

Green Energy for Corporation: alternatives to support the energy transition

ata insights webinar 7 November 2019

Preben Munch - ECOHZ



Global provider of Renewable Energy Solutions

- Enabling corporate Renewable Energy leadership since **2002**
- Innovating product concept and impacts
- All recognized **EAC (Energy Attribute Certificates)** standards
- Sourcing from ~400 power plants **globally**
- Corporate **value chain, supply chain, SDGs, SBT, RE100**
- Single point of contact for global EAC portfolio
- Selective **PPA advisory**
- Offices in Oslo & Geneva
- Serving ~1/4 of RE100 members
- 50-60 TWh EACs delivered annually to customers
- Pioneered renewable energy markets
GOs, I-RECs - RECs, / Green Gas certificates



VISION Changing Energy Behavior |

BELIEF Origin Matters



Photograph: Michael Campanella/The Guardian

An open letter to the CEOs of corporate America



*Medium.com, extract from a full-page ad in the
New York Times Business section on Tuesday, October 15th*



The Aletsch Glacier is pictured from the Eggishorn summit in Fiesch, Switzerland. This river of ice could almost vanish in the lifetime of people born today because of climate change. The glacier, 900 metres (2,950 feet) thick at one point, has retreated about 3 km (1.9 miles) since 1870 and that pace is quickening. Photograph by [Mike Peel](http://www.mikepeel.net) (www.mikepeel.net).

Let's Partner on Climate Action. Now.



We are CEOs from 78 companies and 20 economic sectors. With operations in over 150 countries and territories, together we generated over \$2.1 trillion of revenue in 2014.



PPA

GERMANY

Deutsche Bahn signs Germany's first offshore wind PPA

9 September 2019 by Craig Richard

German railway company Deutsche Bahn has signed the country's first power purchase agreement (PPA) for offshore wind in a deal to buy output from Innogy's 295MW Nordsee Ost for five years from 2024.



Nordsee Ost consists of 48 of Senhvi's 6.2M126 turbines and was commissioned in 2015

Under the deal, Deutsche Bahn will buy the power produced from a 25MW portion of the 48-turbine project at a fixed price.

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Nike Advances Renewable Energy Commitments with 100% Clean Energy Agreement in Europe

Published 7 February, 2019

Through a new partnership with [Enbridge](#), an industry leader in the global clean energy economy, [Nike](#) will begin sourcing 100 percent renewable energy in Europe. Along with previously-launched partnerships between Nike and Avangrid (a subsidiary of Iberdrola) in North America, this new power purchase agreement will enable Nike to reach 75 percent renewable energy globally. This partnership catapults Nike ahead of the timeline that was outlined three years ago when Nike joined [ECO2](#), a coalition of businesses pledging to source 100 percent renewable energy across all operations.

"Delivering on our sustainability commitments, like working towards 100% renewable energy across our owned and operated facilities worldwide, is just one of the ways we protect the future of sport," said Noel Kindel, Nike Chief

Amazon signs PPAs for three renewable projects in UK and US

By NS Energy Staff Writer 24 Oct 2019

POWER WIND PV

Amazon plans to power its AWS data centres in the US and the UK through renewable energy



EDF Renewables Signs PPAs with Tesco in the UK

News 28 de octubre de 2019

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SEM

EDF Renewables has signed three corporate Power Purchase Agreements (PPAs) with leading multinational retailer, [Tesco](#). Through these three contracts, 60 MW of renewable power will be provided to Tesco, from 17 roof mounted solar installations and from two Scottish onshore wind farms.



A distributed solar 20 year Corporate PPA covering 5 MWp in England

EDF Renewables UK will install 15,000 roof-mounted solar PV panels on 17 Tesco stores across England. This is a total of 5 MWp of installed capacity.

Construction is already underway and is expected to be completed by the end of next year (2020).

Two wind 15 year Corporate PPAs covering 54 MW in Scotland

To support these PPAs, EDF Renewables will build two wind projects:

- The Burnfoot East wind farm project which will have three turbines with a total installed capacity

What is behind the interest for PPAs ?

- “Greta effect”
- Being part of the pack - stakeholder expectations

- Hedging power prices
- License to operate
- PR & marketing effect

- “Additionality”
- Impact

Different options for impact

RE alternatives	Structure	Characteristics	Impact	"Issues"
On-site project	Asset owner	Technical decisions	Creates additional RE	Technical & construction related risks
Off-site project	Asset owner	Technical decisions	Creates additional RE	Technical & construction related risks
PPA	Long term off-take	Complex process and legal structure	Contributes to bankability	Is your load well adapted? Financial hedging.
Energy Attribute Certificates	Long term EAC off-take	Simplified process and legal	Contributes to bankability	Flexibility. Low financial exposure
Energy Attribute Certificates	GO ²	Top-financing new projects	Adds decisive external funds	Circular project financing model

Impact efficiency

- Impact to exposure relationship
- Cross border
- Contractual structure



Long-term Certificate Off-take Agreement

- LT contract for GOs
- Transact pre finance close
- Additional value for financing
- Trade-off, duration vs cost
- Reduced risk exposure
- Considerably simplified transaction - legal, financial

Happy to answer questions today
or in later conversations

THANKS

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