Furthering EU-Japan partnership in the context of climate change

IFRI Seminar

The New EU-Japan Partnership: What Lies Ahead?

10 December 2019

Yukari TAKAMURA

(Institute for Future Initiatives, The University of Tokyo)

e-mail: yukari.takamura@ifi.u-tokyo.ac.jp

- Japan’s climate policy in changing climate
- Transformative changes and their driving forces
- Towards a further and strategic partnership between EU and Japan

“Clear and Present Danger” Climate Change and its Risk

- 2018 : enormous damage was caused by extreme events
  - Flooding of July 2018, Typhoon Jebi (No. 21) of September 2019…
  - Japan Meteorological Agency: “Life threatening heat”
- Climate change raises the level and likelihood of extreme events.
  - Flooding of July 2018 : Climate change increased rainfall by 6-7%
  - Heat wave of July 2018 : it could not happen without climate change.

Flooding（July 2018）
（Mabi-cho, Kurashiki City）

※国土地理院提供の図から作製

Typhoon Jebi (No. 21)
（Kansai International Airport）

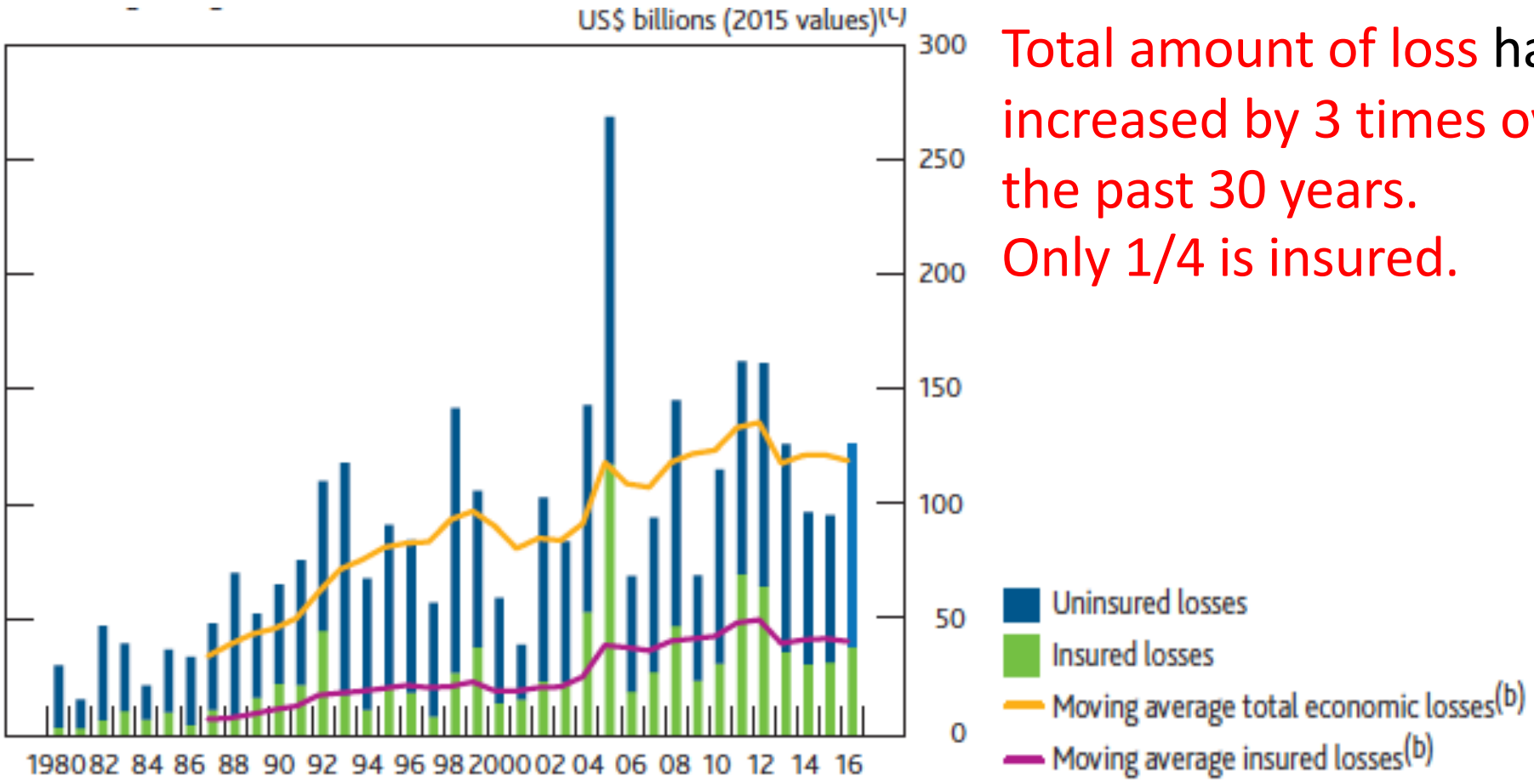
Typhoon Jebi (No.21)
（Sennan City）

2018 Top 10 Global Economic Loss Events

Date (s)	Event	Location	Deaths	Economic Loss（billion USD）	Insured Loss（billion USD）
October 10-12	Hurricane Michael	US	32	17.0	10.0
September 13-18	Hurricane Florence	US	53	15.0	5.3
November	Camp Fire	US	88	15.0	12.0
September 4-5	Typhoon Jebi (No. 21)	Japan	17	13.0	8.5
July 2-8	Flooding	Japan	246	10.0	2.7
Spring & Summer	Drought	Central & Northern Europe	N/A	9.0	0.3
September 10-18	Typhoon Mangkhut	Oceania, East Asia	161	6.0	1.3
July - September	Flooding	China	89	5.8	0.4
November	Woolsey Fire	US	3	5.8	4.5
August 16-19	Tropical Storm Rumbia	China	53	5.4	0.3
	All Other Events		-	123.0	45
		Totals		225.0	90.0

Source：AON, 2019

Global Climate related Economic Loss Trends（1980-2016）



Total amount of loss has increased by 3 times over the past 30 years.
Only 1/4 is insured.

Sources: Geo Risks Research, Munich Reinsurance Company and NatCatSERVICE 2017 (data does not account for reporting bias).

Source：Bank of England, Quarterly Bulletin 2017 Q2, 2017

Japan's climate policy (1)
Current status

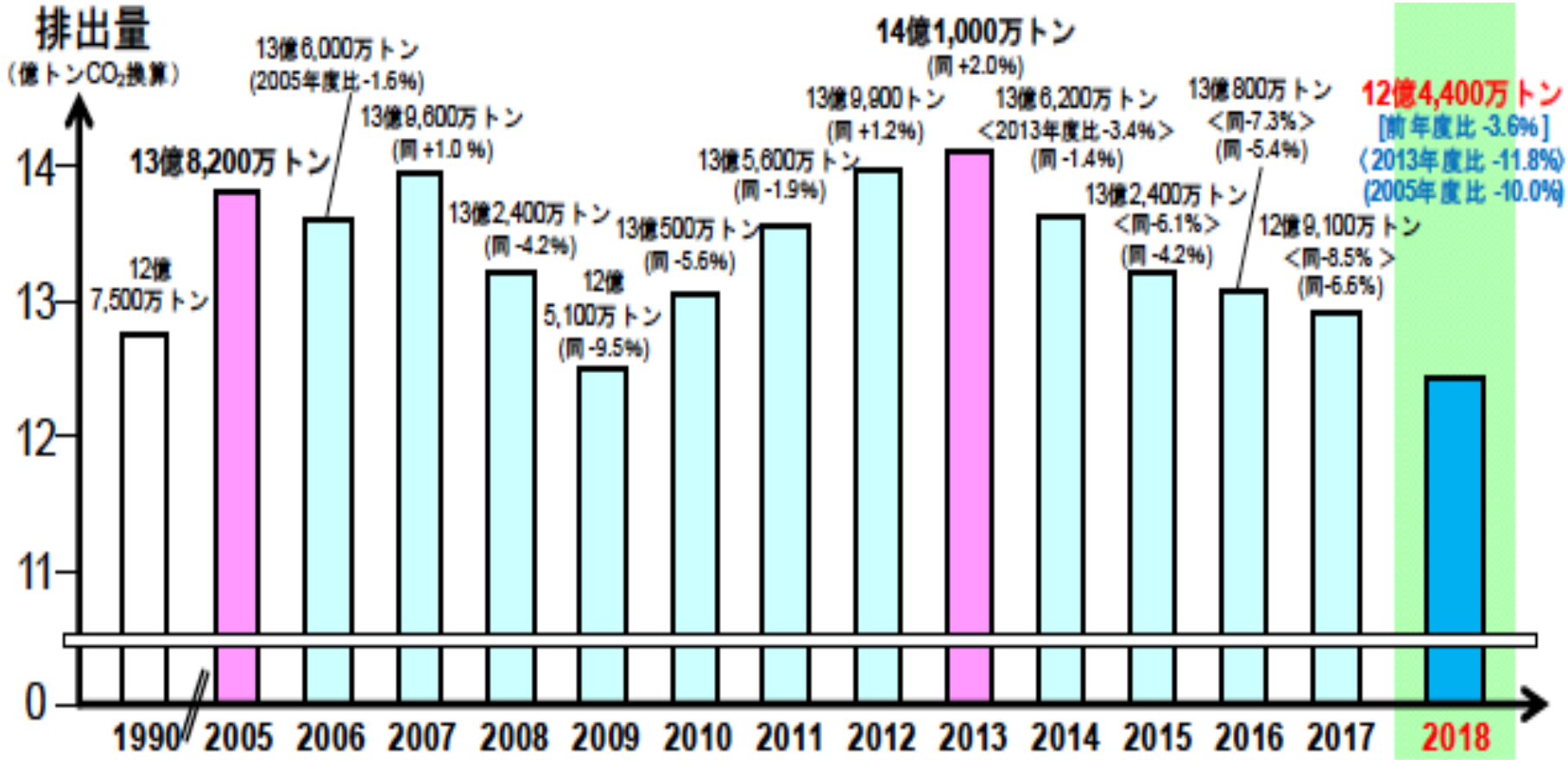
- 2030 climate target (submitted in 2015): 26% reduction below 2013 by 2030.
- Features of Japan's climate policy
  - Driven by international developments of climate policy.
  - Climate action plan of the Government under the 1998 Climate Act is a key tool for climate actions, but it seems "compilation of measures taken or planned by relevant ministries" or "plan of patch-work type" rather than a comprehensive strategy for implementation.
  - Minimal intervention of law in climate actions: "lack in rule of law"; "weak legalization"
    - Mainly voluntary except 1979 Energy Conservation Act
    - A good contrast with EU and its MS implementation.

Japan's climate policy（2）
Recent developments

- Good news: Japan's GHG emission has been declining since 2013.
  - Mainly by improving energy efficiency and expanding renewable power
  - Offset by increase in HFCs emission
- Challenges exist, especially about how to address coal in the power mix.
- Long-term strategy for decarbonization under the Paris Agreement (LTS), submitted to the UNFCCC in June 2019.

Japan's GHG emission trends（2018）

GHG emission in 2018 records the lowest level since 1990 and below 1990 level, which is 3% below 2017 level and 11.8% below 2013.



Source：Ministry of the Environment, Japan, 2019

Elaboration process of LTS

- 4 Jun. 2018: Instruction by Prime Minister to launch elaboration process of LTS and to establish an expert meeting
- 3 Aug. 2018: First meeting
- 4 Sept. 2018: Second meeting, focusing on "Innovation"
- 19 Nov. 2018: Third meeting, focusing on "Green finance" "Green Business" "Local"
- 21 Dec. 2018: 4th meeting, focusing on elements to be included in the LTS
- 2 Apr. 2019: 5th meeting to issue a recommendation on framework and main points of LTS
  - See its recommendation, materials and summary of discussion of the meetings https://www.kantei.go.jp/jp/singi/parikyoutei/ （in Japanese）
- 23 Apr. 2019 Joint meeting of Environmental Council and of the Industrial Structure Council to consider draft of LTS
- 25 Apr. to 16 May 2019: Public comment
- 11 Jun. 2019: LTS approved by the Cabinet

Members of the Meeting

Name	Affiliation and Title
Takeshi UCHIYAMADA	Chairman of the Board of Directors, Toyota Motor Corporation
Junko EDAHIRO	President, Institute for Studies in Happiness, Economy and Society (ISHES) / Professor, Shizenkan University
Shinichi KITAOKA（Chair）	Emeritus Professor, The University of Tokyo; President, Japan International Cooperation Agency
Kosei SHINDO	Representative Director and Chairman, NIPPON STEEL CORPORATION
Shuzo SUMI	Chairman of the Board, Tokio Marine Holdings
Yukari TAKAMURA	Professor, The University of Tokyo
Hiroaki NAKANISHI	Chairman, Keidanren (Japan Business Federation); Executive Chairman, Hitachi, Ltd.
Hiromichi MIZUNO	Executive Managing Director (Chief Investment Officer), Government Pension Investment Fund (GPIF)
Masahi MORI	Mayor, Toyama City
Itaru YASUI	Emeritus Professor, The University of Tokyo; Former Vice-President, United Nations University

Long-term goal and vision in LTS

- Long-term goal and vision
  - Aiming to accomplish a "decarbonized society" as early as possible in the second half of this century, while boldly taking measures towards the reduction of GHGs emissions by 80% by 2050.
- Sectoral vision
  - Energy transition and decarbonization toward 2050, by exploring all options.
  - Establishing new production processes to achieve decarbonized manufacturing with disruptive innovation
    - Alternatives for non fossil fuel based materials
  - Challenging for "Well-to-Wheel Zero Emission"
  - Creating the "Circulating and Ecological Economy" advanced local decarbonization, and achieve the SDGs with integrated improvements on the environment, economy and society, thereby achieving a carbon neutral, resilient and comfortable community and living by 2050.
- One of the basic Principles
  - Realizing "a virtuous cycle of environment and growth" towards the vision with business-led disruptive innovation

Drastic changes from the past

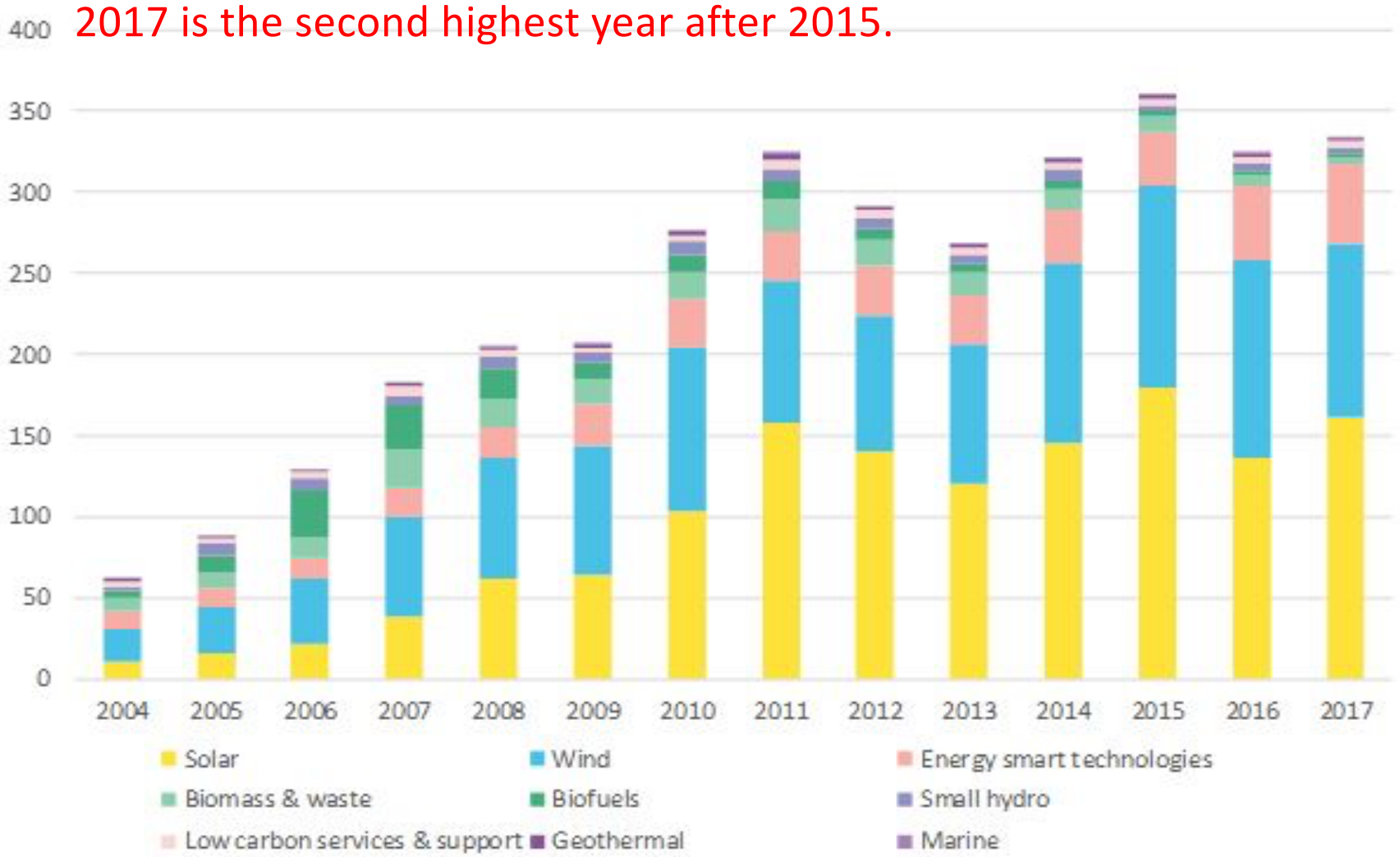
- Drastic changes from conventional climate plans/ strategies
  - Decarbonization (net zero emission) goal
    - Aiming to accomplish "decarbonized society" = net zero emission goal
    - Some more clear and ambitious sectorial goals for decarbonization
    - Challenge towards "zero-carbon steel" by 2100 by the Japan Iron and Steel Federation
  - Approach shifted?
    - Setting an aspirational goal and vision and back-casting from such goal and vision, rather than bottom up from the current undertakings
  - Shift in paradigm: LTS as "Climate" strategy as well as "Economic" strategy
    - Pursuing overcoming "antagonistic" view on relationship of climate and economy

Paradigm shift of climate and energy policies

- Statement by Prime Minister Abe in the Growth Strategy Meeting（4 June 2018）
  - ”…Climate actions are no longer question of cost for companies: rather they are source of their competitiveness… ”
  - “Now change called as a virtuous cycle in the environment and the economy has been truly accelerating at the global scale and with incredible speed for these 5 years”
- 2018 Strategic Energy Plan (approved by the Cabinet, July 2018)
  - Renewables are to be “major source of power” in Japan’s power generation
  - Energy transitions and decarbnization towards 2050

Global investment in clean energy

More than twice as much ($265.8 billion) was invested in clean energy (excluding hydropower) than coal and gas (around $130 billion) in 2017. 2017 is the second highest year after 2015.



Source：BNEF, 2018

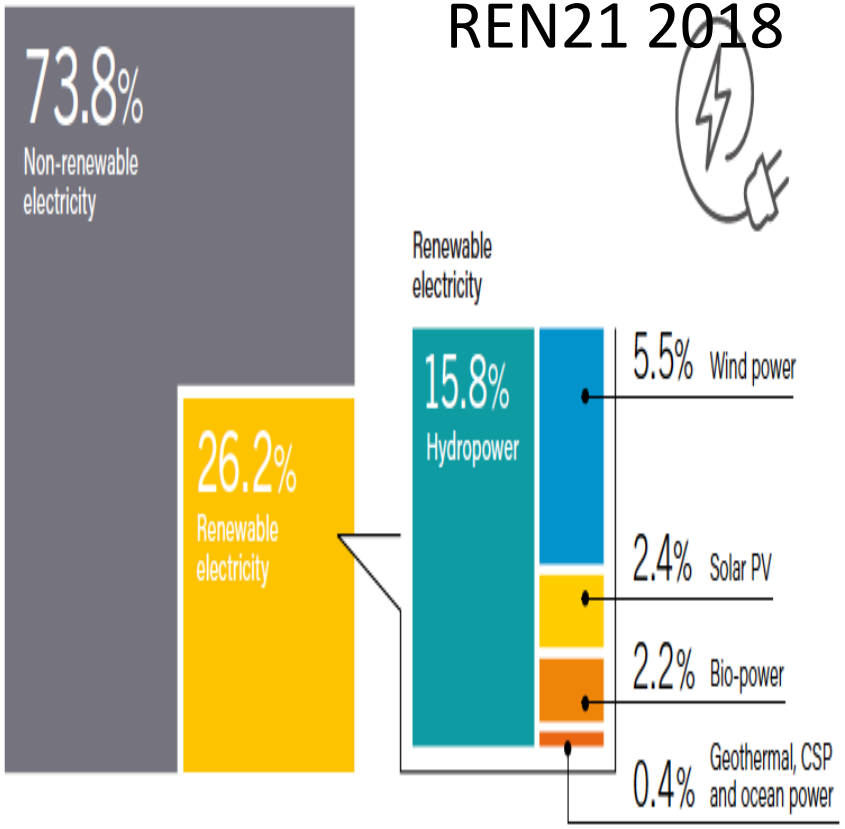
Driving forces for transformative change

- Energy Transition
  - "We are witnessing a transformation of global power markets led by renewables " (IEA, Secretary General, Mr. Fatih Birol (Oct. 2016))
- Zero Emission Mobility
- Businesses (demand side) taking the lead in moving toward zero emission
- Change in financial sector, which is making changes

Share of renewable in global power generation (2018)

More than a quarter of global power generated comes from renewables. Renewable has become the second power source after coal.

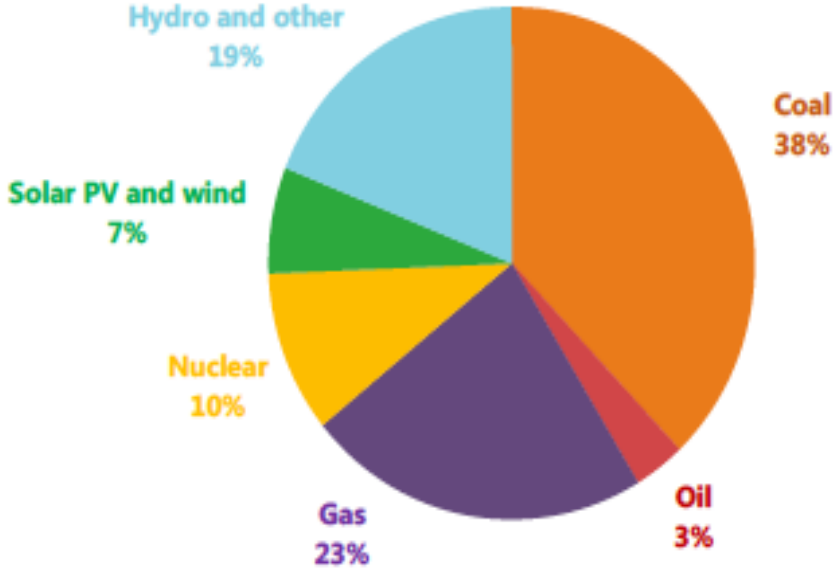
REN21 2018



Note: Data should not be compared with previous versions of this figure due to revisions in data and methodology.

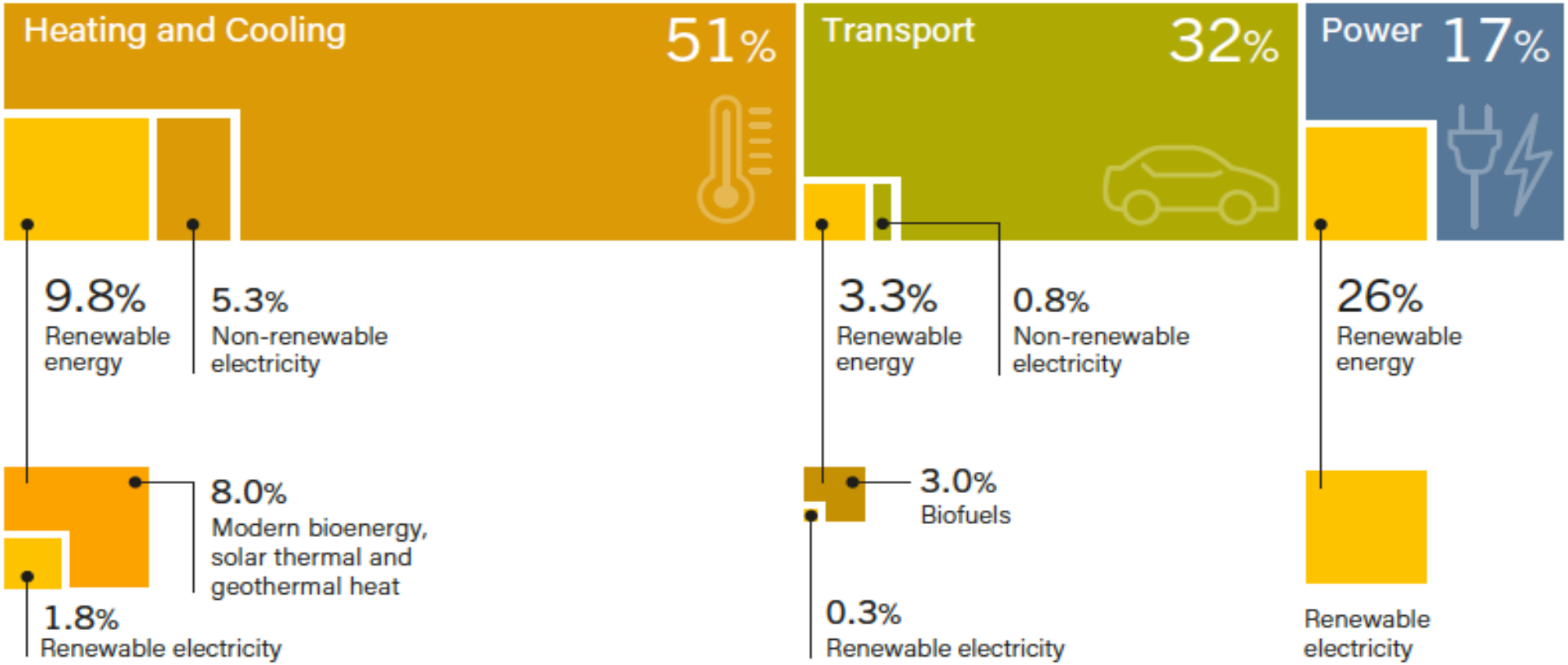
Source: See endnote 192 for this chapter.

IEA 2018



最終エネルギー消費に占める再生可能エネルギー
Renewable Energy in TFEC by Sector

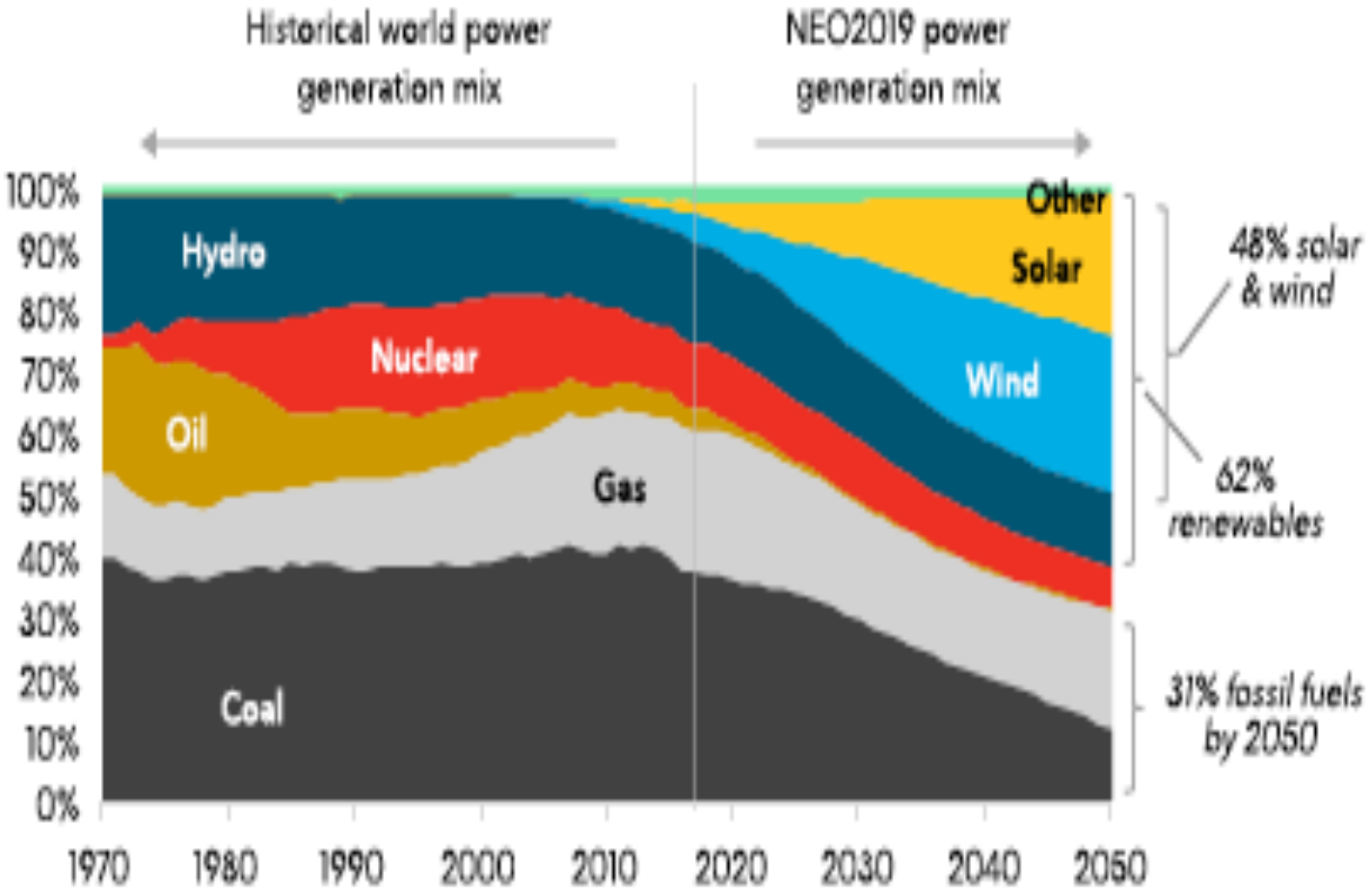
Electricity accounts for about one fifth of final energy consumption.
More difficult challenges are heating and cooling, and transport.



Note: Data should not be compared with previous years because of revisions due to improved or adjusted methodology.

Source: Based on OECD/IEA. See endnote 61 for this chapter.

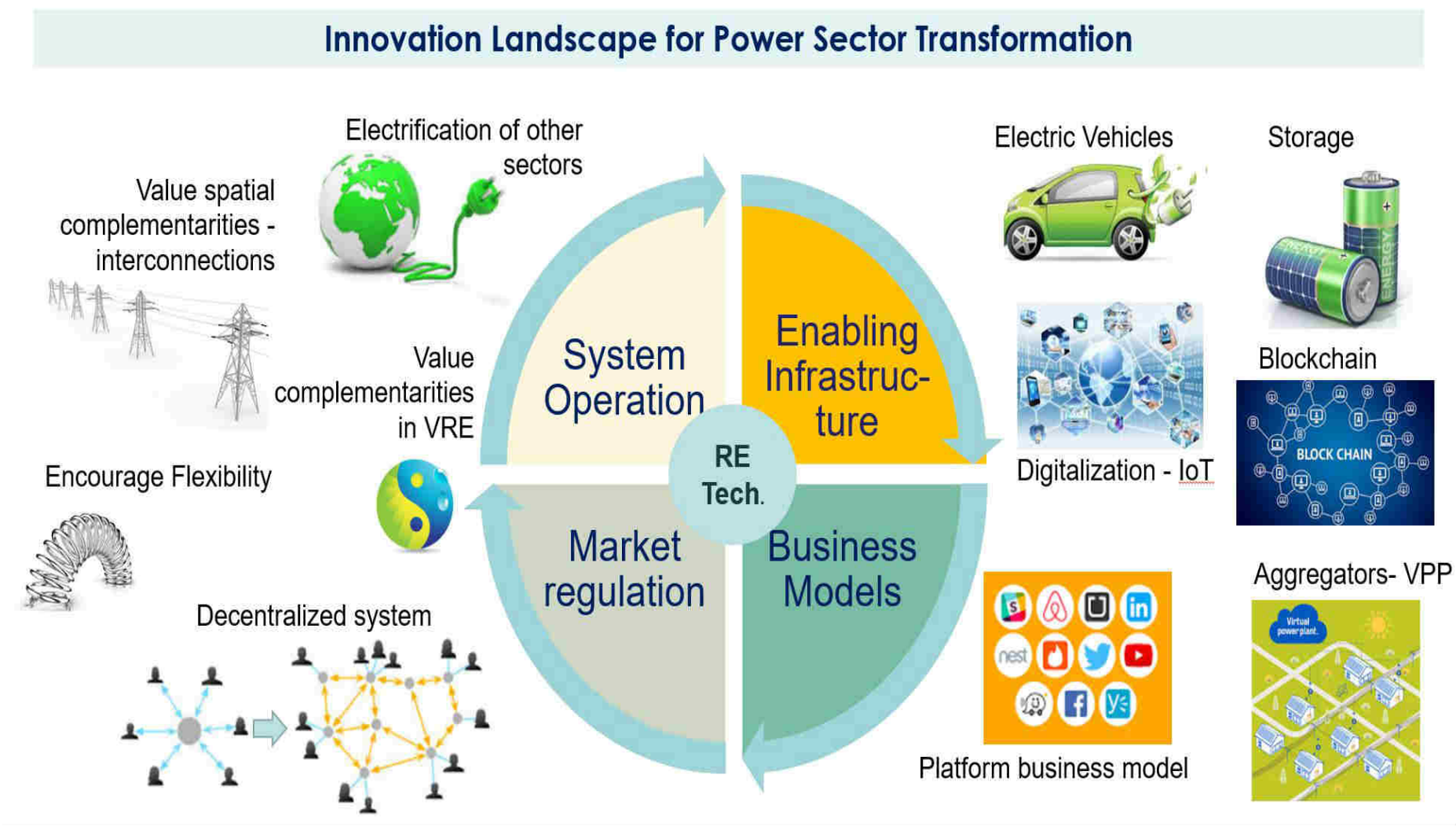
Global power mix: Historical and forecast （BNEF, 2019）



Source: BNEF, 2019

3D : Decarbonization, Decentralization and Digitalization

Innovation progresses across the sectors (through sector coupling)



Source: IRENA, 2017

Science Based Target (SBT)

- Initiative created by CDP, UN Global Compact, WRI, and WWF
- Targets adopted by companies to reduce greenhouse gas (GHG) emissions are certified as "science-based" if they are in line with the level of de-carbonization required to keep global temperature increase well below 2 degrees Celsius compared to pre- industrial temperatures.
- 740 companies have committed to having such targets, 311 of which have set certified science-based targets (as of 6 December 2019)

➢ https://sciencebasedtargets.org

Japanese companies setting SBTs （as of 6 December 2019）

Companies setting SBTs （57）	**Aeon, Anritsu, Asahi Group Holdings, ASICS, ASKUL, Astellas Pharma, Azbil, Brother Industries, Dai Nippon Printing, Daiichi Sankyo, Daito Trust Construction, Daiwa House Industry, Dentsu, Eisai, FUJIFILM Holdings, Fujitsu, Furukawa Electric, HAZAMA ANDO, Hitachi Construction Machinery, J. FRONT RETAILING, Japan Tobacco, KAO, Kawasaki Kisen Kaisha, Kirin Holdings, Komatsu, Konica Minolta, KYOCERA, LIXIL Group, Maeda Corporation, MARUI GROUP, MITSUBISHI ESTATE, Nabtesco, NEC, Nikon, Nippon Sheet Glass (NSG Group), Nippon Yusen Kabushiki Kaisha, Nomura Research Institute, ONO PHARMACEUTICAL, Otsuka Pharmaceutical, Panasonic, Ricoh, Seiko Epson, SEKISUI CHEMICAL, Sekisui House, Shimizu Corporation, Sony, SUMITOMO CHEMICAL, Sumitomo Forestry, Suntory Beverage & Food, Suntory Holdings, TAIHO PHARMACEUTICAL, Taisei Corporation, TODA Corporation, TOPPAN PRINTING, Unicharm, Yamaha, YKK.AP**
Companies committing to set SBTs （24）	Ajinomoto, Benesse, CASIO COMPUTER, FAST RETAILING, FUJI OIL HOLDINGS, Hitachi, Hitachi Capital, JENEX, KDDI, KOBAYASHI PHARMACEUTICAL, MEIDENSHA, Mitsubishi Electric, Miyakoda Construction, MS & AD Insurance Group Holdings, Nissan Motor, Nissin Electric, OMRON, SHIMADZU、Sompo Holdings, Takasago International Corporation, Takeda Pharmaceutical, Tokio Marine Holdings, Toyota Motor, UK-NSI、YAMAHA MOTOR

Asahi Carbon Zero
（based on 2015 emission level）

2050	Commits to reaching zero absolute GHG emissions	
2030	Scope 1 & 2	30% reduction
	Scope 3	30% reduction

- Implementing effective sustainable supply chain management
  - Asahi Group Basic Procurement Policies
  - CSR Principles for Asahi Group Suppliers

- Main Results for FY2017
  - A total of 108 suppliers participated in the Asahi Group Basic Procurement Policy Workshop, in which we explain the Asahi Group's policies to the management of our suppliers.
  - A total of 45 suppliers participated in QA Meetings for Asahi Group suppliers.
  - An on-site survey based on the responses to the Supplier CSR Survey was conducted at 13 suppliers.
  - Supplier evaluations (48 ingredient suppliers and 55 material suppliers)

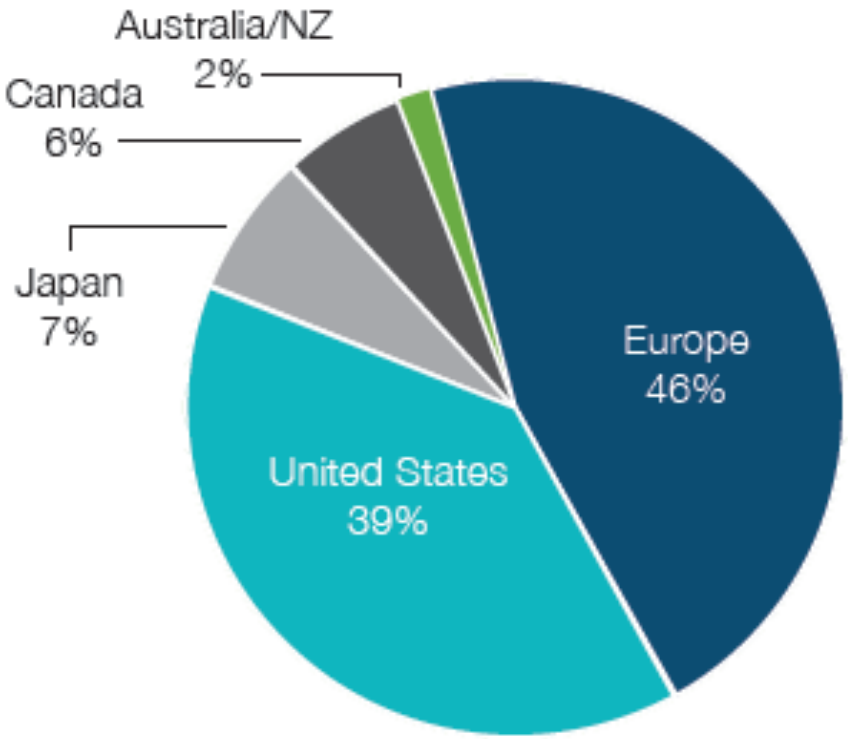
Financial institution and investors are changing and change business behavior

- UNPRI (Principles for Responsible Investment) and ESG investing
- Linked to disclosure of climate related risk, covering the whole supply chain
  - CDP (previously, Carbon Disclosure Project)
  - Recommendations by Task Force on Climate-related Financial Disclosures（TCFD）（June 2017）
- "Engagement, Voting and Divestment"
  - For instance, Norwegian Government Pension Fund (with about One trillion US dollar) has made divestment (about 8 billion US dollar) from 122 companies, more than 30% of business of which depends on coal exploitation and power generation (since 2016)
  - Engagement: Climate Action 100+
  - Revision of loan policy for new coal fired plants

Global Sustainable Investing Assets（2018）

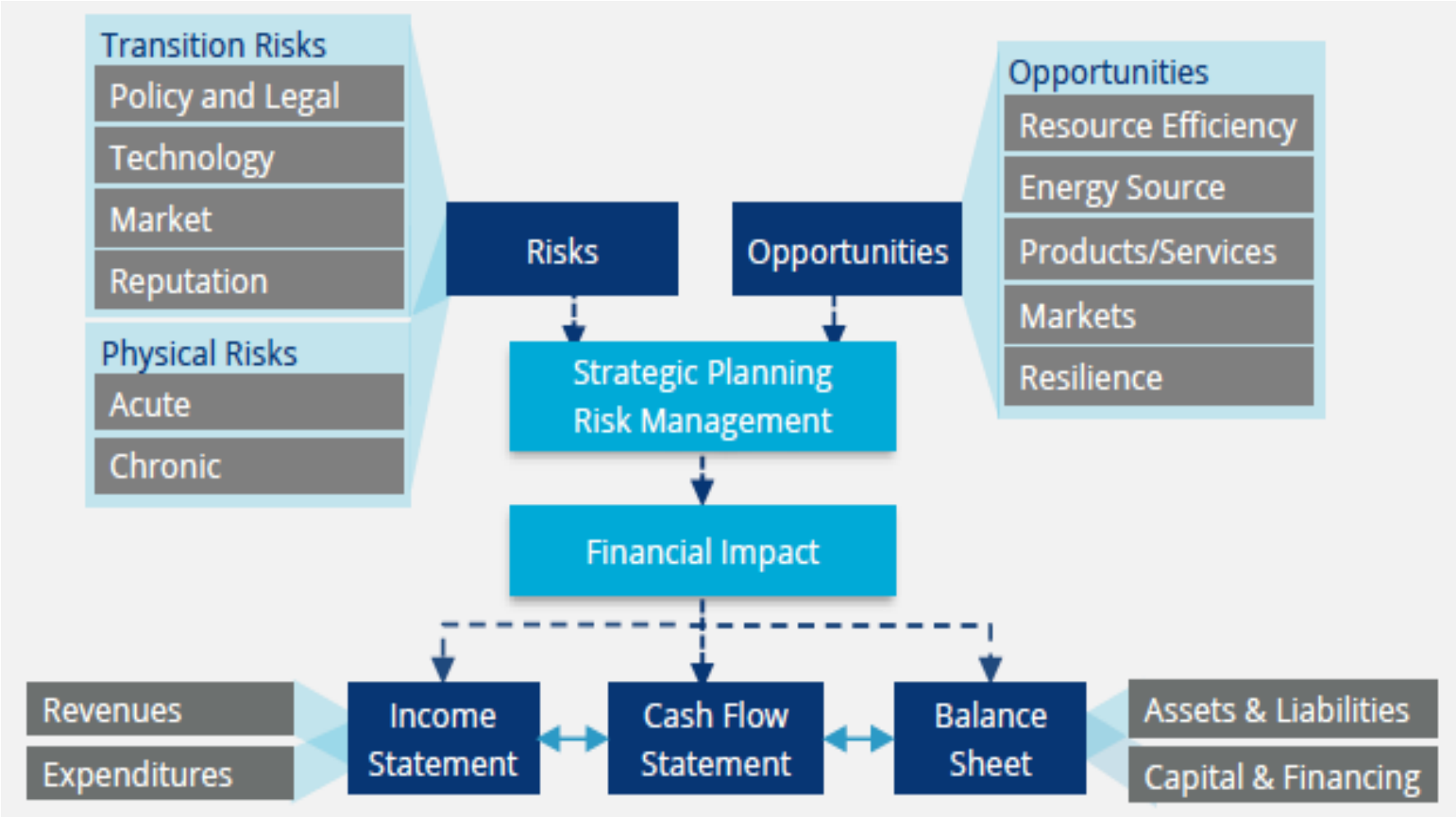
Region	2016	2018
Europe	$ 12,040	$ 14,075
United States	$ 8,723	$ 11,995
Japan	$ 474	$ 2,180
Canada	$ 1,086	$ 1,699
Australia/New Zealand	$ 516	$ 734
TOTAL	**$ 22,890**	**$ 30,683**

Note: Asset values are expressed in billions of US dollars. All 2016 assets are converted to US dollars at the exchange rates as of year-end 2015. All 2018 assets are converted to US dollars at the exchange rates at the time of reporting.

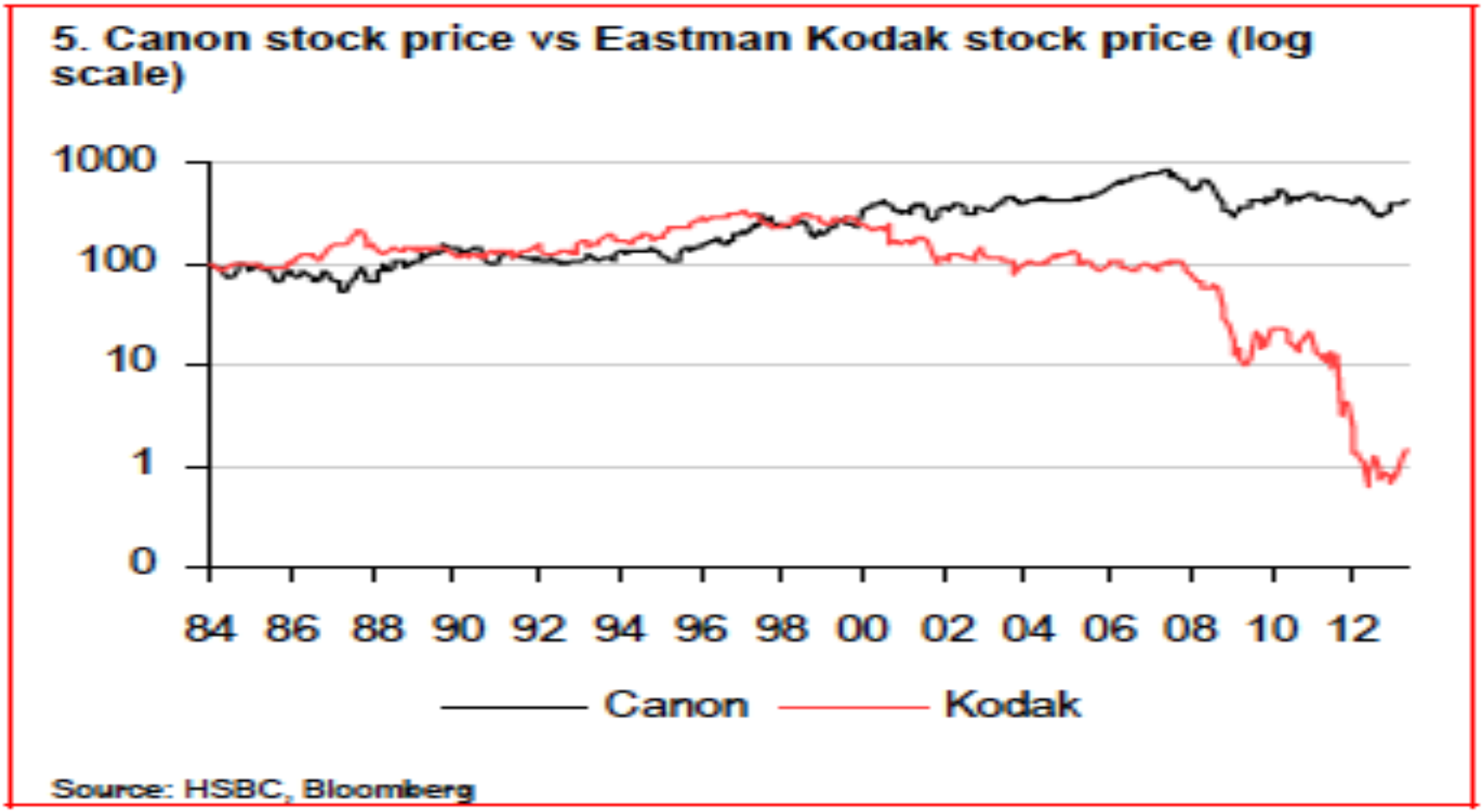


Source: Global Sustainable Investment Alliance, 2019

TCFD: Financial impact of climate related risks and opportunities



Canon stock price vs Kodak stock price (log scale)

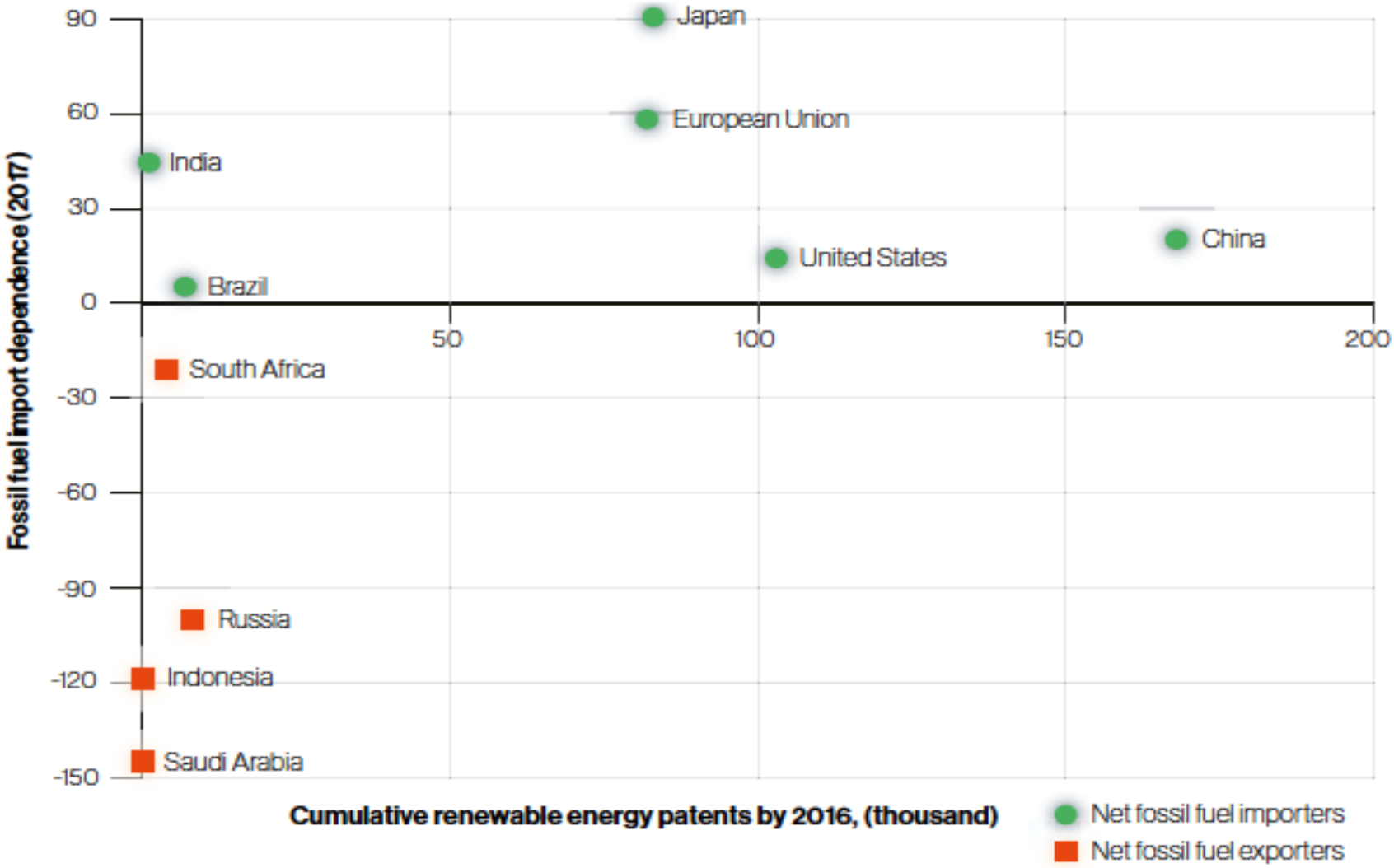


Stock price of PG & E

Towards a further and strategic partnership

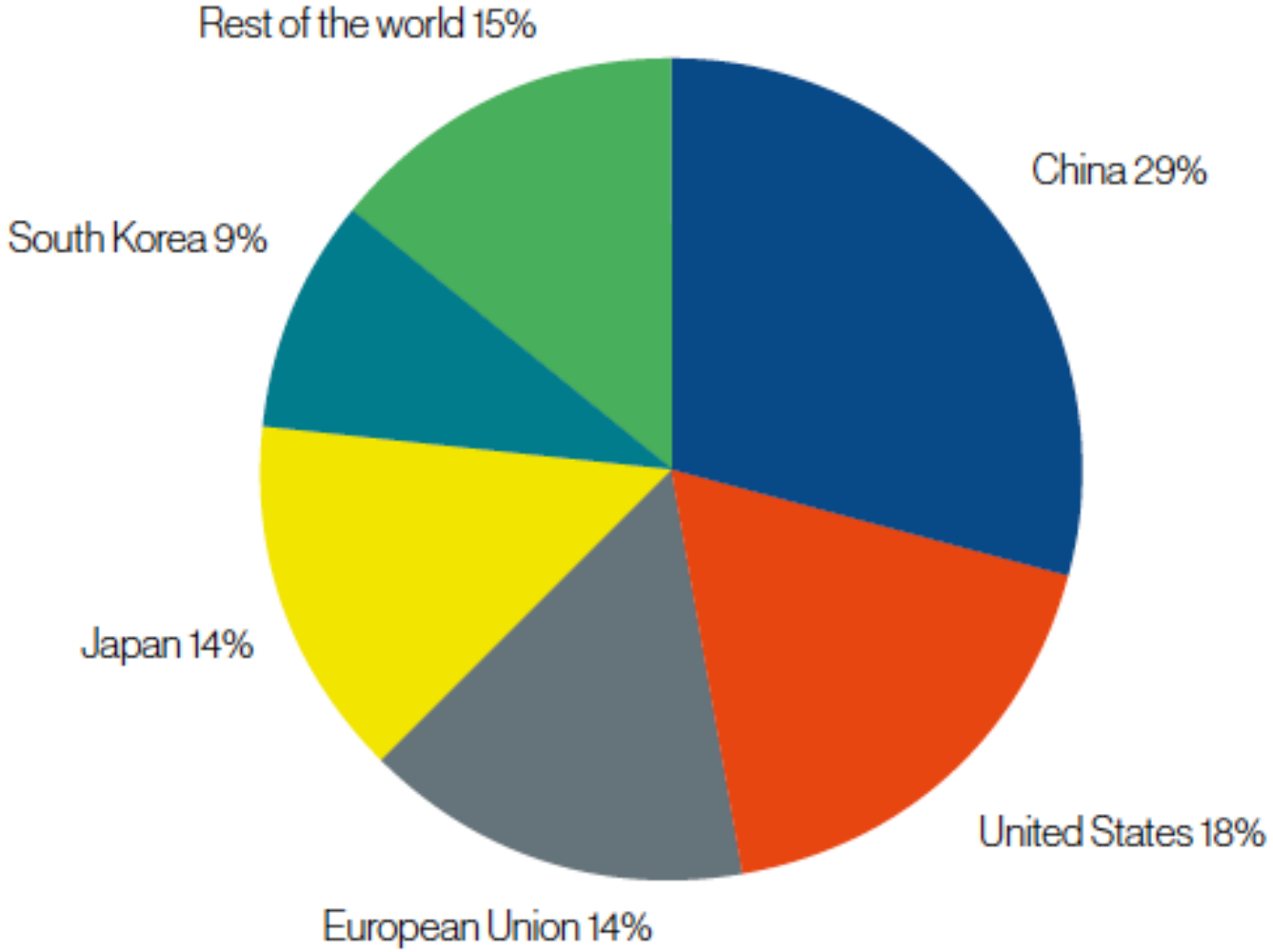
- EU and Japan in the context of transformative changes : Interesting similarities shared by EU and Japan
- Impacts of energy transition and dynamic technological change on international relations (BP and IRENA, 2018)
  - Dependency on imported fossil fuels
  - Technological capability in the growing market
- Similarity of approach to climate change issue
  - Economic development through climate actions
  - Linking economic partnership and climate partnership
  - Focus areas for partnership, such as finance, Asia

Impacts of energy transition on international relations



Source：BP, IRENA, 2018

Share of cumulative patents related to renewable energy technologies （as of the end of 2016）



Source：IRENA, 2018

Thank you for your attention!

Yukari TAKAMURA
E-mail: yukari.takamura@ifi.u-tokyo.ac.jp