

Resources Sector Update

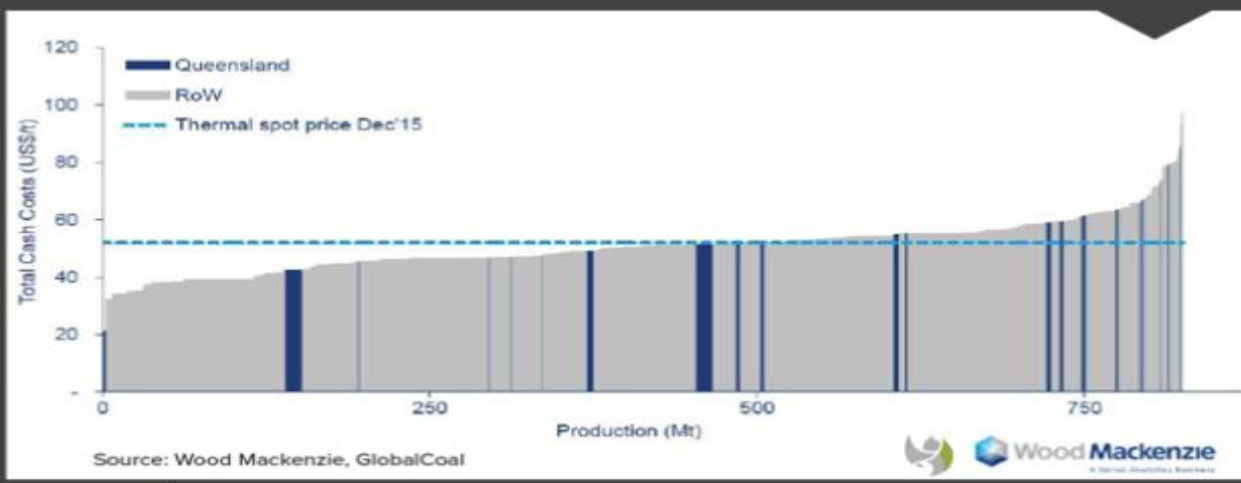


GLOBAL COST CURVES FOR QUEENSLAND COMMODITIES

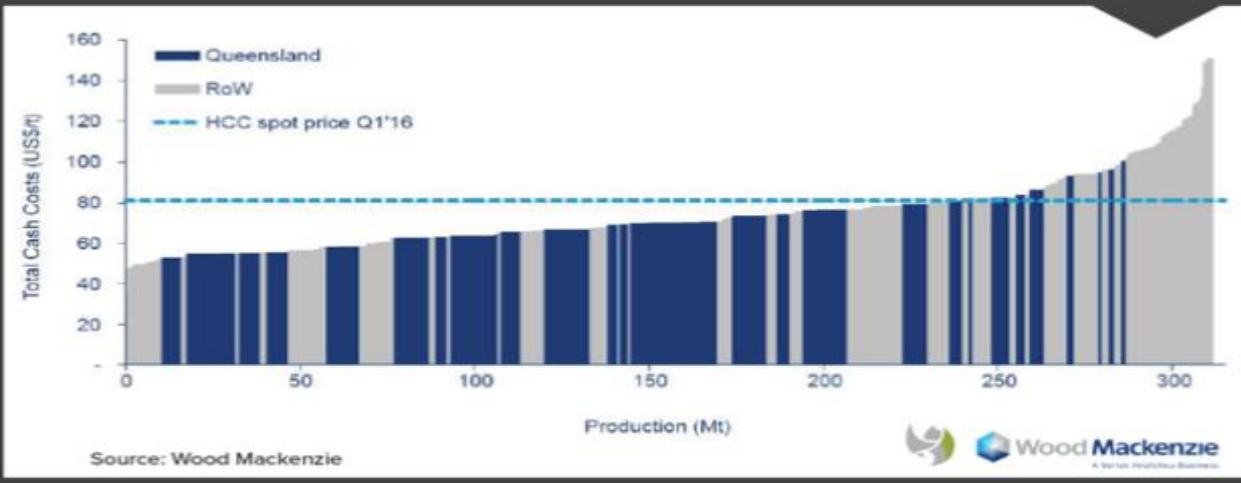
**THERMAL COAL:
22 QLD OPERATIONS**

**METALLURGICAL COAL:
37 QLD OPERATIONS**

2016 SEABORNE THERMAL COAL FOB CASH COST CURVE (ENERGY ADJUSTED):
22 QUEENSLAND OPERATIONS



2016 SEABORNE METALLURGICAL COAL FOB CASH COST CURVE:
37 QUEENSLAND OPERATIONS



- **The El Niño has assisted the mature operations with large footprints and water inventories breathing space to manage inventories.**
- **Smaller footprint sites e.g. stand alone underground operations have been utilising their external water supplies (net importers of water)**

- **Continuous Improvement Focus**
 - Monitor water transfers and inventories
 - Conduct predictive water balance modelling
- Many companies report performance using the MCA's Water Accounting Framework
- Significant funds invested into water management & infrastructure



- The majority of mining companies operating in the Basin remain Partners
- Partnership must continue to demonstrate the business case for ongoing membership
- Ownership changes present challenges – more companies to engage often without corporate history of operating in Fitzroy

Ongoing Research \$2.7M

Through ACARP and the Coal Minesite Rehabilitation Fund



- Metal dynamics in the Mackenzie River
- Macroinvertebrate responses to river health
- Tool to Assess Mining Impacts on River Condition
- Macroinvertebrate and water quality surveys
- Ecosystem health indicators for fish
- Development of a Toolbox for Fish Health Assessment in Aquatic Ecosystems Associated With Coal Industries
- Guidelines for Establishing Ecologically Sustainable Discharge Criteria in Seasonally Flowing Streams
- Assessing The Ecotoxicology Of Salinity On Organisms In Seasonally Flowing Streams In The Fitzroy Catchment
- Development Of Ecosystem Protection Trigger Values For Sodium Sulfate In Seasonally Flowing Streams Of The Fitzroy River Basin
- Understanding water and salt dynamics to facilitate mine water management
- Reducing Analytical and Water Quality Monitoring Costs Using Diffusive Gradients in Thin Film Technique
- Incorporating Salinity into the Source Catchments Model for the Fitzroy Basin Long Term Salt Generation from Coal Spoils

Research often filling knowledge gaps identified by FPRH