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# NET ZERO 2050: the transition to a sustainable and climate- neutral economy must take place under fair conditions, leaving no one behind

### The net-zero transition at global level – huge global costs between 2021 and 2050

The net-zero transition between 2021 and 2050 is likely to amount to about \$275 trillion, or an average of \$9.2 trillion per year, an annual increase of up to \$3.5 trillion compared to today's figures, according to data published in the January McKinsey & Company report. To put this growth in comparative terms, the \$3.5 trillion is roughly equivalent in 2020 to half of the global corporate profits, a quarter of the total tax revenues and 7% of the household spending. Moreover, an additional \$1 trillion of today's annual spending should also be reallocated from high-emission assets to low-emission assets. Taking into account the expected increases in spending as income and population grow, as well as the transition policies currently adopted, the required increase in spending would be smaller, but still about \$1 trillion globally. Spending would be expected to rise from 6.8% of the GDP today to up to 8.8% of the GDP between 2026 and 2030, thereafter following a downward trend.

The transition to a sustainable and climate-neutral economy must take place under fair conditions, leaving no one behind.

Some territories that are heavily dependent on extractive industries and the related energy production and high-carbon industries will need to restructure and/or diversify their economies, maintain social cohesion and train or retrain the affected workers and the youth to prepare them for future jobs. Job demand in those sectors could be reduced by around nine million, four million direct jobs respectively, as a result of the transition, while demand for around eight million direct jobs would be created in renewable energy, hydrogen and biofuels by 2050. Redundant workers will need support, training and retraining during the transition. While the transition would create opportunities, sectors with high-emission products or operations - which generate around 20% of the global GDP - would face substantial impacts on demand, production costs and employment.

In the Net Zero 2050 scenario, coal production for energy use would end by 2050 and oil and gas production volumes would be about 55% and 70% respectively lower than today. The impacts in developed economies could also be uneven. On the other hand, all countries will have prospects for growth, based on natural capital such as the sun and the forests and through their technological and human resources.

Over time, the business environment should adjust its business models as conditions change and opportunities arise: climate-related factors should

be integrated in the decision-making processes for strategy, financing and capital planning. Financial institutions in particular have a key role to play in supporting large-scale capital reallocation, even as they need to manage their own risks and opportunities. Governments and multilateral institutions could use existing and new policy, regulatory and fiscal instruments to establish incentives, support vulnerable stakeholders and encourage collective action.

The pace and scale of the transition means that many existing institutions should be renewed and new ones should be created in order to disseminate best practice, to set standards and follow-up mechanisms, to lead to capital deployment at scale, to manage uneven impacts and to support further coordination of efforts.

### **Lower-income fossil fuel producing countries will spend more**

All countries face some exposure to transition. Lower-income countries producing fossil fuel resources should spend more in relation to the GDP in order to build a low-emission economy and to support economic development.

The challenges of the net-zero transition by 2050 are universal: all regions would have to decarbonise, all would be exposed to the transition, all would face some degree of physical risk, and all would enjoy growth potential as a result of the transition. But the exposure and its effects would be unevenly distributed.

The world's largest economies - the United States, China, the European Union, Japan and the United Kingdom - would account for about half of global spending on physical assets and would spend about 6% of their combined GDP between 2021 and 2050, while for the other economies, the share of the GDP would exceed 8%. To conclude: the lower the GDP per capita, the higher the expenditure required for the transition to a sustainable zero-carbon economy.

For many lower-income, fossil-fuel producing countries, the challenges associated with climate change could worsen. Such countries should con-

sider: decarbonising their economies and financing associated capital expenditure, managing the exposure of large parts of their economies to a net-zero transition, and facilitating economic development and growth, in particular by expanding access to affordable and secure energy. Concerns about inequity would grow as an issue, especially as developing economies claim to have contributed less than others to emissions and yet are being asked to bear a large burden in the net-zero transition.

All countries have opportunities to take advantage of the growth potential of the transition and to secure advantages through their natural capital, such as the sun and the wind, and through the availability of technological, human and physical capital.

Countries such as Austria, Bulgaria, the Czech Republic, Germany, Hungary, Italy, Japan, Mexico, Poland, Romania, Slovakia, South Korea and Sweden, where the main exposure is related to the production of goods (cars and industrial machinery) could see a drop in demand since they use fossil fuel-based energy. Countries in this category could manage their exposure to changes in the demand for such products by reinventing products and supply chains. Many are investing heavily in research and development, which makes them well placed to develop and market low-emission technologies.

### **Romania must prepare for a successful energy transition**

The topic of decarbonisation is well known, however it is important to contextualise it to the situation of Romania.

Policy makers, industry representatives, as well as the representatives of civil society agree unanimously on the importance of decarbonisation and the necessary steps to be taken. Therefore, decisions taken in the coming years by both governments and the industry are absolutely key in this decarbonisation process.

There is a lot of talk about the NRRP being the solution to all the problems of Romania, both in terms of reforms and investments. The financial plan proposes €1.62 billion for the energy sector and €7.62 billion for sustainable transport. Political or regulatory decisions must support the development of modern, less polluting technologies that

should take into account Romania's specific energy needs and projects must be supported that can make the greatest possible contribution to achieving climate objectives.

We have the opportunity to develop new industries, especially in the field of renewable resources, to create new jobs and generate added value in the economy: according to a Deloitte Romania study, €1 billion invested directly in wind farms will generate €2.17 billion in the country's economy, with an additional indirect impact of €2.95 billion between 2021 and 2030. But the potential benefits are not limited to energy production; according to the same study, the energy transition can bring positive effects in construction, transport, energy services, industrial production and the automotive industry, the study showing that total investments of €82.5 billion in those sectors can have an impact of €364.6 billion in Romania's GDP between 2021 and 2030. However such benefits cannot materialise without a well-defined strategy at national and European level. At the end of 2019, the Von der Leyen Commission officially announced the "Green Deal", in which the EU aims to become a world leader in tackling the effects of climate change and to be the first continent with net zero greenhouse gas emissions by 2050. Basically, it aims for a sustainable and durable transformation of the economy by moving away from fossil fuels, promoting clean, renewable energy and developing a circular economy.

Romania will face many challenges in the energy sector over the next ten years, but right now we are still able to get prepared. It will be up to us to make the necessary commitments for a successful energy transition.

### **Mandatory introduction of climate change and sustainable development as a subject matter in schools – the key to a better future**

2020 was the year when the COVID-19 epidemic made the international community deeply aware of the necessity and urgency of achieving harmony between man and nature.

It is a responsibility of all of us - businesses and individuals - to play our part in addressing the challenges that threaten the future of our planet and the quality of life of people around the world. The Global Strategy will help us make a difference and mobilise data and technology in support of those goals. But we also need to realise that the changes society demands will be most effectively achieved through open collaboration based on trust and partnership opportunities with other organisations that share the goal of creating a better future for everyone. To this end, I believe we must take the Italian model and advocate for the introduction of mandatory climate change studies in schools, so that one hour a week is allocated to the study of sustainability and climate change issues. This is a new model of civic education focusing on sustainable development and climate change that should be taught to children from middle school to the end of grade 12, so that every generation is aware of the importance of the 17 UN Sustainable Development Goals, including how individuals can live more sustainably, how they can tackle ocean pollution, and how they can address poverty and social injustice.