Power Viability Audit (PVA) Report

[Insert Site Name here]

Performed by:

Insert Company Name

Performed for:

Insert Company Name.

Date:

Click or tap to enter a date.

Words mentioned in this book that are known to be trademarks, whether registered or unregistered, have been capitalised or use initial capitals. Terms identified as trademarks include Cisco®, Microsoft®, Microsoft Windows®, Apple®, AirPort®, Mac®, Linksys®.

# Scope

The scope of this PVA is to do an assessment of a Telstra Exchange for the proposed load growth and assess the impact on the site.

|  |  |
| --- | --- |
| Site Details | Description |
| Site Name | Insert Site Name. |
| Address ID | Insert Address ID. |
| Address | Insert Site Address. |

The assessment shall include a complete review of the incoming infrastructure, such as locations of POS (Point of Supply)/POA (Point of Attachment), sizes and capacities of transformer, mains, MSB, Telstra MSB, etc. This list is not exhaustive, as each site can have a unique infrastructure. Complete details of this infrastructure must be identified within the report.

# Proposed Load Details

Requested power requirement

|  |  |  |  |
| --- | --- | --- | --- |
| Equipment | Red Phase (Aac) | White Phase (Aac) | Blue Phase (Aac) |
| Maximum Demand | Insert load in Amps. | Insert load in Amps. | Insert load in Amps. |

# Records

Provide drawings where applicable of the following:

|  |  |
| --- | --- |
| Site Drawings | Relevant Drawing Number/Attachments |
| Site / Survey Plan |  |
| Site Elevation |  |
| Equipment Layout |  |
| AC Single Line Drawing |  |
| DC Single Line Drawing |  |

# Investigation

Provide a complete description of the Telstra site, along with information about any other huts on site. Include information about the power supply, how it is reticulated, such as pole mounted fuses, etc. Include details of the site MSB and the Telstra MSB, inclusive of service mains and consumer mains sizes, capacity, etc.

* 1. AC Power Supply Details

Include details on the AC power supply into the facility, i.e. single phase, three phase, transformer sizes, consumer mains cabling, service mains cabling, service fuse sizes, etc.

|  |  |
| --- | --- |
| Power Details  | Description  |
| Supply Authority  |   |
| Supply Type (Ø & V)  |   |
| Pole Number / ID  |   |
| Substation Number / ID |  |
| Transformer / Substation Capacity (kVA) |  | **Rating (Amps)** |  |
| Service Fuse Rating  |   |
| Service Mains Cable | **Size (mm2) / Type / Arrangement** |  | **Length (m)**  |  | **CCC (A)**  |  |
| Point of Attachment (POA) Details / Service Mains Route Details |   |
| Consumer Mains Cable  | **Size (mm2) / Type / Arrangement** |  | **Length (m)**  |  | **CCC (A)**  |  |
| Consumer Mains Route Details |  |
| Site Main Switch Rating (A)  | **Switch Type**  |  | **Switch Rating (A)**  |  |
| Site Measured Load (Aac) | **Red**  |  | **White** |  | **Blue** |  |

* 1. Site Main Switchboard (MSB) / Metering Arrangement

Following are the details of the site MSB/Metering arrangement:

|  |  |
| --- | --- |
| MSB Detail | Description |
| MSB Location |  |
| MSB Rating (A) |  |
| MSB Form / Type |  |
| Service Protection Details (Type and Rating) |  |
| Active and Neutral Links (Capacity and Rating) – if available in MSB |  |

Following are the details of the clients supplied from the MSB:

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Client | Meter Number | Meter Location | Supply Type (Ø) | SCCD (Protection CB / Main Switch) | Cable CSA (mm2) and Type | CCC (A) |
| Telstra |  |  |  |  |  |  |
| Add other clients as needed. |  |  |  |  |  |  |

* 1. Telstra Main Switchboard

Following are the details of Telstra’s MSB:

|  |  |
| --- | --- |
| Telstra MSB Detail | Description |
| Telstra MSB Location |  |
| Telstra MSB Rating (A) |  |
| Telstra MSB Form / Type |  |
| Telstra MSB Fault Rating |  |
| Telstra Essential / Non-Essential Board Details |  |

* 1. Earthing (Multiple Earthed Neutral)

Following are the details for the earthing at the site:

|  |  |
| --- | --- |
| MEN Details | Description |
| MEN Location |  |
| No. of MEN | [ ] Singular | [ ] Multiple |
| If multiple MEN, provide details |  |

* 1. Standby Generator Plant Details

Following are the details for the SGP on site:

|  |  |
| --- | --- |
| SGP Detail | Description |
| SGP Rating Type | [ ] Prime | [ ] Standby | [ ] Continuous |
| SGP Rating (based on rating type identified above) | **Rating (kVA)** |  | **Rating (kW)** |  |
| SGP Type |  |
| SGP Year / Manufactured Date |  |
| ATS Details (if embedded in Telstra MSB or separate) |  |
| SGP Output Circuit Breaker (Type and Rating) |  |
| SGP Output Cable Details (Size (mm2) / Type / Arrangement) |  |

* 1. Existing DC Power System Details

Include details on the DC power systems on the facility as needed (if applicable to report).

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| PowerID | Brand/Type | Location | Measured Load | Measured Voltage | Batteries | Rectifiers |
| Add power system loads for the site. |  |  |  |  |  |  |

1. Load Summary

Summary of the loads

* 1. Site Measured Load

|  |
| --- |
| Latent site conditions when load readings were taken |
| Date and Time when Measurement was taken | Click or tap to enter a date. |
| Approximate Outside Temperature | Insert temperature.OC |
| Was Air Conditioning ON? | [ ] Yes | [ ] No |
| Client | **L1 – Red (Aac)** | **L2 – White (Aac)** | **L3 – Blue (Aac)** |
| Telstra |  |  |  |
| Add other loads as needed. |  |  |  |
| Total Measured Load |  |  |  |

* 1. Existing Maximum Demand Evaluation

|  |  |  |  |
| --- | --- | --- | --- |
| Client | L1 – Red (Aac) | L2 – White (Aac) | L3 – Blue (Aac) |
| Telstra |  |  |  |
| Add other loads as needed. |  |  |  |
| Total Measured Load |  |  |  |

* 1. Proposed Maximum Demand Evaluation

|  |  |  |  |
| --- | --- | --- | --- |
| Client | L1 – Red (Aac) | L2 – White (Aac) | L3 – Blue (Aac) |
| Telstra |  |  |  |
| Add other loads as needed. |  |  |  |
| Total Measured Load |  |  |  |

1. Observations

Provide summary of the existing electrical reticulation, distribution, capacity, condition and whether the proposed loads can be added to existing infrastructure. Highlight other observations or compliance issues.

1. Recommendations

Summary of proposed works and associated upgrades required in order to be able to supply the proposed load increase.

1. Technical

Provide a list of standards that would be relevant, such as Australian Standards and Telstra standards.

1. Assumptions

Clearly list out all relevant assumptions made when producing this report.

1. Validity

Identify under what conditions the audit is valid and for how long, e.g.: Is this valid for a maximum of 12 months, etc.

1. Disclaimer

Provide required disclaimer conditions for this report.

1. Exclusion

Identify what information has not been considered as part of this audit.

1. Document Author

|  |  |
| --- | --- |
| Contact | Details |
| Inspection performed by | Insert Name of Auditor |
| Phone number of contractor | Insert Number of Auditor |
| Signed | Insert Signature of Auditor |
| Date | Click or tap to enter a date. |

Appendix A: Maximum Demand Calculations

Provide table of maximum demand calculations as per AS/NZS 3000:2018 Appendix C rules. This should include things like general light and power loads, HVAC nameplate full load amps, rectifier loads, etc.

Appendix B: Site SLD

Include a drawing of the site SLD, this may be a drawing on site or a hand drawn sketch of what was observed on site. The drawing must include all fuse sizes, cable sizes, CB sizes, etc where identified. Additionally provide the neutral and PE diagram (may be hand drawn).

Appendix C: Photos

Include a photo log of all relevant site photos inclusive of site, hut layout, meter panels, MSB, transformer, HVAC plant, circuit schedules from distribution boards, etc. The photos must be of such a quality that all details/labels can be read when zoomed in.