

RE-Users Summit 2019

Options to RE Users in Japan

Miho Kurosaki

February 1, 2019

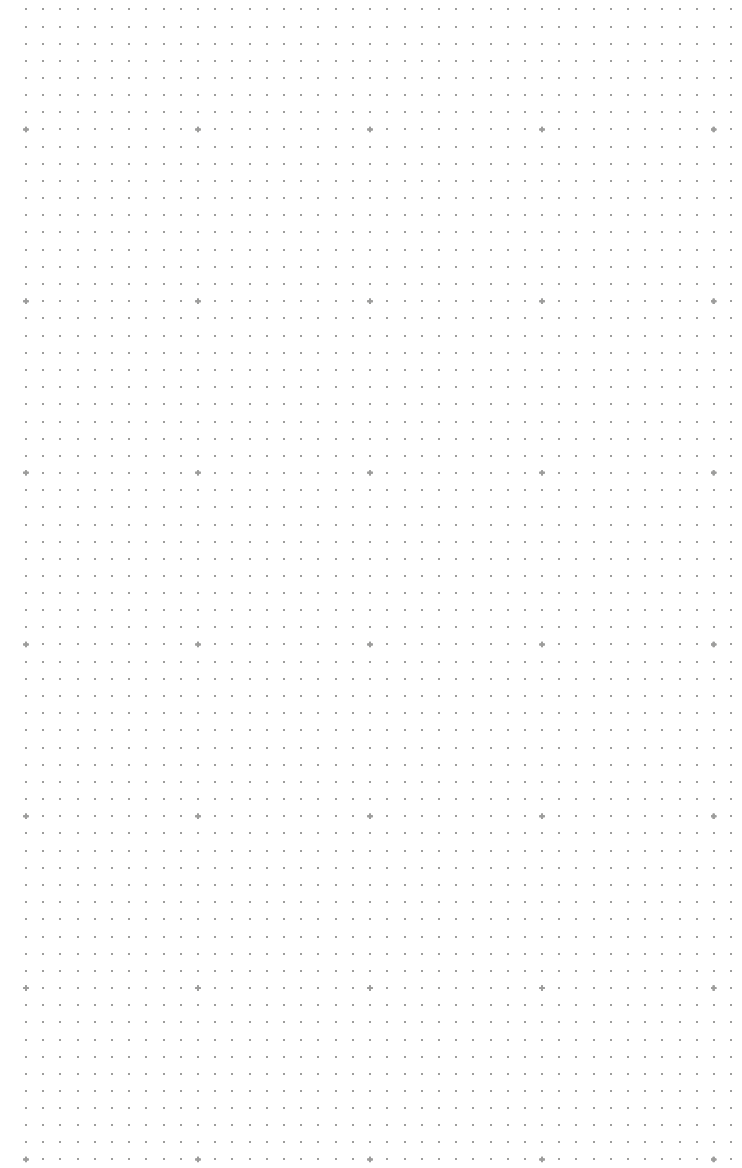


BloombergNEF

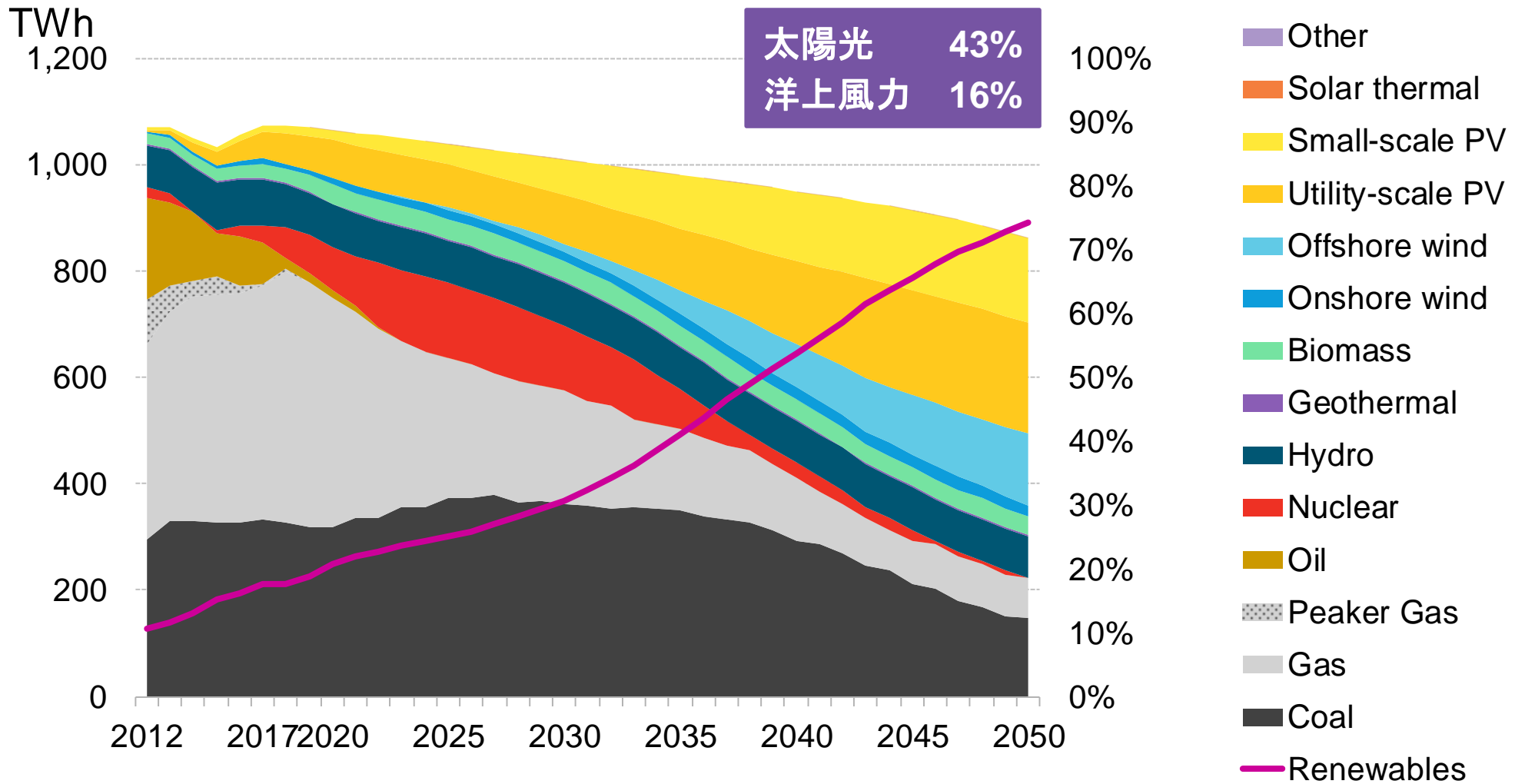
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Japan power outlook

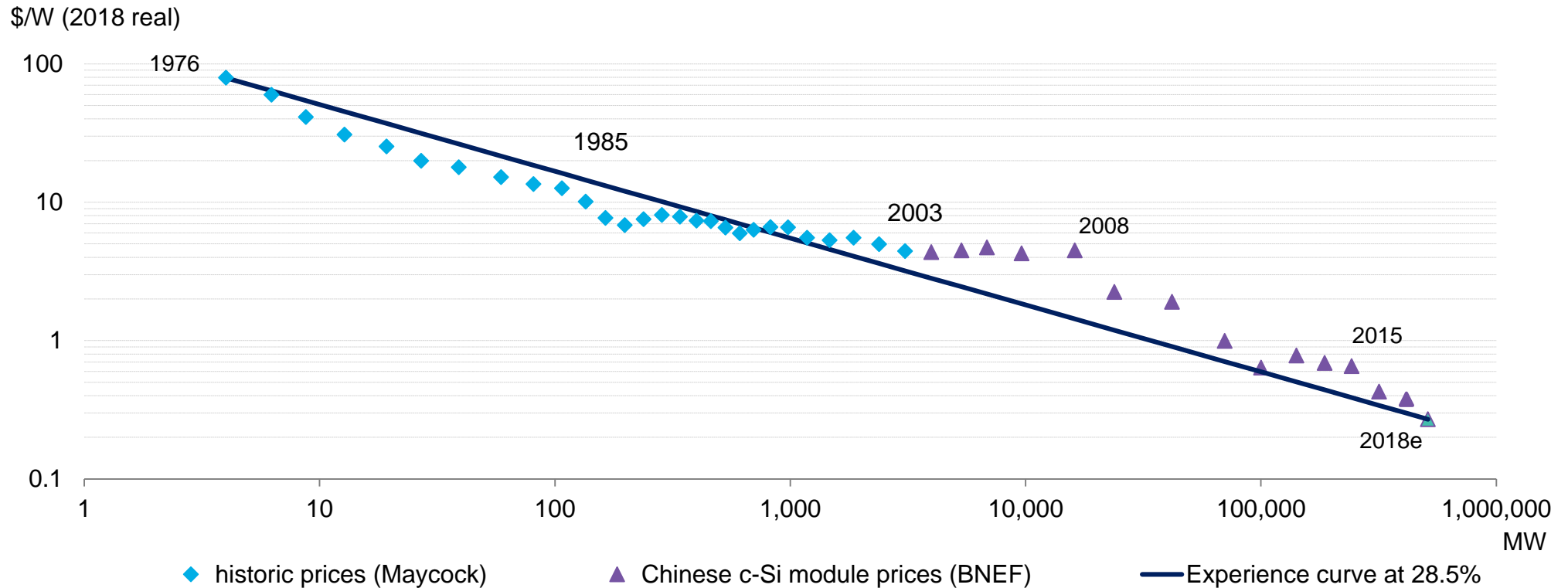


Japan to add 340GW of RE by 2050



Source: BloombergNEF

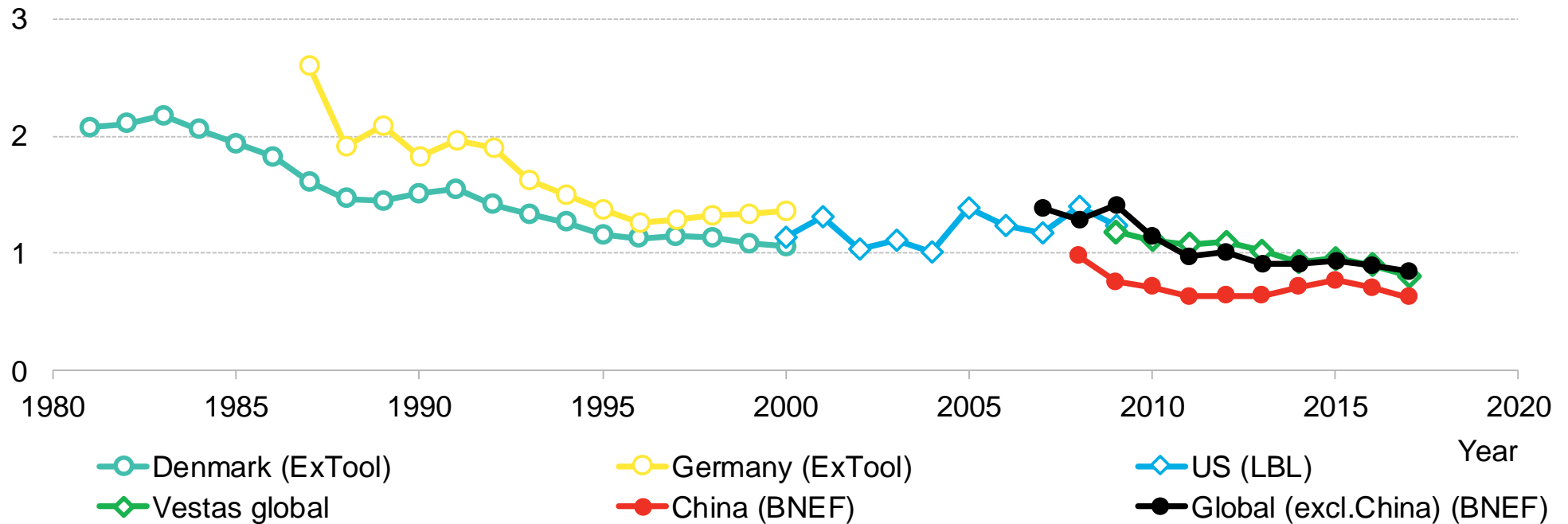
PV module prices have fallen 83% since 2010



Source: BloombergNEF, Maycock

Wind turbines are down 32% since 2010

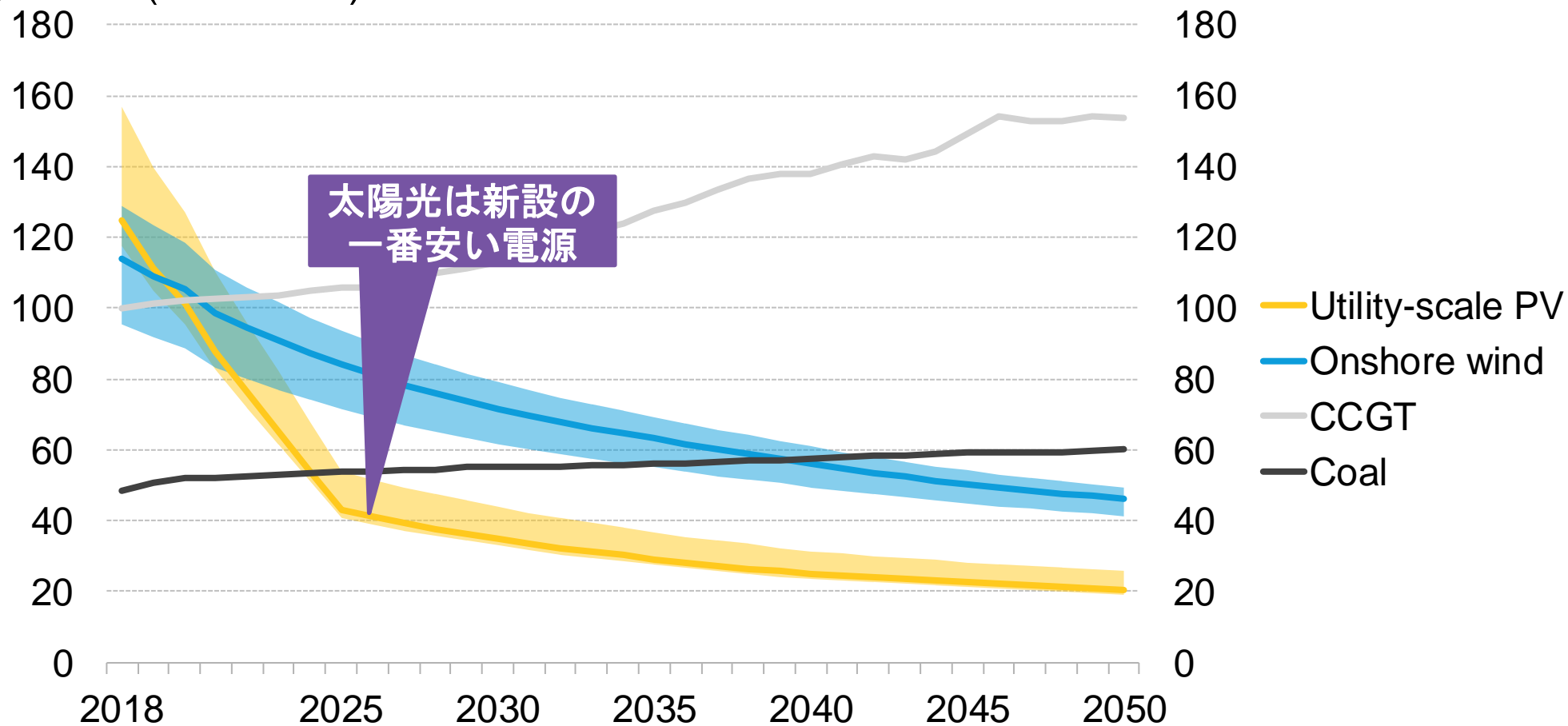
Wind turbine price (2017 mEUR/MW)



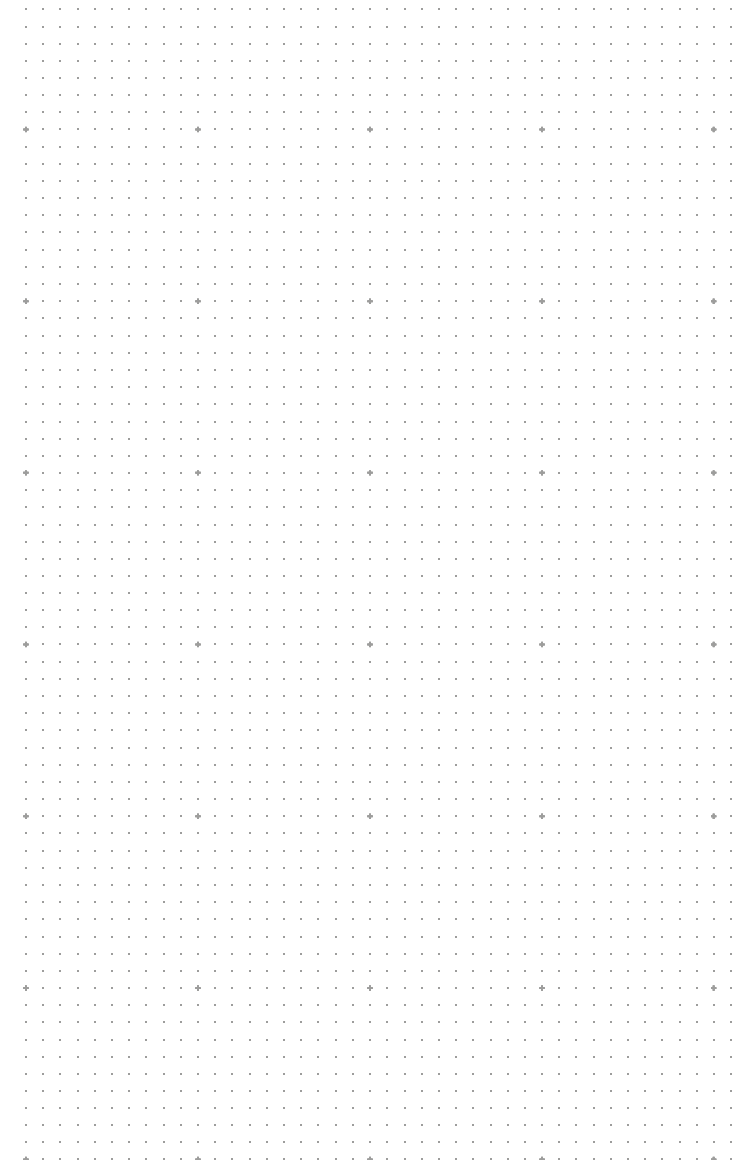
Source: BloombergNEF, Lawrence Berkeley National Laboratory (LBL), ExTool study (Neij et al. 2003), Vestas annual reports

Cost coming lower than fossil fuels

\$/MWh (real 2017)



RE procurement options

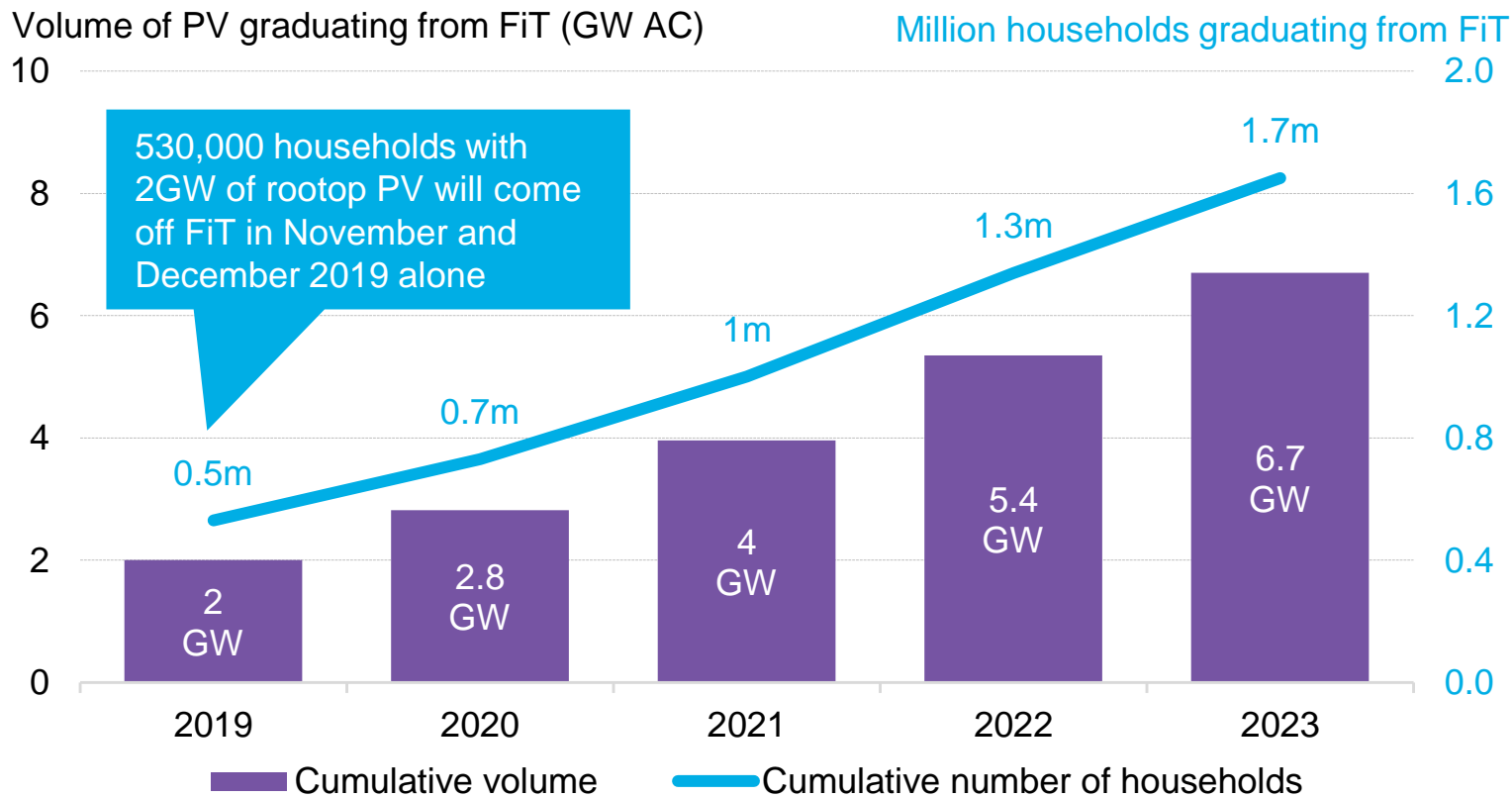


RE procurement options in Japan today

1. Self-generating renewable energy
2. Purchasing renewable electricity through licensed electricity retailers (Green tariffs)
3. Purchasing renewable energy or emission reduction certificates

Option 1: Self-generating, Self-consuming

Cumulative households coming off FiT



Source: BloombergNEF, METI. Note: in previous publications we estimated that 547,000 households with 2.15GW of PV will come off the buyback program in 2019. This was an estimate based on a chart published by METI.

Option 2: Purchasing through retailers (Green tariffs)

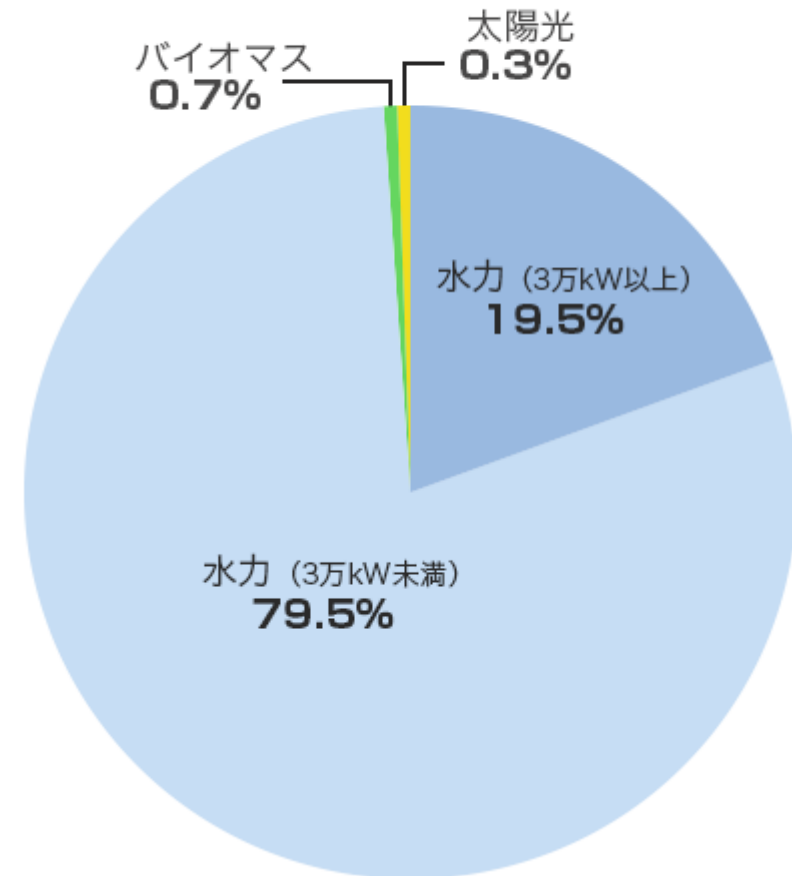
法人（大口契約）向けプラン



アクアプレミアム

アクアプレミアムは、水力100%（CO2フリー）のエコな電気料金プランです。

再エネプレミアムプランの電源構成
（平成30年度 計画値）



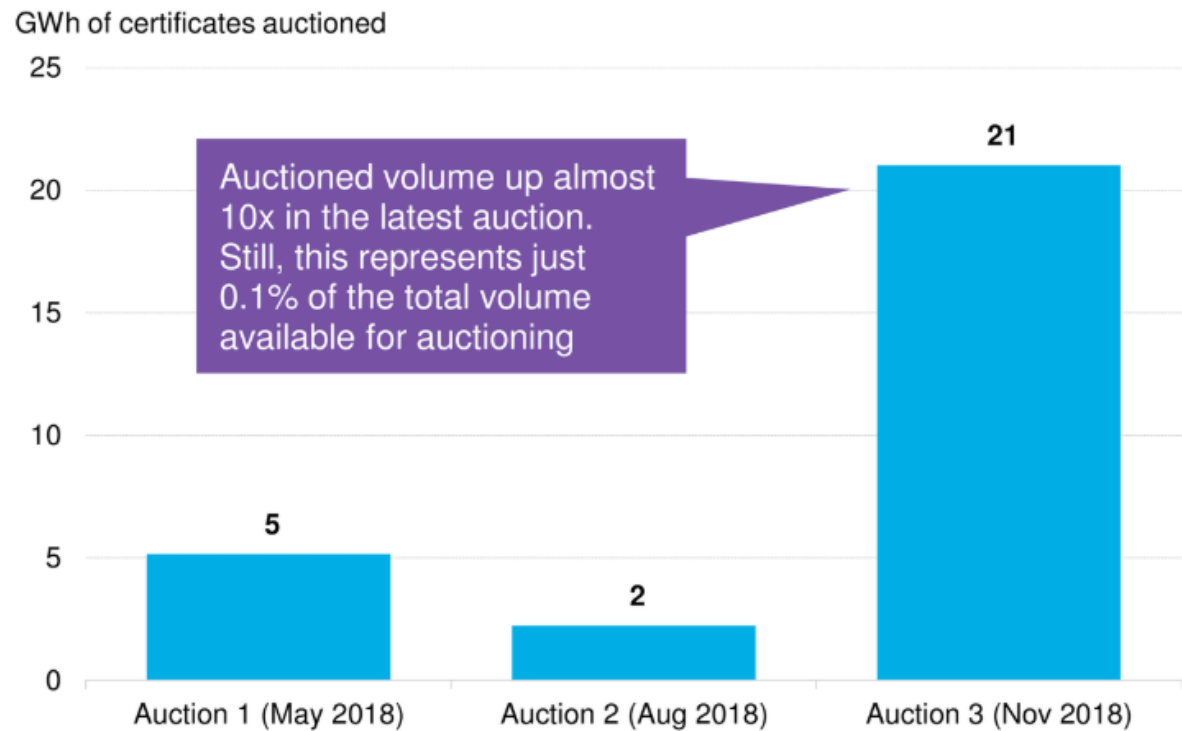
Option 3: Certificates

1. Green Energy Certificates
2. J-Credits
3. Non-fossil Certificates

Non-fossil certificate auction

- a) Entities that can participate
- b) Tracking source
- c) Floor price: 1.3 yen/kWh

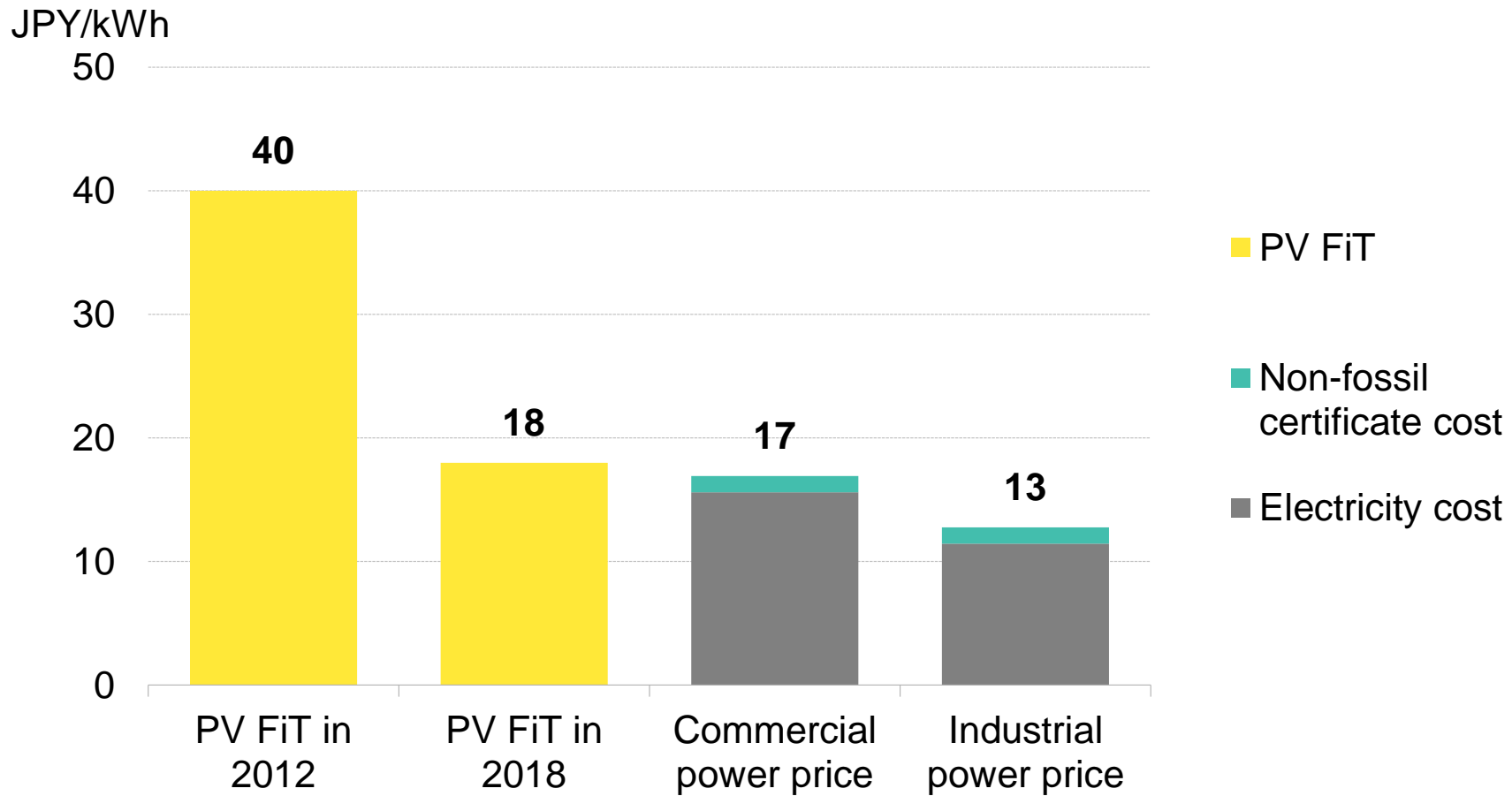
Non-fossil certificate auction results



Source: BNEF

Changing economics

FiT from PV and cost of non-fossil electricity

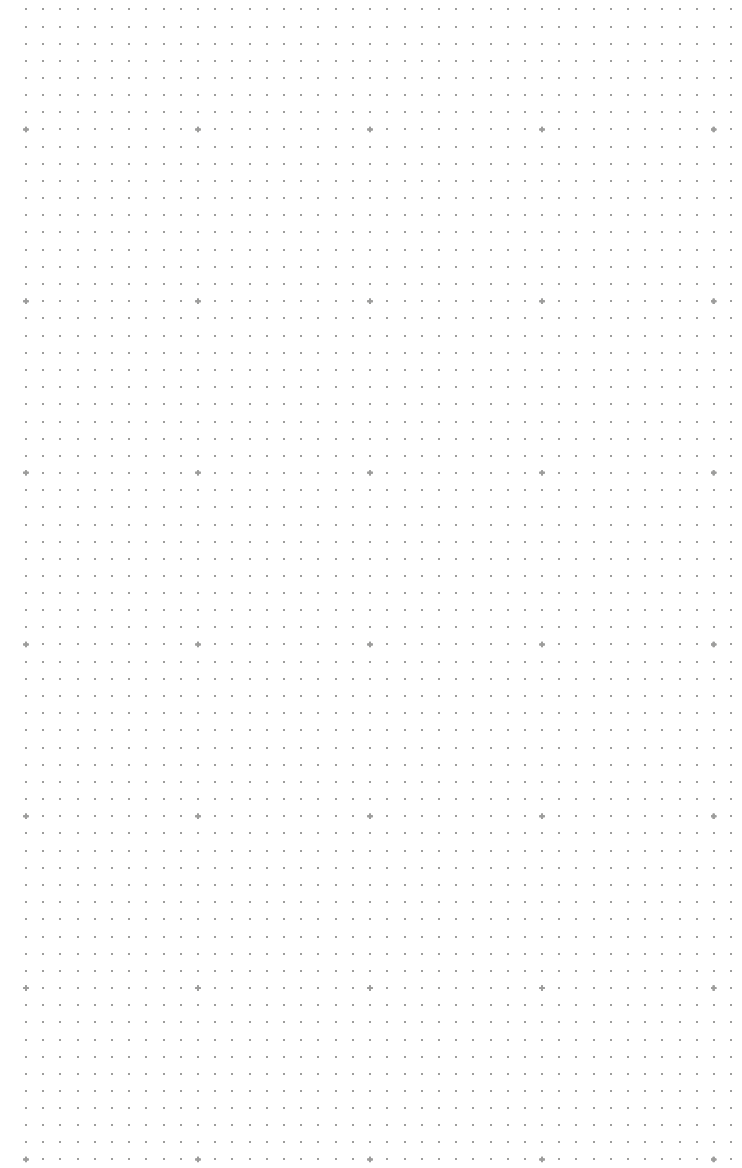


Source: BloombergNEF

What to choose?

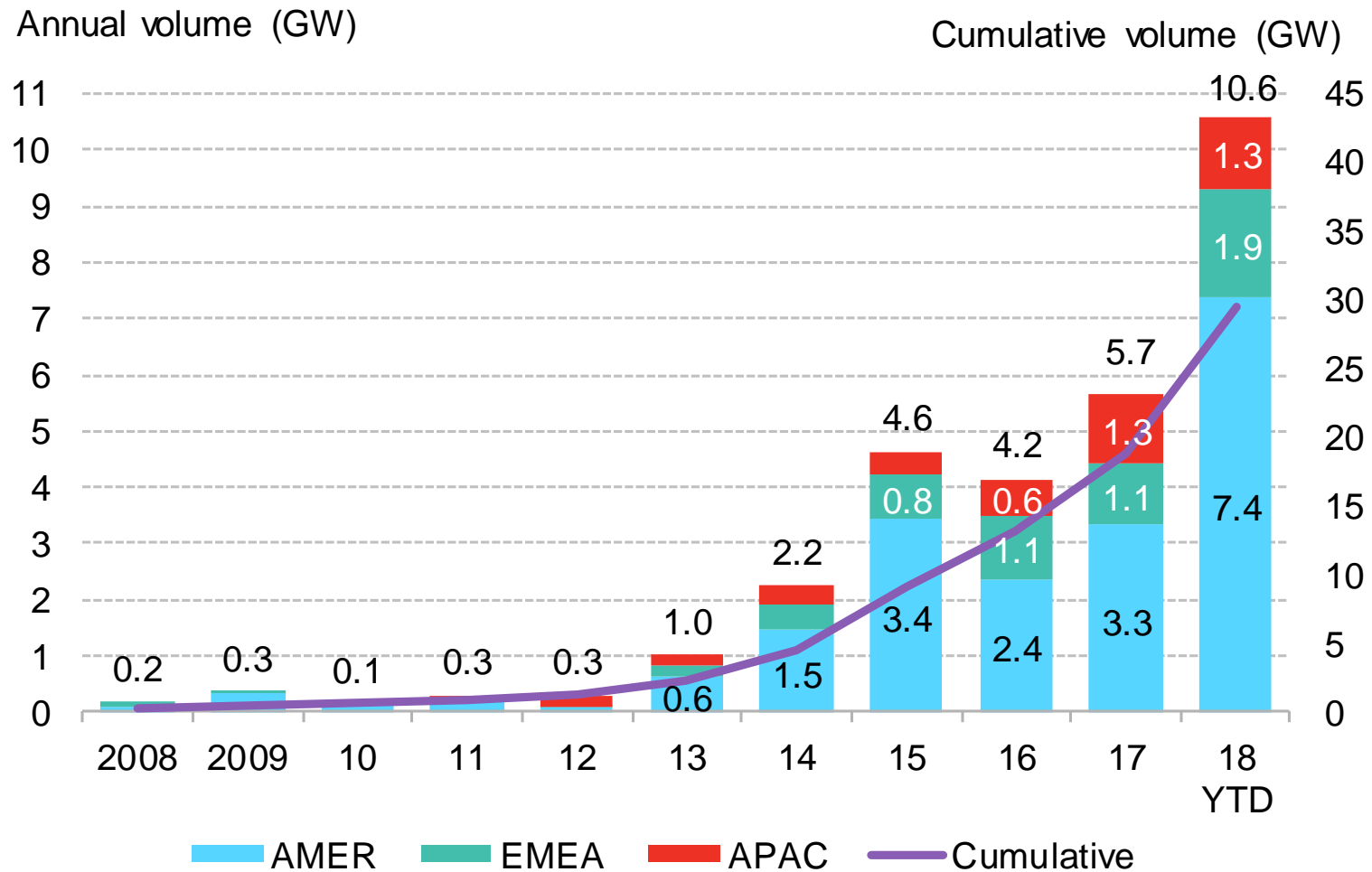
1. Self-generating renewable energy
2. Purchasing renewable electricity through licensed electricity retailers (Green tariffs)
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Global RE procurement



What's missing in Japan: Corporate PPA

Global Corporate PPA volumes by region

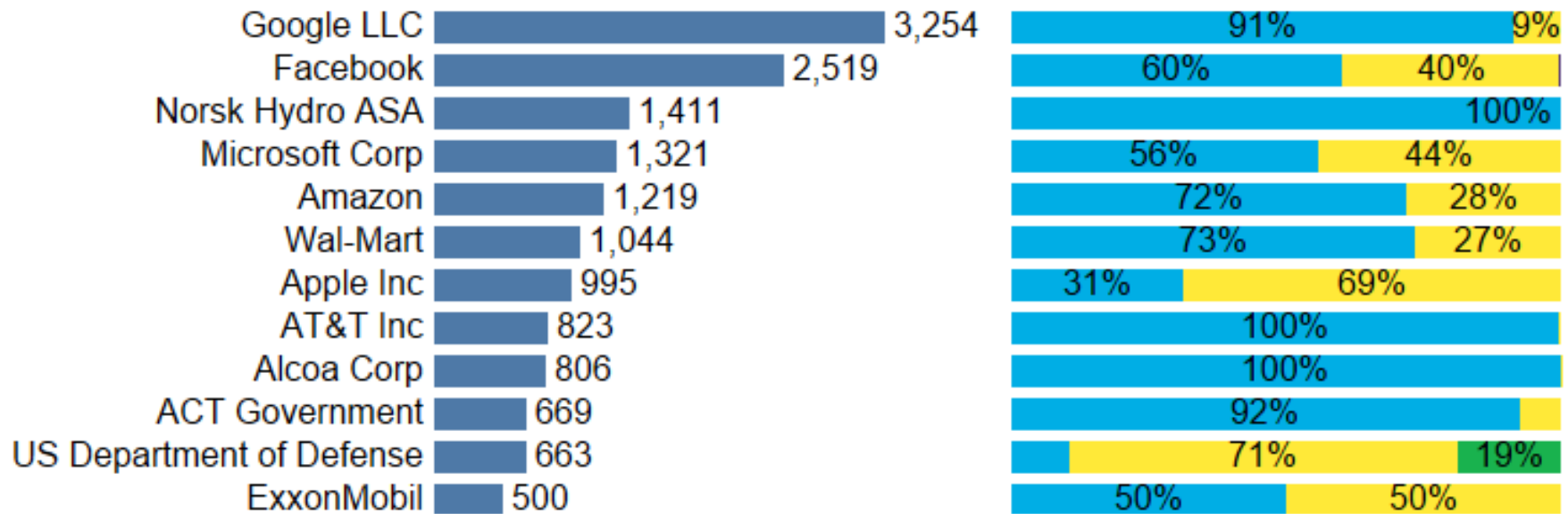


Source: BloombergNEF Note: All data in this report is up to through November 2018. Volumes are for offsite deals only.

Top oftakers by capacity

Top oftakers by capacity (MW), broken down by sector

Click on the name of any oftaker below to filter the charts, click again to de-select



Source: BloombergNEF Note: ACT is Australian government

PPA location



Source: BloombergNEF Note: Bubble size based on PPA capacity (MW)

Case studies

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Case Study: Walmart Goes All In on Supply Chain

by [Kyle Harrison](#) / 28 Aug 2018

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Executive Summary
Walmart has established a goal of instituting various renewable energy projects by 2030. Perhaps its most significant initiative is its supply chain, which is cumulatively reducing emissions equivalent to Brno. Project Gigaton, which aims to significantly scale up its efforts to achieve its goals, is a key initiative.

Walmart's current pro...

Project Gigaton progress: 0.02BtCO₂e

Source: Bloomberg NEF
Note: Data is from F...

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Microsoft Makes a Deal Yet

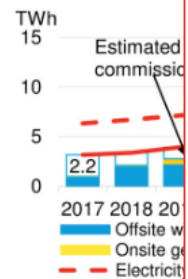
by [Kyle Harrison](#) / 24 Mar 2018

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Executive Summary

On March 22, Microsoft announced a 31-year agreement for 310 MW of solar power, the single largest deal in the world, structured as a financing vehicle, meeting a 60% requirement as an example of smaller corporate...

Microsoft clean energy



Source: Bloomberg NEF
Note: Chart does not include and onsite wind and solar

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What Drives Europe's Top Three Corporate PPA Markets?

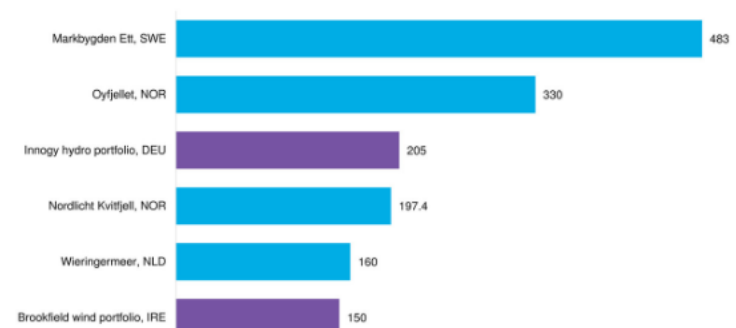
by [Helen Dewhurst](#) / 15 May 2018

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Executive Summary

The number and volume of power purchase agreements being signed in Europe is on the rise. However, almost all of the recent activity has been in just three countries: the Netherlands, Norway and Sweden. This note examines why these three have emerged as the main centers. It looks at policies, regulations, electricity markets, risk control characteristics, and business environments, and asks whether the trio can remain magnets for PPA deals in the years ahead. (Figure 3 in this note was corrected on May 24, to reflect the fact that at the time of publishing, there had been no new corporate PPAs signed in the rest of Europe in 2018.)

Top 10 European PPA deals by volume (MW) since 2013



By the Numbers

2.7 GW

PPA contracts signed in the Netherlands, Sweden and Norway since 2013: over half of all PPA activity in Europe in the same period.

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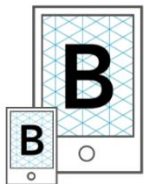
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