



a world class African city



City Power Johannesburg

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ANNEXURE A

City Power head office is situated at 40 Heronmere Rd, Reuven in Booyens. The property has multiple buildings and warehouses utilising a variety of appliances from office equipment to air-conditioning and water heating systems. The aerial view of the facility is included in Figure 1 showing the buildings arrangement within the property. In addition, parking spaces around and between the buildings are present within the premises with varying suitability for solar installation. One interesting aspect is that no apparent shading on any of the roof was observed, increasing the potential solar generation throughout the year.

The facility takes supply at 11 kV Medium Voltage (MV) and uses internal Transformers to stepdown the voltage from 11 kV to 400V. The point of supply at MV is indicated by red colour.

Scenario

Design a hybrid solar PV system to offset the energy consumption at Reuven Facility by using any Engineering Software. The design shall demonstrate at high-level detailed single line diagram up to the point of connection.



Figure 1 : Facility aerial view

Non-Executive Directors: D Gibson (Chairperson of the Board), J du Plessis, D Hunt, N Kgope, P Mabece, M Mashabela, M Mello, B Mpangalasane
Executive Director: T Mashava (Chief Executive Officer), Company Secretary: M Smith
Registration number: 2000/030051/30 - **VAT number:** 4710191182

