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EXPERT:

McKinsey's Marcin Purta and Gustaw Szarek argue that Poland can reach carbon neutrality by 2050.

EVER SINCE ITS INCEPTION 30 YEARS AGO, ONE OF THE MOST FUNDAMENTAL FUNCTIONS OF AMCHAM HAS BEEN TO MAINTAIN PLATFORMS FOR SHARING PROFESSIONAL KNOWLEDGE AND EXPERIENCE BETWEEN ITS MEMBERS. THERE ARE SEVERAL SUCH PLATFORMS, INCLUDING AMCHAM MONTHLY MEETINGS, THE AMCHAM COMMITTEES, AND THE EXPERT SECTION OF THE CHAMBER'S MAGAZINE. IN THIS DISPATCH, **MARCIN PURTA, MANAGING PARTNER AT WARSAW OFFICE OF MCKINSEY IN POLAND, AND GUSTAW SZAREK, ASSOCIATE PARTNER AT THE WARSAW OFFICE OF MCKINSEY IN POLAND,** WRITE ABOUT THE CHALLENGES AND OPPORTUNITIES FACING POLAND ON ITS WAY TO REACH CARBON-NEUTRALITY BY 2050.

EXPERT Carbon neutral economy

A LONG ROAD AHEAD



By **Marcin Purta**, *Managing Partner, Warsaw Office, McKinsey Poland*, and **Gustaw Szarek**, *Associate Partner Warsaw Office, McKinsey Poland*.

Addressing climate change in a post-pandemic world

According to the latest report from McKinsey & Company, “Carbon-neutral Poland 2050. Turning a challenge into an opportunity,” the country can achieve climate neutrality by 2050 but requires proper policies to address all of the challenges on the way. Poland is not blessed with rivers that could support extensive hydro generation and has half of the sunny hours a year that California enjoys. Natural gas is scarce, and geopolitical factors make it difficult to import on a sustainable scale. The Baltic Sea provides an opportunity for offshore wind generation in the north, but high-consumption areas are located in the south of the country. Poland does not have a single nuclear-power reactor either. What Poland does have is a significant agricultural sector and coal-fired power stations that progressively deplete coal reserves. Poland’s greenhouse gas (GHG) emissions in 2017 were 380 MtCO_{2e}, which is over 800g of CO_{2e} for every euro of the country’s GDP. That makes Poland the third-most carbon-intensive economy in the European Union.

FIVE KEY SECTORS

The overwhelming majority of GHG emissions in Poland are produced by industry (22 percent of total emissions), transportation (15 percent), buildings (predominantly heating and air conditioning 11 percent), agriculture (almost 11 percent), and power (38 percent). To achieve carbon neutrality by 2050, each sector would need to reduce its emissions radically. In transporta-

tion, replacing internal combustion engine (ICE) vehicles with electric vehicles and hydrogen-based alternatives could help cut emissions by up to 99 percent. In buildings, improving insulation and reducing the use of coal, natural gas, and oil boilers and stoves could significantly reduce emissions as well.

Transforming the power sector will be a significant challenge, as around 77 percent of Poland’s electricity is currently generated from coal. The demand for electricity will more than double over the next 30 years due to increased widespread electrification, such as the introduction of electric vehicles, heat pumps in buildings, and electric furnaces in industry.

Poland’s energy infrastructure is aging, and approximately two-thirds of its installed coal capacity is over 30 years old. These assets will eventually need to be replaced, providing Poland with an excellent opportunity to redesign and rebuild its energy system to be zero-emission.

MONEY WELL SPENT

Given the scope and magnitude of the economic crisis resulting from the Covid-19 pandemic, the question is whether the world can afford to pay attention to climate change at this time. Yet, according to economists and climate experts, the world cannot afford to do otherwise, as investments in the transition to a lower-carbon future will create new jobs in the economy. EU leaders reached a landmark EUR 1.82 trillion budget at the most recent EU

summit in July. The Covid-19 recovery package reached EUR 550 billion, which is to be spent on green projects over the next seven years. Reportedly, Poland will be entitled to use EUR 160 billion from the EU post-pandemic recovery package. These funds could play a vital role in the decarbonization process. According to McKinsey’s analysis, in order to achieve net-zero emissions by 2050, Poland’s rate of decarbonization should accelerate by a factor of four over the next decade.

MULTIPLYING RISKS

Climate change is referred to by experts as a “risk multiplier” because the change in global temperatures can contribute to the spread of new viruses and pandemics. Researchers from major science organizations and research centers, including Stanford University, recently expressed this opinion. They noted that rising temperatures could create favorable conditions for the spread of certain infectious, mosquito-borne diseases such as malaria and dengue fever. Disappearing habitats may force various animal species to migrate, increasing the chances of spillover pathogens between them. On the same note, the factors that mitigate environmental risks are likely to help mitigate the risk of pandemics as well.

GOOD TRADES

The Covid-19 pandemic transformed people’s lifestyles and offered them an opportunity to find a balance between what worked before and what needs to be done in the new normal. Some new practices will likely endure long after the lockdown ends. Among factors that could support and accel-

erate climate action are teleworking and a greater reliance on digital channels, as these can all help reduce transportation demand and emissions.

COST AND BENEFIT

Achieving carbon neutrality by 2050 would require an additional investment of EUR 380 billion, the McKinsey report estimates. However, around 70 percent of that investment is expected to be cost-effective by 2050. Securing and investing this capital and coordinating the investment would be a challenge of historic proportions. But decarbonization could bring Poland many benefits, including increased energy independence, a reduction in operational costs of up to EUR 75 billion, improvements in economic competitiveness and quality of the environment, and the development of a set of modern industries.

Poland could develop low-emission industries, including the production of heat pumps, electric vehicle battery components, electrified agricultural equipment manufacturing, and Baltic offshore wind development. According to McKinsey’s calculations, combining these activities could boost Poland’s GDP by one to two percent and could create 250,000 to 300,000 new jobs.

When analyzing the costs and benefits of decarbonization, we must take into account the fact that climate action may currently appear less important than combating the economic consequences of the COVID-19 pandemic. But it is worth remembering that investing in infrastructure and low-carbon technology could be just the new engine of growth that the Polish economy needs, especially after the pandemic.