

再生可能エネルギー のコストと調達方法

RE100

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August 3, 2021

ローカルとグローバルの 両方の観点から



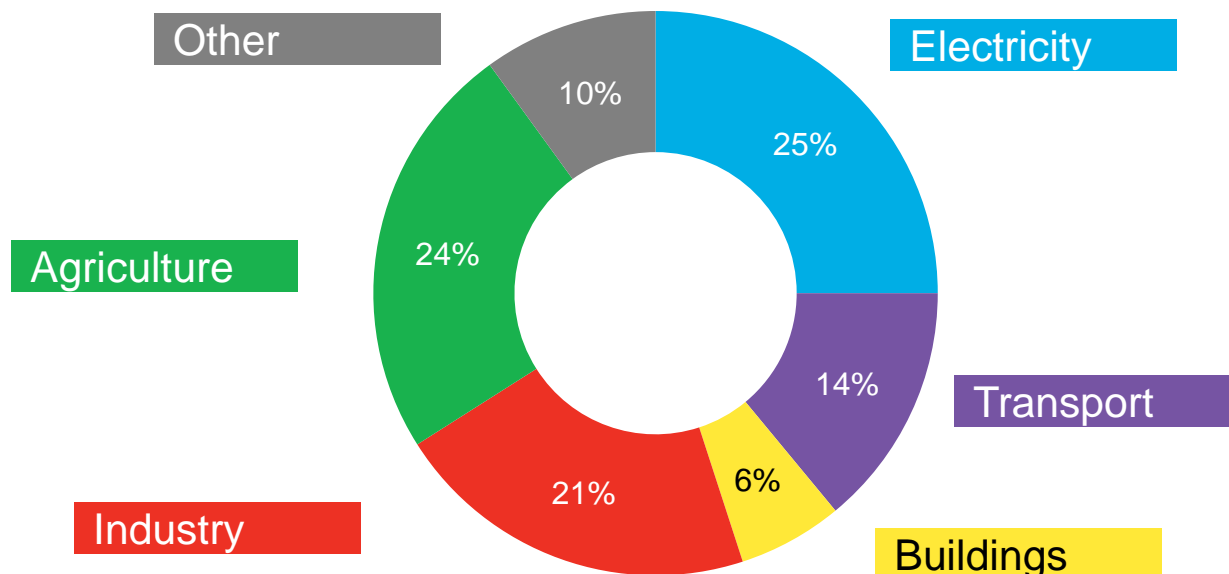
250

BNEF professionals in
17 locations*

* 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

コモディティ



ガス & LNG



電力



石油



カーボン



石炭



金属



ケミカル



農業

セクター

電力市場



太陽光



風力



蓄電池



分散型電源



電力システム・ネットワーク

次世代交通システム



電気自動車



モビリティサービス



自動運転



次世代・飛行機



次世代・船舶

産業&ビル



低炭素の熱&冷却



3D印刷& グリーンマニュファクチャリング



循環型経済



コンポジットバイオプラスチック



省エネ

農業



農業& バイオテクノロジー



土地と水の利用



代替肉 & 食糧需要



食品廃棄物のマネジメント



農業のIT化 & サプライチェーン

最先端技術



デジタル産業技術



水素



バイオ燃料



CCUS

企業戦略・予測

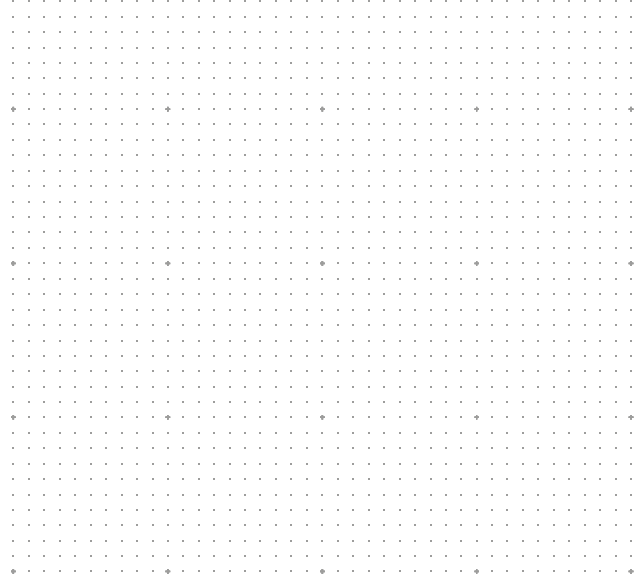
政策・規制

経済・ファイナンス

サステナビリティ

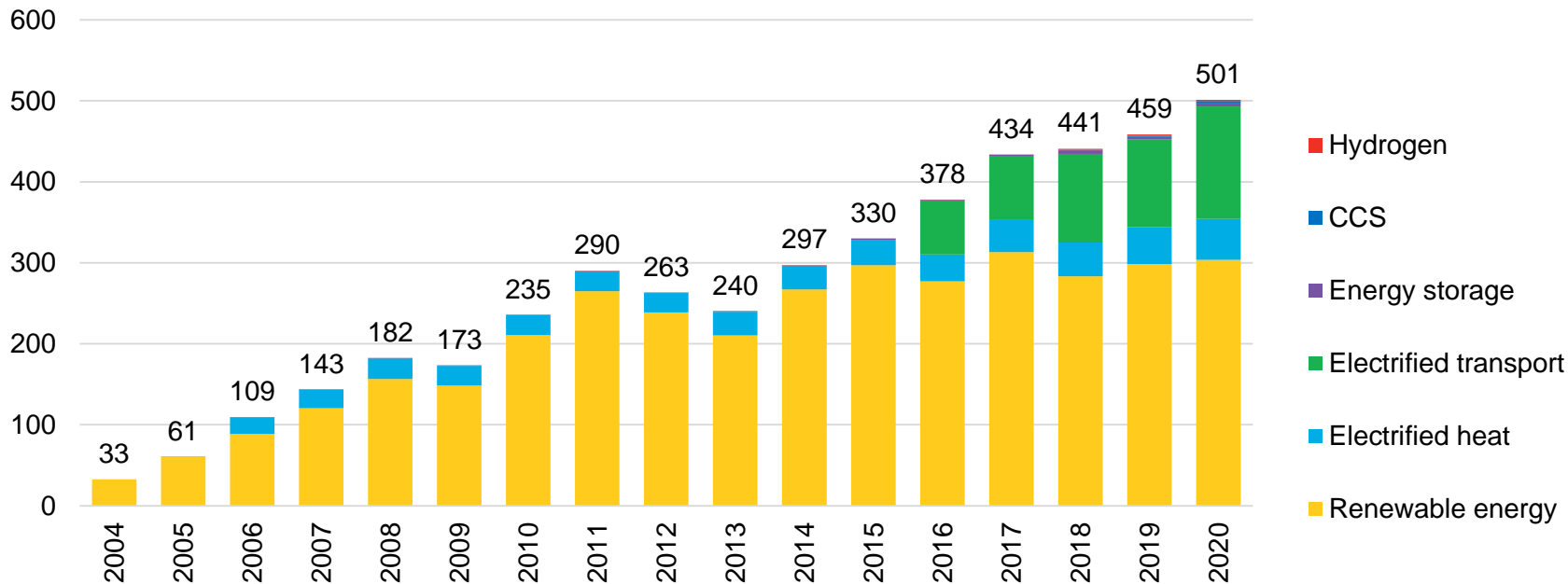
コンシューマー

再工ネ市場動向



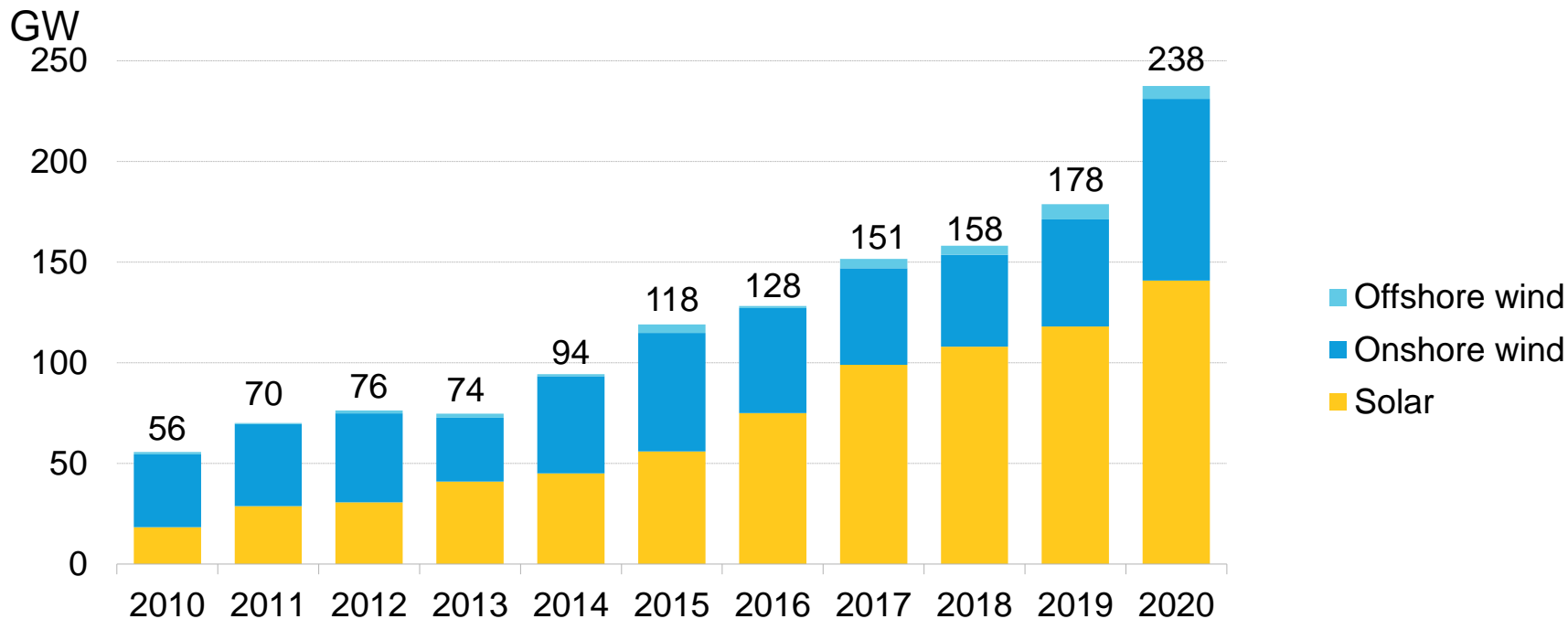
脱炭素技術への投資は2020年、\$500bnを超える

\$ billion



Source: BloombergNEF

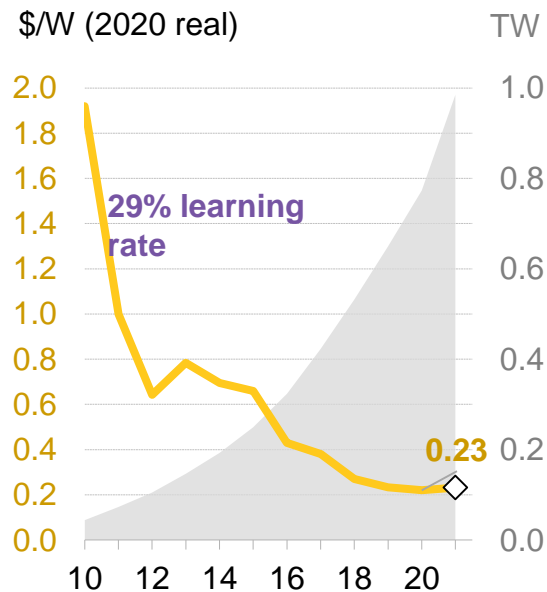
2020年の太陽光と風力新規導入量が 238GWと記録更新



Source: BloombergNEF

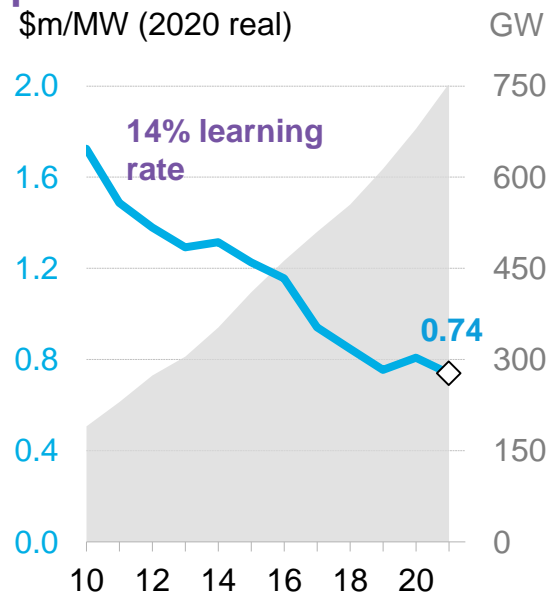
再エネ機器の価格下落

PV module price



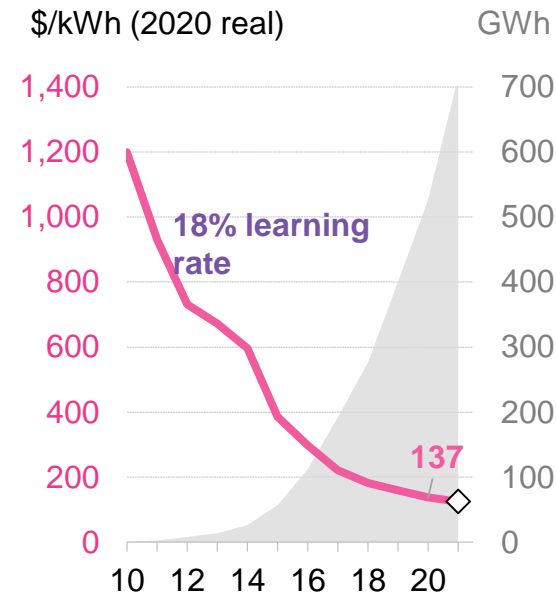
Source: BloombergNEF

Onshore wind turbine price



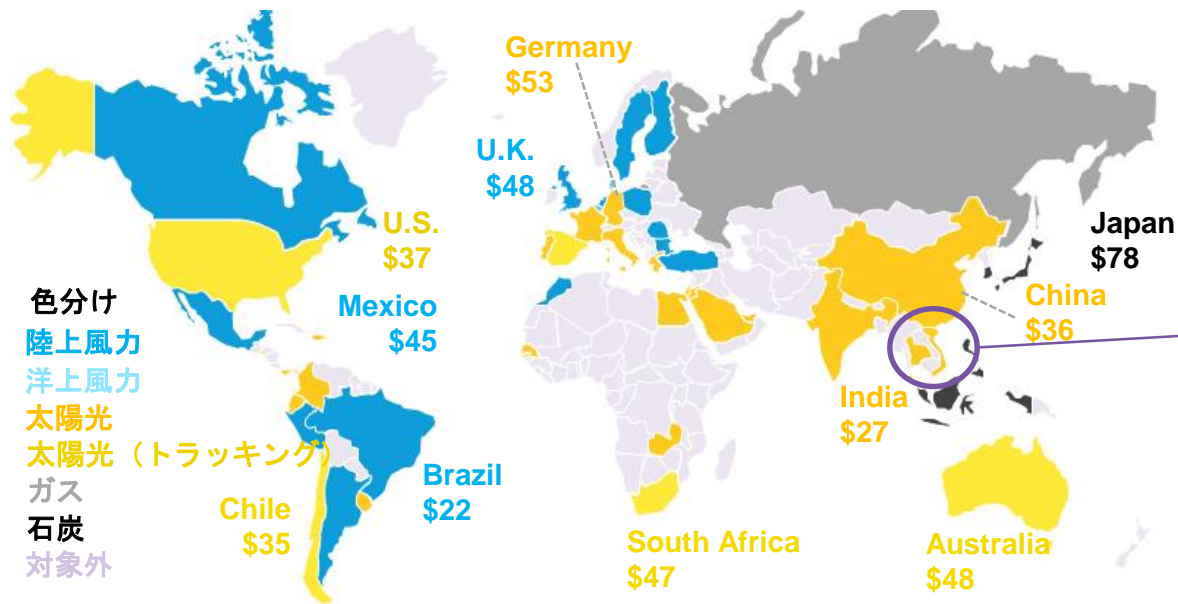
Source: BloombergNEF

Li-ion battery pack price



Source: BloombergNEF

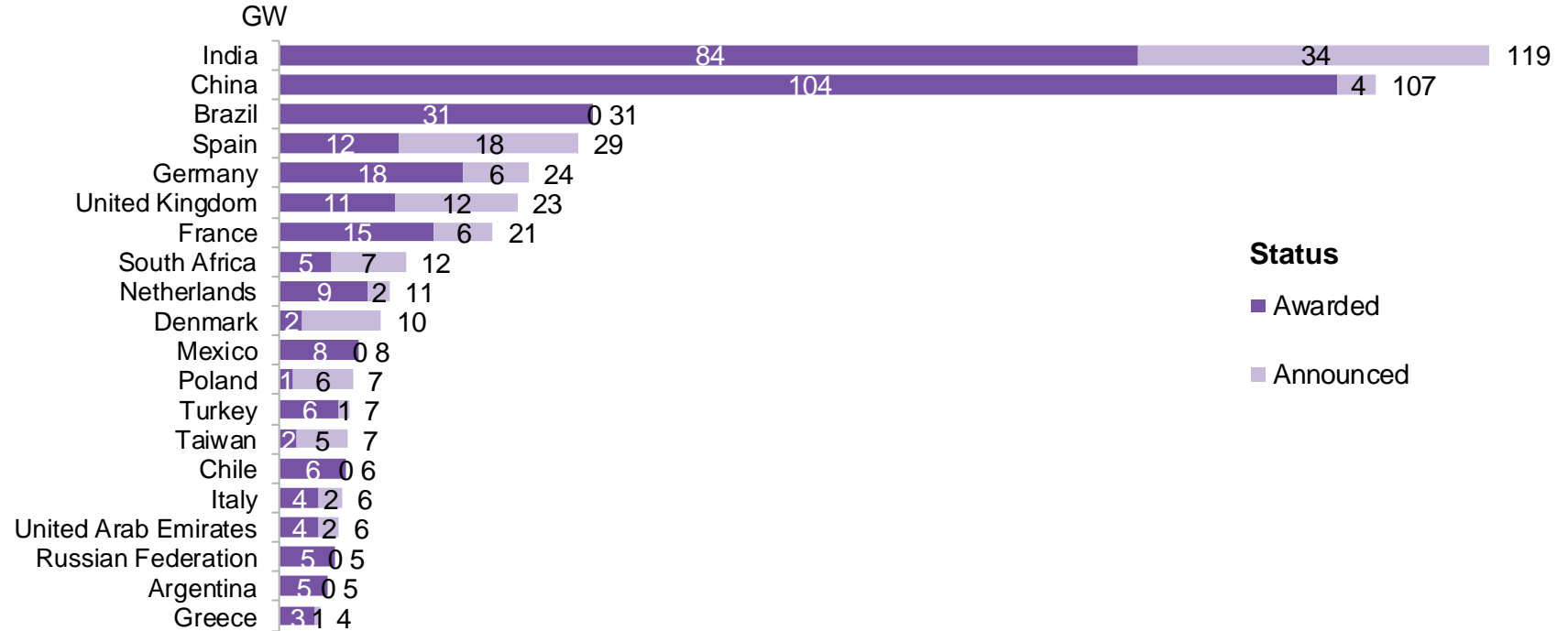
新設発電所にて再エネが最安の国は世界の3分の2に増加、再エネを経済的に選択する動きが広まる



- 日本は2025年以降に再エネが新設石炭より安価に
- タイは2020年、ベトナムは2021年に太陽光が最安に。半年前まで石炭最安
- その他東南アジア諸国も追随

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

Countries with highest auctioned and announced renewables capacity



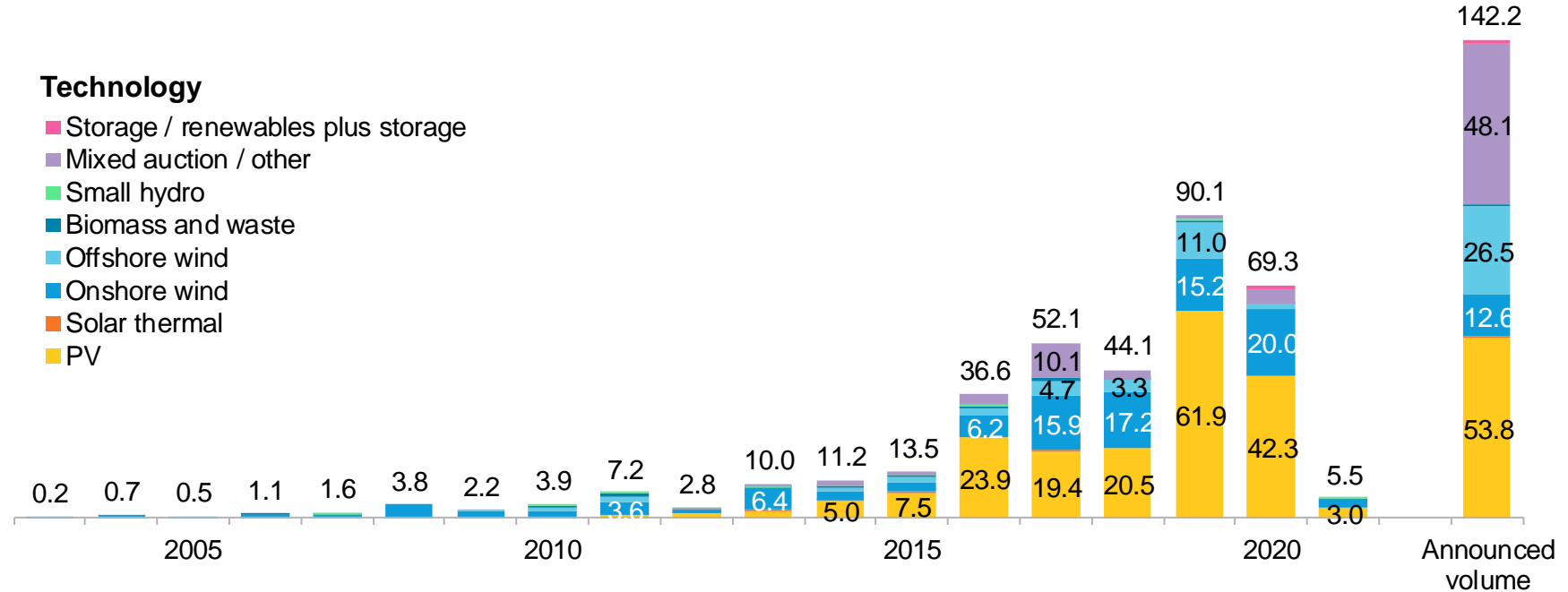
Source: BloombergNEF. Note: Figures are cumulative over 2003-20. Uses plant-level data for auctions where support is awarded for generation.

Annual auctioned and announced renewables capacity by technology

GW

Technology

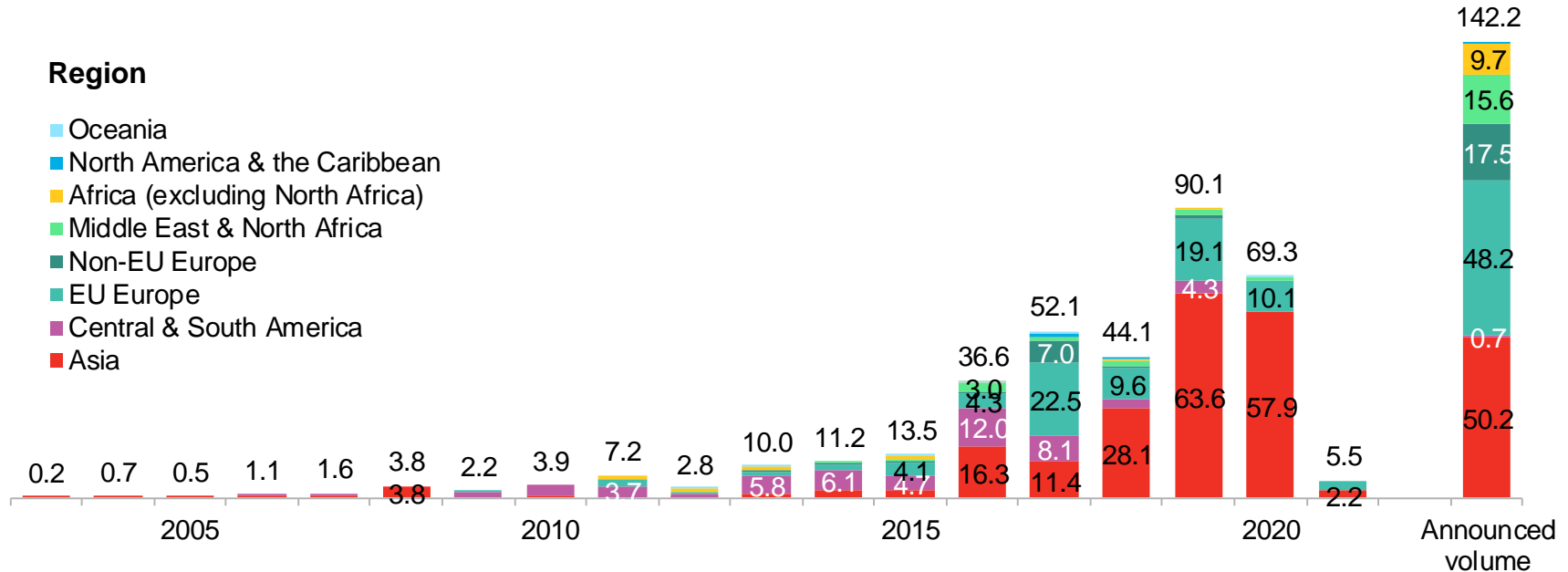
- Storage / renewables plus storage
- Mixed auction / other
- Small hydro
- Biomass and waste
- Offshore wind
- Onshore wind
- Solar thermal
- PV



Source: BloombergNEF. Note: Uses plant-level data for auctions where support is awarded for generation.

Annual auctioned and announced renewables capacity by region

GW



Source: BloombergNEF. Note: Uses plant-level data for auctions where support is awarded for generation.

日本の現行入札制度では上限価格に張り付く

日本の最初の入札前のBNEFの3つのシナリオ

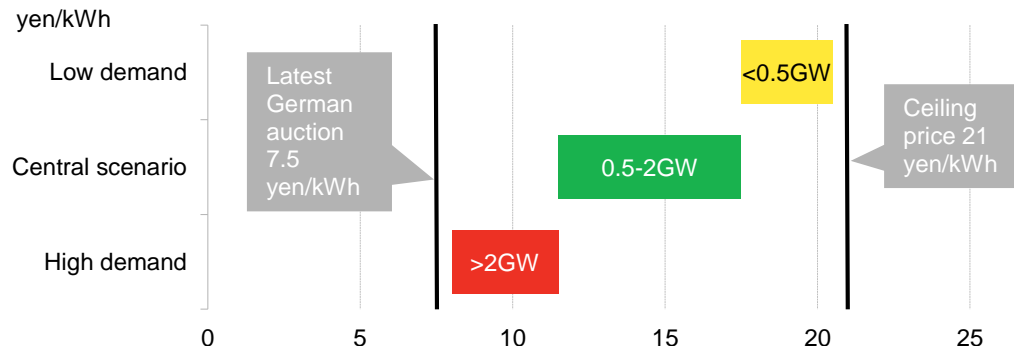


Table 1: BNEF scenarios for the Japan auction

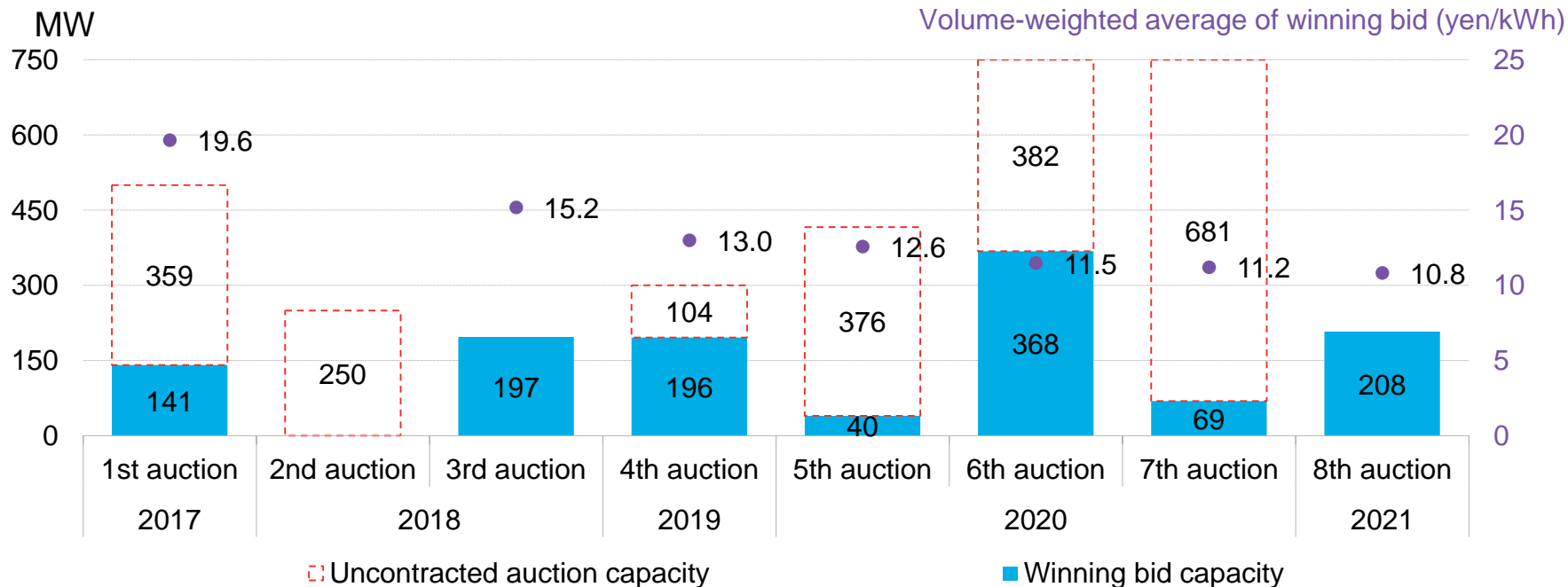
Scenario	Price range	Volume range	Probability
Central	12-17 yen/kWh	0.5-2GW	Highest
Low demand	18-20 yen/kWh	<0.5GW	Medium
High demand	8-11 yen/kWh	>2GW	Lowest

Source: BloombergNEF

- 入札が導入されると、価格は他国では29%から50%削減される
- 結果として19%削減

落札容量が少ない

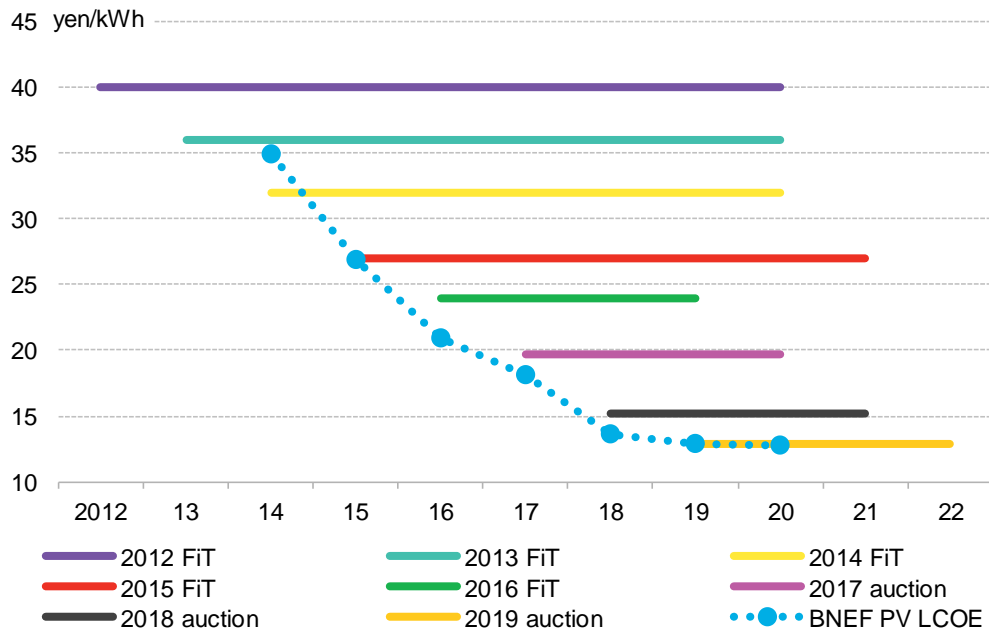
国内の太陽光発電入札結果



Source: BloombergNEF, GIO

太陽光発電コスト削減が鈍化する一方、買取価格は下がり続ける

太陽光発電買取価格とプロジェクトコストの推移



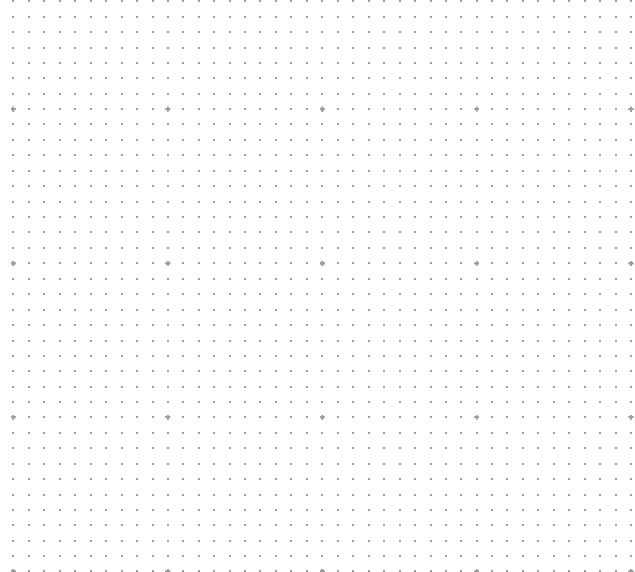
Source: BloombergNEF, Ministry of Economy, Trade, and Industry

開発リスクを下げつつ地域に還元できる 入札制度が必要

地域で求められる入札制度

- 系統の確保、利害関係者との調整、環境影響アセスメントを終えた適地
- 地域の銀行、地元の事業者・建設業者・OMサービス企業、地域新電力
- 環境価値
- 地域電源
- 脱炭素目標

企業の再エネ調達費用



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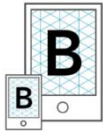
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