CitiPower/Powercor Technical Standards Update for September 2019

Please ensure that this information is passed on to all employees and contractors with in your organisation.

The following updates are relevant to all technical, field employees and contractors undertaking design, construction and maintenance activities on the CitiPower and Powercor networks.

Technical Standards are available on our website.

*All new design and construction proposals commenced after the **07 November 2019** are required to comply with these updates.*

If you have further questions, please contact the relevant team member associated with the published documents.

Standard Category	*Technical Standard*	*Description*	*Overview*	*Impacted Key Stakeholder/s*
D - General	DS101	Distribution Construction Standard - Signage & Labelling - Poles	Standards updated to include new "Added Controls - Serviceable" signage to replace "Limited life" signage. Standards were also updated to include added controls (AC) wording in pole reinstatement and reinforced pole signage. **Contact: Darren Martini (03) 9683 4738**	**DESIGN CONSTRUCTION MAINTENANCE**
	DS901-999	Distribution Material Standard - Signage & Labelling		

Standard Category	Technical Standard	Description	Overview	Impacted Key Stakeholder/s
D - General	DS518	Distribution Construction Standard - Signage & Labelling - Zone Substation - Cable Terminations	Standard updated to include permanent nameplates on cable terminations within Zone Substations. **Contact: Alan Su (03) 9683 4328**	**DESIGN** **CONSTRUCTION** **MAINTENANCE**
E - Overhead	EM016	Distribution Construction Standard - HV Manual Gas Switches – General Information	Standards updated to include two new (22kV & 11kV) future automation HV gas switches. **Contact: Darren Martini (03) 9683 4738**	**DESIGN** **MAINTENANCE** **CONSTRUCTION**
	EM021	Distribution Construction Standard - Remote Control Gas Switches – General Information		
	EM831-901	Distribution Material Standard - Switches & Isolators		
	EM051	Distribution Construction Standard - LV Fuse Mounts & Isolators – General Information	Standard updated to validate the Fuse Switch Disconnector (FSD) ratings in Table 1. **Contact: Alan Su (03) 9683 4328**	**DESIGN** **CONSTRUCTION**
G - Underground	GH001	Distribution Construction Standard - Hybrid Underground – General Information	Standard updated to provide further guidance on the installation of solar panels. **Contact: Aza Masoudtehrani (03) 9683 4892**	**DESIGN** **CONSTRUCTION** **MAINTENANCE**
	GL052	Distribution Construction Standard - High Voltage Outdoor Switchgear Cabinets	Standards updated to improve constructability. **Contact: Darren Martini (03) 9683 4738**	**DESIGN** **CONSTRUCTION** **MAINTENANCE**
	GL501-711	Distribution Material Standard - Kiosk Substations		
Permitted Materials	PM013	Permitted Material List - Poles - Wood - Version 5 (7 October 2019)	Permitted material list updated to include the latest approved materials & supplier information for option 2 contractors. **Contact: Stephen McGuire - (03) 9297 6415**	**OPTION 2 DESIGN** **OPTION 2 - CONSTRUCTION** **PROJECT MANAGEMENT**
	PM016	Permitted Material List - Public Lighting - Standard Poles, Rag Bolts, etc.- Version 8 (7 October 2019)		

LEGEND
HIGH IMPACT
MEDIUM IMPACT
LOW IMPACT

DS101, DS966, DS972 & DS996 - Signage & Labelling

Key changes*

Release date: 07 October 2019

**Please refer to official standard for details*

What has changed?:

- Technical Standard DS101 have been updated to include:
  - New “Added Controls – Serviceable” (AC-Serviceable) signage. This signage replaces the “Limited Life” signage (figure 1).
  - Enlarged pole reinstatement sign (figure 2)
  - New “AC-Serviceable” terminology to reinforced pole signage (figure 3)
- Technical Standards DS966, 972 and 996 have been updated to include new signage material

Why?:

- The standards have been updated to align with 450 Asset Inspection Manual, where the term “limited life” is no longer used and has been replaced with “Added Controls – Serviceable”.
- The enlargement of the pole reinstatement sign has occurred to cover the “X” marked on poles when the pole has been assessed to be serviceable.

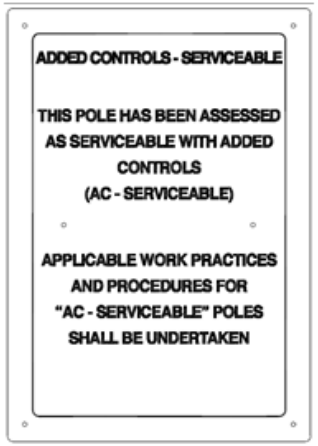

Figure 1

Figure 2

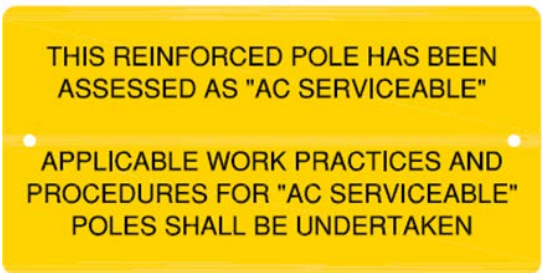

Figure 3

DS518 – Zone Substations – Cable Terminations

Key changes*

Release date: 07 October 2019

**Please refer to official standard for details*

What has changed?:

- Technical Standard DS518 has been updated to reference CC061 – Underground Commissioning Standard for identification of cables via testing
- Cable terminations are to be temporarily marked after cable testing. Permanent nameplates are to be produced for the cable terminations and installed prior to project completion.

Why?:

- The standards have been updated due to an incident where it was identified that the neutral cables from two transformers at MRO Zone Substation were transposed during construction
- The standards has been updated to ensure this incident does not occur in the future

EL051 – LV Fuse Mounts & Isolators

Key changes*

Release date: 07 October 2019

**Please refer to official standard for details*

What has changed?:

- Technical Standard EM051 has been updated to validate the Fuse Switch Disconnector (FSD) ratings in Table 1.

Why?:

- This update was identified as a result of the update to EL021 in May 2019. The addition of the FSD as a transformer LV Bus isolator did not align with the ratings in EM051.
- Confirmation with the suppliers was sought and EM051 was subsequently updated.

Type of Mount	Voltage Rating	Maximum Fuse Rating	Isolator Rating	Fault rating (@ 1sec)	Cable Connections
FSD – 160A	500V	160A	245A	16kA	16mm² to 95mm² (1 in/2 out)
FSD – 400A	415V	400A	630A	25kA	50mm² to 150mm² LVABC or 185mm² Cu (2 in/2 out)
FSD – 630A	415V	630A	1000A	25kA	Lugs with 12mm bolt (2x150mm² LVABC or 2x240mm² Cu)

EM016, EM021, EM861, EM865 & EM867 – Gas Switches

Key changes*

Release date: 07 October 2019

**Please refer to official standard for details*

What has changed?:

- Technical Standard EM016 has been updated to include:
  - The provision for two new future automation HV gas switches, 22kV 400A and 11kV/6.6kV 630A.Future automation gas switches come with motor pack attached but no controller. The controller can be added to the switch in the future to make the switch remote controllable.
  - Reference to the VESI Switchgear Operating Manual
  - Minor amendments to the switchgear rating details in table 1
- Technical Standard EM021 has been updated to include:
  - Reference to EM016 for future automation requirements
  - Reference to the VESI Switchgear Operating Manual
  - Minor amendments to the switchgear rating details in table 1
- Technical Standards EM861, 865 and 867 have been updated to include material information related to the future automation HV gas switchgear

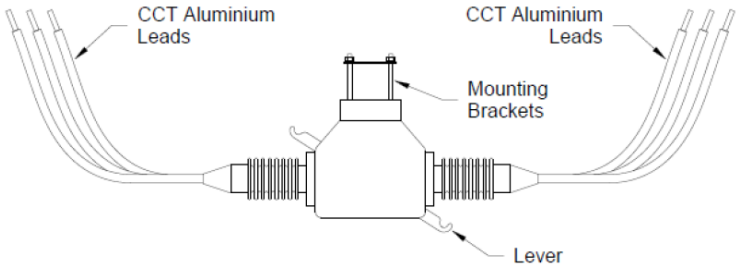

Figure 1 – HV gas switch

Why?:

- The standards have been updated to allow HV gas switches to be automated in the future with minor modifications to the installed switch.

GH001 - Hybrid Underground - General Information

Key changes*

Release date: 07 October 2019

**Please refer to official standard for details*

What has changed?:

- Technical Standards GH001 and Standards Construction Drawings GH403 and GH404 have been updated with Note 12 which provides further guidance on the installation of solar panels

Why?:

- The standards have been updated due to solar panels being installed incorrectly in the field resulting in reduced battery life on the RCU control box

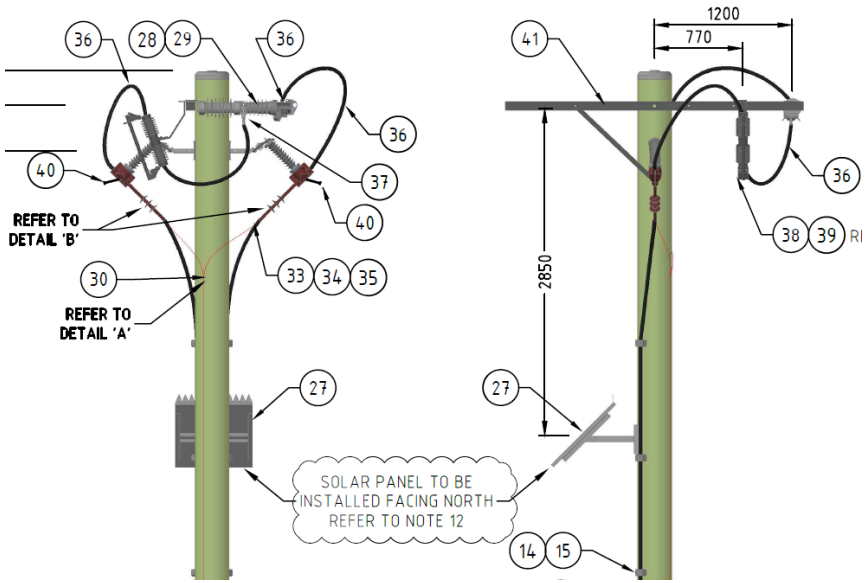

Figure 1 – Hybrid arrangement

GL052, GL663 & GL703 – HV Outdoor Switching Cabinet

Key changes*

Release date: 07 October 2019

**Please refer to official standard for details*

What has changed?

- Technical Standards GL052 & GL663 have been updated to include:
  - Minor modifications to the two pre-cast concrete box foundations to improve constructability
  - Pre-installed elephant trunk support brackets to assist with installation
- Technical Standards GL703 has been updated to include a new hessian sandbags to be installed between elephant trunks and the wall of the foundation and between elephant trunk to elephant trunk

Why?

- The standards have been updated to improve constructability