

South Korea doubles down on Green Growth

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Recent headlines on the South Korean economy announced that the country's GDP grew faster during July–September 2015 [than it had over the past five years](#) ^[1]. But there is a more important story beyond the [fluctuations](#) ^[2] in regularly reported macroeconomic data that needs telling. South Korea is quickly rising as a world leader in the creation, development and export of renewable energy technologies — widely viewed by analysts as strategic growth industries of



the future.

[3]

Things began in 2008 when the Lee Myung-bak government announced the prioritisation of a 'Green Growth' initiative. South Korea's Green Growth initiative was an ambitious and comprehensive national project, which sought to [initiate an economy-wide transition](#) ^[4] away from the decades-long commitment to fossil fuel-based 'brown growth'.

After her election in 2013, President Park Geun-hye initially distanced herself from her predecessor's initiative. Yet doubts over the current government's commitment to driving green growth appear to have been addressed through the formation of the [Prime-Ministerial Committee on Green Growth](#) ^[5]. This [committee](#) ^[6] is the successor to the former Presidential Committee on Green Growth, a high-level governmental body responsible for coordinating Green Growth during the Lee administration. This commitment was made resolutely clear (although without using the terminology of Green Growth) in [Park's keynote speech](#) ^[7] at the recent COP21 climate conference in Paris.

Green Growth is now just one part — albeit an important pillar — of the Park government's emphasis on nurturing an innovation-intensive 'Creative Economy'. In 2014 the government launched the country's [Second Five-Year-Plan for Green Growth \(2014-2018\)](#) ^[8], which focuses on driving forward many of the initiatives developed during the [First Five Year Plan](#) ^[9] (2009–2013).

Major milestones to date include the completion of the [world's largest smart grid](#) ^[10] testbed on Jeju Island — the key enabling infrastructure for the wide and efficient use of renewable energy sources via the infusion of information and communications technologies into the power grid. The idea is to allow domestic firms to use the testbed to trial new technologies and services before launching their products into international markets.

In October 2014 the government, with the participation of the government-owned electricity utility, Korea Electric Power Corporation (KEPCO), successfully completed a [microgrid testbed](#) ^[11] on Gasa Island. For now, microgrids are small scale autonomous energy systems and are seen as stepping stones to the launch of full-scale smart grids. South Korean companies [such as LSIS](#) ^[12] are presently seeking to export their technological knowhow in microgrid systems throughout the region.

South Korean firms are rapidly rising as market leaders in the creation, manufacture and export of energy storage systems — which will be critical in successfully introducing electric vehicles on a wide scale via smart grids. Take, for instance, [LG Chemicals](#) ^[13]: the company is fast approaching Panasonic's lead in this area by becoming an alternative supplier to Tesla, GM, Ford, amongst other leading automotive companies. It also has a [contract](#) ^[14] with a major German utility company, Steag. South Korea's automotive industry is playing its part through the development of mass-produced electric vehicles manufactured by Kia and Hyundai.

On the global front, the South Korean government successfully led the establishment [of the Green Climate Fund](#) ^[15], the [Global Green Growth Institute](#) ^[16] and the [Climate Technology Centre & Network](#) ^[17]. These initiatives were driven by the former Senior Secretary for Green Growth in the Office of President Lee Myung-bak in his vision to establish a '[Global Green Growth Architecture](#)' ^[18] to promote green growth throughout the [developing and developed worlds](#) ^[19]

To further accelerate the adoption of green growth globally, the government launched the world's first [Graduate School for Green Growth](#) ^[20] at the Korea Advanced Institute for Science and Technology. And the Korea Export–Import (KEXIM) Bank issued the world's first 'climate bond' backed by a national government to a value of US\$500 million — a development significant enough to lead one observer to depict Korea as a '[Global Environmental Leader](#)' ^[21]. KEXIM's climate bond provides a mechanism to accelerate the take-up of clean technology projects by providing cheaper capital (and reputable green financial securities for large institutional investors) than would be the case via conventional bank-based finance.

Even in the face of both institutional and political interests to remain locked in to 'brown growth' and a change in political leadership in 2013, South Korea remains committed to positioning itself as a leader in the global race towards building renewable energy technology industries. Why is this so?

Three factors appear to be the most critical in explaining how South Korea has pursued a transition to [green growth](#) ^[22], as Elizabeth Thurbon and I [have argued](#) ^[23]. The first is the need to rethink the relationship between economic and environmental goals and to embrace a new

philosophical mindset, which we [have coined 'developmental environmentalism'](#) ^[24].

Developing high levels of centralised coordinating capacity within the government is another crucial requirement. In South Korea this is manifested in the creation of first the Presidential and now the Prime-Ministerial Green Growth Committees.

South Korea's acute dependence on imported fossil-fuels has further provided a key motivation in the [drive towards green growth](#) ^[25]. As John Mathews and Hao Tan recently stated in *Nature* ^[26], manufacturing renewables is a pathway to build energy security. These are the reasons behind South Korea's growing presence in the strategic growth industries of the future. South Korea's success offers important lessons for the region in how to drive a green growth agenda even from the most unlikely candidates.

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