

CARE FORUM

10 August 2011

Operations Report

Glenn Sharrock
General Manager/Central Coast



OPERATIONS OVERVIEW

2010/11 4th Quarter



Safety (31 July 2011)

Vales Point	242 days since last LTI
Munmorah	949 days since last LTI
Colongra	609 days since last LTI (no LTI)
NSCA Index 77 (target < 50)	



Safety Milestones

- ✓ New record for Munmorah – 949 days LTI free
- ✓ Colongra continues to be LTI free since commissioning on 1 December 2009

OPERATIONS OVERVIEW

2010/11 4th Quarter



Energy Production

- Vales Point slightly under budget due to lower demand
- Colongra slightly under budget due to mild weather experienced in Autumn 2011
- Munmorah Units 3/4 on 3 month standby
- Tight market conditions during 2011/12 expected

Availability (2010/11)

- Vales Point above budget for 2010/11
- Colongra 99.95% - world class performance
- Munmorah on standby

Unit Operations

- 2 unit start-ups at Vales Point in June 2011



OPERATIONS OVERVIEW



Vales Point

- VP5 Continuous operation to 2011/12 outage
- (VP5 outage to commence in August 2011)
- VP6 Continuous operation to 2011/12 outage

Munmorah

- Units 3 and 4 continue on 3 month standby

Colongra

- Colongra continues to provide support to Vales Point and providing quick responses to market volatility
- The first gas turbine 'A' Inspections have commenced

OPERATIONS OVERVIEW



Coal Supplies

- Rail and conveyor supplies continuing (Centennial and others)
- Limited road/truck deliveries
- LDO (trial via internal roads)
- Review of longer term LDO deliveries
- South Coast (average 6 trucks/day)
- Biomass deliveries start Sept/Oct (avg. 5 trucks/week)



OPERATIONS OVERVIEW



Projects

- Vales Point Ash Dam Capping & Rehabilitation Approved
- Vales Point A Station Demolition Approved
- Completion of aqueous ammonia plant at Vales Point

Other Issues

- Government Inquiry Update



PROJECT : Vales Point Ash Dam



Vales Point Ash Dam



General Information

- **Constructed in 1962**
- **Increased capacity in 1982**
- **Total area of 450 hectares**
 - 70 hectares rehabilitated
 - 200 hectares active storage area
 - 180 hectares water body
- **Stores VP Flyash & bottom ash, MM flyash**

Vales Point Ash Dam



Ash Dam Environmental Controls

- **Return water system**
 - Closed system to prevent ash dam over boarding
 - Water reused in process
- **Aeration control**
 - Turns water over, prevents stagnation
 - Reduces odour
- **Dust control**
 - Inundation is best
 - Spray exposed ash surface with suppressant (hovercraft)

Vales Point Ash Dam



Ash Dam Management Objective

- **Reduce exposed ash surface by:**
Inundation, rehabilitation of filled ponds.
- **Segregate ash dam into ponds.**
- **Pump ash to pond until full.**
- **Cover ash with soil and vegetate.**

Vales Point Ash Dam



Ash Dam Construction

Pond walls and capping using imported soil.

- Design by Aurecon dam consultants
- Process managed by Boral
- Review of Environmental Factors completed by consultants
- Delta Approved Environmental Management Plan
- Soil certified as VENM/ENM
- Traffic management plan
- Dust control plan
- Vegetate using local stock to provide green corridor

Vales Point Ash Dam



PROJECT : “A” Station Demolition



“A” Station Demolition



History:

- 4 Units @ 200 to 275 MW each capacity
- Constructed in 1960s
- Ceased operation in late 1980s
- Partially demolished in 1990s
- Remaining structures- boilers, turbine house, plinths
- Increasingly difficult to maintain
- Demolition timeframe 15 months target
- Photographic record

“A” Station Demolition





VALES POINT POWER STATION VISUALISATION

DELTA A-STATION DEMOLITION - BEFORE



VALES POINT POWER STATION VISUALISATION

DELTA A-STATION DEMOLITION - AFTER

“A” Station Demolition



Demolition Process:

- Fence off the site
- Remove turbine plinths
- Remove remaining boilers
- Remove boiler structures in order 2,3,1,4
- Remove turbine house cladding
- Dismantle the turbine house structure
- Site final clean up
- Chimney stacks remain

“A” Station Demolition



Issues to be Managed: Project Management Plan

Safety

- Dismantle process
- No explosives or dropping material
- Independent Hygienist to manage any contamination issues
- WorkCover alliance
- Traffic management plan – up to 7 trucks per day

“A” Station Demolition



Issues to be Managed:

Environmental Management Plan considered:

- Waste disposal to approved repository
- Dust control
- Runoff control
- Recycle all material possible
- Truck impacts via rear station exit

Noise

- Limits applied
- Management plan

Carbon Scheme Implications

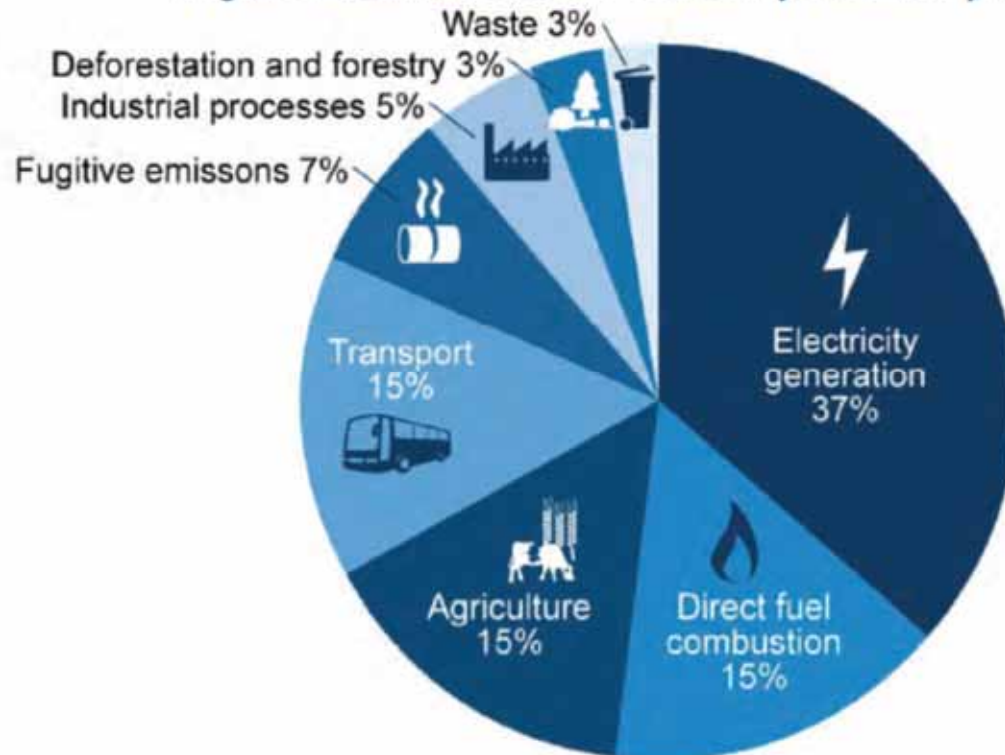
August 2011



Carbon profile



Figure 2.2: Australia's carbon pollution profile



Carbon policy is aimed at the top 500 carbon emitters

i.e. over 25,000 tonnes emitted per annum per facility

2009 emissions from the National Greenhouse Gas Inventory 2011, DCCEE analysis.

Top Carbon Emitters 2009/10



Company	Tonnes CO ₂ -equivalent
International Power & Loy Yang Holdings (Hazelwood, Loy Yang B, Pelican Point)	27,434,752
Macquarie Generation	23,408,791
Delta Electricity	20,453,113
Great Energy Alliance (Owner Loy Yang A and AGL)	19,797,636
C S Energy Limited (Callide, Kogan Ck)	16,824,919
TRUenergy (Yallourn)	15,612,214
Eraring Energy	12,067,677
BlueScope Steel Limited	10,791,351

Delta's Emissions 2009/10

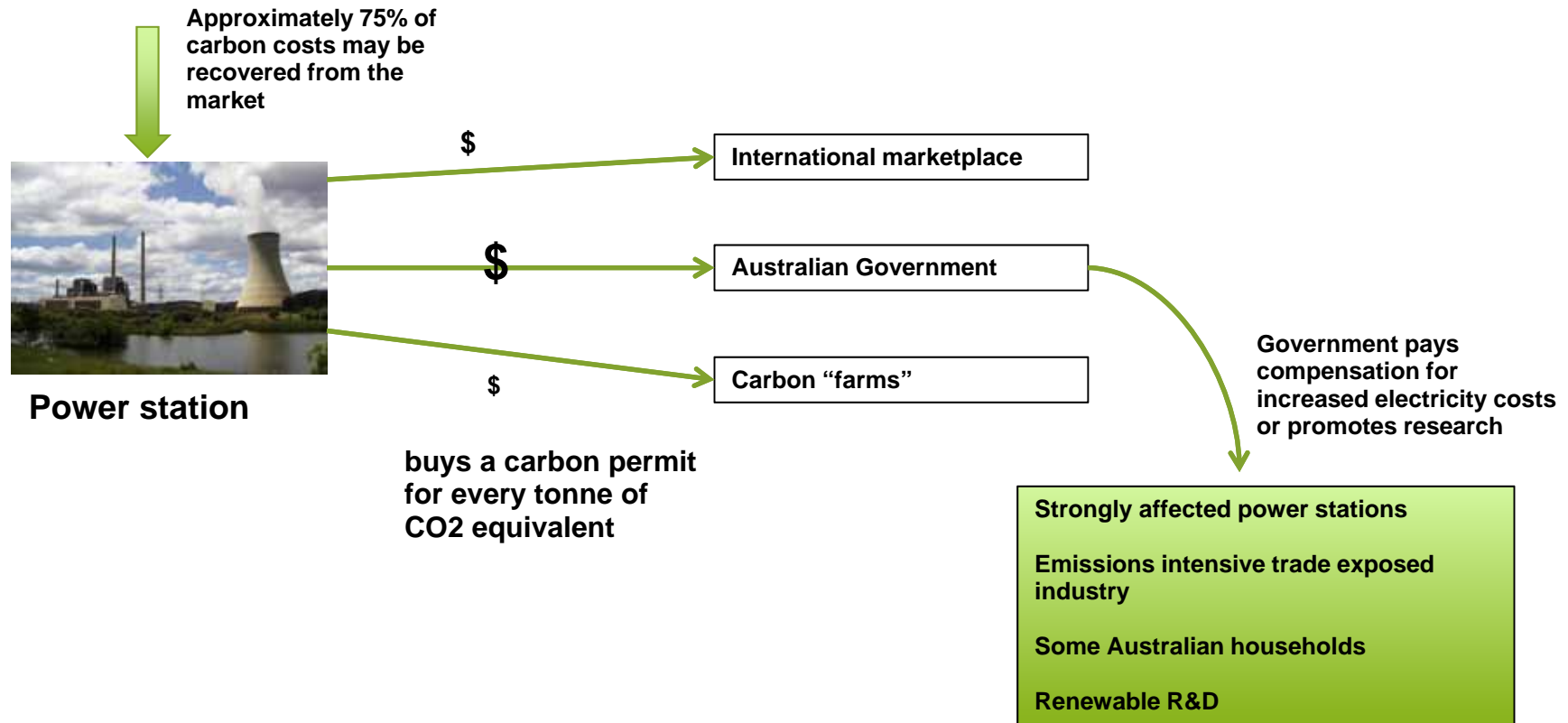


Power Station	Tonnes CO ₂ -equivalent
Mt Piper	8,175,893
Wallerawang	3,822,543
Total Western Assets	11,998,436
Vales Point	7,574,393
Colongra	102,259
Munmorah	778,025
Total Central Coast Assets	8,454,677

TRUenergy is required to buy carbon permits for Western power stations

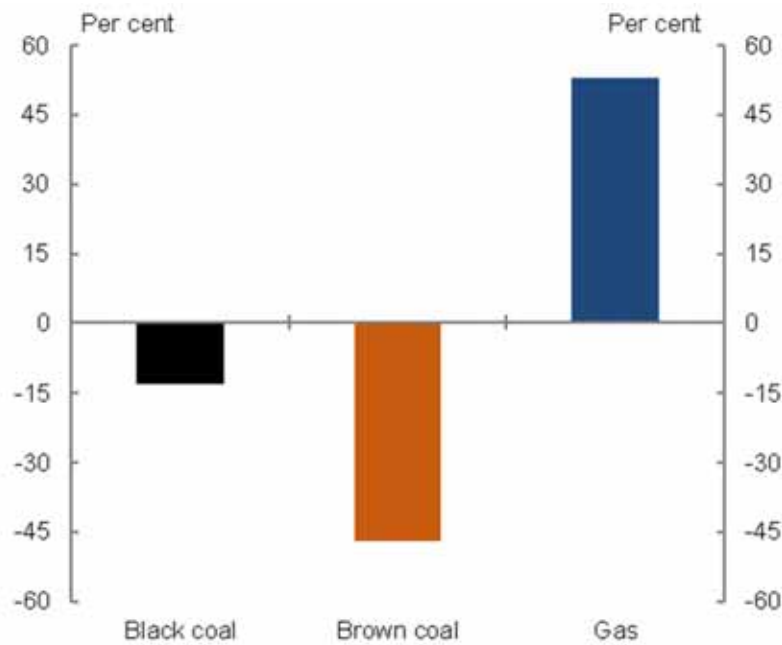
On current levels of production Wallerawang may produce up to 6Mt of CO₂ in future

How it Works

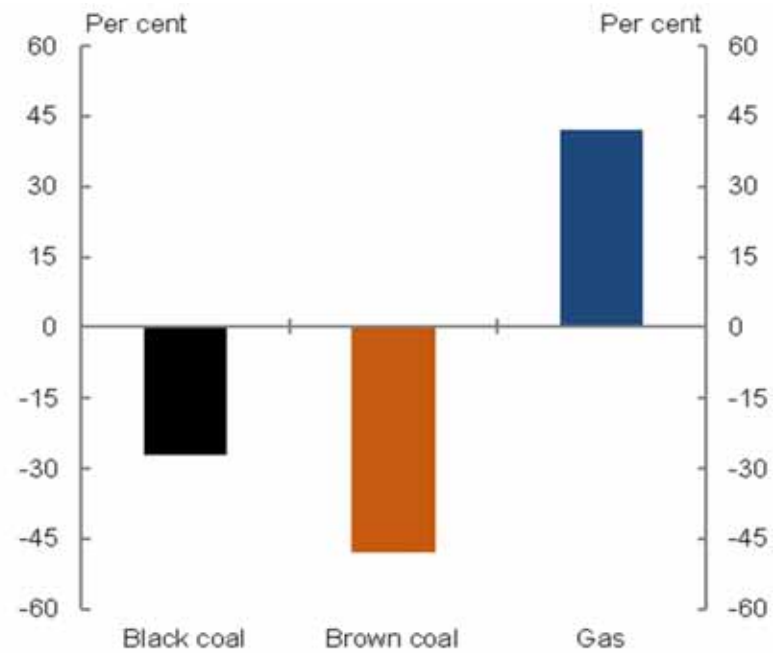


SCHEME IS DESIGNED TO DISADVANTAGE HIGH EMMITERS

Treasury Modelling Impact on Profitability



SKM modelling



ROAM modelling

Commonwealth Treasury used SKM and ROAM to model impacts

Source: Commonwealth Treasury

Carbon Scheme Details



- **Fixed price for 3 years from 1 July 2012**
- **Delta will have to purchase permits for every tonne of carbon dioxide emitted and then surrender the permits to Government to meet its carbon liability.**
- **During the fixed price period there will be unlimited permits available**
- **\$23/tonne starting price, rising annually at 2.5% above inflation**
- **No trading of permits in the first 3 years**

Carbon Scheme Details

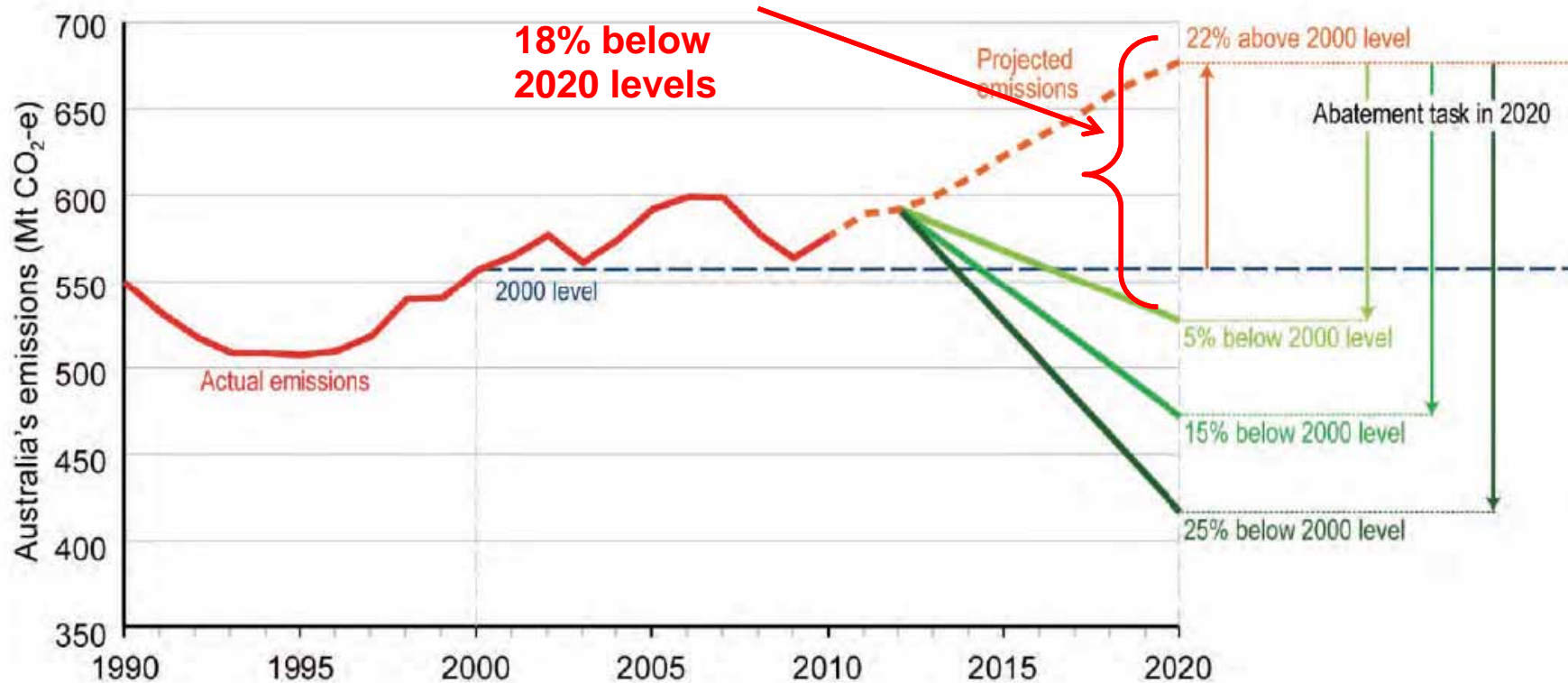


- **“Cap and trade” Emissions Trading Scheme from 2015/16**
- **The number of carbon permits issued each year will be capped (but not price).**
- **It is likely permits will be auctioned at regular intervals by the government with permits then able to be traded between counterparties until they are surrendered.**
- **Delta can buy the permits it needs from auction or the secondary trading market.**
- **From 2015 to 30 June 2018, a price floor and “cap” will exist**
- **Minimum 5% emissions reduction on 2000 levels by 2020**

Commonwealth Treasury Modelling



- The scheme is targeting a minimum 5% carbon emissions reduction on 2000 levels by 2020
- A long term target of 80% reduction of year 2000 level carbon emissions has been set



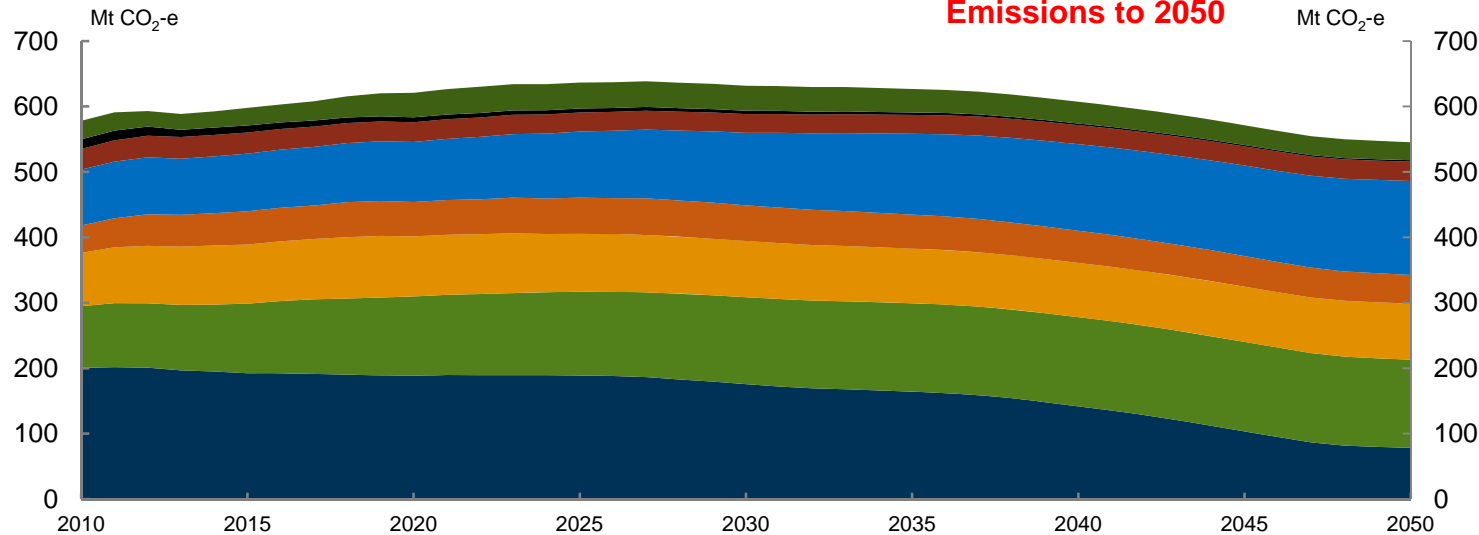
Source: Treasury modelling, 2011 (medium global action scenario).

Commonwealth Treasury Modelling

Abatement Sources



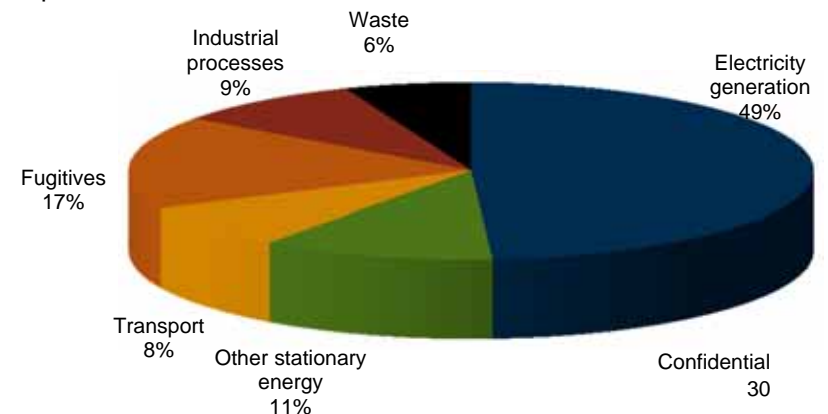
Australia's Sectoral Emissions to 2050



- Electricity generation
- Other stationary energy
- Transport
- Fugitives
- Agriculture
- Industrial processes
- Waste
- Forestry and land use change

Sectoral shares of abatement task

(Agriculture exempt)

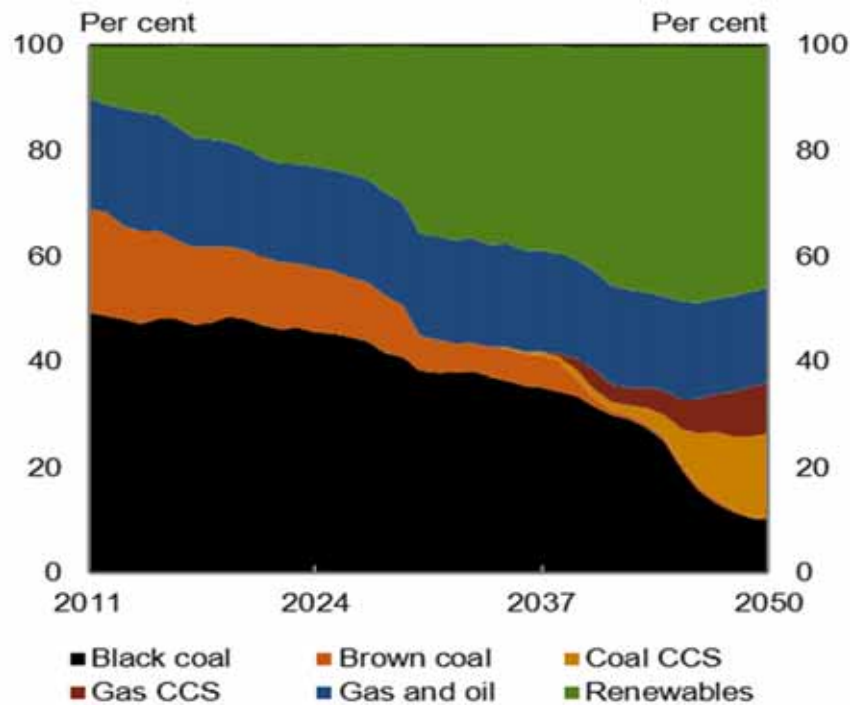


Source: Commonwealth Treasury

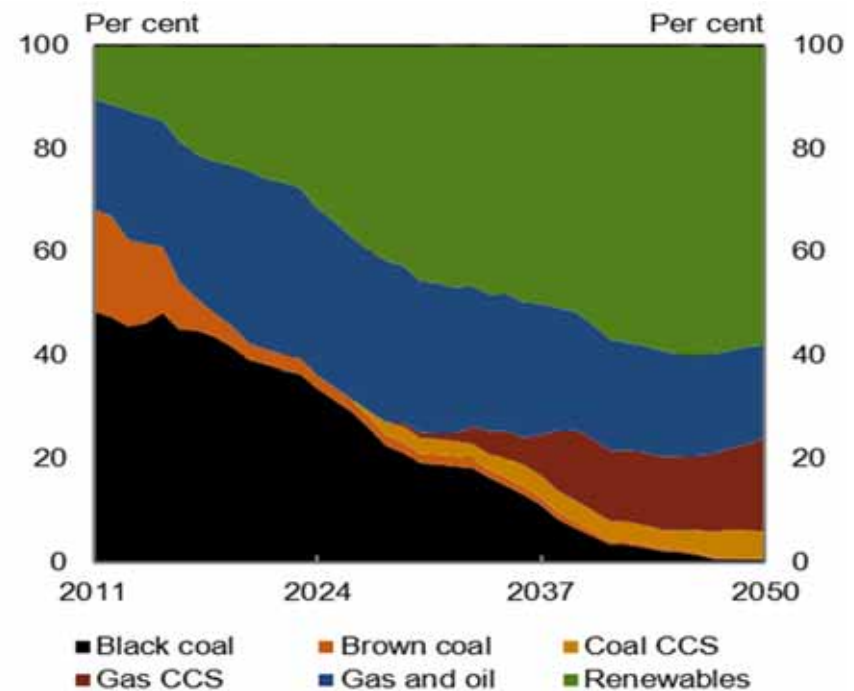
Future Generation Profile SKM Modelling



\$20/tonne starting price



\$30/tonne starting price



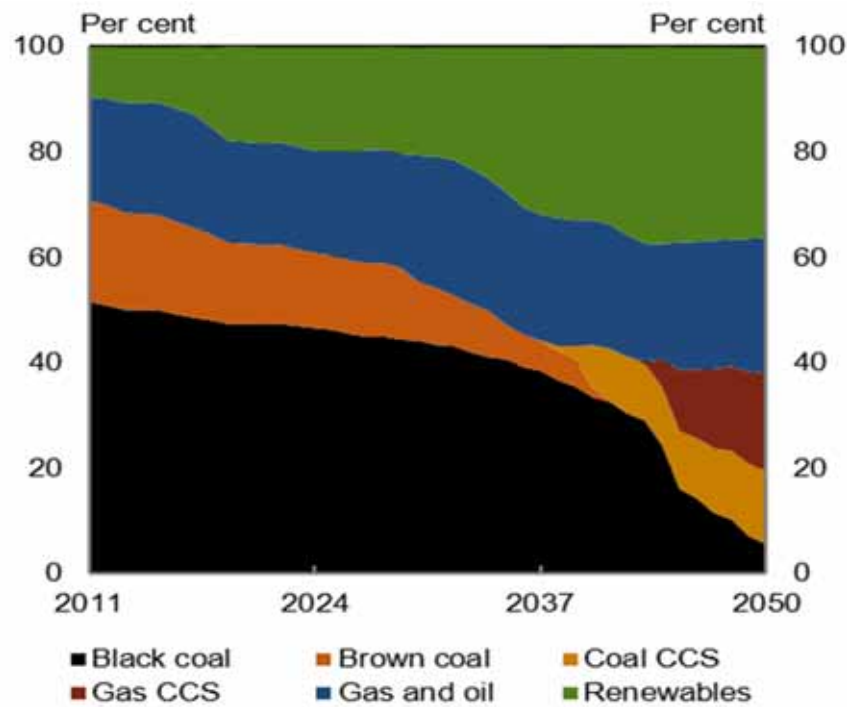
Source: Commonwealth Treasury

STARTING PRICE IS ACTUALLY \$23/tonne

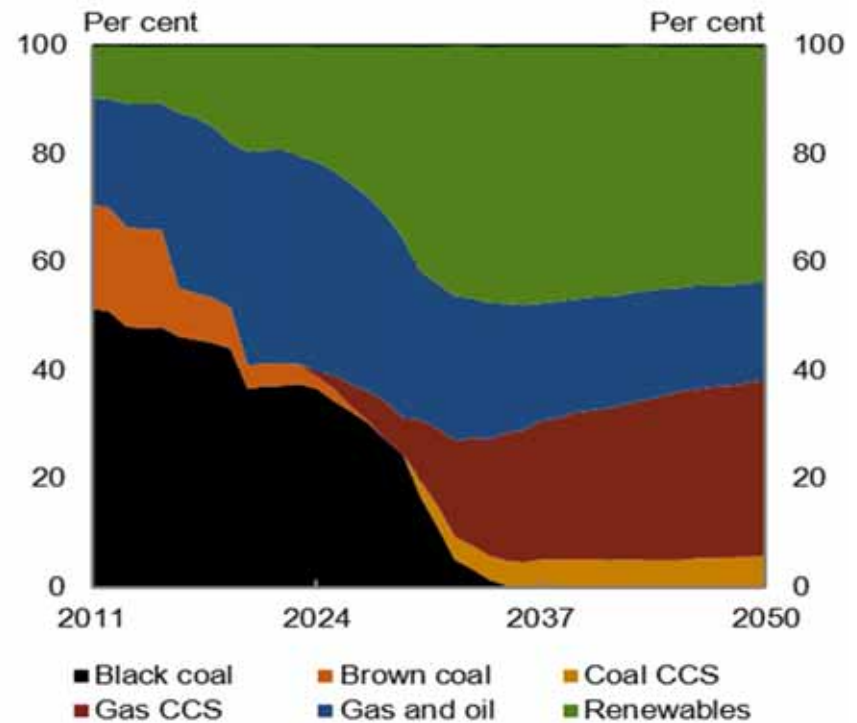
Future Generation Profile ROAM Modelling



\$20/tonne starting price



\$30/tonne starting price

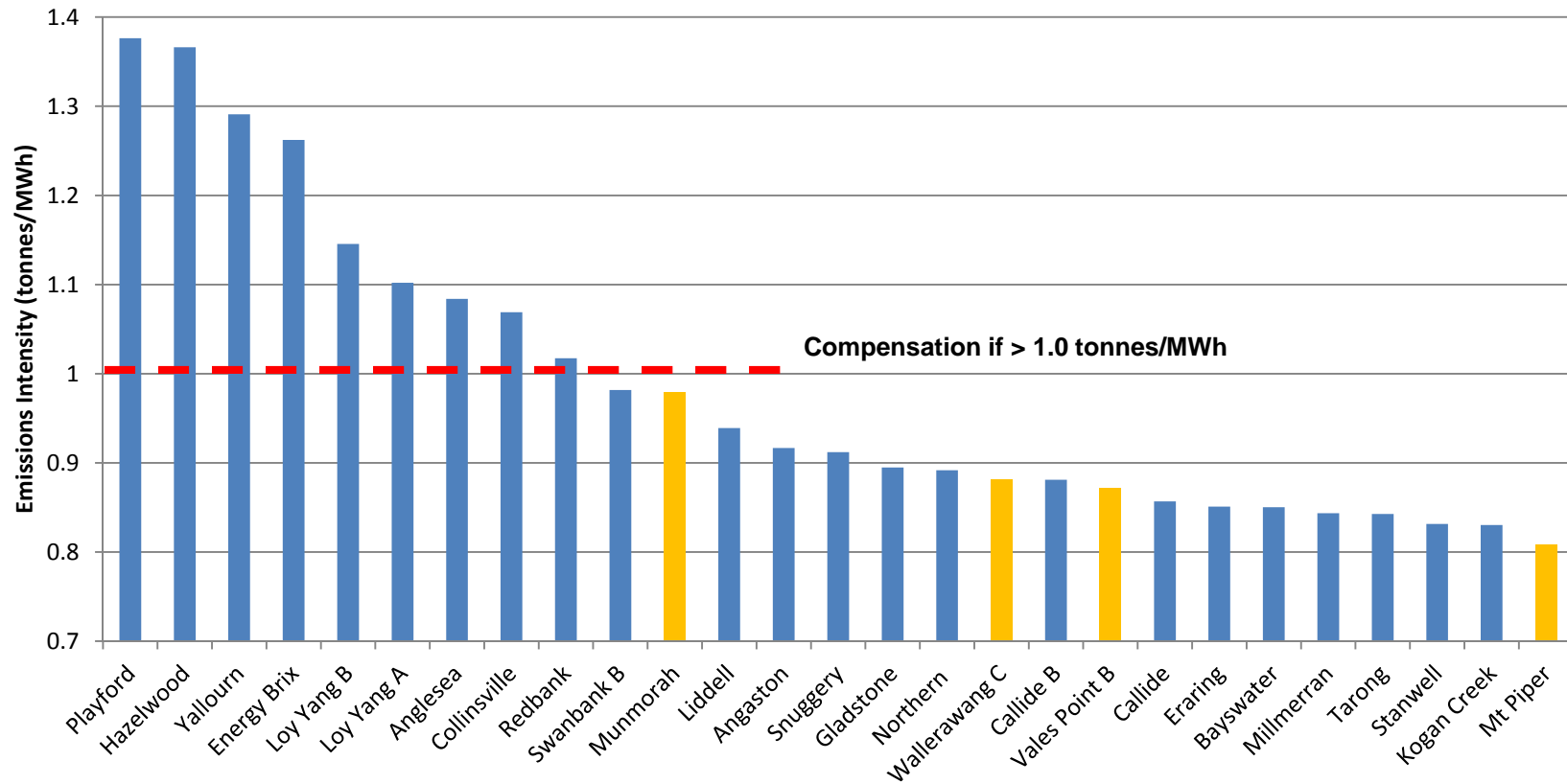


STARTING PRICE IS ACTUALLY \$23/tonne

Compensation

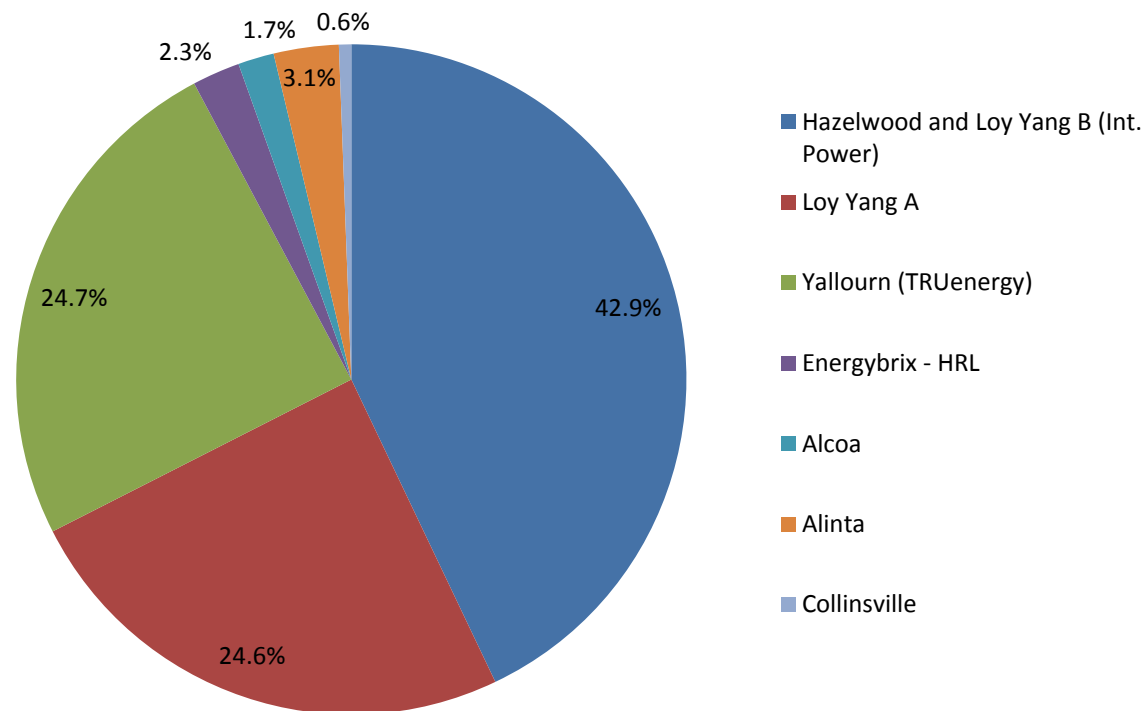


Emissions Intensity of NEM Coal Stations



Source: ACIL Data

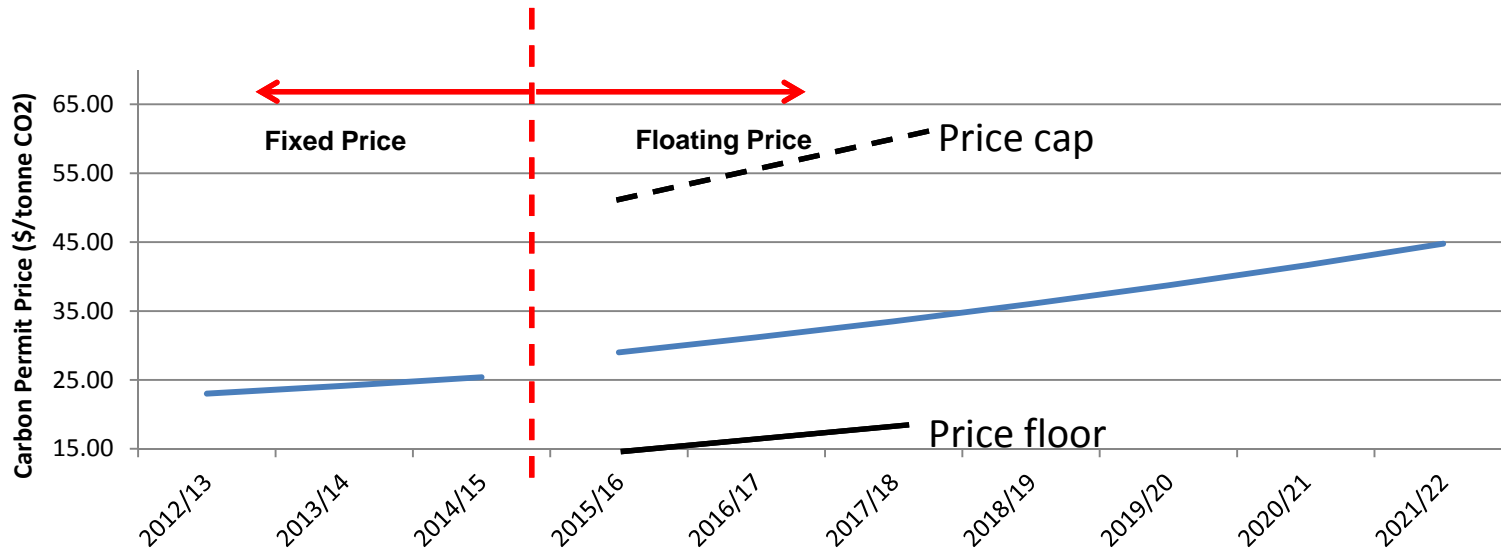
Electricity Sector Compensation



TOTAL \$5,500M

Source: These percentages are based on published figures of emissions intensity and are approximate

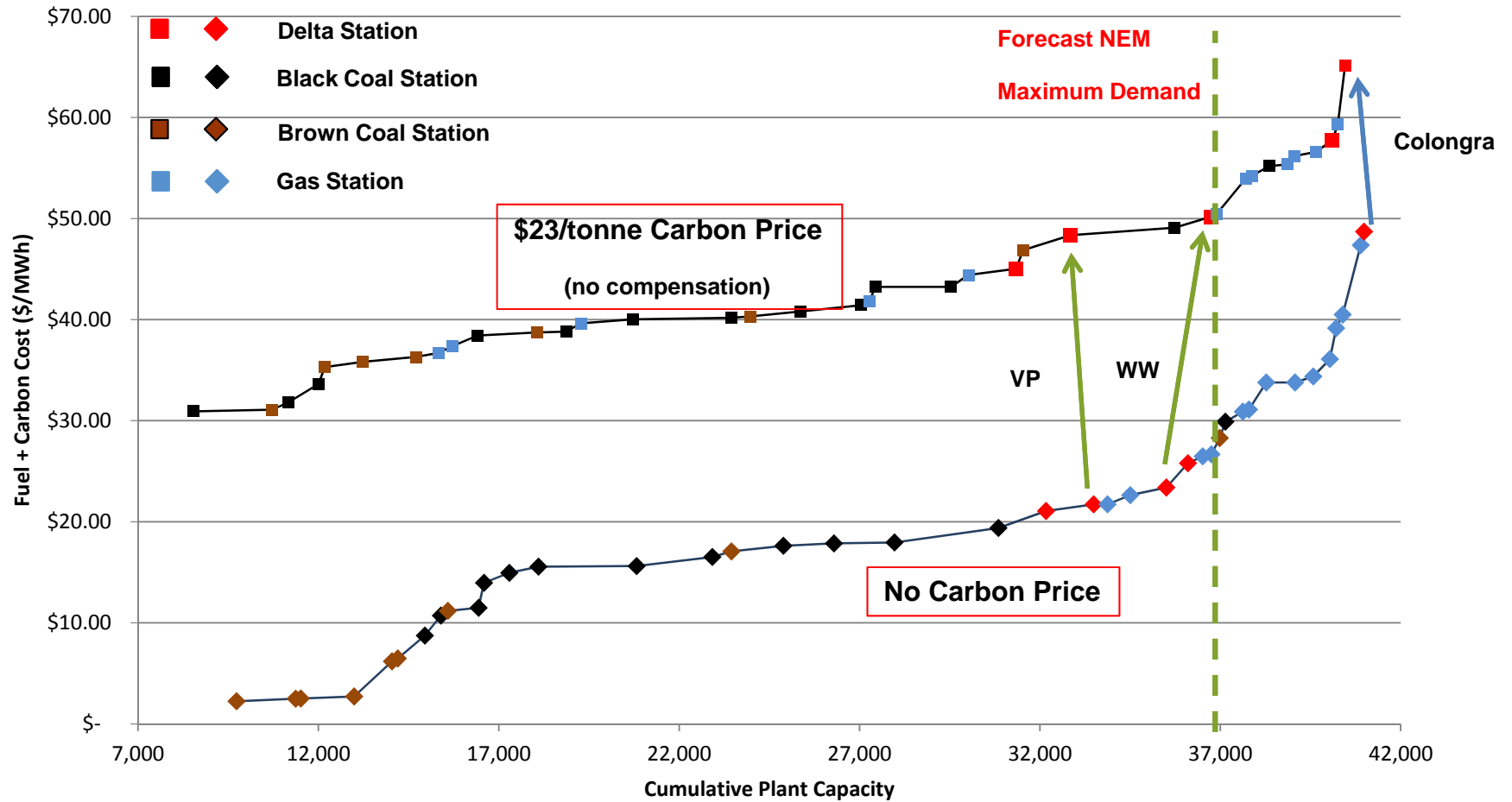
Price forecast and impact on Delta's Central Coast profitability



	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21	2021/22
Carbon Price (\$/tonne CO ₂)	23.00	24.15	25.40	29.00	31.18	33.51	36.03	38.73	41.64	44.76
Carbon Cost (\$m)	153	147	155	208	217	238	252	273	299	318
Revenue Recovery (\$m) (assumes 75% pass through)	115	110	116	156	163	178	189	205	224	238
Impact on Profit (Before Tax) (\$m)	(38)	(37)	(39)	(52)	(54)	(59)	(63)	(68)	(75)	(79)

OVER \$300M OF VALUE LOST FROM THE CENTRAL COAST ASSETS

Merit Order Implications for the NEM



Source: ACIL Tasman data, Delta

Summary



- **Electricity sector is targeted for the majority of the abatement task**
- **Major economic decisions will be necessarily based on uncertain modelling**
- **Inequity in the compensation model**
- **Compensation package may distort the electricity market**
- **TRUenergy will determine future for Western power stations**
- **Significant value lost for Central Coast > \$300m asset value**

What is Delta doing?

Short Term



Voice our concerns in the *MEDIA*

Chief Executive has approached the *SENATE INQUIRY* into new taxes to give evidence

Supporting *NSW GOVERNMENT* arguments for greater equity in compensation

Conveying our position to State and Federal *LOCAL MEMBERS OF PARLIAMENT*

Work with other black coal generators for effective *LOBBYING*

What is Delta doing?

Long Term



Large scale biomass co firing for Vales Point

Carbon capture and sequestration demonstration project

Efficiency projects

Suzanne Laucht
Environment Manager
Central Coast



**Environmental
Update.**



Community Enquiries May 2011 to July 2011



Issues raised by community for previous 3 months:

Land Management and Air Quality

- **Munmorah Power Station –**
 - Dust inquiry**
 - Vegetation clearing**
 - Security fence damaged buffer land**
 - Cats in power station site**

- **Vales Point Power Station -**
 - Fencing of property**
 - Parking for truck on Vales Point land**

Mannering Park Precinct Committee Meeting

- **Presentation covered Vales Point Environment Protection Licence and Vales A Station Demolition.**

