., of almost identical funding.

Planned financing for one-family houses adopting a “from the bottom upwards” approach. The houses should be reflected in the territorial strategies of development of the six economic regions, having undergone an energy efficiency analysis beforehand.

Note also LV 318 million for building and/or reconstruction of water and sewage systems, together with wastewater treatment plants for urban agglomerations with 2000–10000 residents.

## 5. CONCLUSION

COVID-19 pandemic, the digital transformation, the recovery and sustainability of Europe (including the local recovery and resilience plan), and the emerging financial crisis seriously challenged the construction branch, yielding not only issues of construction stability but also some new requirements. Note the great responsibility of the branch since it is one of the biggest employers in the EU, and engine of local and EU economy.

The building materials industry should provide the branch with sustainable (green) materials and solutions for lowered CO<sub>2</sub> emissions. This is the objective of the several spanning years since EC made decisive steps to guarantee hydrogen security. It announced the “Green package”, and the first European climate law set out to reduce CO<sub>2</sub> emissions by 50% and even 55%. The UN conference in Glasgow confirmed that requirement.

The successful treatment of those issues needs the united efforts of construction specialists, organizations, government, and public administration to achieve the prosperity of Bulgaria.

Note the fresh news that businesses accessed the first millions of the Recovery plan [16]. Small and medium companies can apply for projects amounting to LV 260 million provided they meet the specific requirements. The procedure concerns companies in four local economic sectors – C (processing industry), E (water supply, sewage service, waste control, and recovery), J (information and communication), and M (professional activities and scientific research).

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