# 再生可能エネルギー主力電源化の利点

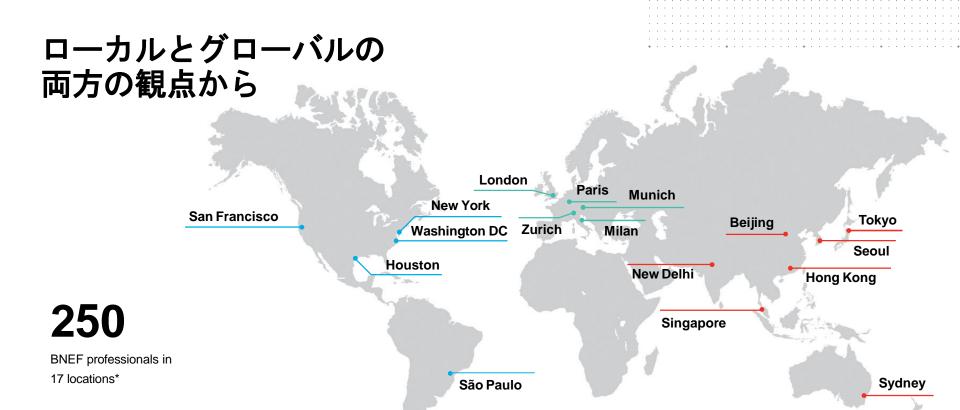
4の利点

BloombergNEF

日本韓国分析部門長

黒﨑 美穂

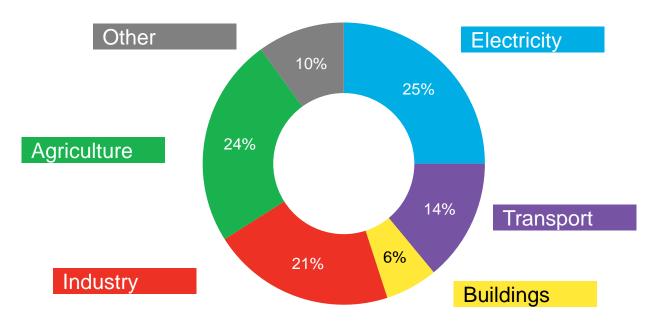
February 15, 2021



\* Part of the Bloomberg LP network of 19,000 employees in 176 locations.

## 世界の温室効果ガスセクター別内訳

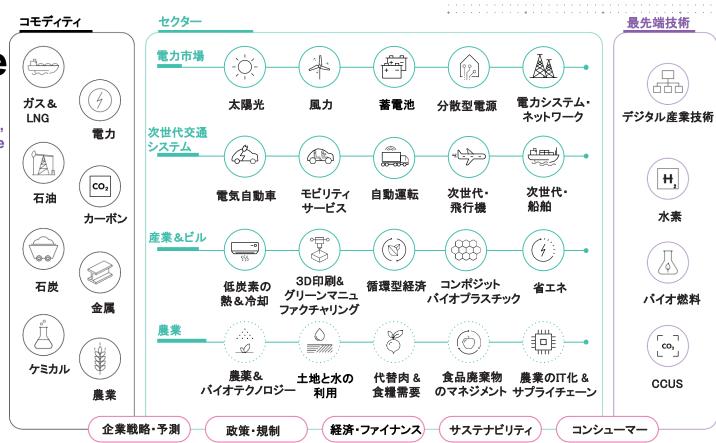
#### Greenhouse gas emissions by sector



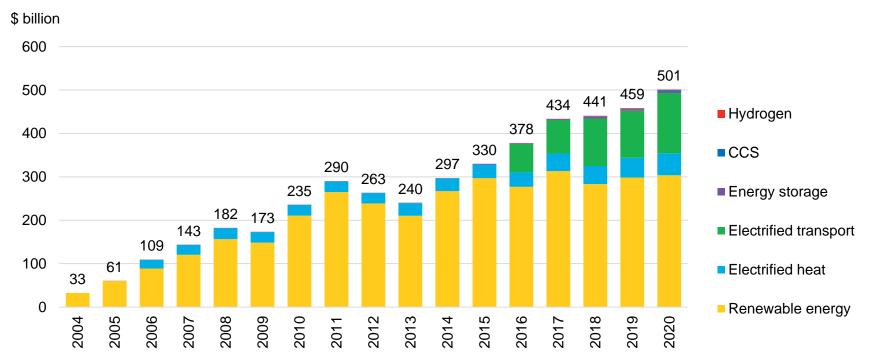
Source: International Energy Agency

## **BNEF** coverage

Strategies for a cleaner, more competitive future

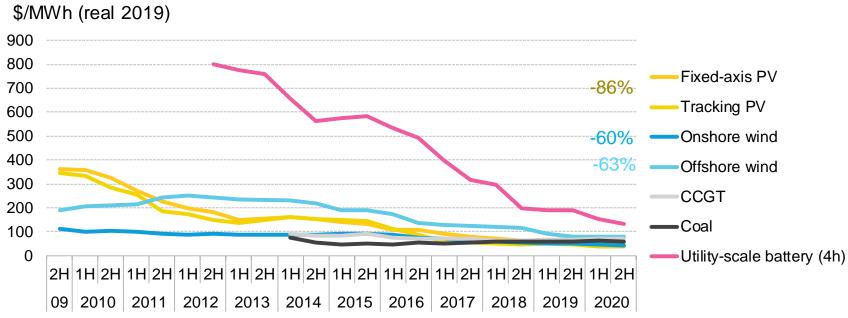


## 脱炭素技術への投資は2020年、\$500bnを 超える



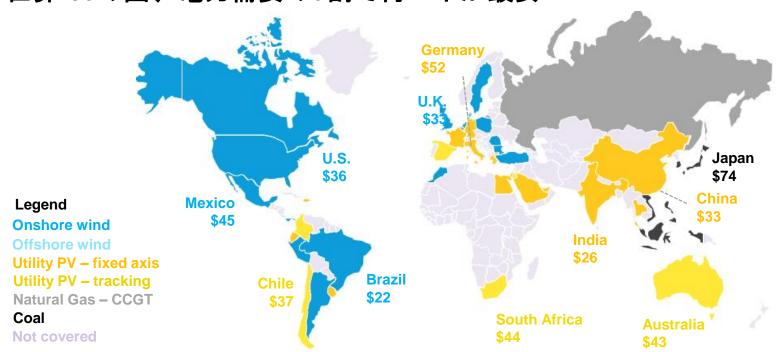
Source: BloombergNEF

## 再生可能エネルギーの均等化発電コスト グローバルで低減



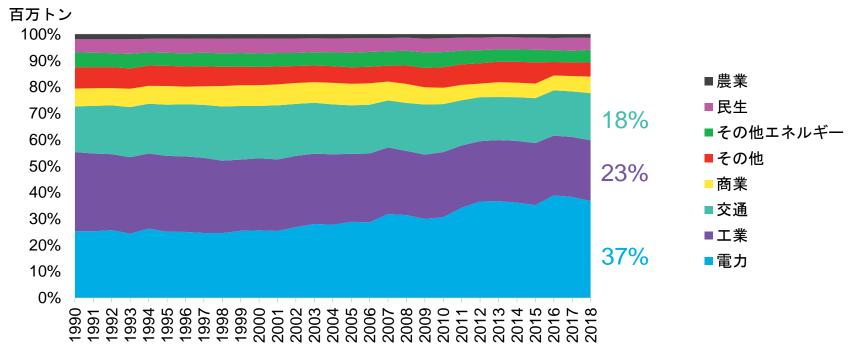
Source: BloombergNEF. Note: All LCOEs calculations are unsubsidized. Prior to 1H 2018, the LCOE for battery storage was estimated using historic battery pack prices, from 1H 2018 onwards it is based on project data.

### 新設再エネと新設火力 2020年下半期 世界2/3の国、電力需要の9割で再エネが最安



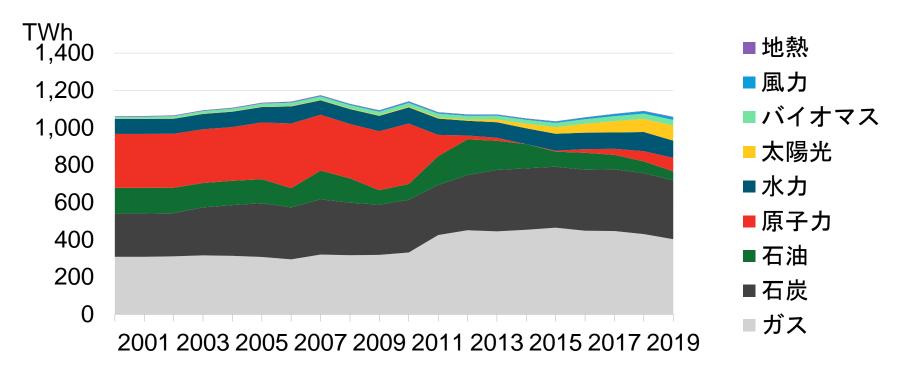
Source: BloombergNEF. Note: The map shows the technology with the lowest LCOE for new-build plants in each country where BNEF has data. The dollar numbers denote the per MWh benchmark levelized cost of the cheapest technology. All LCOEs are in nominal terms. Calculations exclude subsidies, tax-credit or grid connection costs. CCGT is combined-cycle gas turbine.

## 日本の排出量 電力からの排出最も多い



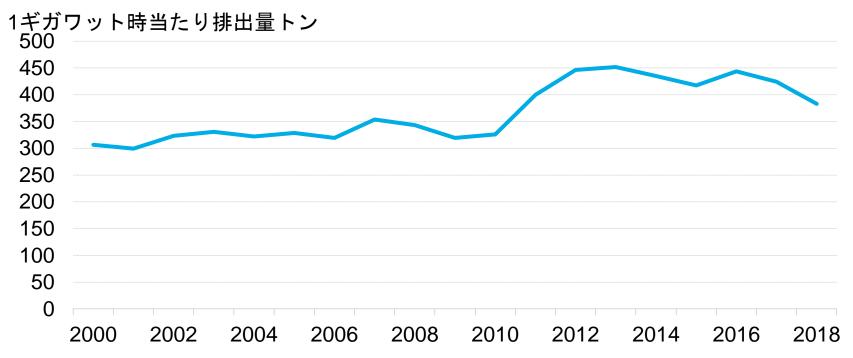
Source: National Institute for Environmental Studies in Japan

## 電力部門:化石燃料火力は電源の72%



Source: METI

## 電力排出係数はこの10年で悪化



Source: METI, BloombergNEF

## 排出係数を下げ、再工ネ購入の選択肢を 増やすことが必須

#### **Emitting Above Others** Emissions intensity of power generation 434 g CO2/kWh Japan (2019) U.S. (2019) 410 406 Germany (2018) EU-27 (2018) 287 Spain (2018) U.K. (2019) 187 France (2018)

Climate Capital Renewable energy Sony warns it could move factories over Japanese energy policy CEO pushes for renewable rules revamp to meet green manufacturing pledges of its client Apple March and by 2030 for those in North America © Bloomberg Kana Inagaki, Robin Harding and Leo Lewis in Tokyo NOVEMBER 27 2020 □ 52 
□

Source: FT

**Bloomberg Green** 

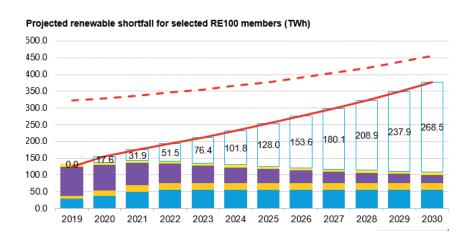
Sources: BloombergNEF, European Environment Agency

### 再生可能エネルギー最大限導入の利点 再エネは日本経済と脱炭素社会構築の鍵

- 1. 再エネ購入がビジネスの条件となる企業を支え、サステナブル・サプライチェーンからの経済損失を防ぐ
- 2. エネルギーの安全保障を強化する
- 3. 電力部門と電力以外の部門の脱炭素化に寄与する
  - 電気自動車、熱需要など
- 4. 再エネ由来水素のコスト競争力を高める

## ①-1 RE100加盟企業の目標達成に必要な再工ネ発電量、増加傾向

#### グローバル



Source: BloombergNEF, Bloomberg Terminal, The Climate Group, company sustainability reports

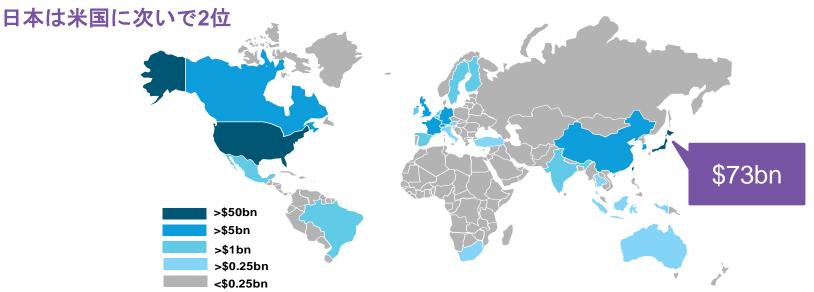
#### 日本



Source: BloombergNEF, Bloomberg Terminal, The Climate Group, company sustainability reports

## ①-2 再エネ調達がビジネスの必須条件サステナブルサプライチェーンの経済的影響

サステナビリティ志向の高い企業への売上高依存額

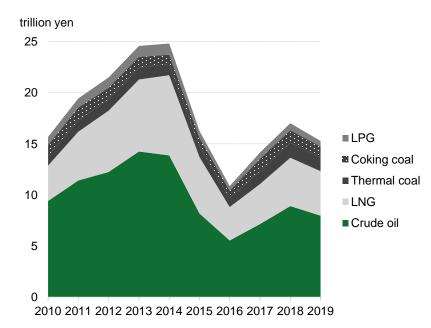


Source: BloombergNEF, Bloomberg Terminal

Note: Chart is based on data available on Bloomberg's SPLC function, and does not necessarily represent the entire supply chain for this group of selected companies.

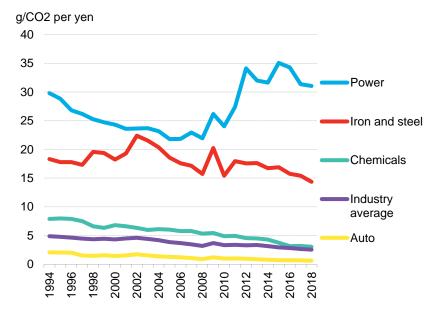
## ②エネルギーの安全保障を強化

#### 化石燃料輸入額



Source: Japan Ministry of Finance

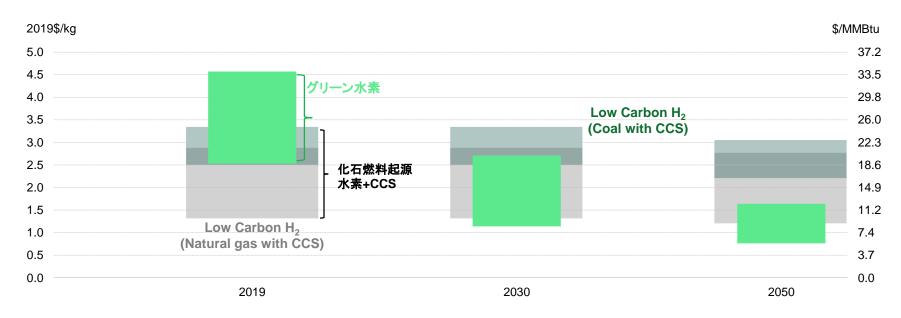
#### GDP当たりセクター別排出量



Source: Japan Cabinet Office, Japan National Institute for Environmental Studies

## ④再エネ由来水素は化石燃料起源とCCSを 合わせた費用を下回る

均等化水素製造原価の予測値



Source: BloombergNEF. Note: renewable hydrogen costs based on large projects with optimistic projections for capex. Natural gas prices range from \$1.1-10.3/MMBtu, coal from \$30-116/t.

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