



eolus

Making the PPA bankable, key elements

Per Witalisson, CEO

Eolus at a glance

- Founded in 1990.
- Project developer in the Nordics, Baltics and U.S.
- 850 MW wind built. Plan to double until 2021.
- 350 MW under asset management. An additional 350 MW contracted and under construction.
- 40 employees.
- Listed at the Nasdaq Main Market in Stockholm.



Tailor made solutions

A selection of Eolus' customers



Ewz / Aquila Capital

Utility/Financial investor

60 MW, 10 yr PPA with Google

2015



Global Asset Manager

30 MW + 38 MW + 79 MW
Global Asset manager

2013, 2015 and 2017
15 MW + 47 MW

2016 and 2017



Google

Tecch company

Alcoa Norway



PPA Experience

- Swedish 10 year PPA with Google signed in 2014 for the Atlantic portfolio that consisted of four windfarms of 60 MW in total. In operation since 2015.
- Swedish 10 year PPA with Google signed in 2015 for the Jenåsen project, 79 MW. In operation since summer 2018.
- Norwegian 15 year PPA with Alcoa signed in 2018 for the Öyfjellet project, 330 MW. Backed by a power credit garanti issued by the Norwegian export credit agency (GIEK). Planned to be in operation during 2021.
- Negotiations of PPAs together with and on behalf of investors.



Bankable PPA?

- Investability is top priority!
- Long term PPAs of 10-15 years or more is preferred by European banks.
- Tie up all loose ends! Contracts that are crystal clear regarding terms and conditions:
 - Length of contract
 - Delivery point
 - Definitions of product traded
 - Base load
 - Pay as produced
 - GoOs and green certificates
 - Price mechanisms. Cap? Floor? Collar?
 - Responsibility for balancing services.



Bankable PPA?

- Termination fees
- Securities from seller and buyer
- Availability warranty.
- Curtailment and negative pricing.
- Communication set-up and back-up systems
- 8760 h/ year yield forecast.
- Counter party risks to be assessed.
- Term of contract may have a great impact on debt sizing.



Trends regarding corporate PPAs in the US

- Long tradition of corporate PPAs.
- Significant growth in PPA volumes from renewable sources.
- PPAs for solar PV is in several markets priced lower than PPAs from wind.
- Tech companies like Google, Amazon, Apple, Facebook and Microsoft are among the top buyers, but also US Army.
- PPAs for 20-25 years are not uncommon.
- Community Choice Aggregators (CCA) is becoming
- More common to seek PPAs already in mid/late stage development phase.



A photograph of a technician in safety gear standing on the nacelle of a wind turbine. The technician is wearing a white helmet, a black t-shirt, black pants with yellow reflective stripes, and a harness. They are looking out over a landscape of rolling hills under a clear blue sky. The nacelle is white and has various mechanical components visible. The technician's shadow is cast on the nacelle floor.

Thanks!

Per Witalisson
per.witalisson@eolusvind.com
+46 (0) 702 65 16 15