

**23 April 2021**

## **SPECIFICATION DOCUMENT**

# **Request for Proposal: Supply and installation of a solar photovoltaic grid-tie system for SA Pharmacy Council**

### **1. Introduction**

SA Pharmacy Council owns a building located at 591 Belvedere Street, Arcadia, Pretoria. The building is supplied with electricity by the City of Tshwane on the low voltage time of use tariff. This is a time of use energy tariff structure with maximum demand. (Please see annexure 1 for the tariff details).

The objectives of this project as stated by the management of the SA Pharmacy Council are:

- To reduce the on-going and increasing cost of energy.
- To reduce reliability on electricity from the grid.
- To reduce impact on the environment.

In order to achieve the above objectives SAPC request that prospective service providers with a proven track record in installation of the grid-tied rooftop solar PV system to submit RFP to Refilwe Mutlane at this email address [tenders@sapc.za.org](mailto:tenders@sapc.za.org)

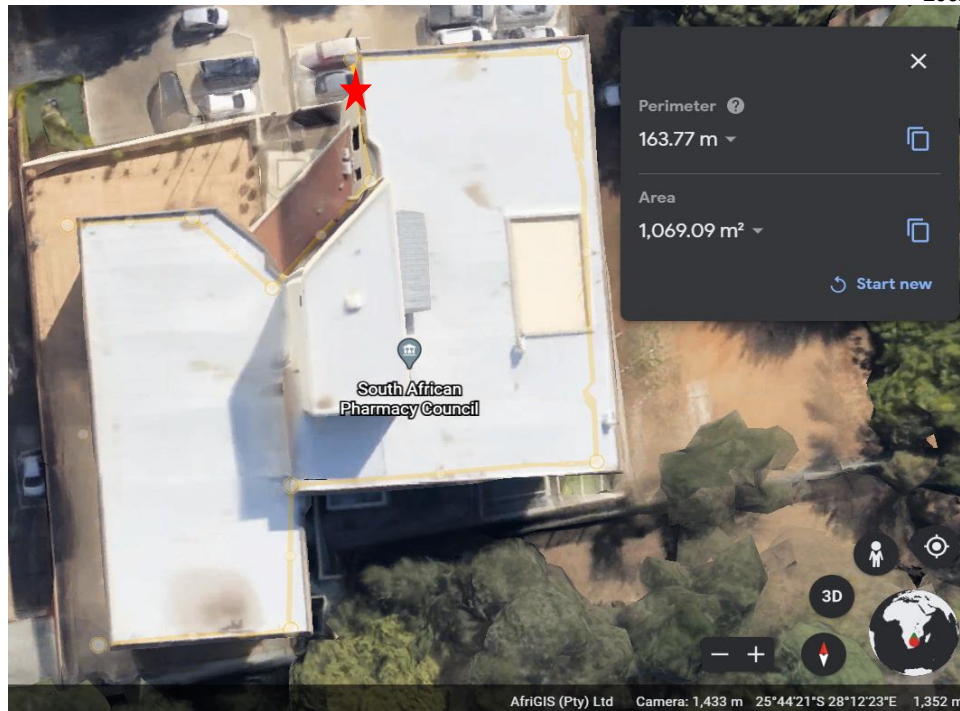
### **2. Background**

The site is located at 591 Belvedere Street, Arcadia, Pretoria with the following GPS coordinates: 26°44'41.496"S 28°11'16.188"E.

The yellow line indicates the area available for a roof mounted solar PV plant. There is +/- 800m<sup>2</sup> of relatively unobstructed area available. The red star indicates the current existing DB located in the basement of the building.



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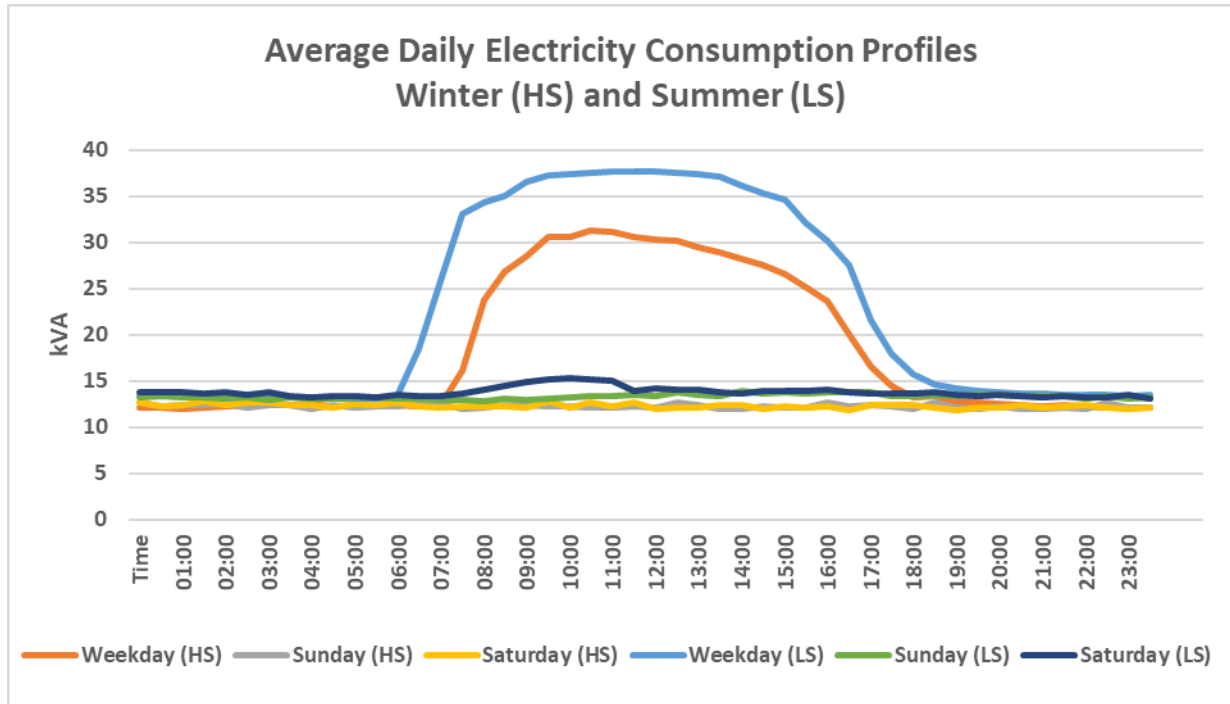


Energy Resource Optimizers cc (ERO) was appointed to measure the load profile of the building to get an accurate understanding of the consumption profile. ERO obtained 30-minute profile data from April 2020 for analysis. The data showed a typical business energy profile with the following:

- A good power factor of 99%
- A winter baseload of 14 kVA
- A summer base load of 14 kVA
- A maximum demand of 88kVA (2020-06-18 11:30:00)
- Daily average consumption of 440kWh,
  - Summer 475 kWh/day
  - Winter 376 kWh/day
  - Monthly totals

Month	kWh	kVA (Max)
<b>Mar-20</b>	36024	77
<b>Apr-20</b>	19355	37
<b>May-20</b>	22809	59
<b>Jun-20</b>	26680	88
<b>Jul-20</b>	21266	76
<b>Aug-20</b>	21271	60
<b>Sep-20</b>	23573	73
<b>Oct-20</b>	32433	74
<b>Nov-20</b>	30497	65
<b>Dec-20</b>	27917	60
<b>Jan-21</b>	26743	55
<b>Feb-21</b>	30278	62

From the average profiles depicted on the graph below we concluded that a 40kW peak grid tied solar PV system would be optimal for this facility.



As can be seen from the graph above, the consumption peaks are considerably higher in summer. It can therefore be concluded that the system needs to be substantially pro-summer orientated.

### 3. Call for proposals

This is a call for “selected” solar companies to make two Engineering, Procurement, Installation and Maintenance proposals.

**Proposal 1:** 40 kW grid tied rooftop solar PV system. Full details required.

**Proposal 2:** 100% off grid solar and battery solution. Full details required.

Alternatives will only be considered if Proposals 1 and 2 are provided.

### 4. Funding

The funding model will be decided once the proposals have been received. Bidders are welcome to submit a power purchase agreement, rental agreement, financed purchase and outright purchase as options. Please note that irrespective of the options proposed the component costs needs to be supplied as requested under point 6.

### 5. Timing



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The Solar PV array should be installed and operational by latest end November 2021. Therefore, the management of SA Pharmacy Council wants to consider all proposals as soon as possible. At that meeting, it wants to select the contractor with whom to proceed with final negotiations and award the contract as quickly as possible.

The chosen contractor would be announced before 01 October 2021. The Tender would be finalised, awarded, and signed by latest end 01 November 2021, for project completion by end November 2021. If this timing is too tight, it should be mentioned in your submission.

## 6. RFP requirements

Your company is invited to supply the proposals, by no later than 15:00, 21 June 2021 by e-mail, clearly marked “**RFP solar system SA Pharmacy Council**” with your company name, contact person and contact details to [tenders@sapc.za.org](mailto:tenders@sapc.za.org) with at least the following information:

### Proposal 1:

- A description of all the components of the 40kW<sub>p</sub> grid-tie PV system.
- A simulation of the system and its performance, clearly showing the input values.
- A cost proposal separating the main hardware components (solar modules, inverter, logger/communication, roof mount substructure) from the rest of the items (labour, cabling, trunkings, consumables, engineering, documentation, commissioning & certification). Please note that an independent communication system with its own modem must be included, with the possibility to push generation data in a .csv file format to ERO on a daily basis,
- A maintenance and operations plan and associated cost for the first year with conditions of extension of the project maintenance.
- Special Considerations:
  - No energy may be fed back into the Tshwane grid network at this stage and the required equipment must be included in the BoQ.
  - The system must be installed on the roof and connected to the central DB in the basement.

### Proposal 2:

- A description of all the components of 100% off-grid PV system complete with storage.
- A simulation of the system and its performance, clearly showing the input values.
- A cost proposal separating the main hardware components (solar modules, inverter, batteries and battery room, logger/communication, roof mount substructure) from the rest of the items (labour, cabling, trunkings, consumables, engineering, documentation, commissioning & certification). Please note that an independent communication system with its own modem must be included, with the possibility to push generation data in a .csv file format to SAPC on a daily basis,
- A maintenance and operations plan and associated cost for the first year with conditions of extension of the project maintenance.

## Alternatives

You are welcome to provide additional alternatives to the above two proposals however ***it will only be considered if you have provided all the information required for Proposals 1 and 2.***

## General

- A list with references (including a contact person, number and email address) of 5 similar projects done by your company within the last 2 years.
- A reference that your company has experience in maintaining solar systems.
- A short company profile, with contact person and contact details (no more than 1 page).
- BBBEE certification. Minimum level 4.

## 7. Security

Access control is via a motorised gate with remote control.

Space for storage of tools and materials during construction will have to be negotiated with SA Pharmacy Council.

## 8. Site visit & questions:

Site visits will be arranged on the 9<sup>th</sup> and 10<sup>th</sup> June 2021. Please indicate your interest by no later than 8 June 2021 in writing. A site inspection is **not** compulsory.

**A compulsory briefing session** will be held virtually via Microsoft Teams on 8 June 2021 at 09:00 AM. Login details of the briefing session and tender specification documents are on the Bulletin Board found on the home page of our website ([www.sapc.za.org](http://www.sapc.za.org)).

All technical questions may be directed in writing to [tenders@sapc.za.org](mailto:tenders@sapc.za.org) by no later than Monday, 11 June @ 17:00 and will be answered to all companies in writing by latest 17 June 2021 @ 17:00.

Thereafter no further question will be entertained, nor will any questions be answered.

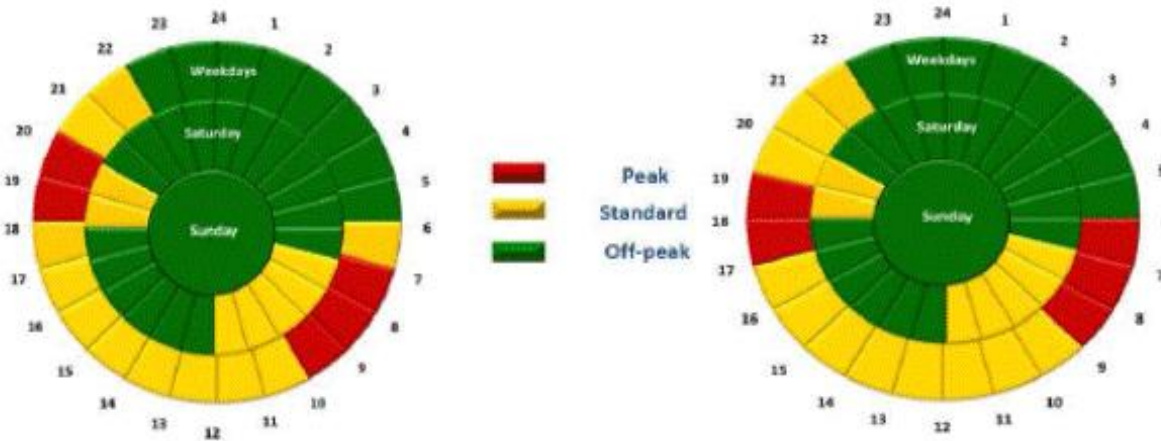
## 9. Conditions of the RFQ:

The client holds the rights to negotiate with any party and/or parties for the development and/or decide not to proceed at all, pending the decision of the SA Pharmacy Council Management. Your information will be treated confidential and not distributed to third parties who are not part of the decision-making group, neither will it be used for anything but the mentioned project.



## Annexure 1: Electricity Tariff Details

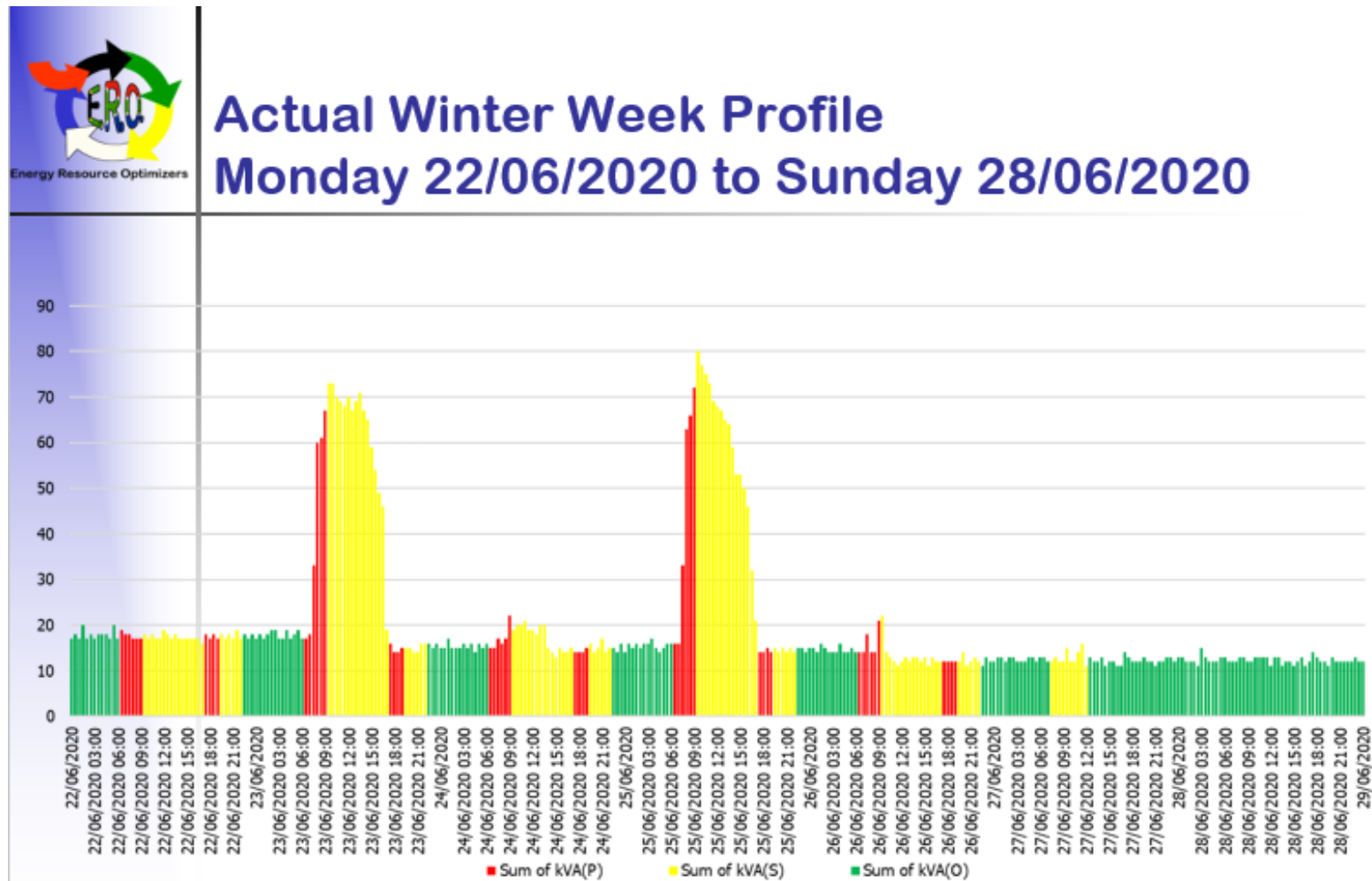
### Tshwane Low Voltage 3 phase (TOU)



	Unit	High Season (Jun - Aug)	Low Season (Sept - May)
Peak Energy Charge	R/kWh	R4.11	R1.69
Std Energy Charge	R/kWh	R1.57	R1.06
Off-Peak Energy Charge	R/kWh	R0.90	R0.75
Energy Demand Cost	R/kVA	R205.32	R205.32
Service Charge	R/month	R2854.06	R2854.06



## Annexure 2: Sample Load Profiles





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# Actual Summer Profile Monday 01/03/2021 to Sunday 07/03/2021

