

Renewable Energy Guidance Note [201]

This note documents Massmart's position on renewable energy and investment in renewable energy technology.

Background

Presently 92% of South Africa's electricity is derived from coal power, 5% comes from nuclear and the remainder comes from a mixture of hydro and natural gas. Approximately 95% of the country's electricity is generated by Eskom, a South African parastatal. While Eskom does not have exclusive generation rights, it has a practical monopoly on bulk electricity in South Africa. In addition, Eskom controls the national transmission system, which determines where and how electricity is distributed. South Africa's energy supply is evidently under strain as the country's burgeoning energy needs outpace its aging electricity generation infrastructure.

National Renewable Energy Objectives

The South African government has identified the need to diversify its energy portfolio and reduced the country's reliance on coal. This has given rise to the South Africa Integrated Resource Plan 2010-2030, which aims to generate approximately 17,800MW of energy through renewable sources by 2030. Although a number of renewable energy sources such as wind, solar, wave and to a lesser extent hydro are available in South Africa it is too early to predict when and how these energy sources will be made available over the national grid.

From a business perspective, South Africa's rapidly increasing energy tariffs coupled with the country's excellent solar radiation potential makes investment in onsite photovoltaic plants an increasingly attractive option.

Walmart Position

Walmart has committed to a goal of being supplied 100% by renewable energy by 2025. This includes generating its own energy at stores and distribution facilities and significantly reducing its greenhouse gas emissions (Walmart Global Responsibility Report: 2012).

Walmart is committed to experimenting, piloting and scaling a variety of cutting edge and proven technologies to propel its use of renewable energy around the world. As such, Walmart's renewable energy activities are focused on development and installation of new renewable energy projects; driving down the cost of renewable energy; building scale; and securing cost-effective, stable energy pricing that meets or beats utility power pricing (Walmart Global Responsibility Report: 2012).

Massmart Position

Massmart recognises that energy security and significantly increased energy tariffs continue to be national priorities. Investment in onsite renewable energy has the potential to assist in reducing Massmart's vulnerability to grid energy insecurity; insulate the Group from increasing energy tariffs; and reduce Massmart's operational carbon footprint. However, given the infrastructural requirements of the renewable energy interventions currently available, their applicability is limited to standalone stores and distribution centers.

Actions

Going forward, Massmart's investment in renewable energy technology will take into consideration the following guidelines:

- Massmart will focus on onsite renewable pilots at standalone stores and distribution centers
- Renewables will be used as a means of supplementing grid energy consumption and assisting with load balancing
- As an initial step, Massmart will give preference to photovoltaic (PV) projects that supply electricity directly into stores
- Given the capital investment required and the effective lifespan of PV panels, potential projects must be developed with a 10-25 year timeline in mind
- Investment in renewable energy projects will be confined to stores in which baseline energy consumption has been accurately measured (have a minimum of 12 months independently metered electricity consumption data)
- To ensure that excess renewable energy capacity is not installed, renewable energy pilot projects will be confined to stores in which energy efficiency processes have been optimised
- Investment in onsite renewable energy technologies should result in a 3-4 year simple payback
- Energy prices negotiated as part of renewable energy power purchase agreements should be at parity with or better than grid tariffs
- Given the relatively untested nature of PV technology in South Africa, it is Massmart's opinion that onsite renewable projects that give rise to power purchase agreements negate many of the potential risks associated with outright investment in renewable projects. As such, it is our position that at least initially, projects that are based on power purchase agreements should be given preference.