



INFRASTRUCTURE INTEGRATION AND ECONOMIC DEVELOPMENT
IN THE HUNTER REGION

The climate change challenge: how commercial
development of new technologies will generate
opportunities for the Hunter Region

PANELLIST

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*The Hunter and Climate Change -
Exposure and Opportunity.*

Presentation to CEDA Forum Newcastle

17 September 2008.

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Forum Topic - Climate Change



-This Presentation.

- **The Hunter and Climate Change** - Exposure and Opportunity.
- **CBD Energy** – Introducing our agenda, our commitment to the 'Hunter' and our strength in partnership.
- **CBD Energy** - Why we might **invest** – what we need stability in policy ?
- **CBD Energy** – Understanding low carbon economics – jobs for the Hunter.

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Hunter Exposure



Obvious exposure induced by :

- Cost of carbon –Garnaut 1 and 2.
- Hunter's role in the traditional fossil fuel energy sector.
- Coal mining exports.
- Export Exposed Heavy Industry.
- So Jobs @ risk.
- But exposure also induces opportunity

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Exposure Induces Opportunity

- Hunter track record on economic adaption
 - compelling;
- Hunter –agility.
 - BHP
 - Manufacturing
- Seize the opportunity to position on the low carbon economy.
 - Leadership.
 - Community spirit.

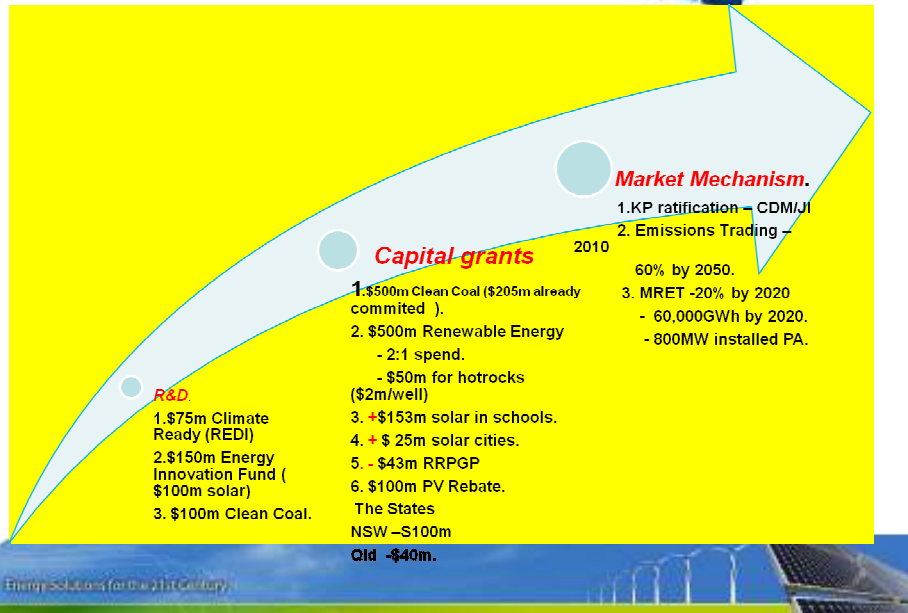
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Why CBD will invest ?

- Why **Cautious** ? Manage any investment against stability in prevailing policy settings.
- What - **Conducive Policy settings!**
- Ideally - **‘Silver bullet’** vs. **‘Buckshot ‘**
- What is the **‘silver bullet’** ?
- What is the **‘buckshot approach’** ?

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The Kev 07 New Low Carbon Policy Landscape



Challenge the 'Silver Bullet'



- *Economists rationalists suggest – ‘the sound of one hand clapping’ – Productivity Commission –Wilkins Report.*
- *What this means – extinguish complimentary measures ??*
- ✓ *Dumb as ...?*
- ✓ *Diversified Policy settings. MRET.*
- Stability = longevity.
- Longevity means job growth in new industry.

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Jobs Growth in the Hunter 'Low Carbon Economy'



- Economic analysis –CofFEE –Bill Mitchell Uni of Newcastle –'Just transition to RE Economy in the Hunter'.
 - 2 scenarios
 1. Hunter as a self sufficient regional centre. – 9,400
 2. Hunter as an energy export centre – 14,290.
- SEDA Sustainable Energy Jobs Report.
 - Reviewed SEI in NSW ,
 - Assessed the potential to generate jobs.
 - Developed scenarios against policy settings.
- CBD – Practical application and commitment to the Hunter- '**Singleton Green**'.

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'Why Singleton Green?'



Some investment certainty – '**less regulatory** risk'.

- ✓ return to shareholders.
- ✓ market interest.
- ✓ distributed power – DSM
- ✓ security/reliability of supply.
- ✓ Strong local partnerships.
 - Builddev,
 - Hunter Water.

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Singleton Green



- The industrial estate is intended to be the first industrial development in Australia to incorporate environmental sustainability principles in the delivery of energy and utility services to industrial tenants.
- In the joint venture agreement, CBD Energy will be responsible for the provision of energy and water utility services based on design and technologies that will set new standards and benchmarks for Green Star Energy Rating in an industrial application.

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Singleton Green –Distributed Energy solutions for the 21st Century.



Overview: This 355 hectare development will service the mining, transport and manufacturing industries of the Upper Hunter Valley. This estate is positioned within an hour of Newcastle and, when the F3 link is completed, will be within a two hour drive from Sydney. The site has four kilometers of New England Highway frontage and 1.2klms of frontage to the main Northern Railway Line.

Job Creation: 3,550

Value on Completion: \$400 million



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Singleton Green



Industrial estate incorporating environmental sustainability principles in the delivery of energy and utility services to tenants.

Technologies:

- Solar
- Wind
- Tri-generation
- Water recycling
- Energy Storage

Services:

- ESCO
 - Billing and metering
 - Heating and cooling

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Singleton Green

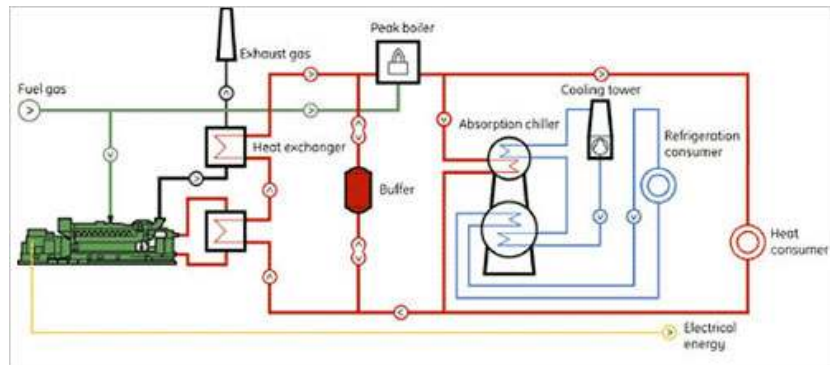


- Project Drivers
 - Differentiation
 - Energy Independence
 - Energy Trading
 - Sustainable Development
 - Large Scale Renewable Integration
 - Benefits of low energy footprint in constrained areas
 - Attract industry wishing to increase its “Green” visibility
 - Lower industry costs by shared services
 - Steam
 - Cooling

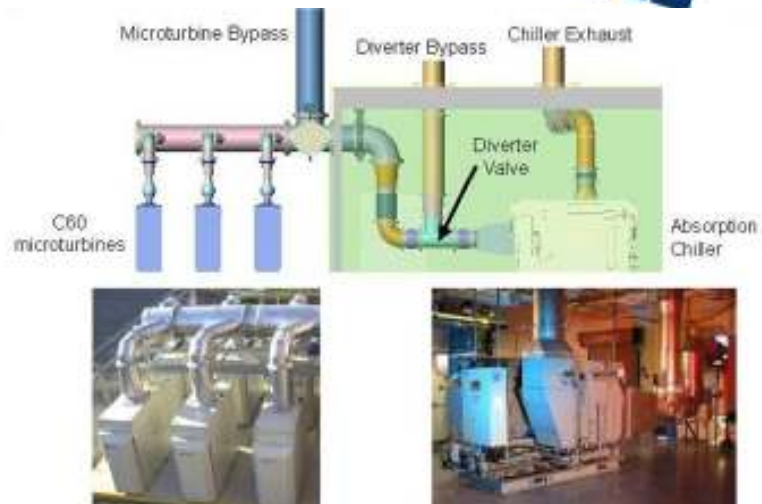
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Trigeneration



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Singleton Green



Trigeneration

Using natural gas, trigeneration involves the simultaneous production of electricity and thermal energy – heat – in the one energy process. Natural gas produces less than half the greenhouse gas per unit of produced energy than the cleanest thermal power station.

- The greater efficiency achieved through trigeneration means carbon dioxide emissions are dramatically reduced and surplus power generated after hours is returned to the electricity grid as green power.

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Singleton Green



Water Recycling

Singleton Green will hosts some of Australia's most advanced water saving technologies – technologies that will reduce dependence on town water supplies. The water program aims to recycles over 150,000 litres of water every day.

- And by collecting rainwater in tanks and introducing water recycling, our buildings use around one quarter the water used by conventional industrial parks. The parks and gardens will use tank water collected off roofs and then the recycled water and when required, bore water. The toilets will use the recycled water. Town water is used only for drinking and showering.

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Small to Medium
Scale Wind Systems
Dual Axis Solar
Technology

Enables renewable power to be
sold at retail rather than wholesale



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Buildev

- Manage the development process including recognizing opportunities, securing development sites, approval processes, through to marketing, finance and construction.
- Current projects underway valued at \$ over:
 - NSW \$1.5b
 - VIC \$0.6b
 - QLD \$1.0b
- Portfolio comprises over 6,000 dwelling sites and industrial land with employment capacity in excess of 2,000 jobs.



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Hunter Water



- Hunter Water is a State Owned Corporation and the water and wastewater service provider for over half a million people in the lower Hunter region. There are 213,913 properties connected to the water network and 202,103 to the wastewater network.
- They are directly involved in the operation of over 50 water and wastewater treatment plants, provide a full range of engineering and specialist consultancy services, and operate an advanced environmental laboratory.

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Hydro Tasmania Consulting



- Hydro Tasmania Consulting is an international consulting firm drawing on around 100 years of expertise in providing expert engineering and environmental services in the areas of renewable energy, power engineering and environmental and catchment management. Hydro Tasmania's consulting abilities span the planning, design, construction, operation and maintenance aspects of a wide variety of major energy and water projects.
- **Focus Areas Include**
 - Catchments and Spatial Solutions
 - Environment Solutions
 - Dams Solutions
 - Hydro Power Solutions
 - Sustainable Energy Solutions
 - Power Engineering Solutions

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