



Just coal transition in some countries in the world and lessons learnt for Vietnam

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Just energy transition is a shift from fossil energy to clean, low-carbon energy without causing negative impacts on society, people's jobs and livelihoods. This is a global trend, especially in the context of countries' commitments to achieving net zero emissions by the middle of the 21st century. At the COP26 Summit in 2021, the Group of Seven (G7) and the European Union (EU) launched the Just Energy Transition Partnership (JETP) Initiative to support the energy transition of developing countries with a high share of coal-fired power generation. In the context of increasingly limited climate finance due to global economic difficulties, the JETP is one of the solutions to help developing countries access the necessary resources to effectively build and implement low-carbon development pathways that are resilient to climate change. After the negotiation process, the Political Declaration on Establishing the Just Energy Transition Partnership (JETP Declaration) was adopted by Vietnam and the International Partners Group (IPG) on 14th December 2022 in Brussels, Belgium. International partners participating in the JETP with Vietnam include the European Union, the United Kingdom of Great Britain and Northern Ireland, the United States, Japan, Germany, France, Italy, Canada, Denmark, and Norway. As the third country after Indonesia and South Africa to sign the JETP, Vietnam is the first country to announce a Resource Mobilization Plan to implement the JETP. This is considered a crucial and essential step to unlock financial resources from JETP and transform them into breakthrough projects, strongly promoting Vietnam's just energy transition. This proves that Vietnam is ready and will create the best conditions to receive resources to implement a just energy transition. However, for developing countries like Vietnam, this transition not only faces financial and technological difficulties but also requires major institutional and policy changes. This article focuses on analysing the experience of just coal transition in countries like Indonesia, South Africa, and India, on that basis, draws some suggestions for Vietnam.

JUST COAL TRANSITION IN SOME COUNTRIES

Indonesia

Despite the bleak outlook for coal, countries with large coal-fired power sources are stepping up efforts to develop technology and operational innovations to improve the environmental impact, efficiency, flexibility and cost of coal-fired power. Indonesia, the world's fourth most populous country, is endowed with abundant resources, a young population, a potential domestic market, and strategic economic and policy reforms, gradually asserting

its position as a leading regional and global economic prospect. Indonesia is also the world's largest coal exporter, investing in many coal-fired power plants, leading to overcapacity in some parts of the country. Faced with this situation, Indonesia has issued many response policies including the "Long-term Strategy on Low Carbon and Climate Resilience 2050", the "National Energy Grand Strategy" with the "National Energy General Plan". These strategies encourage the development of renewable energy based on available potential, technology, finance and social efficiency. In order to implement renewable energy development strategies, Indonesia has many tax incentive mechanisms, supports for loans to import renewable energy technology, human resource development, etc. In addition to the greenhouse gas emission reduction targets in the "Enhanced Nationally Determined Contribution 2022", Indonesia aims to increase the share of renewable energy in the primary energy mix to at least 23% in 2025, 31% in 2050; oil must be below 25% in 2025, below 20% in 2050; coal must be at least 30% in 2025, 25% in 2050; gas must be at least 22% in 2025 and 24% in 2050. From these targets, JETP in Indonesia aims to support policy reforms, help the Government facilitate green finance and investment and strengthen the legal framework. Accordingly, JETP investments will mainly be loans to the Government or to enterprises and guaranteed by the Government. Public sector financing will aim to promote private sector investment.

India

Coal is a major pillar of India's energy sector, accounting for around 70% of the country's electricity production. As the world's second-largest coal consumer, this country relies heavily on the coal mining industry to sustain its economic and social activities. However, this poses significant challenges related to the environment, public health, and sustainable development goals. India has pledged to achieve net zero emissions by 2070, but this transition is facing many obstacles because the coal industry plays a vital role in the economy, from providing



energy to creating jobs. At the same time, if the transition is accelerated without a support plan, millions of people could fall into poverty. According to India’s Ministry of Power, coal-fired power accounts for 51% of installed capacity, but generates more than 70% of the country’s total output by 2022. India is aiming for renewable energy to account for 50% of its energy mix by 2030. However, there is no plan to announce the retirement of any of its 172 existing coal-fired power plants before 2030. Instead, the country’s largest power companies, such as NTPC, proposed a gradual approach to improving efficiency and reducing emissions. This includes the adoption of super-critical (SC) and ultra-supercritical (USC) technologies. In 2019, state-owned NTPC started up its first USC coal-fired power plant at the 1,320 MW (2 units) Khargone Super Thermal Power Station in Madhya Pradesh. In early 2023, India’s independent power producer Adani Power began operating the 1.6 GW Goddam Supercritical Thermal Power Plant. The project in Jharkhand state, also known as India’s first “cross-border power project” to supply 100% of its electricity to Bangladesh, is also India’s first project to have 100% flue gas desulfurization (FGD), SCR and zero effluent discharge.

South Africa

South Africa is the most developed country in Africa, located at the southern tip of Africa. With three capitals and 11 official languages, it is considered Africa’s bridge to the world. South Africa’s coal industry is the fifth largest in the world, employing 90,000

miners, generating 80% of South Africa’s electricity and providing raw materials for 25% of South Africa’s liquid vehicle fuel. As a country that relies on coal for electricity, South Africa has reduced its dependence by choosing cleaner energy. South Africa became the first country to adopt the JETP Declaration with development partners from the UK, US, France, Germany and the European Union at COP26. Indonesia, Vietnam and Senegal followed suit, joining the JETP with the International Partners Group, and are developing implementation plans. South Africa began developing its Just Energy Transition Investment Plan after adopting the JETP Political Declaration, and completed it one year later in October 2022. The Plan identifies a need for US\$98 billion in clean energy development and supports for a “just” transition over the long term, investing in green hydrogen infrastructure and electric vehicle manufacturing. South Africa needs another year to develop an action plan to implement the JETP. The EU and its member states recently announced that they will invest more than €280 million in South Africa to support green recovery reforms, green investment and development of a knowledge-based transformation process. This is part of the Just and Green Recovery Team Europe Initiative for South Africa, which was launched in Pretoria at the Global Gateway. The Initiative is expected to help South Africa address pressing socio-economic challenges through policy dialogue and investment facilitation, including in public infrastructure, and to open up the way for sustainable development, circular economy, biodiversity protection and climate change response. South Africa’s commitment to the implementation of the just energy transition plan is internationally recognized, with the view that Africa’s leading economy will benefit from a low-carbon, climate-resilient economy in the long term.

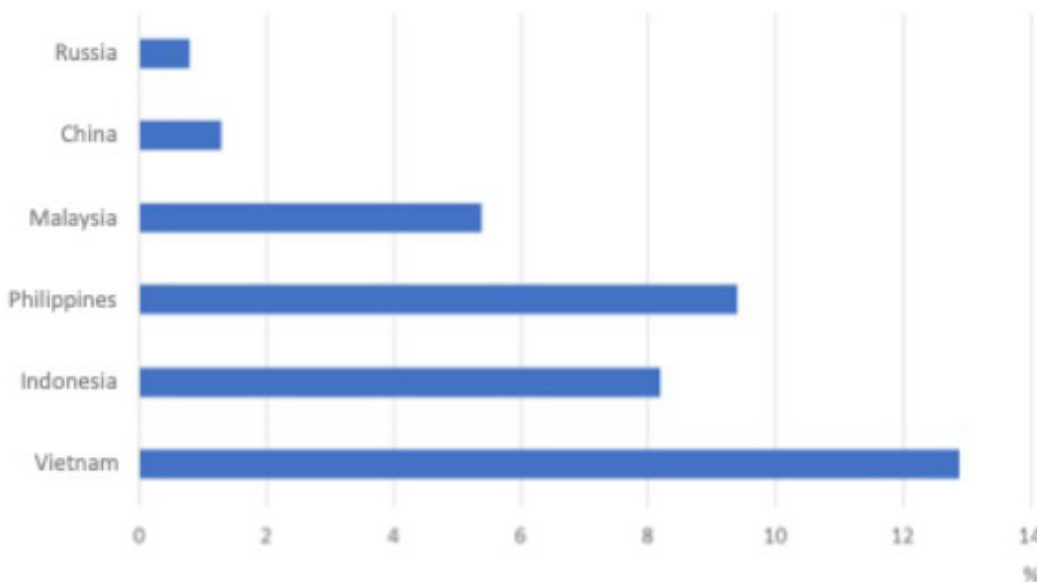


Figure 1. Average annual growth rate in coal consumption in some countries in the APEC region (2010-2020 period).

(Source: [1])



SOME SUGGESTIONS FOR VIETNAM

Coal is an accessible and affordable primary energy source, widely used in electricity generation and heavy industry sectors in our country, but has a high CO₂ emission intensity when used. According to the Nationally Determined Contribution (NDC) 2022, CO₂ emissions from the energy sector and industrial production processes in Vietnam in 2020 were 428 million tons of CO₂ equivalents, accounting for nearly 81% of Vietnam's total greenhouse gas emissions [2]. Vietnam is also the country with the highest coal consumption growth rate in the APEC region. Especially in the 2010-2020 period, the amount of coal consumed in Vietnam increased very rapidly with an average growth rate of 12.9%/year.

At COP26, Vietnam made a commitment to striving for net zero emissions by 2050 and joined the Global Coal to Clean Power Transition Statement. To implement the above international commitment, the Government of Vietnam has taken specific actions to realize climate change goals through a series of new policies issued in the past two years, specifically: Decision No. 896/QD-TTg dated 26 July 2022 approving the National Strategy on Climate Change to 2050, action plans of ministries and sectors on implementing the commitment at COP26. Most recently, on 15th May 2023, the Prime Minister approved the National Power Development Plan VIII. For coal-fired thermal power plants in this Plan, only projects that are already included in the adjusted Power Plan VII and are being invested in and built until 2030 will be continued. According to the development orientation, coal will not be used for power generation by 2050. For coal-fired thermal power plants that are still technically viable at that time, fuel will be converted to biomass and ammonia. For plants with a lifespan of more than 40 years, they will stop operating if they cannot convert fuels or capture CO₂. In the heavy industry sector, the proportion of coal consumed will also gradually decrease in the coming decades, but at a slower rate than the power generation sector. Thus, through a series of international commitments and specific policies, it can be seen that the transition from fossil energy to renewable energy is an inevitable trend of the whole world and Vietnam is no exception.

Experience from other countries shows that it is necessary to develop a comprehensive and overall strategy to successfully transition from energy to clean energy with specific goals including:

First, ensure energy security for economic development. For domestic coal mining, it is necessary to continue investing in basic construction and preparing for production to meet domestic coal needs, in order to minimize coal imports from abroad. For imported coal, continue maintaining long-term contracts with foreign suppliers and partners at appropriate rates, avoiding over-reliance on the spot coal market which is easily affected by many external factors. On the other hand, expand joint ventures, partnerships, and invest in mines abroad (if deemed appropriate) to ensure stable supply.

Second, the energy transition must be associated with social equity. The energy transition can only be considered successful if it puts people at the centre, especially the issue of job creation for coal workers after 2050. Therefore, it is necessary to develop an implementation roadmap and specific plans for retraining and supplementary training for coal workers. Switch to training in occupations that are suitable for the energy transition trends of the world and Vietnam. For example, in the coming years, the demand for key minerals and raw materials (lithium, nickel, cobalt, and rare earths, copper) will increase sharply to serve the production of clean energy technologies such as wind turbines, solar panels, electric vehicle batteries, and power transmission systems. At that time, coal workers need to be trained in additional expertise in mining technology, mineral and raw material processing to be able to work in mines and mineral processing sites. Along with that, there is new training to adapt to the requirements of new types of jobs in the energy transition period. For example, jobs in renewable energy, hydrogen production, electric vehicle production, and storage battery production. In addition, it is necessary to establish a "Just Energy Transition Fund" for the coal industry to support workers in the transition period to stabilize their lives after losing their jobs.

Third, the energy transition must aim at environmental protection. In particular, ensure the target and roadmap for reducing greenhouse gases; focus on waste treatment and other negative impacts from energy activities ■

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