

Green New Deal of Korea in the Era of COVID-19¹

Hong, Jong Ho, Kim, Keewon, and Um, Sang Won²

Since the outbreak of COVID-19, the South Korean government has aggressively introduced fiscal stimuli with policy packages amounting to a total of 277 trillion KRW (241 billion USD), as of July, 2020. Starting from early February, the supplementary budget for the year was discussed and revised three times at the National Assembly, the last of which proposed a cumulative increase in the budget of 35.1 trillion KRW (30.6 billion USD). The main components of the increase are largely identified as strengthening of job and social security, and the economy (18.7 trillion KRW, 16.3 billion USD), adjustment of tax revenues (11.4 trillion KRW, 9.9 billion USD), and fiscal support for industries and businesses (5 trillion KRW, 4.4 billion USD).

Included in the packages to strengthen the economy is the Korean New Deal (KND), which constitutes 13.7% of the total (4.8 trillion KRW, 4.2 billion USD). This is only the first stage of the fiscal stimulus package that will be directed towards a green and digital transition of the economy and society, the first of its kind to be introduced in the country. Although the general need is explained in terms of falling growth rates (from 6.9% in the 1990s to 2.9% in the 2010s) and the worsening of social polarization due to a lack of social safety nets, COVID-19 undoubtedly served as a direct catalyst. Not unlike the situation around the globe, the pandemic has led South Korea into an unprecedented economic recession, prompting large-scale changes in economic and social structures.

Of at least equal importance, however, are growing concerns over the changing climate, compared to which COVID-19 may only be the tip of the iceberg. South Korea has not been immune to abnormal or extreme weather events, such as heat and cold waves, stronger and more frequent typhoons, and intense precipitation. Such occurrences

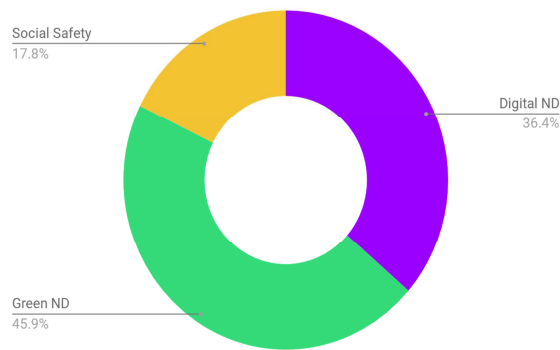
¹ This manuscript is based on an ongoing collaborative research titled "Asia Regional Dialogues and Comparative Study on the Roles of COVID-19 Fiscal Stimulus in Accelerating Clean Energy Transition," between Carbon Policy Initiative of Indonesia and Seoul National University. **Draft – Please do not quote.**

² Graduate School of Environmental Studies, Seoul National University

have caused society to incur various losses and costs, including in terms of human lives, health, property, infrastructure, agriculture, and restoration. According to a recent study, the scope of damage due to natural disasters through 2060, estimated in terms of annual damage costs, could be as high as 20.9 billion USD (Hong et al., 2017). This is a substantial amount that is over 1% of the country's estimated future GDP and sheds light on the critical importance of climate change mitigation and adaptation activities.

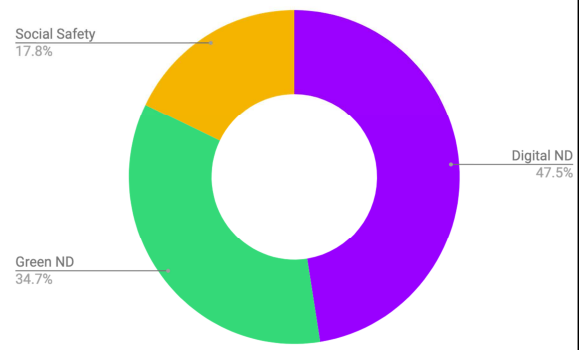
According to the plan released by the Ministry of Economy and Finance (MoEF) on 14 July, 2020, the full package to be implemented by 2025 equals 160 trillion KRW (139 billion USD) and is expected to create 1.9 million jobs. Out of the total, 45.8% (73.4 trillion KRW, 64 billion USD) is specifically directed to the GND, while the majority of the remainder will be directed towards the Digital New Deal and a smaller portion towards strengthening social safety nets. Through the KND policy and large-scale public investments thereof, the government hopes to also induce large-scale private investments that currently constitute 28.7% of total investments at 45.9 trillion KRW (40 billion USD). As shown below in Figure 1, the proportion of private to public is higher for the GND compared to the digital new deal, which may signify a potential challenge.

Fiscal investment



| | |
|------------------|------------------|
| Total | 160.0 (114.1) |
| Digital New Deal | 58.2 (44.8) |
| Green New Deal | 73.4 (42.7) |
| Social safety | 28.4 (26.6) |

Job creation



| | |
|------------------|-------|
| Total | 190.1 |
| Digital New Deal | 90.3 |
| Green New Deal | 65.9 |
| Social safety | 33.9 |

*Unit: trillion KRW (government expenditure), ten thousand jobs

Figure 1 Korean New Deal investment and job creation plan by 2025

Government policies and projects proposed under the GND are largely grouped into three categories: (1) green transition of buildings and infrastructure, (2) expansion of low-carbon and distributed energy, and (3) green industrial innovation. The list of projects, allocated budget, and expected number of jobs created under each category are as shown below in Table 1.

Table 1 Green New Deal investments and job creation by project

(unit: trillion KRW, ten thousand jobs)

| Category | Project | Public investment (% of total) | Private investment (% of total) | Total investment (% of total) | Job creation (% of total) |
|----------------------------------|---------------------------------------|-----------------------------------|------------------------------------|----------------------------------|------------------------------|
| Green buildings & infrastructure | Zero energy public buildings | 6.2 (8.45) | 13.8 (18.80) | 20.0 (27.25) | 24.3 (36.87) |
| | Ecological restoration | 2.5 (3.41) | 1.3 (1.77) | 3.8 (5.18) | 10.5 (15.93) |
| | Clean & safe water management system | 3.4 (4.63) | 2.9 (3.95) | 6.3 (8.58) | 3.9 (5.92) |
| | Subtotal | 12.1 (16.49) | 18.0 (24.52) | 30.1 (41.01) | 38.7 (52.72) |
| Low-carbon & distributed energy | Smart grid | 2.0 (2.72) | 2.2 (3.00) | 4.2 (5.72) | 2.0 (3.03) |
| | New & renewable energy | 9.2 (12.53) | 2.1 (2.86) | 11.3 (15.40) | 3.8 (5.77) |
| | Green mobility | 13.1 (17.85) | 7.2 (9.81) | 20.3 (27.66) | 15.1 (22.91) |
| | Subtotal | 24.3 (33.11) | 11.5 (15.67) | 35.8 (48.77) | 20.9 (28.47) |
| Green industrial innovation | Green business & industrial complexes | 3.6 (4.90) | 1.3 (1.77) | 4.9 (6.68) | 4.7 (7.13) |
| | Green innovation | 2.7 (3.68) | 0.0 (0.00) | 2.7 (3.68) | 1.6 (2.43) |
| | Subtotal | 6.3 (8.58) | 1.3 (1.77) | 7.6 (10.35) | 6.3 (8.58) |
| Total | | 42.7 (58.17) | 30.7 (41.83) | 73.4 (100.00) | 65.9 (100.00) |

The first and second categories constitute almost 90% of the investments and are expected to create 81% of the jobs, implying that they hold relatively more weight. This could also be attributed to the fact that the three projects included in the ten key projects of the KND fall under these two categories. It is the government's anticipation

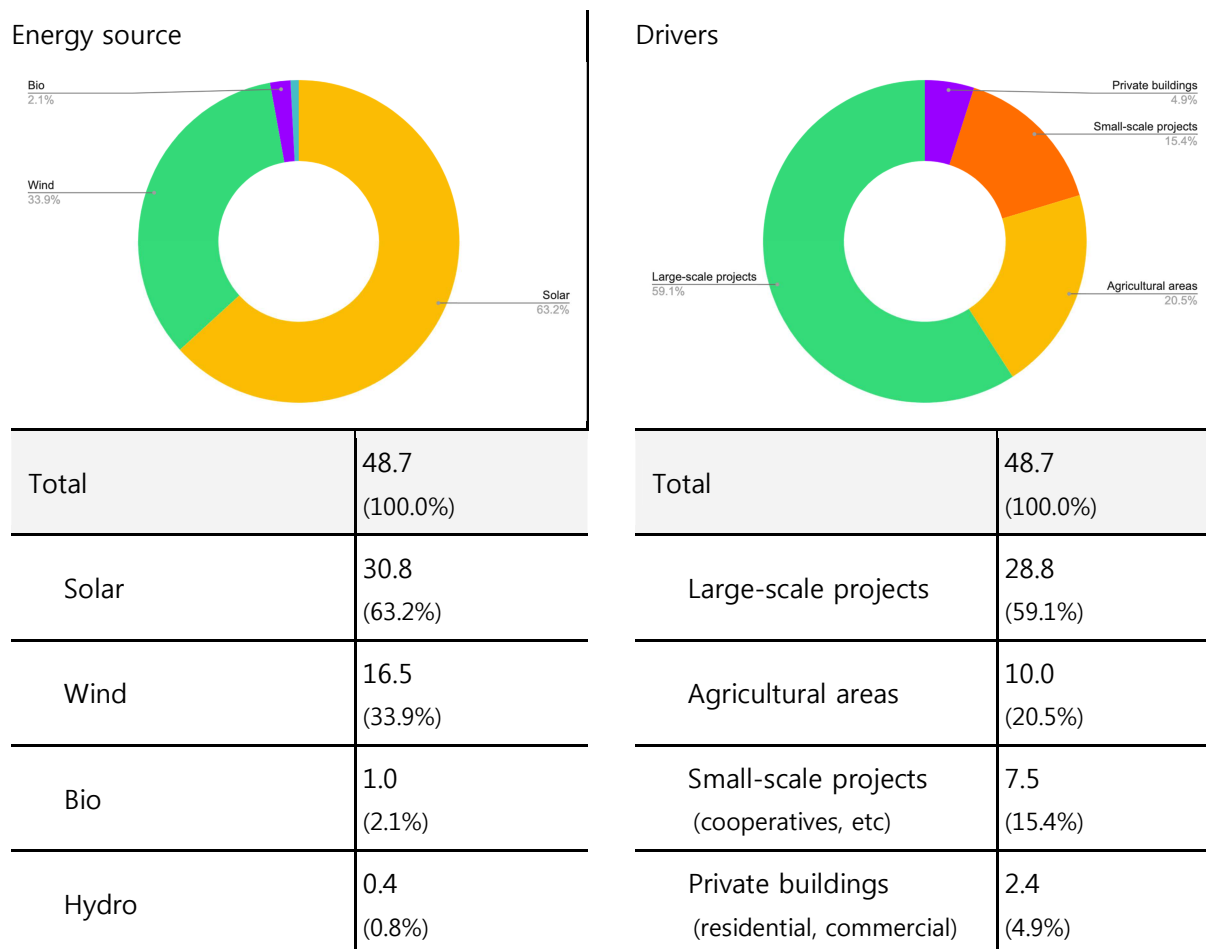
that the key projects will serve as the core, spurring ripple effects on the other projects and society at large.

Energy supply in the Republic of Korea is still largely reliant on fossil fuels, namely coal and natural gas, and nuclear, with the share of renewable energy sources remaining at only 5.6% as of 2019 (IEA, 2020). This has been of serious concern globally and internally, especially considering the country's economic status and contribution to greenhouse gas (GHG) emissions, yet change so far has been slow. The GND, however, aims to turn the tides and boost the transition to renewables, by promoting research and development, further dissemination, and ensuring a just transition.

The focus is largely on solar and wind power. Under the GND, support will be provided to: (i) domestic PV manufacturers in conducting product performance and quality testing through a government-established research center; (ii) install self-generation systems in residential and commercial buildings (up to 200,000 households); and (iii) install PV panels in rural areas and industrial complexes in the form of loan assistance. Meanwhile, the government plans to support the development of large-scale offshore wind power, particularly with regard to conducting feasibility studies and measurements, which has been identified as a key barrier.

More general plans also exist for the introduction of energy projects based on citizen participation and profit sharing models (i.e. provision of support for investment loans for local residents participating as shareholders). Otherwise, pilot projects to foster technology development in the areas of hydrogen and hydrothermal energy and plans to support the transition of at-risk regions due to shrinking dependence on coal have also been included.

While the GND does not present concrete targets, it is in line with the *3020 Renewable Energy Implementation Plan*, released by the Ministry of Trade, Industry and Energy (MoTIE) in December, 2017. Under the plan, the share of new and renewable energy will be increased from 7.6% in 2017 to 20% in 2030 and generation capacity from 15.1GW to 63.8GW. Although previously the share of waste and bioenergy constituted 41%, most of the capacity increase of 48.7GW will come from solar (30.8GW, 63%) and wind (16.5GW, 34%) sources, in order that together their share will jump from 46% to 85%. The breakdown in terms of drivers is shown below in Figure 2.



*Unit: GW

Figure 2 Renewable energy development plan by energy source and driver

Although the introduction of the GND is undeniably a welcoming development, it is not without shortfalls. This becomes more evident when compared to the European Union (EU)'s policy response to climate change and energy transition. In December 2019, the European Commission announced its growth strategy to achieve net-zero GHG emissions by 2050 and achieve sustainable prosperity, as an integrated strategy for the implementation of the UN SDGs. In the following year, the EU declared that it will ensure a just transition, accompanied by a 10-year investment plan amounting to 1 trillion EUR, and proposed the European Climate Law in April.

To begin with, the EU's Green Deal was announced under the recognition of the gravity of the climate crisis before the outbreak of COVID-19; South Korea, on the other hand, began to pay attention to the GND driven more by the need for an economic

stimulus after the spread of COVID-19. As a result, South Korea's GND does not present a strong vision and rather resembles a short-term project for the next 5 years, preoccupied with overcoming the economic recession. In comparison, the European Green Deal is for a longer period of 10 years and puts at least an equal focus on responding to the climate crisis (Chung, 2020). Such a difference in perspective can be guessed by the difference in the choice of name: Green Deal versus Green 'New' Deal. South Korea's model, which puts primary emphasis on fiscal investments and job creation, brings to mind the New Deal following the Great Depression and remains at a distance from a proactive response to climate change.

In addition, South Korea's GND fails to include specific targets, timelines, and plans to reduce emissions and stimulate economic recovery. In comparison, the EU has proposed new legislations that stipulate emissions reductions targets and a revision of all relevant policies, as well as measurement programs and monitoring. To achieve economic recovery, the idea of a 'circular economy' has been placed at the center, based on the findings that such a system can boost the region's GDP by an additional 0.5% by 2030 and create around 700,000 new jobs in various industries, from ICT and battery to plastic, textile, construction, food, and waste. In contrast, South Korea's Green New Deal does not present a clear picture of what it attempts to achieve and how.

Perhaps in response to harsh criticisms over the lack of ambition, however, President Moon declared carbon neutrality by 2050 in a recent speech given at the National Assembly in October, 2020. In the following month, the ruling party proposed the *Framework Act on the Green New Deal*, calling for legislating the goal and establishing a National Climate Crisis Committee as the control tower. If the bill passes, both the GND and the path toward carbon neutrality will be able to have a legal basis and, hence, stronger ground.