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*Windlab's submission to Foreign Affairs, Defence and Trade References Committee Inquiry on  
**Australia's trade and investment relationships with the countries of Africa***

## **Introduction**

Windlab Ltd ("Windlab") welcomes the opportunity to provide a submission to the Foreign Affairs, Defence and Trade References Committee Inquiry on "Australia's trade and investment relationships with the countries of Africa".

## **About Windlab**

Windlab is an Australian owned and headquartered, international renewable energy development company with a distinct competitive advantage in the development of global wind energy projects.

Windlab participates in wind generation projects from inception through development, financing, construction and the asset management of operating wind farms.

Windlab was established in 2003 to commercialise a leading atmospheric modelling and wind energy assessment technology, *WindScape*, which was originally developed by the founders of Windlab at the Commonwealth Scientific and Industrial Research Organisation (CSIRO).

Since 2003, Windlab has continued to apply and develop the *WindScape* technology to identify, acquire and develop wind farms in Australia and internationally. Windlab's main operations are in Australia with its head office located in Canberra. Windlab also has offices in Cape Town, South Africa where it has successfully completed two projects and an office in Dar Es Salaam, Tanzania.

Windlab Africa is expanding into select Sub-Saharan Africa countries where there is a demand for renewable energy projects in response to electricity supply shortages.

Further, the Company has an office based in Plymouth, Michigan from which it manages its North American operations.

Windlab is in the process of listing on the Australian Securities Exchange (ASX), with trading expecting to commence on 23 August 2017.



## **Portfolio submission**

The Terms of Reference of the inquiry on Australia's trade and investment relationships with the countries of Africa, refer to:

- a. existing trade and investment relationships;
- b. emerging and possible future trends;
- c. barriers and impediments to trade and investment;
- d. opportunities to expand trade and investment;
- e. the role of government in identifying opportunities and assisting Australian companies to access existing and new markets;
- f. the role of Australian based companies in sustainable development outcomes, and lessons that can be applied to other developing nations;
- g. the role of Australian based companies in promoting the achievement of Sustainable Development Goals; and
- h. any related matters.

### **a. Windlab's existing investment relationships in Africa**

Windlab's submission to these terms of reference concentrate specifically on renewable energy generation in the Sub-Saharan African (SSA) countries of South Africa, Tanzania, Kenya, Mozambique, Ethiopia and Zambia.

These countries are home to more than 300 million people and it is the most electricity-poor region in the world. More than 170 million people lack access to electricity, and millions more are connected to an unreliable grid that does not meet their daily energy service needs, and is subject to blackouts.

Windlab has been operating in South Africa since 2007 and has more than 20 projects, if ultimately constructed worth over A\$2Billion, in SSA in various stages of development, from project concepts to two projects totalling 228MW of capacity in operation.

### **b. Emerging trends and possible future trends in renewable energy in Africa**

SSA countries are generally significantly underdeveloped in terms of energy access, installed capacity, and overall consumption and suffers from insufficient generation capacity and grid infrastructure in parts of the region. Increases in energy demand have severely outstripped capacity growth, and as such the significant energy gap is widening.

The cost of generating electricity from newly installed renewable energy generating capacity is now generally less than that produced by newly constructed traditional thermal alternatives such as coal fired power stations.

The SSA region requires immediate and substantial investment in electricity generation projects to meet current demand, and substantial ongoing capacity investment in order to meet the fourfold increase in demand expected by 2040.

Renewable energy is currently expected to meet two thirds of the growth in demand for power in sub-Saharan Africa by 2020, according to the 2015 IEA Renewable Energy Medium-Term Market Report.

As renewable energy become increasingly more cost competitive than conventional thermal generation, it may enable some markets in sub-Saharan Africa to leapfrog fossil fuel infrastructure development and drive Africa's competitive advantage and economic development.



**c. Barriers and impediments to investment in renewable energy development in Africa;**

Significant investment is required in outdated and insufficient distribution and transmission infrastructure as well as the generating plant itself.

Whilst there is significant finance available for well-conceived, developed and structure projects there is a paucity of such opportunities. There is a lack of political and regulatory structure in many African markets which prevent good industry practices from being developed and applied. Large renewable energy infrastructure projects worth hundreds of millions of dollars each require good regulatory and governance processes to succeed.

Most African electricity markets are dominated by a state-owned utility. Many of these utilities are inefficiently run, lack knowledge of renewable energy deployments, don't possess strong procurement practices and are not credit worthy from a project finance perspective.

**d. Opportunities to expand investment in renewable energy development in Africa**

Investors can be incentivised to take part in power procurement processes in Africa by investing alongside Development Finance Institutions (DFIs) and other international government and quasi government investment funds.

This can be achieved through donor funding, development grants, export finance, investment in transmission and distribution infrastructure or support from development agencies to assist SSA markets to enable independent power providers (IPPs) to enter the market.

Development Finance Institutions (DFIs) and government development assistance agencies must play a key role in supporting the rapid deployment of renewables in Africa. In addition to providing financial assistance, they can assist with the institutional capacity and credibility building required to attract international investment.

**e. The role of government in identifying opportunities and assisting Australian companies to access existing and new markets**

The Australian government can assist in a number of different ways:

- 1) Engagement with prospective countries' governments to ensure alignment with development of projects best practices;
- 2) Hosting of study groups to investigate how the Australian market has been able to build a complete renewable energy industry;
- 3) Assisting foreign governments in understanding incentives with regards to renewable energy and how foreign governments can attract large foreign investment through the renewable energy;
- 4) Assisting foreign governments in understanding the impact that renewable energy can have on their electricity grids;
- 5) Ensuring best practice with regards to community engagement and ensuring that the surrounding areas to any renewable energy project are able to benefit from renewable energy.

**f. The role of Australian based companies in sustainable development outcomes, and lessons that can be applied to other developing nations**

Historically, economic development has been strongly correlated with increasing energy use and growth of greenhouse gas emissions. Renewable energy can help decouple that correlation, contributing to sustainable development.



In addition, renewable energy offers the opportunity to improve access to modern and relatively cheap energy services for the poorest members of society, which is crucial for the achievement of any single of the eight Millennium Development Goals.

Renewable energy offers the opportunity to contribute to a number of important sustainable development goals:

- a. social and economic development;
- b. energy access;
- c. energy security;
- d. climate change mitigation and the reduction of environmental and health impacts.

Overall, and in the long run, sustainable development in the field of energy is also deemed to contribute to economic sustainability and national security of communities, thus being increasingly encouraged through investment policies.

**g. the role of Australian based companies in promoting the achievement of Sustainable Development Goals.**

The deployment of utility-scale renewable energy will achieve a number of Sustainable Development Goals, including Goal 7 (Affordable and Clean Energy), Goal 9 (Industry, Innovation and Infrastructure), Goal 12 (Responsible Consumption and Production) to ultimately meet Goal 13 (Climate Action) by promoting renewable energy development.

From its base in Canberra, Windlab is well positioned to assist Sub-Saharan countries to transition to low-carbon economies and the achievement of Sustainable Development Goals.

## **Recommendations**

The Australian Government could support the role of Australian-based businesses such as Windlab to increase investment in renewable energy in Africa to bring energy security to the continent while meeting the Sustainable Development Goals by:

1. Considering renewable energy development financing as a form of Australian Aid;
2. Providing grants or credit support for transmission and distribution infrastructure via EFIC or its participation in the Green Climate Fund;
3. Supporting the development of a local renewable energy industry for IPPs by assisting SSA countries to improve strategies and programmes to enhance the uptake of renewable energies and energy efficiency measures.

## **Contact**

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