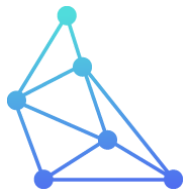


How corporate 100% renewable targets are changing the way we plan our grids

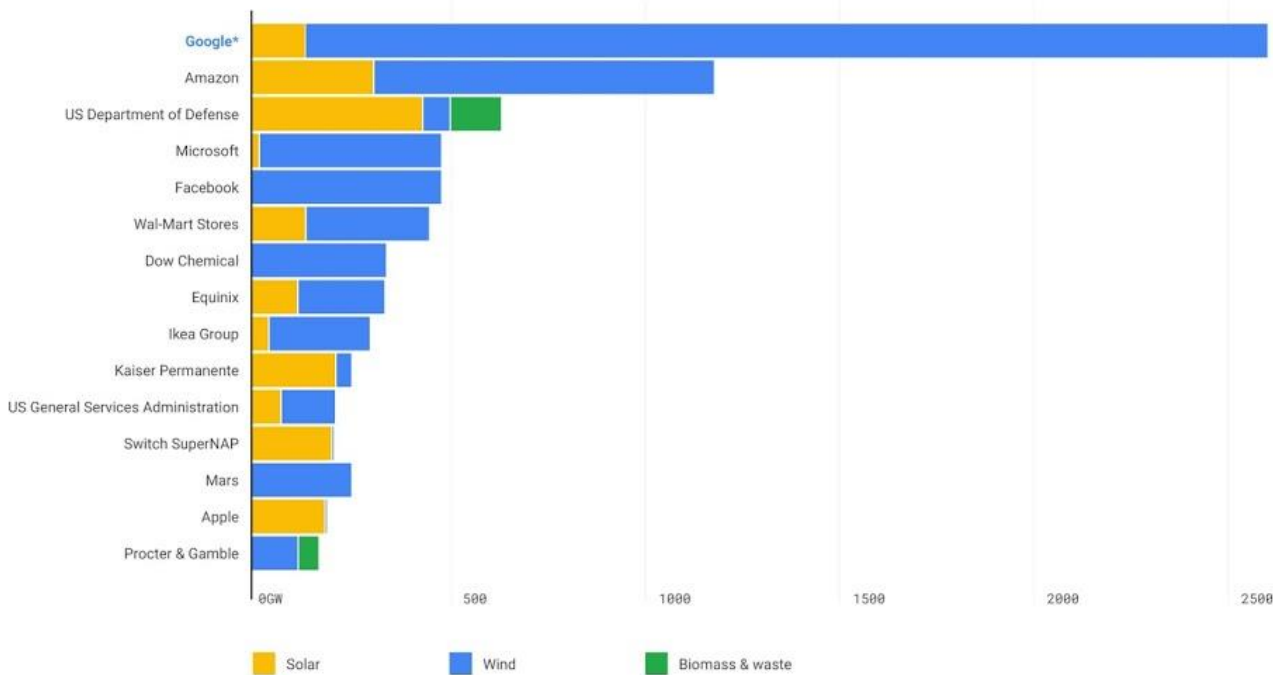
ESIG Fall Technical Workshop | October 29, 2019



TEL O S E N E R G Y

Corporate procurement is changing the game

CUMULATIVE CORPORATE RENEWABLE ENERGY PURCHASING IN EUROPE, THE UNITED STATES, AND MEXICO--AS OF NOVEMBER 2016

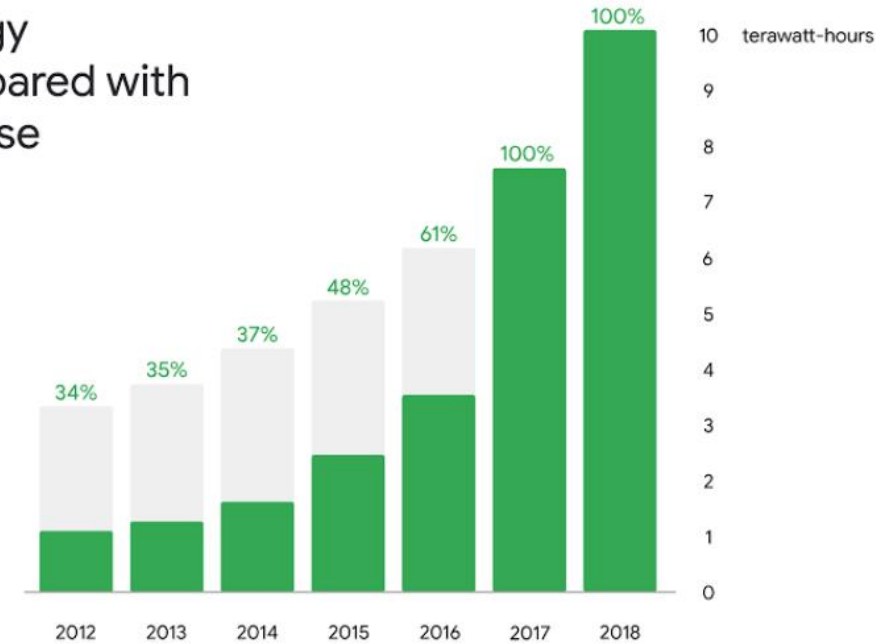


Source: Bloomberg New Energy Finance

*Google total also includes one project in Chile for 80 MW

Renewable energy purchasing compared with total electricity use

● Total electricity consumption
● Renewable energy

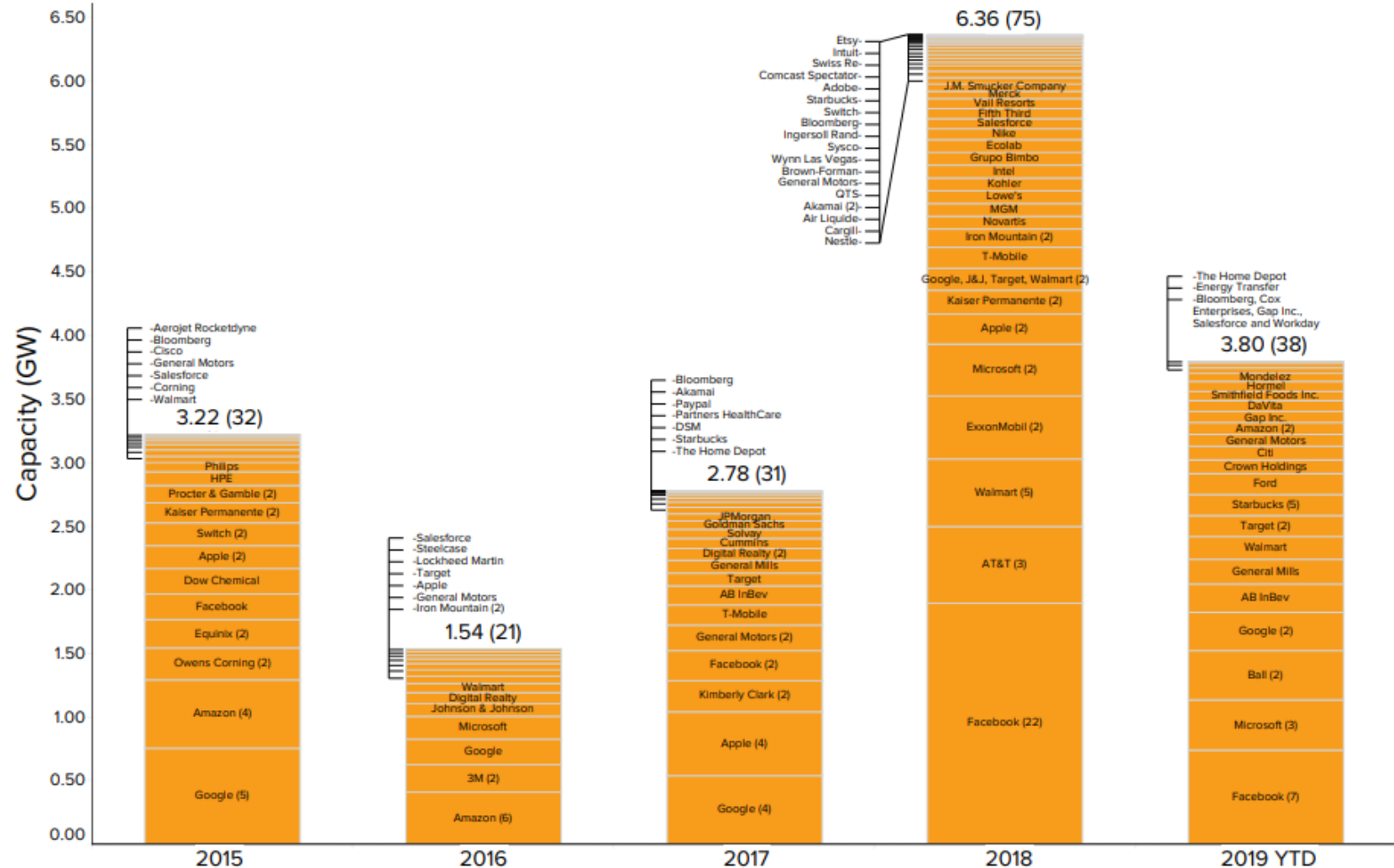


Google



A growing list of players

Image Credit:
Renewable Energy Buyers Alliance
(rebuyers.org)



As of August 28, 2019. Publicly announced contracted capacity of corporate Power Purchase Agreements, Green Power Purchases, Green Tariffs, and Outright Project Ownership in the US, 2015 – 2019YTD. Excludes on-site generation (e.g., rooftop solar PV) and deals with operating plants. (#) indicates number of deals each year by individual companies. Copyright 2019 by Renewable Energy Buyers Alliance.

What comes next?

Bridging the gap between planners & purchasers

- Grid planners can no longer assume renewable growth is driven by **policy & RFPs**
- **Multi-national** trend – 100% renewable goals are going global
- 100% renewable across **time and space**: Planning for 24/7
[resource diversity, load flexibility, storage, utility partnerships]
- It's not just about corporates – **cities & municipalities** joining to trend
- Voluntary commitments extend to the **vertically integrated IOUs**
(Idaho Power, Xcel CO, MidAmerican, etc.)

*The same tools and analyses used for decades at the grid operator level should be applied to corporate procurement – but at a **larger scale & faster***



Introducing today's panel of experts

Beth Wytiaz



SVP, Global
Environmental
Operations Manager
Bank of America

Graham Furlong



Managing Director,
Business Development
Duke Energy
Renewables

Lori Bird



US Energy Program
Director
World Resources
Institute

Aaron Barr



Principal Wind Energy
Consultant
Wood Mackenzie

Leandro Alvez



President & COO
WindHQ
a Flavez Energy
Affiliate