

Priority project name and ranking	Summary of project	Have steps been taken in the previous calendar year to implement the priority project?	Priority project completion summary		
			Has the priority project been delivered?	Has the priority project improvement target been achieved?	If the priority project has been delivered, has AEMO been notified of any change in the limit?
Queensland – New South Wales Interconnector (Rank 1)	Changes to current transformer secondary ratios on 8C, 8E, 8L and 8M lines.	No	No	No	No
67 & 68 Murray – Dederang 330kV Switchbays (Rank 2)	Replace wave traps, disconnectors and change CT ratios and protection settings on 67 & 68 line switchbays at Murray 330/132kV Substation.	No	No	No	No
993 Line Protection & Metering Upgrade (Rank 3)	Replace the secondary systems panel for 993 Line at Wagga 330/132kV substation.	No	No	No	No
DLR - 83 Liddell – Muswellbrook, 84 Liddell – Tamworth 330, 85 & 86 Tamworth 330 – Armidale & 88 Muswellbrook – Tamworth 330 330kV Lines (Rank 4)	Install dynamic line ratings based on real time weather data on 83, 84, 85, 86 and 88 330kV Lines.	Yes	No	No	No
99P Line Protection & Metering Upgrade (Rank 5)	Changes to CT ratios at Gadara 132/66kV Substation.	No	No	No	No
DLR - 65 Murray – Upper Tumut & 66 Murray – Lower Tumut 330kV Lines (Rank 6)	Install dynamic line ratings based on real time weather data on 65 and 66 330kV Lines.	Yes	No	No	No
Extension of Directlink Tripping Scheme (Rank 7)	Extend the Directlink emergency tripping scheme to include the transformers at Lismore 330/132kV Substation, 872B bay at Armidale 330/132kV Substation and 872A, 872B and 892A bays at Coffs Harbour 330/132kV Substation.	No	No	No	No
976 Line Configuration & Protection Changes (Rank 8)	Install disconnector at Yass 330/132kV Substation and change of protection settings at Canberra 330/132kV Substation, Yass 330/132kV Substation and Queanbeyan 132/66kV Substation.	Yes	No	No	No
94E Mt Piper 132 – Wallerawang 132 Switchbays (Rank 9)	Replace interplant connections and change current transformer secondary ratios on the 94E Line switchbay at Wallerawang 330/132 kV Substation.	No	No	No	No
DLR - Northern 132kV System (Rank 10)	Install dynamic line ratings based on real time weather data on 967, 96R, 96T and 966 132kV Lines.	Yes	No	No	No
DLR - Snowy – Yass & Canberra 330kV Lines (Rank 11)	Install dynamic line ratings based on real time weather data on 01, 2, 3 and 07 330kV Lines.	Yes	No	No	No
Northern Reactive Plant Control Scheme (Rank 12)	The installation of reactive controller on the Queensland - New South Wales Interconnector (QNI) to maintain the Armidale SVC at near zero output, as well as emergency switching capability for the reactive equipment at Dumaresq and Armidale 330/132kV Substations.	Yes	No	No	No
DLR - 4 & 5 Yass – Marulan, 9 Yass – Canberra, 61 Yass – Bannaby & 39 Bannaby – Sydney West 330kV Lines (Rank 13)	Install dynamic line ratings based on real time weather data on 4, 5, 9, 61 and 39 Lines. Increase the height of transmission line conductor on 61 Line to achieve a 100 degrees C design temperature.	Yes	No	No	No
DLR - 969 Tamworth 330 – Gunnedah 132kV Line (Rank 14)	Install dynamic line ratings based on real time weather data on 969 Line.	Yes	No	No	No
81 & 82 Liddell – Newcastle & Tomago Lines (Rank 15)	Replace interplant connections on 81 & 82 Line switchbays at Liddell and Newcastle, and replace wave traps and change current transformer secondary ratios at Liddell.	No	No	No	No
Beryl Capacitor Bank (Rank 16)	Install a new capacitor bank at Beryl 132kV Substation.	No	No	No	No
TWFL - Snowy Lines (Rank 17)	Install travelling wave fault locators on the Snowy (01, 2, 3, 07, 64, 65, 66 and 97G) lines.	No	No	No	No
TWFL - North Western 132kV System (Rank 18)	Install travelling wave fault locators on the North Western (968, 969, 9U3 and 96M) lines.	No	No	No	No
TWFL - Northern 330kV Lines (Rank 19)	Install travelling wave fault locators on the Northern (83, 84, 88, 85&88 and 8C&8E) lines.	No	No	No	No
TWFL - Far North Coast 132kV System (Rank 20)	Install travelling wave fault locators on the Far North Coast (87, 89 and 96C) lines.	No	No	No	No
Point-on-Wave Switching for 132kV Capacitor Banks (Rank 21)	Replace standard 132kV circuit breakers with point-on-wave circuit breakers.	Yes	No	No	No
Point-on-Wave Switching for 66kV & Below Capacitor Banks (Rank 22)	Replace standard 66kV circuit breakers with point-on-wave circuit breakers.	Yes	No	No	No
Behaviour of Residential Solar During System Events (Rank 23)	Install high speed monitors on connection points with significant penetration of residential solar installations, and fault recorders at locations representative of various load types.	No	No	No	No
TWFL - Southern 330kV Network (Rank 24)	Install travelling wave fault locators on the Southern (63 and 51) Lines.	No	No	No	No
TWFL - Western 220kV Network (Rank 25)	Install travelling wave fault locators on the Western (X5/1, X5/3 and X2) lines.	No	No	No	No
Remote Interrogation of Protection Relays (Rank 26)	Install remote interrogation of protection relays at 13 substations and commission production servers.	No	No	No	No
Communications to Albury, ANM & Hume Substations (Rank 27)	Installation and commissioning of high bandwidth communications network (UGFO) to Albury, ANM and Hume substations.	Yes	No	No	No
Energy Storage (Rank 28)	Install a pilot energy storage device in the Sydney area.	No	No	No	No

<b>Priority project name and ranking</b>	<b>Queensland – New South Wales Interconnector (Rank 1)</b>
<b>Priority project description</b>	Changes to current transformer secondary ratios on 8C, 8E, 8L and 8M lines.
<b>Co-ordinated project</b>	Yes
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The rating of 8C & 8E and 8L & 8M lines are presently limited to 1097MVA(Contingent).
<b>Target limit value(s)</b>	The target rating of 8C & 8E and 8L & 8M lines are 1200MVA(Contingent).
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$0
<b>Estimated operating cost of priority project</b>	\$55,000
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Internal approval to undertake the project has been scheduled in July 2015 (DG 0)</li> <li>● Project commencement date has been scheduled in September 2015 (DG1)</li> <li>● Procurement of equipment has been scheduled in January 2016 (DG2)</li> <li>● Commencement of site works (POS) has been scheduled in April 2016</li> <li>● Project completion has been scheduled in May 2016</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>67 &amp; 68 Murray – Dederang 330kV Switchbays (Rank 2)</b>
<b>Priority project description</b>	Replace wave traps, disconnectors and change CT ratios and protection settings on 67 & 68 line switchbays at Murray 330/132kV Substation.
<b>Co-ordinated project</b>	Yes
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The rating of 67 and 68 lines are presently limited to 1015MVA(Contingent).
<b>Target limit value(s)</b>	The target rating of 67 and 68 lines are 1486MVA(Contingent).
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$360,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Internal approval to undertake the project has been scheduled in June 2016 (DG 0)</li> <li>● Project commencement date has been scheduled in August 2016 (DG1)</li> <li>● Procurement of equipment to commence has been scheduled November 2016 (DG2)</li> <li>● Commencement of site works (POS) has been scheduled in February 2017</li> <li>● Project completion has been scheduled in May 2017</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>993 Line Protection &amp; Metering Upgrade (Rank 3)</b>
<b>Priority project description</b>	Replace the secondary systems panel for 993 Line at Wagga 330/132kV substation.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The rating of 993 line is presently limited to 114MVA(Contingent).
<b>Target limit value(s)</b>	The target rating of 993 line is 122MVA(Contingent).
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$90,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Internal approval to undertake the project has been scheduled in July 2016 (DG 0)</li> <li>● Project commencement date has been scheduled in September 2016 (DG1)</li> <li>● Procurement of equipment has been scheduled in January 2017 (DG2)</li> <li>● Commencement of site works (POS) has been scheduled in April 2017</li> <li>● Project completion has been scheduled in June 2017</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	DLR - 83 Liddell – Muswellbrook, 84 Liddell – Tamworth 330, 85 & 86 Tamworth 330 – Armidale & 88 Muswellbrook – Tamworth 330 330kV Lines (Rank 4)
<b>Priority project description</b>	Install dynamic line ratings based on real time weather data on 83, 84, 85, 86 and 88 330kV Lines.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The rating of 83 line is presently limited to 1160MVA. The rating of 86 line is presently limited to 989MVA. The rating of 84, 85 and 88 lines are presently limited to 983MVA.
<b>Target limit value(s)</b>	Increased line ratings by approximately 20% at times during favourable conditions.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$1,100,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Concept Design of the weather station module has been completed - Wind speed, solar radiation, ambient temperature will be monitored in real time to produce real time ratings for the lines. Moreover, historical ambient conditions will be recorded in the database.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Procurement of equipment has been scheduled in September 2015 (DG2)</li> <li>● Environmental approvals has been scheduled for completion by June 2016</li> <li>● Commencement of site works (POS) has been scheduled in September 2016</li> <li>● Project completion has been scheduled in June 2017</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>99P Line Protection &amp; Metering Upgrade (Rank 5)</b>
<b>Priority project description</b>	Changes to CT ratios at Gadara 132/66kV Substation.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The rating of 99P line is presently limited to 114MVA (Contingent).
<b>Target limit value(s)</b>	The target rating of 99P line is 128MVA (Contingent).
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$0
<b>Estimated operating cost of priority project</b>	\$50,000
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Internal approval to undertake the project has been scheduled in July 2015 (DG 0)</li> <li>● Project commencement date has been scheduled in September 2015 (DG1)</li> <li>● Procurement of equipment has been scheduled in January 2016 (DG2)</li> <li>● Commencement of site works (POS) has been scheduled in April 2016</li> <li>● Project completion has been scheduled in May 2016</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>DLR - 65 Murray – Upper Tumut &amp; 66 Murray – Lower Tumut 330kV Lines (Rank 6)</b>
<b>Priority project description</b>	Install dynamic line ratings based on real time weather data on 65 and 66 330kV Lines.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The rating of 65 and 66 lines are presently limited to 715MVA.
<b>Target limit value(s)</b>	Increased line ratings by approximately 20% at times during favourable conditions.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$400,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Concept Design of the weather station module has been completed - Wind speed, solar radiation, ambient temperature will be monitored in real time to produce real time ratings for the lines. Moreover, historical ambient conditions will be recorded in the database.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Procurement of equipment has been scheduled in June 2015 (DG2)</li> <li>● Environmental approvals has been scheduled for completion by November 2015</li> <li>● Commencement of site works (POS) has been scheduled in February 2016</li> <li>● Project completion has been scheduled in June 2016</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>Extension of Directlink Tripping Scheme (Rank 7)</b>
<b>Priority project description</b>	Extend the Directlink emergency tripping scheme to include the transformers at Lismore 330/132kV Substation, 872B bay at Armidale 330/132kV Substation and 872A, 872B and 892A bays at Coffs Harbour 330/132kV Substation.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	During outages of a transformer at Lismore 330kV Substation, 872B bay at Armidale or a 330kV bay at Coffs Harbour the NSW export on the Directlink interconnector is limited.
<b>Target limit value(s)</b>	The target is to obtain full use of line capacity of the Directlink Interconnector during outages of the Lismore transformers, 872B bay at Armidale or 872A, 872B and 892A bays at Coffs Harbour.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$600,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Preparation of Project Scoping Study has commenced (DG1)
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Completion of Preliminary Design has been scheduled for April 2015 (DG2)</li> <li>● Contract Award has been scheduled for July 2015 (DG3)</li> <li>● Project Completion has been scheduled for February 2016</li> </ul>
<b>Priority project update/comments</b>	



<b>Priority project name and ranking</b>	<b>976 Line Configuration &amp; Protection Changes (Rank 8)</b>
<b>Priority project description</b>	Install disconnector at Yass 330/132kV Substation and change of protection settings at Canberra 330/132kV Substation, Yass 330/132kV Substation and Queanbeyan 132/66kV Substation.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The existing configuration requires the manual operation of disconnector during switching on line 976 or an outage of 976/1.
<b>Target limit value(s)</b>	Reduce likelihood of loss of supply to Queanbeyan and prevents the need for manual operation of disconnectors. Avoid load transfer in the Essential Energy Network
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$110,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Detailed design activities (Preparation of RNF/RTI) has been completed.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Commencement of site works (POS) has been scheduled in March 2015</li> <li>● Project completion has been scheduled in June 2015</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>94E Mt Piper 132 – Wallerawang 132 Switchbays (Rank 9)</b>
<b>Priority project description</b>	Replace interplant connections and change current transformer secondary ratios on the 94E Line switchbay at Wallerawang 330/132 kV Substation.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The rating of 94E line is presently limited to 285MVA(Contingent).
<b>Target limit value(s)</b>	The target rating of 94E line is 373MVA(Contingent).
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$50,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Internal approval to undertake the project has been scheduled in July 2015 (DG0)</li> <li>● Project commencement date has been scheduled in September 2015 (DG1)</li> <li>● Procurement of equipment has been scheduled in January 2016 (DG2)</li> <li>● Commencement of site works (POS) has been scheduled in April 2016</li> <li>● Project completion has been scheduled in June 2016</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>DLR - Northern 132kV System (Rank 10)</b>
<b>Priority project description</b>	Install dynamic line ratings based on real time weather data on 967, 96R, 96T and 966 132kV Lines.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The rating of 967, 96R and 96T lines are presently limited to 136MVA. The rating of 966 line is presently limited to 121MVA.
<b>Target limit value(s)</b>	Increased line ratings by approximately 20% at times during favourable conditions.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$1,000,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Concept Design of the weather station module has been completed - Wind speed, solar radiation, ambient temperature will be monitored in real time to produce real time ratings for the lines. Moreover, historical ambient conditions will be recorded in the database.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Procurement of equipment has been scheduled in September 2015 (DG2)</li> <li>● Environmental approvals has been scheduled for completion by June 2016</li> <li>● Commencement of site works (POS) has been scheduled in September 2016</li> <li>● Project completion has been scheduled in June 2017</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>DLR - Snowy – Yass &amp; Canberra 330kV Lines (Rank 11)</b>
<b>Priority project description</b>	Install dynamic line ratings based on real time weather data on 01, 2, 3 and 07 330kV Lines.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The rating of 01 and 2 lines are presently limited to 995MVA. The rating of 3 and 07 lines are presently limited to 1132MVA.
<b>Target limit value(s)</b>	Increased line ratings by approximately 20% at times during favourable conditions.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$1,400,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Concept Design of the weather station module has been completed - Wind speed, solar radiation, ambient temperature will be monitored in real time to produce real time ratings for the lines. Moreover, historical ambient conditions will be recorded in the database.
<b>Priority project key milestones and dates</b>	<p>Project Scoping Process completed.</p> <ul style="list-style-type: none"> <li>● Procurement of equipment has been scheduled in February 2015 (DG2)</li> <li>● Environmental approvals has been scheduled for completion by June 2015</li> <li>● Commencement of site works (POS) has been scheduled in September 2015</li> <li>● Project completion has been scheduled in December 2015</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>Northern Reactive Plant Control Scheme (Rank 12)</b>
<b>Priority project description</b>	The installation of reactive controller on the Queensland - New South Wales Interconnector (QNI) to maintain the Armidale SVC at near zero output, as well as emergency switching capability for the reactive equipment at Dumaresq and Armidale 330/132kV Substations.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	Failure to provide reactive support can impose market constraints when the SVC at Armidale is operating at its limit.
<b>Target limit value(s)</b>	Provision of adequate post contingent voltage control in the Northern area and reduce the need for operator intervention.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$524,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Detail design and procurement activities have commenced.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Commencement of site works (POS) has been scheduled in October 2015</li> <li>● Project completion has been scheduled in April 2016</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>DLR - 4 &amp; 5 Yass – Marulan, 9 Yass – Canberra, 61 Yass – Bannaby &amp; 39 Bannaby – Sydney West 330kV Lines (Rank 13)</b>
<b>Priority project description</b>	Install dynamic line ratings based on real time weather data on 4, 5, 9, 61 and 39 Lines. Increase the height of transmission line conductor on 61 Line to achieve a 100 degrees C design temperature.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The rating of 4 and 5 lines are presently limited to 880MVA. The rating of 9, 39 and 61 lines are presently limited to 995MVA.
<b>Target limit value(s)</b>	Increased line ratings by approximately 20% at times during favourable conditions. Uprate line 61's design temperature of 100°C.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$2,600,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
	Concept Design of the weather station module has been completed - Wind speed, solar radiation, ambient temperature will be monitored in real time to produce real time ratings for the lines. Moreover, historical ambient conditions will be recorded in the database.
<b>Priority project key milestones and dates</b>	Uprating works on line 61 (from 85 to 100 degrees) has been completed. <ul style="list-style-type: none"> <li>● Procurement of equipment has been scheduled in June 2015 (DG2)</li> <li>● Environmental approvals has been scheduled for completion by March 2016</li> <li>● Commencement of site works (POS) has been scheduled in June 2016</li> <li>● Project completion has been scheduled in March 2017</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>DLR - 969 Tamworth 330 – Gunnedah 132kV Line (Rank 14)</b>
<b>Priority project description</b>	Install dynamic line ratings based on real time weather data on 969 Line.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The rating of 969 line is presently limited to 82MVA.
<b>Target limit value(s)</b>	Increased line ratings by approximately 20% at times during favourable conditions.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$300,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Concept Design of the weather station module has been completed - Wind speed, solar radiation, ambient temperature will be monitored in real time to produce real time ratings for the lines. Moreover, historical ambient conditions will be recorded in the database.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Procurement of equipment has been scheduled in September 2015 (DG2)</li> <li>● Environmental approvals has been scheduled for completion by June 2016</li> <li>● Commencement of site works (POS) has been scheduled in September 2016</li> <li>● Project completion has been scheduled in June 2017</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>81 &amp; 82 Liddell – Newcastle &amp; Tomago Lines (Rank 15)</b>
<b>Priority project description</b>	Replace interplant connections on 81 & 82 Line switchbays at Liddell and Newcastle, and replace wave traps and change current transformer secondary ratios at Liddell.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The rating of 81 and 82 lines are presently limited to 1428MVA(Contingent).
<b>Target limit value(s)</b>	The target rating of 81 and 82 lines are 1646MVA(Contingent).
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$600,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Internal approval to undertake the project has been scheduled in January 2017 (DG 0)</li> <li>● Commencement of Project Scoping (DG1) has been scheduled for March 2017.</li> <li>● Completion of Preliminary Design has been scheduled for July 2017 (DG2)</li> <li>● Contract Award has been scheduled for October 2017 (DG3)</li> <li>● Possession of Site has been scheduled for January 2018</li> <li>● Project Completion has been scheduled for May 2018</li> </ul>
<b>Priority project update/comments</b>	



<b>Priority project name and ranking</b>	<b>Beryl Capacitor Bank (Rank 16)</b>
<b>Priority project description</b>	Install a new capacitor bank at Beryl 132kV Substation.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The current capacity in the Beryl and Mudgee area is 91MW.
<b>Target limit value(s)</b>	With the provision of reactive support at Beryl substation the capacity will be increased by 6MW.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$1,900,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Commencement of Project Scoping has been scheduled for February 2015(DG1).</li> <li>● Completion of Preliminary Design has been scheduled for September 2015 (DG2).</li> <li>● Contract Award has been scheduled for March 2016 (DG3).</li> <li>● Possession of Site has been scheduled for June 2016.</li> <li>● Project Completion has been scheduled for January 2017.</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>TWFL - Snowy Lines (Rank 17)</b>
<b>Priority project description</b>	Install travelling wave fault locators on the Snowy (01, 2, 3, 07, 64, 65, 66 and 97G) lines.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	Extensive travel and inspection time required to locate faults on the Snowy (01, 2, 3, 07, 64, 65, 66 and 97G) lines.
<b>Target limit value(s)</b>	Reduction to the response time to locate, inspect and if required, repair faults on the Snowy (01, 2, 3, 07, 64, 65, 66 and 97G) lines.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$2,211,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Project Scoping activities have commenced.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>●Completion of Preliminary Design has been scheduled for September 2015 (DG2).</li> <li>●Contract Award has been scheduled for March 2016 (DG3).</li> <li>●Possession of Site has been scheduled for June 2016.</li> <li>●Project Completion has been scheduled for June 2017.</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>TWFL - North Western 132kV System (Rank 18)</b>
<b>Priority project description</b>	Install travelling wave fault locators on the North Western (968, 969, 9U3 and 96M) lines.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	Extensive travel and inspection time required to locate faults on the North Western (968, 969, 9U3 and 96M) lines.
<b>Target limit value(s)</b>	Reduction to the response time to locate, inspect and if required, repair faults on the North Western (968, 969, 9U3 and 96M) lines.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$877,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Project Scoping activities have commenced.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>●Completion of Preliminary Design has been scheduled for September 2015 (DG2).</li> <li>●Contract Award has been scheduled for March 2016 (DG3).</li> <li>●Possession of Site has been scheduled for June 2016.</li> <li>●Project Completion has been scheduled for June 2017.</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>TWFL - Northern 330kV Lines (Rank 19)</b>
<b>Priority project description</b>	Install travelling wave fault locators on the Northern (83, 84, 88, 85&88 and 8C&8E) lines.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	Extensive travel and inspection time required to locate faults on the Northern (83, 84, 88, 85&88 and 8C&8E) lines.
<b>Target limit value(s)</b>	Reduction to the response time to locate, inspect and if required, repair faults on the Northern (83, 84, 88, 85&88 and 8C&8E) lines.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$1,895,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Project Scoping activities have commenced.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>●Completion of Preliminary Design has been scheduled for September 2015 (DG2).</li> <li>●Contract Award has been scheduled for March 2016 (DG3).</li> <li>●Possession of Site has been scheduled for June 2016.</li> <li>●Project Completion has been scheduled for June 2017.</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>TWFL - Far North Coast 132kV System (Rank 20)</b>
<b>Priority project description</b>	Install travelling wave fault locators on the Far North Coast (87, 89 and 96C) lines.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	Extensive travel and inspection time required to locate faults on the Far North Coast (87, 89 and 96C) lines.
<b>Target limit value(s)</b>	Reduction to the response time to locate, inspect and if required, repair faults on the Far North Coast (87, 89 and 96C) lines.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$890,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Project Scoping activities have commenced.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>●Completion of Preliminary Design has been scheduled for September 2015 (DG2).</li> <li>●Contract Award has been scheduled for March 2016 (DG3).</li> <li>●Possession of Site has been scheduled for June 2016.</li> <li>●Project Completion has been scheduled for June 2017.</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>Point-on-Wave Switching for 132kV Capacitor Banks (Rank 21)</b>
<b>Priority project description</b>	Replace standard 132kV circuit breakers with point-on-wave circuit breakers.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	Transient distortion of supply voltage during capacitor switching causes damage to HV plant and equipment.
<b>Target limit value(s)</b>	Reduce transient distortion through the installation of point-on-wave switching on 3 capacitor banks.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$631,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
<b>Priority project key milestones and dates</b>	<p>Detail design and procurement activities have commenced.</p> <p>Project will be bundled with major capital works (e.g. substation rebuild) where possible to achieve efficiencies.</p> <ul style="list-style-type: none"> <li>●Project Completion has been scheduled for March 2018.</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>Point-on-Wave Switching for 66kV &amp; Below Capacitor Banks (Rank 22)</b>
<b>Priority project description</b>	Replace standard 66kV circuit breakers with point-on-wave circuit breakers.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	Transient distortion of supply voltage during capacitor switching causes damage to HV plant and equipment.
<b>Target limit value(s)</b>	Reduce transient distortion through the installation of point-on-wave switching on 24 capacitor banks.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$4,500,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
<b>Priority project key milestones and dates</b>	<p>Detail design and procurement activities have commenced.</p> <p>Project will be bundled with major capital works (e.g. substation rebuild) where possible to achieve efficiencies.</p> <ul style="list-style-type: none"> <li>●Project Completion has been scheduled for March 2018.</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>Behaviour of Residential Solar During System Events (Rank 23)</b>
<b>Priority project description</b>	Install high speed monitors on connection points with significant penetration of residential solar installations, and fault recorders at locations representative of various load types.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	Potential behaviour of residential solar generation during system events, that could exacerbate the effect of some system events.
<b>Target limit value(s)</b>	Realisation of the behaviour of residential solar generation during system events. Records will improve data availability for the calculation of load indices.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$1,850,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Internal approval to undertake the project has been scheduled in June 2016 (DG 0)</li> <li>● Project commencement date has been scheduled in October 2016 (DG1)</li> <li>● Procurement of equipment has been scheduled in January 2017 (DG2)</li> <li>● Commencement of site works (POS) has been scheduled in August 2017</li> <li>● Project completion has been scheduled in March 2018</li> </ul>
<b>Priority project update/comments</b>	



<b>Priority project name and ranking</b>	<b>TWFL - Southern 330kV Network (Rank 24)</b>
<b>Priority project description</b>	Install travelling wave fault locators on the Southern (63 and 51) Lines.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	Extensive travel and inspection time required to locate faults on the Southern (63 and 51) lines.
<b>Target limit value(s)</b>	Reduction to the response time to locate, inspect and if required, repair faults on the Southern (63 and 51) lines.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$1,347,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Project Scoping activities have commenced.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>●Completion of Preliminary Design has been scheduled for September 2015 (DG2).</li> <li>●Contract Award has been scheduled for March 2016 (DG3).</li> <li>●Possession of Site has been scheduled for June 2016.</li> <li>●Project Completion has been scheduled for June 2017.</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>TWFL - Western 220kV Network (Rank 25)</b>
<b>Priority project description</b>	Install travelling wave fault locators on the Western (X5/1, X5/3 and X2) lines.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	Extensive travel and inspection time required to locate faults on the Western (X5/1, X5/3 and X2) lines.
<b>Target limit value(s)</b>	Reduction to the response time to locate, inspect and if required, repair faults on the on the Western (X5/1, X5/3 and X2) lines.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$877,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Project Scoping activities have commenced.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>●Completion of Preliminary Design has been scheduled for September 2015 (DG2).</li> <li>●Contract Award has been scheduled for March 2016 (DG3).</li> <li>●Possession of Site has been scheduled for June 2016.</li> <li>●Project Completion has been scheduled for June 2017.</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>Remote Interrogation of Protection Relays (Rank 26)</b>
<b>Priority project description</b>	Install remote interrogation of protection relays at 13 substations and commission production servers.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The existing protection relay fault information at Holroyd, Rookwood Road, Griffith, Wallerawang, Tomago, Williamsdale, Barnaby, Glen Innes, Wagga North, Uranquinty, Wollar, Mt Piper 500kV and Bayswater Substations is limited in that it is stored at site and requires site visits to access/interrogate.
<b>Target limit value(s)</b>	Ability to remotely interrogate protection relay information from the 13 Substations above and commission production servers.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$1,000,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Internal approval to undertake the project has been scheduled in January 2017 (DG 0)</li> <li>● Project commencement date has been scheduled in March 2017 (DG1)</li> <li>● Procurement of equipment has been scheduled in September 2017 (DG2)</li> <li>● Project completion has been scheduled in March 2018</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>Communications to Albury, ANM &amp; Hume Substations (Rank 27)</b>
<b>Priority project description</b>	Installation and commissioning of high bandwidth communications network (UGFO) to Albury, ANM and Hume substations.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The communication link is slow and do not support SCADA or advanced protection schemes connections.
<b>Target limit value(s)</b>	The target limit is achieving commissioning of the communication link to Albury , ANM and Hume substations.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$4,200,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	Detail design works are progressing.
	Preparation of Specification is being undertaken.
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>●Contract Award (DG3) has been scheduled in June 2015</li> <li>●Possession of Site (POS) has been scheduled in September 2015 <ul style="list-style-type: none"> <li>●Completion of Jindera ANM - May 2016</li> <li>●Completion of ANM Albury - September 2016</li> <li>●Completion of Albury Hume - March 2017</li> </ul> </li> <li>●Project Completion has been scheduled in April 2017</li> </ul>
<b>Priority project update/comments</b>	

<b>Priority project name and ranking</b>	<b>Energy Storage (Rank 28)</b>
<b>Priority project description</b>	Install a pilot energy storage device in the Sydney area.
<b>Co-ordinated project</b>	No
<b>Has the priority project been commenced ?</b>	
<b>Date of priority project completion</b>	
<b>Limit(s) addressed by priority project</b>	
<b>Initial limit value(s)</b>	The network is limited in the unpredictability of intermittent generation and constraints between generation areas and load centres at times of high load.
<b>Target limit value(s)</b>	Review of the storage technology and install pilot energy storage device to the network.
<b>Completion limit values</b>	
<b>Estimated capital cost of priority project</b>	\$4,900,000
<b>Estimated operating cost of priority project</b>	\$0
<b>Capital expenditure to date</b>	
<b>Operating expenditure to date</b>	
<b>Priority project key milestones and dates</b>	<ul style="list-style-type: none"> <li>● Project commencement date has been scheduled in August 2015 (DG1)</li> <li>● Procurement of equipment has been scheduled in March 2016 (DG2)</li> <li>● Project completion has been scheduled in February 2018</li> </ul>
<b>Priority project update/comments</b>	