



Global Innovation Index 2018

Energizing the world with innovation

TEC 17, Bonn
September 26, 2018

Victor Owade, External Relations

GLOBAL INNOVATION INDEX 2018

Energizing the World with Innovation

11TH EDITION

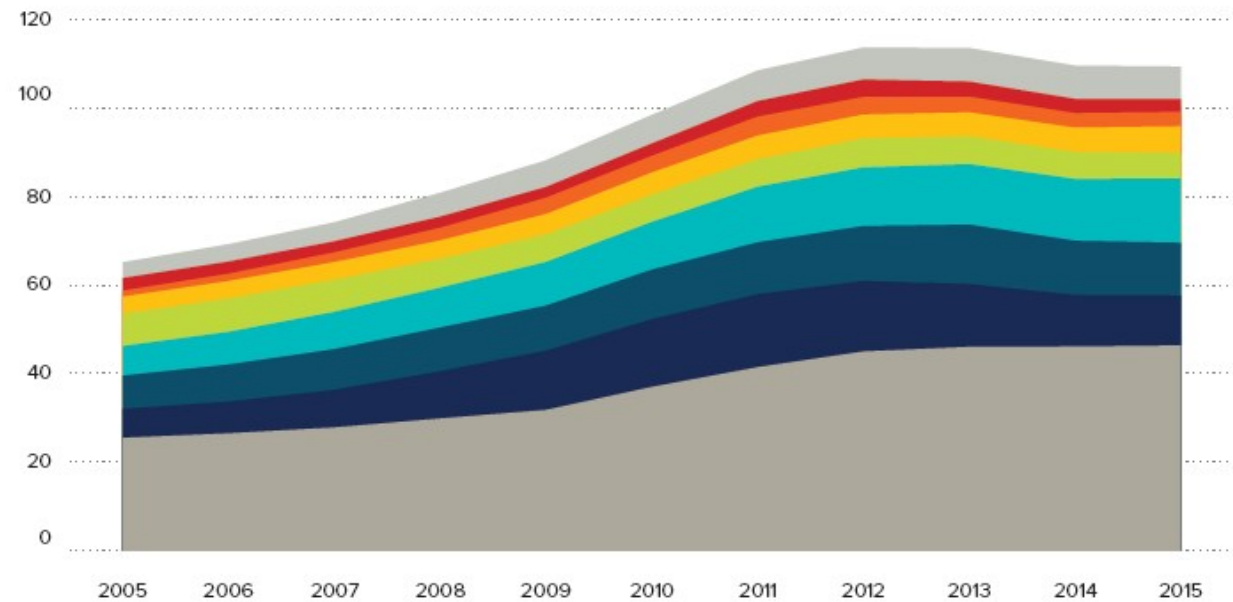


- 11th year of publication
- Measures innovation across 126 countries
- Leading reference for innovation
- A 'tool for action' for decision makers
- Chapter contribution from IRENA

Green energy inventions: accelerated growth and slow decline

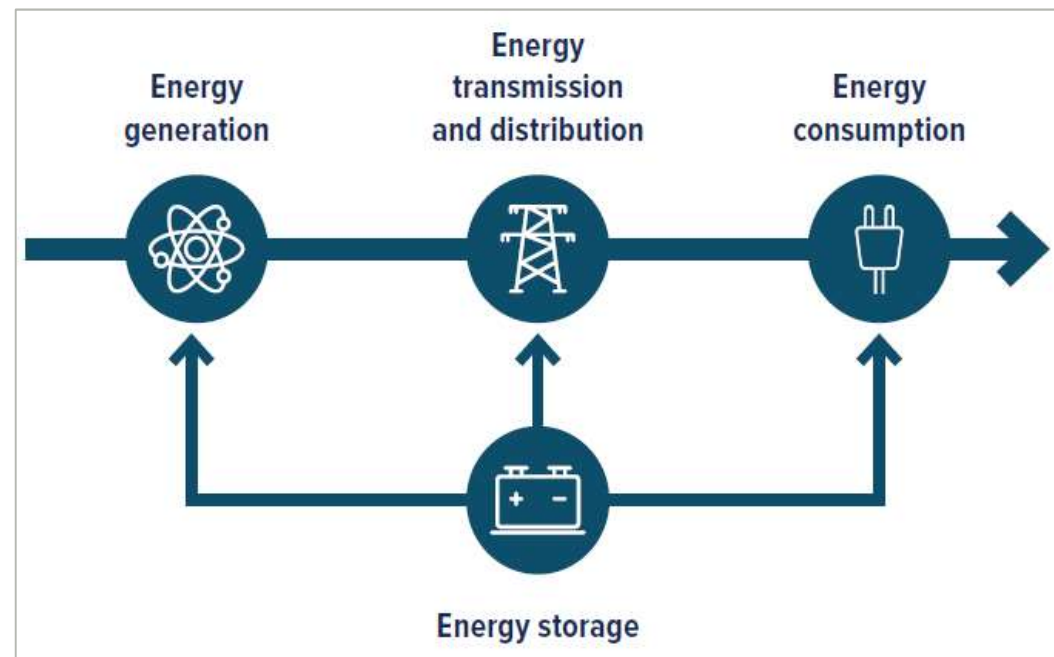
- The total number of patents doubled between 2005 and 2013
- Since then a decrease in the number of patent families and PCT international patent applications has been observed every year
- Reasons not apparent but could point to challenges related to adoption and diffusion

Green energy patent families, thousands



Higher levels of innovation needed to meet future energy demands

- By 2040 the world will require 30% more energy than it needs today
- At present, energy innovation mostly concentrated on the supply side
- Next generation of innovations could come from decarbonizing end-use sectors e.g. transport, buildings and making heavy industries energy efficient
- Enabling technologies for the optimization of energy systems such as smart grids



Public policy plays a central role in moving forward the energy transition

- Technologies alone are not enough
 - institutions, business models, consumer habits and social practices also need to be innovative
- Policy makers and policy making bodies such as the TEC have a responsibility to provide clear and strong incentives to support the energy transition
- Public policies should to be coherent and encourage cooperation and innovation networks
- International cooperation is a good way for countries to learn from one another and promote technology diffusion and transfer



Innovation, energy, and the United Nations

In 2015 the United Nations (UN) Member States adopted the 2030 Agenda for Sustainable Development (the 2030 Agenda) and the Paris Agreement.¹ Both recognize that effective national innovation systems are key to promoting scientific and technological solutions that lead to improvement in energy efficiency systems.

The 2030 Agenda and its 17 Sustainable Development Goals (SDGs) and 232 indicators apply to all countries universally and set out an ambitious global path towards a sustainable future for all. Goal 7 calls for 'access to affordable, reliable, sustainable and modern energy for all'. It highlights international cooperation to facilitate access to clean energy research and technology and promote investment in energy infrastructure and clean energy technology. The UN General Assembly also emphasized the importance of access to energy in a recent resolution.² The majority of the 17 SDGs rely on technology and innovation as a means of implementation, and all are interlinked. Goal 9 explicitly refers to innovation and to several specific innovation factors referenced in the GII.³ The High-level Political Forum (HLPF), which has a central role in the global review of the 2030 Agenda, will meet from 9 to 18 July 2018, coinciding with the GII launch on 10 July 2018.⁴

Energy production and use account for two-thirds of total global greenhouse gas emissions and 80% of CO₂; they are closely linked with climate change. The Paris Agreement—which entered into force in 2016 under the auspices of the United Nations Framework Convention on Climate Change (UNFCCC)—brings together countries in a common effort to address climate change. Article 10.5 of the Agreement explicitly recognizes the critical role of technological innovation for an effective response to climate change also helping to accelerate the implementation of nationally determined contributions (NDCs), national adaptation plans, and mid-century (2050) strategies to achieve the Paris Agreement.

The GII provides countries with a data-based tool for policy making and contributes to the shared endeavour of achieving the SDGs and the full implementation of the Paris Agreement. WIPO GREEN also promotes clean energy innovation and diffusion by connecting those seeking solutions with technology and service providers.⁵

Notes

Notes for this box appear at the end of the chapter.