

NEED/OPPORTUNITY STATEMENT (NOS)



Making the Grid More Resilient - Upgrading Wave Trap for Wagga Line 99X Ratings Augmentation

NOS- 00000001426 revision 2.0

Ellipse project description:

TRIM file: [TRIM No]

Project reason: Upgrading Wave Trap for Line 99X – Wagga 330 to Wagga 132 Ratings Augmentation

Project category: Prescribed - NCIPAP

Approvals

Author	Jim Ye	Operations Analysis Engineer
Reviewed/Endorsed	Jahan Peiris	Network Modelling & Performance Manager
	Hoang Tong	Operations Analysis Manager
	Anwar Kurukchi	Project Portfolio Sponsorship Manager
Approved	Nalin Pahalawaththa	Manager/Power System Analysis
Date submitted for approval	27 October 2016	

2. Need/opportunity for Line 99X

This limitation of radialisation of supply can be significantly improved up to 184 MVA by upgrading the wave trap at Wagga 132 on the line 99X.

The replacement of the wave trap is cost/benefit efficient. It will not only increase reliability benefit to consumer, but also especially boost market benefit of Wagga - Yass transmission capacity at times of high NSW import from Snowy/Victoria.

Therefore, with this proposed *priority project*, the post contingency capacity can be improved as follows:

Option	Post contingency (for the trip of the line 99W or 99X) capacity
Do nothing	137 MVA (due to wave trap at Wagga 132 on line 99X)
Upgrade of line 99X wave trap	184 MVA (due to wave trap at Wagga 132 on line 99W)

3. Related needs/opportunities

Nil

4. Recommendation

It is recommended that the line 99X wave trap at Wagga 132 be replaced in order to allow the Wagga 132 kV overload control scheme to operate at a higher overload threshold.

Attachment 1 Risk costs summary

Current Option Assessment - Risk Summary

Project Name: Wagga132kV TL99X Rating Upgrade

Option Name: 1426 - Base case

Option Assessment Name: 1426 - Base case - Assessment 1

Rev Reset Period: Next (2018-23)



Major Component	No.	Minor Component	Sel. Hazardous Event	LoC x CoF (\$M)	Failure Mechanism	NoxLoC xCoF (\$M)	PoF (Yr 1)	Total Risk (\$M)	Risk (\$M) (Rel)	Risk (\$M) (Op)	Risk (\$M) (Fin)	Risk (\$M) (Peo)	Risk (\$M) (Env)	Risk (\$M) (Rep)
Conductor	1	Conductor (inc Joints)	Unplanned Outage - HV (Conductor)	\$31.20	Break	\$31.20	1.16%	\$0.36	\$0.36					\$0.01
				\$31.20		\$31.20		\$0.36	\$0.36					\$0.01

Total VCR Risk: \$0.36

Total ENS Risk: