

WATT WORKS

<u>Team Member Name</u>	<u>Year</u>	<u>Major</u>
Member 1: Carly Catanzaro	Third	International Business
Member 2: Samuel Clark	Second	International Business
Member 3: Eddie Doyle	Third	International Business
Member 4: Charlene Orimoloye	Third	International Business
Member 5: Alfred Segbe	Second	International Business

Advisor(s): Astrid Schmidt-King

Topic Title: Powering Progress: Leveraging enterprises to advance solar energy in Africa

Audience: ACES Group, Board of Directors

Sustainable Development Goal

SDG #7 : Ensure access to affordable, reliable, sustainable and modern energy for all.

Executive Summary

Watt Works is recommending that ACES Group enter an Engineering, Procurement and Construction contract with Illovo Sugars, one of the continent’s largest sugar producers with operations in six countries. Currently in South Africa, there is load shedding – intentional temporary power outages to prevent grid collapse. Load shedding has become an ongoing problem with the nation experiencing about 6,700 hours of load shedding for 2023. Mass production generates about 13% of the country’s GDP and supports over 1.6 million jobs according to data from the South African Embassy in the US. A huge economic driver behind South Africa’s mass production sector is the Agro-processing industry, an \$8.1bn+ USD industry, serving as the third largest manufacturing component. South Africa’s government has been focused on utilizing the private sector to support the nation’s sustainability efforts; awarding companies who focus on sustainability with operational incentives such as tax breaks and government contracts.

ACES is a leader in solar energy procurement for businesses, contributing to a cleaner and more sustainable South Africa while helping to reduce load shedding on the national power grid. Illovo Sugars currently uses bagasse in its operations to mitigate emission production; however, it requires 300 lbs of harvested sugar cane to produce 84 lbs of it. This attempt to meet their sustainability goals is positive but timely. Enlisting in this joint venture would allow ACES Group to help bolster the companies’ efforts to reduce emissions in its operations, as well as allow the company to better transition to solar power for their manufacturing infrastructure. Illovo Sugars would additionally be able to utilize the excess generated bagasse to power the grids around them, additionally limiting strain on the power grid. For ACES Group, this collaboration would provide the company with a first-mover advantage in supporting manufacturers across the country in reducing their emissions and earning revenue on their technology and services.