**TASKS TO BE DONE ON SITE SURVEY FOR THE PROPOSED SOLAR BACK-UP SYSTEM TO BE INSTALLED IN NTINDA**

A thorough site survey is critical for the successful installation of a solar power system. On our inspection day we must consider the following parameters and perform specific tasks on-site:

**Site Survey Parameters**

1. Geographical Location

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| Task | Details |
| Record GPS Coordinates | Use a mobile app to log the exact latitude and longitude of the site. |
| Measure Solar Irradiance | Use a solar radiation meter online tool to collect irradiance data and assess solar energy potential. |
| Assess Climatic Conditions | Gather historical weather data for rainfall, wind speeds, and temperature variations, noting any extreme conditions that may affect system performance. |

1. Site Conditions

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| Task | Details |
| Conduct a Shading Analysis | Use visual inspection to check for shading from trees, buildings, and poles. Take photos and note obstacles that may impact panel efficiency. |
| Inspect Roof Type, Strength, and Orientation | Examine the roof material (metal, concrete, tiles) and structure to confirm it can support the solar panel weight. Measure/estimate tilt angle and orientation for optimal sun exposure. |
| Check Accessibility and Security | Ensure the site allows safe and easy access for installation and future maintenance. Identify potential security risks and propose protective measures against theft and vandalism |

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1. Energy Consumption Patterns

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| Task Details |  |
| Identify Critical and Non-Critical Loads | Work with the client to categorize essential loads (such as lighting, refrigeration, and medical equipment) and non-essential loads like Air conditioners or other heavy machines |
| Assess Seasonal Energy Variations | Inquire about fluctuations in power demand due to weather changes or operational shifts. |
| Analyze Daily Energy Usage | Review recent electricity bills and conduct interviews with the site owner to determine peak consumption hours. |

1. Electrical Infrastructure

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| Task | Details |
| Evaluate Grid Availability and Reliability | Check if the site has grid access and assess the frequency of power outages. Note the need for a hybrid or off-grid system. |
| Inspect Existing Wiring and Load Distribution | Examine the electrical panel, circuit breakers, and wiring to determine if upgrades are needed for solar integration. |
| Assess Battery Storage and Backup Requirements | Determine the necessity of battery storage based on power reliability and critical load needs. Propose suitable battery capacities and types. |

1. Permissions and Compliance Requirements

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| Task | Details |
| Check Building Codes and Permit Requirements | Identify any necessary permits before installation, ensuring compliance with structural and electrical standards.. Getting the building plan if possible |
| Conduct an Environmental Impact Assessment | Assess potential ecological concerns such as land use restrictions, impact on the surrounding people, and installation considerations (inconvenience). |

After the inspection, a detailed report is expected including the quotation for the sized system.

The overall fee for inspection is only **UGX 200,000** (two hundred thousand shillings) including transport