INFRASTRUCTURE INTEGRATION AND ECONOMIC DEVELOPMENT IN THE HUNTER REGION

Overcoming infrastructure bottlenecks for a major export hub

PANELLIST

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ARTC

HUNTER VALLEY MAJOR WORKS

CEDA Presentation
September 2008

Background

In October 2007 ARTC restructured to create focussed regional delivery Divisions:

- East West
- North South
- Hunter Valley
- CRN

Each Division has a General Manager who has complete responsibility to deliver according to needs of their region/market.

Hunter Valley Division is committed to working with all necessary stakeholders to ensure reliable capacity is in place ahead of industry demand.

Hunter Valley Background Principles

ARTC is committed to ensuring its operations and infrastructure meet capacity requirements ahead of demand by the coal industry.

ARTC recognises that it is part of a coal chain and cannot achieve this outcome independently of other coal chain participants; including producers, other service providers and a range of Government bodies.

ARTC will therefore continue to pursue engagement with all entities that play a role in

- Determining requirements, and
- Ability to implement initiatives

ARTC operates as a commercial entity and must be able to achieve relevant return again risk on capital invested.

Hunter Valley Background Principles

There are two key bodies of work:

Delivery of physical infrastructure

Development of a commercial framework that will deliver certainty to industry.

Physical Infrastructure

ARTC has a rolling 5 year infrastructure delivery plan which is updated annually. This plan is publicly available on ARTC's website.

ARTC models required infrastructure under assumptions drawn from industry in relation to future timing and characteristics of demand.

It takes 2-3 years to plan, design and deliver major infrastructure; changes 'mid-design' will add to cost and potentially jeopardise timing of delivery.

Therefore, having a clear and sufficiently timely indication of demand pattern (timing and geographical source) is central to ARTC's ability to deliver in a timely fashion.

Current infrastructure plans are all "on plan" in accordance with critical paths, however, there are a number of risk areas such as resource availability that will challenge delivery.

Non Infrastructure Issues

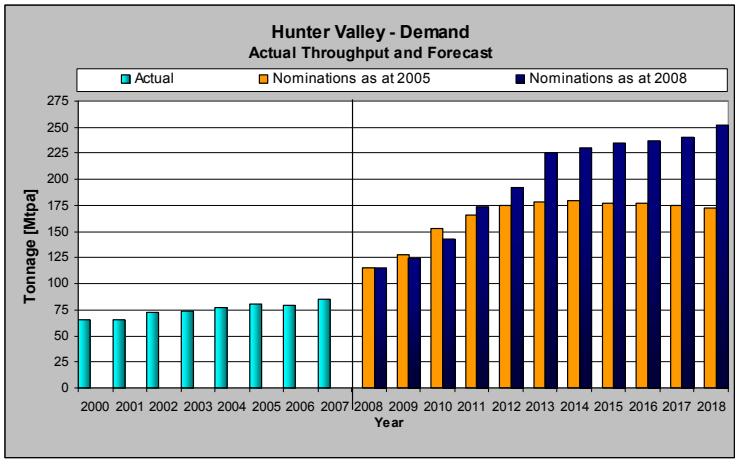
Only establishment of appropriate commercial frameworks that match investment risk with investment outcomes over aligned timeframes will ensure ongoing appropriate investment by all parties against future requirements and deliver certainty that industry is seeking.

In this regard ARTC is engaged in two pieces of work:

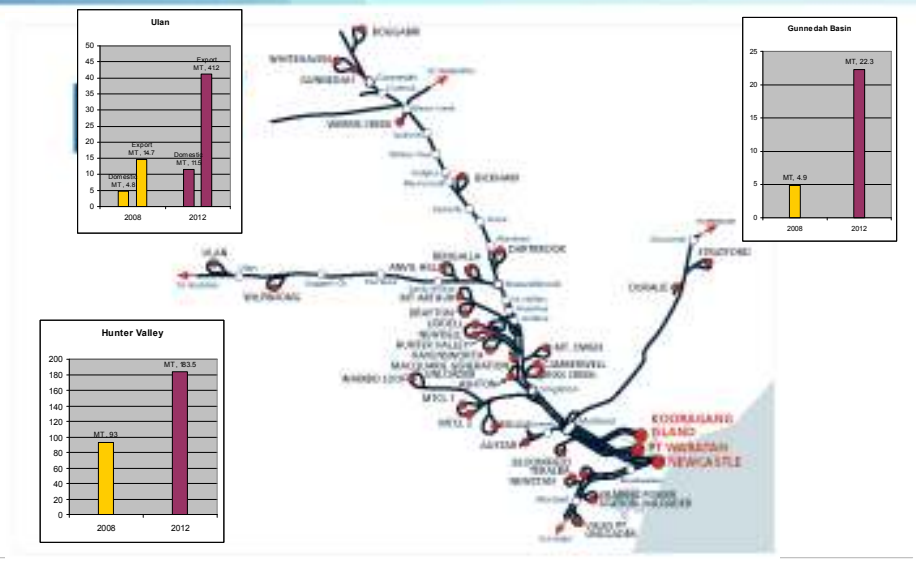
- Establishment of independent HVCCC

- Development of ARTC HV Access Undertaking

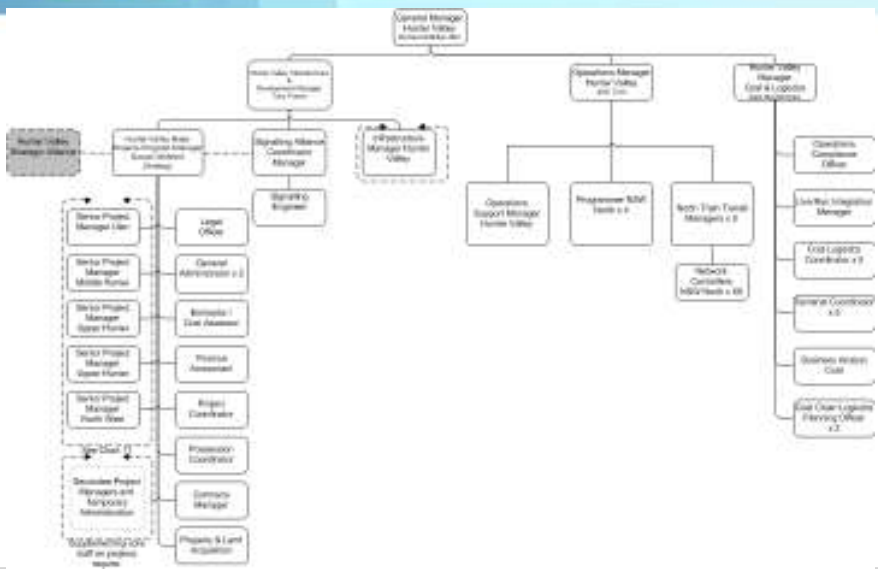
Forward Forecast Demand Forecast & Comparison 2005 vs 2008



Where is the future growth ?



ARTC - addressing HV growth demand



Major Projects, Hunter Valley

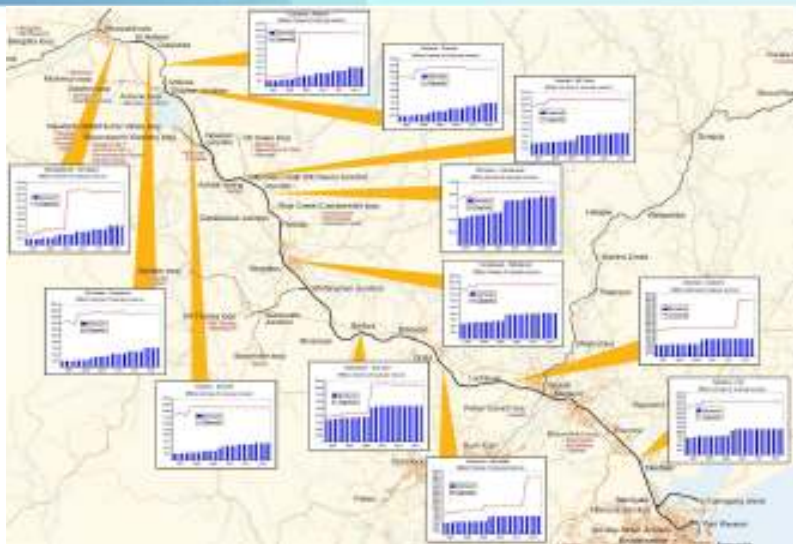
HV Major Projects team is dedicated just to the Delivery of Capacity Improvement Projects in the Hunter Valley

- Delivery HV Capacity Improvement Strategy (~$1B over 5 years)
- Delivery of CRN Capacity Improvements (~$50M over 2 years)

Hunter Valley Context

- A lost train will cost around $0.7 to $1.5M to the coal industry
- There are 4 x 48hr possession windows available each year
- New infrastructure must be delivered under ever increasing train movements as demand grows
- The market is '*Hot*' and resources are limited

Strategists Determines Coal Trends and Capacity Requirements



Refer ARTC HV Strategy 2007-2012

EXAMPLE

Current Projects – SNAP SHOT

Hunter Valley

Construction or recently completed

- Antiene to Grasstree Duplication (~$27M)
- St Heliers to Muswellbrook Duplication (~$27M)
- Wollar Loop (~$10M)
- Mangoola Loop (~$11M)
- Ulan CTC (~$15M) + associated level crossing upgrades – St 4 commissioned June 08
- Ardglen Loop (~$13M) – commissioned July 08
- Willow Tree Loop (~$7M) – commissioned June 08

Development

- Bi-directional Signalling (Maitland to Branxton) (~$40M)
- Minimbah 3rd Track (~$100M) – enabling works is progressing in the field
- Ulan Line Tunnel Ventilation Investigation (~$0.6M)
- Minimbah to Maitland 3rd Track (~$270M) – Concept
- 3 more Ulan Loops (~$30M)

Current Projects – SNAP SHOT

North West

Construction

Breeza, Curlewis & Emerald Hill Loops incl CTC Gap to Emerald Hill (~$20M) – commissioned July 08/August 08

Development

Development of Boggabri Loop incl CTC Emerald Hill to Narrabri (~$20M)

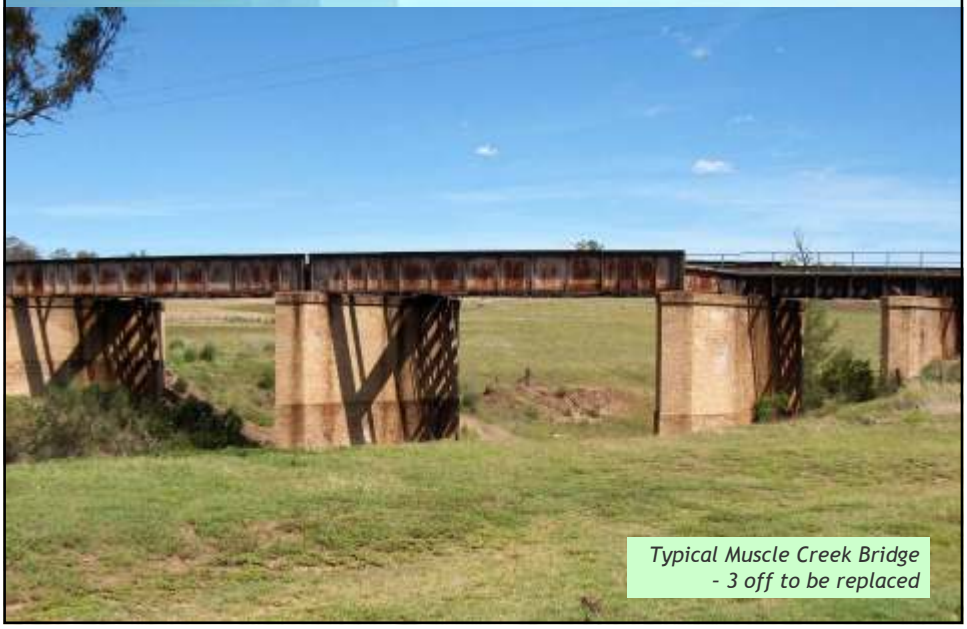
Projects Currently Underway or recently completed in the Hunter Valley

Antiene to Grasstree

100,000m3 earthworks
6.5km of track duplication
Bi-directional signalling Up and Down Main
3 High Speed Crossovers

On Target for completion November 2008

St Heliers to Muswellbrook



Typical Muscle Creek Bridge
- 3 off to be replaced

Mangoola Loop -
Civil Works complete

Wollar Loop
Civil Works Complete

Ardglen Loop
Commissioned 22 July 2008

Willow Tree Loop
Completed

Projects Currently Underway or recently completed on the CRN

Breeza Loop – 213m extension

Curlewis Turnout – 915m extension

Works also include CTC Gap to Narrabri

Emerald Hill Loop – 380m extension

Future Projects

PROJECTS THAT WILL LIKELY BE PART 3A (Major Works SEPP) – DETERMINED BY THE MINISTER

BiDi Signalling – 26km of signalling works - Maitland to Branxton (was part 5 but with revised costs now over $30M will be part 3A)

Minimbah Bank 3rd Road – approx 10km of third track (ARTC have submitted PAR to DP and we have received DG's Requirements) – start on site Jan 09

Minimbah to Maitland 3rd Road – approx 30km of third track with some reconfiguration in Maitland Yard

Nundah Bank 3rd Road – approx 10km of third track (just beyond the current strategy but will likely be in next version with compressed delivery time).

Muswellbrook to Mt Pleasant Duplication - approx 10km of second track on the Ulan Line

Muswellbrook to Koolbury Duplication - approx 6km of second track on the Ulan Line

Future Projects (continued)

Werris Creek Bypass (Binnaway Line Restoration) - approx 2km of line restoration

Liverpool Range Deviation – approximately 20km of new alignment with multiple options currently under consideration

NOTE THAT THERE ARE NUMEROUS OTHER SMALLER PROJECTS THAT WILL BE DELIVERED CONCURRENTLY (LESS THAN $30M each)

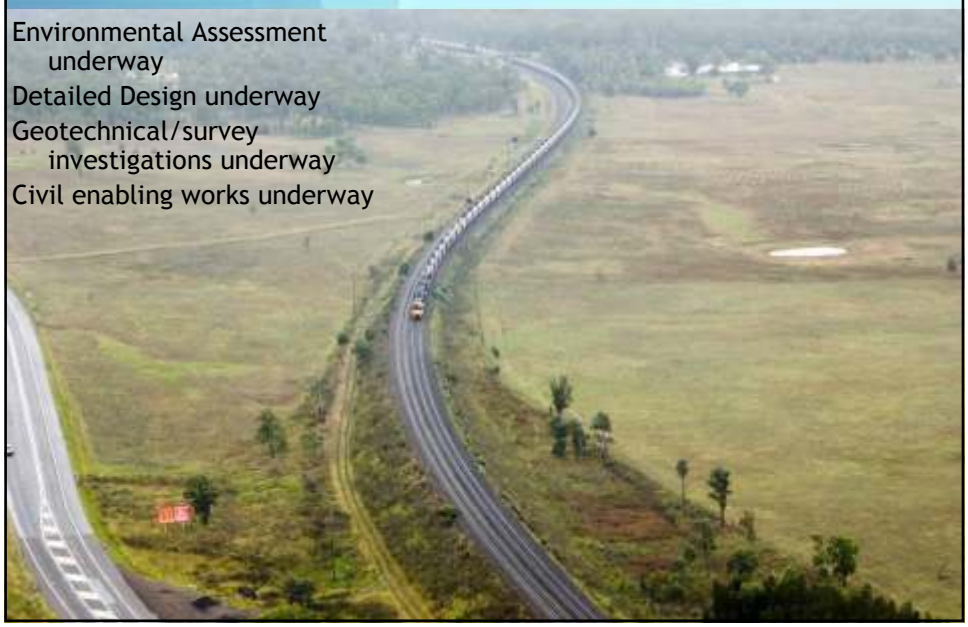
Minimbah Third Track

Environmental Assessment underway

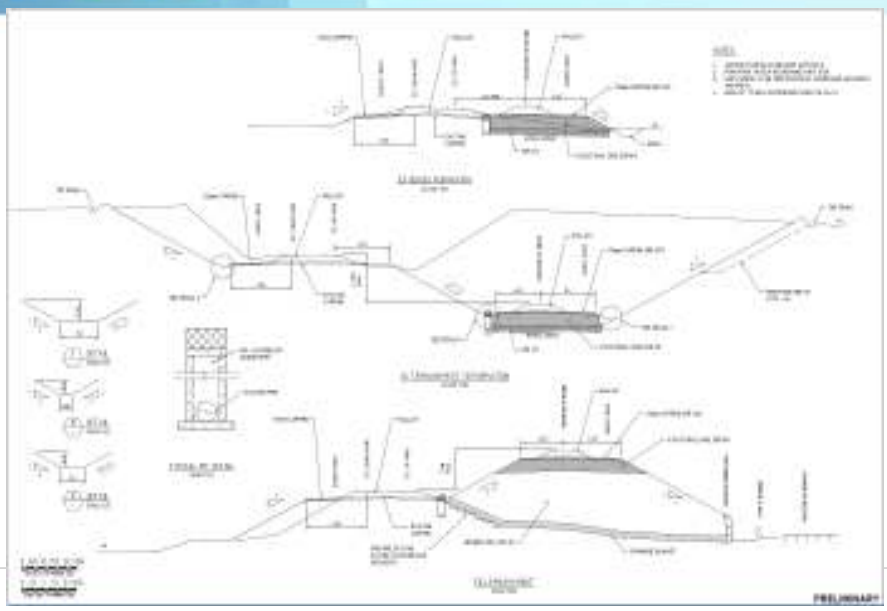
Detailed Design underway

Geotechnical/survey investigations underway

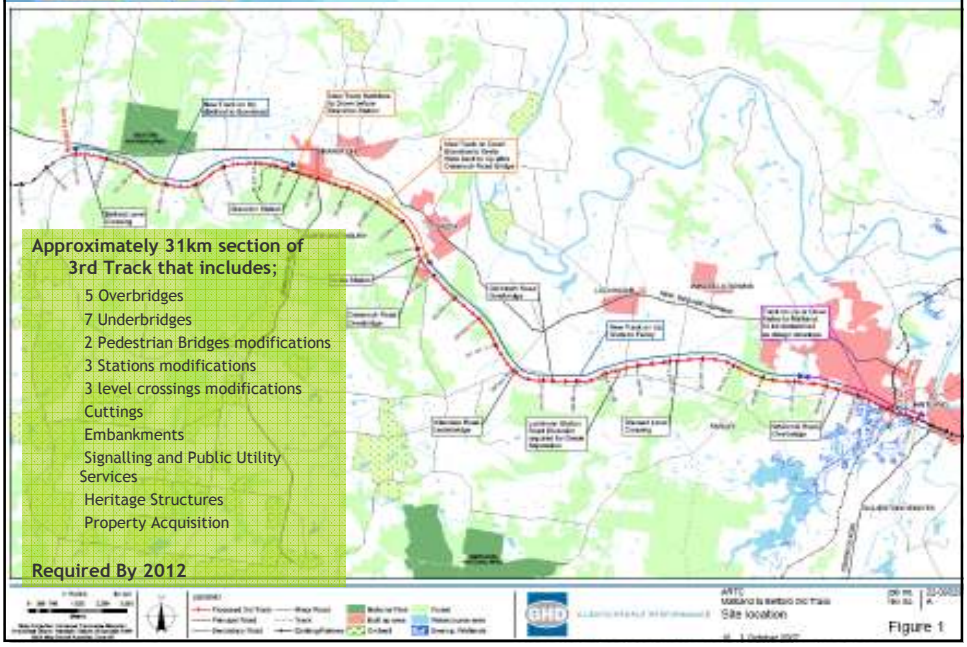
Civil enabling works underway



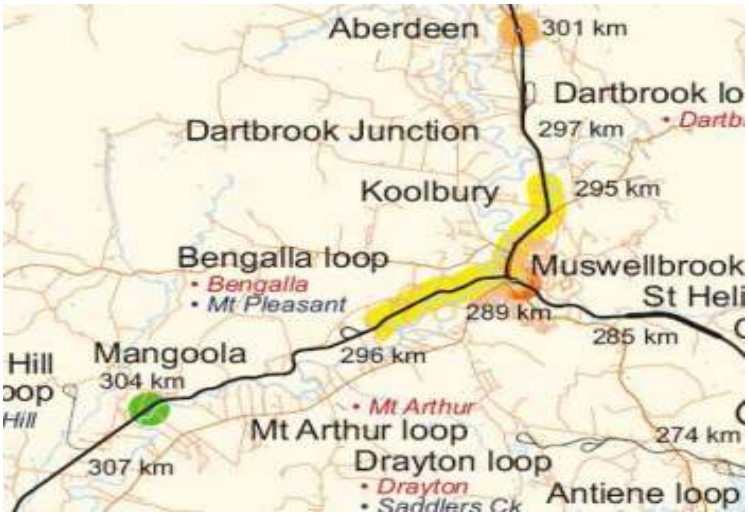
Types of Footprint created by a 3rd Road



Maitland to Minimbah - 3rd Road



Muswellbrook to Mt Pleasant Duplication and Muswellbrook to Koolbury Duplication



Liverpool Range – 6 Options

Challenges we will face

Finding Professional Staff to deliver the program (on the client side)
Timely Land Acquisition
Ministerial Approvals (Part 3A can take 9 to 18 months)
Co-operation from Utilities who have unaligned agendas
Construction under increasing train volumes
Potential increase in noise and “green” complaints
Unknown Impact of Carbon Trading
An overheated market and the management of escalating costs
Constrained resource availability, especially signalling Managing key Stakeholder expectations (with both time and money)

Non Infrastructure Issues

Hunter Valley Coal Chain Coordinator

ARTC Hunter Valley Undertaking

STATUS OF HUNTER VALLEY CORRIDOR
2007-2012 CAPACITY STRATEGY

HUNTER VALLEY CORRIDOR 2007-2012 CAPACITY STRATEGY – PROGRESS

Prepared by: G Withford
Date: 29 July 2008

	2006-2011 STRATEGY TIMING	2007-2012 STRATEGY TIMING	Commissioned Cost ($M)	Scheduled Delivery Date	Comment/Status	Performance; (Note; 'On time' is within 3 months of strategy date given the inflexible nature of the possession regime, ie 4 x possessions per year)
Newcastle – Muswellbrook						
Sandgate Grade Separation	By 1st half 2007	Completed	$80.00	Completed Nov 2006		Early
80km/hr approaching Minimbah Bank	By 1st half 2007	Completed	$0.60	Completed Nov 2006 - sl 1		Early
Muswellbrook Loop & Junction	By 2nd half 2007	Completed	$11.02	Completed May 2007		Early
Minimbah Bank 10 min headway	By 2nd half 2007	Deleted	$0.00	Deleted		Deleted
80km/hr approaching Nundah Bank	By 1st half 2007	Completed	$0.60	Completed Nov 2006 - sl 1		Early
Nundah Bank 10 min headway	By 2nd half 2007	Deleted	$0.00	Deleted		Deleted
Antiene to Grasstree Duplication	By 2008	By Q1 2009		Target November 2008 (was August)		Early
Bidirectional Signalling Maitland to Branxton	By 2009	By Q3 2009		Target June 2009	Detailed Design well advanced	On time
Bidirectional Signalling Whittingham to Newdell	By 2008	Deleted		Deleted		Deleted
Minimbah Bank 3rd Road	By 2010	By Q4 2009		Target March 2010	Enabling works has commenced.	On time
Newdell Junction	By 2009	By Q1 2010		Target Q1 2010	Detailed Design Well advanced	On Time
St Heliers – Muswellbrook Duplication	By 2009	By Q3 2009		Target March 2009	Enabling works and bridges commeced construction, civil tender to be call next week	Early
Nundah Bank 3rd Road	By 2011	Deleted		Deleted		Deleted
Drayton Junction Upgrade	By 2011	By 2011		Target by 2011		Not Commenced
Bidirectional Signalling Newdell to Drayton	By 2010	Deleted		Deleted		Deleted
Bidirectional Signalling Grasstree – St Heliers	By 2009	By Q3 2009		Target March 2009	Delivered as part of Duplication	Early
Allandale Resignalling for 8-minute headways	New	By Q3 2009		Target March 2009	Delivered as part of BiDi Project	On Time
Minimbah – Maitland 3rd Road	New	By 2012		By 2012	Feasibility has commenced	On Time

Completed Projects
Construction Has Commenced or tenders called
Deleted Projects
Late Projects

Muswellbrook – Ulan						
Ulan Line CTC	By 2nd half 2007	By Q1 2008	tba	Stage 1 and Stage 2, commissioned January 2008, Stagte 3 Commissioned in March 2008, Stage 4 targeted for 26 May 2008		Late
Mangoola (304km) Loop	By 2008	By Q4 2008		Target July 2008 (was June)		Early
Bylong (Rylestone Rd) (381km) Loop	By 2008	By Q4 2008		Target November 2008	Detailed Design well advanced	On Time
Wollar (410km) Loop	By 2009	By Q4 2008		Target July 2008 (was May)		Early
Aerosol Valley (370km) Loop	By 2010	By 2010		Target 2010	Feasibility has commenced	On Time
Worondi (348km) Loop	By 2010	By 2010		Target 2010	Feasibility has commenced	On Time
Radio Hut (319km) Loop	New	By 2012		Target 2012	Feasibility has commenced	On Time
Muswellbrook – Bengalla Duplication	New	By 2012		Target 2012		Not Commenced
Muswellbrook – Narrabri						
Togar Loop Extension	By 2nd half 2007	Completed	$4.00	Completed May 07		On Time
Murulla Loop Extension	By 2nd half 2007	Completed	$4.80	Completed May 07		On Time
Gunnedah Loop (RIC)	By 2nd half 2007	By Q1 2008	$10.00	Completed December 2007		On Time
Werris Creek – Narrabri Power Operation (RIC)	By 2nd half 2007	Deleted		Deleted		Deleted
Ardglen Loop Extension	By 2008	By Q2 2008		Target for July 2008	Commissioning has slid 1 mth	On Time
Willow Tree Loop Extension	By 2008	By Q1 2008		Completed May 2008		Late
Werris Creek Loop Extension	By 2008	Completed	tba	Completed December 2007		On Time
Werris Creek Bypass	New	By 2011		Target 2011		Not Commenced
Quirindi Loop Extension	By 2009	Deleted		Deleted		Deleted
Ardglen – Kankool Duplication	By 2009	Deleted		Deleted		Deleted
Parkville Loop Extension	By 2009	By 2011		Target 2011		Not Commenced
Curlewis Loop Extension (RIC)	By 2009	By Q3 2008		Target July 2008	Commissioning on target	On time
Werris Creek to Gunnedah CTC (RIC)	By 2009	By Q3 2008		Target July 2008	Commissioning on target	On time

Completed Projects
Construction Has Commenced or tenders called
Deleted Projects
Late Projects

Muswellbrook – Narrabri - continued						
Gunnedah – Narrabri CTC (RIC)	By 2010	By 2010		Target March 2009 - tbc by RIC		Early
Koolbury Passing Loop	By 2010	Deleted		Deleted		Deleted
Murrurundi Loop Extension	By 2010	By 2011		Target 2011		Not Commenced
Burilda Loop Extension (422.360km)	By 2010	By 2012		Target 2012		Not Commenced
Emerald Hill Loop Extension (RIC)	By 2010	By 2010		Target August 2008	Commissioning on target	Early
Boggabri Loop Extension (RIC)	New	By 2010		Target Novemeber 2008 - tbc by RIC		Early
Breeza Loop Extension (RIC) (433.900km)	New	By Q3 2008		Target July 2008	Commissioning on target	On time
Quipolly Passing Loop (402.014km)	New	By 2011		Target 2011		On Time
Braefield Passing Loop (386.010km)	New	By 2010		Target 2010		Not Commenced
Watermark Passing Loop (RIC) (455.600km)	New	By 2011		Target 2011		Not Commenced
Wingen Passing Loop	New	By 2012		Target 2012		Not Commenced
South Gunnedah Passing Loop	New	By 2012		Target 2012		Not Commenced
Muswellbrook – Koolbury Duplication	New	By 2011		Target 2011		Not Commenced
New Liverpool Range Alignment	New	By 2012		Target 2012		Not Commenced
Scone Reconfiguration	New	By 2011		Target 2011		Not Commenced

Completed Projects
Construction Has Commenced or tenders called
Deleted Projects
Late Projects