

# QTC INVESTOR CONFERENCE

*Resources: the foundation of Queensland's  
diverse economy*

21 October 2016

Port Douglas

**Michael Roche**  
Chief Executive

# WHAT IS THE QRC?

QRC is a **not-for-profit peak industry association** representing the commercial developers of Queensland's minerals and energy resources. We have:

- **71 full members** – explorers, miners, mineral processors, site contractors, oil and gas producers, electricity generators
- **138 service and associate members** – the providers of goods or services to the sector

QRC is a **multi-commodity, state-based advocacy body**



# THE WORLD WANTS OUR RESOURCES

## Queensland is the:

- #1 source of traded coking coal
- Lead #2 in the world
- Zinc #3 in world
- Silver #6 in the world
- Bauxite #6 in the world
- Copper #12 in the world (#1 in Australia)
- Australia (with Qld CSG) world's #2 LNG exporter; potential #1 by 2020
- Uranium production potential



# RESOURCE CONTRIBUTIONS TO QUEENSLAND

**1 IN \$5**  
OF QUEENSLAND  
ECONOMY

**1 IN 6 JOBS**  
FOR  
QLD

**24,400**  
BUSINESSES  
BENEFITED

## WHAT ARE RESOURCES WORTH TO QUEENSLAND? | 2014-2015 financial year

### INDUSTRY'S DIRECT CONTRIBUTIONS

IN 2014-15, THE QUEENSLAND RESOURCES SECTOR CONTRIBUTED:

**\$5.2 BILLION** IN WAGES PAID TO **38,461** FULL TIME EMPLOYEES

**\$24.7 BILLION** IN PURCHASES

GOODS & SERVICES PURCHASED LOCALLY + COMMUNITY CONTRIBUTIONS  
**24,417** QLD BUSINESSES BENEFITED + **937** COMMUNITY ORGANISATIONS BENEFITED

**\$2.1 BILLION** IN ROYALTIES SHARED ACROSS QUEENSLAND in the form of  
 EDUCATION LAW & ORDER HEALTH ROADS

USING ONLY **0.1%** QUEENSLAND'S LAND MASS

SPEND BY COMMODITY

COAL	OIL & GAS	METALS	OTHER
50%	33%	14%	3%

### FLOW-ON BENEFITS

QUEENSLAND SPENDING AND EMPLOYMENT SUPPORTS:

**327,405** ADDITIONAL F/T EMPLOYEES

+ ADDITIONAL VALUE ADD OF **\$32.9 BILLION**

### QUEENSLAND'S PROSPERITY

TOTAL CONTRIBUTION BY THE QUEENSLAND RESOURCES SECTOR TO QUEENSLAND'S ECONOMY IN 2014-15:

**\$64.8 BILLION**

**1 IN \$5** OF QUEENSLAND ECONOMY | **1 IN 6 JOBS** FOR QLD



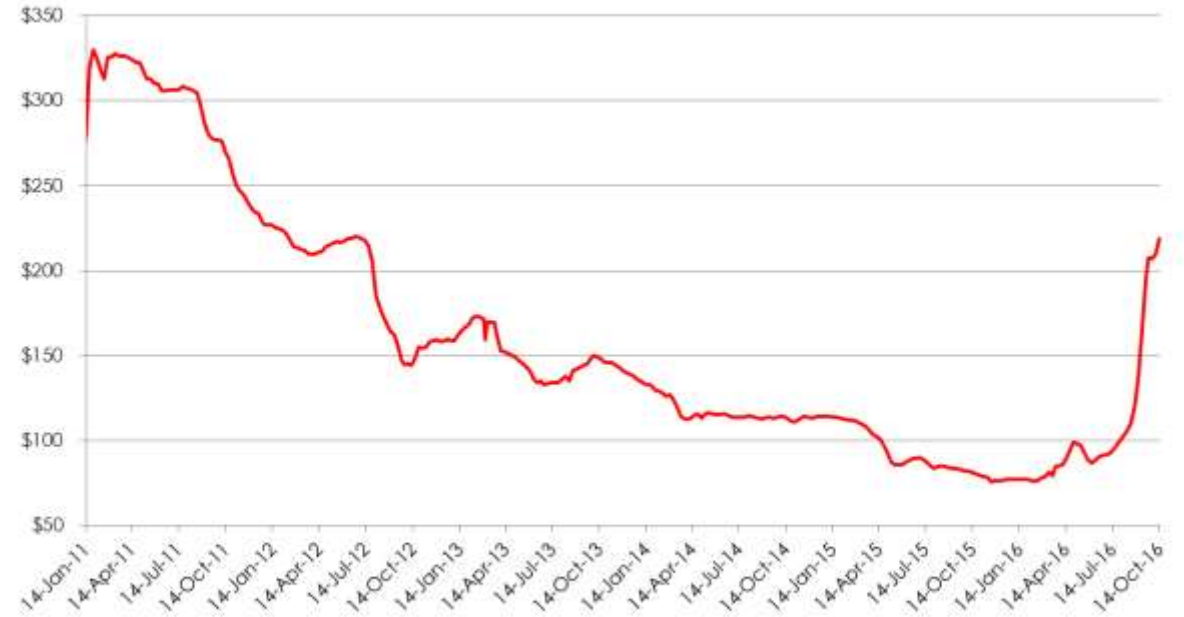
# COAL PRICES STRONG REBOUND

## Thermal coal prices (\$US)



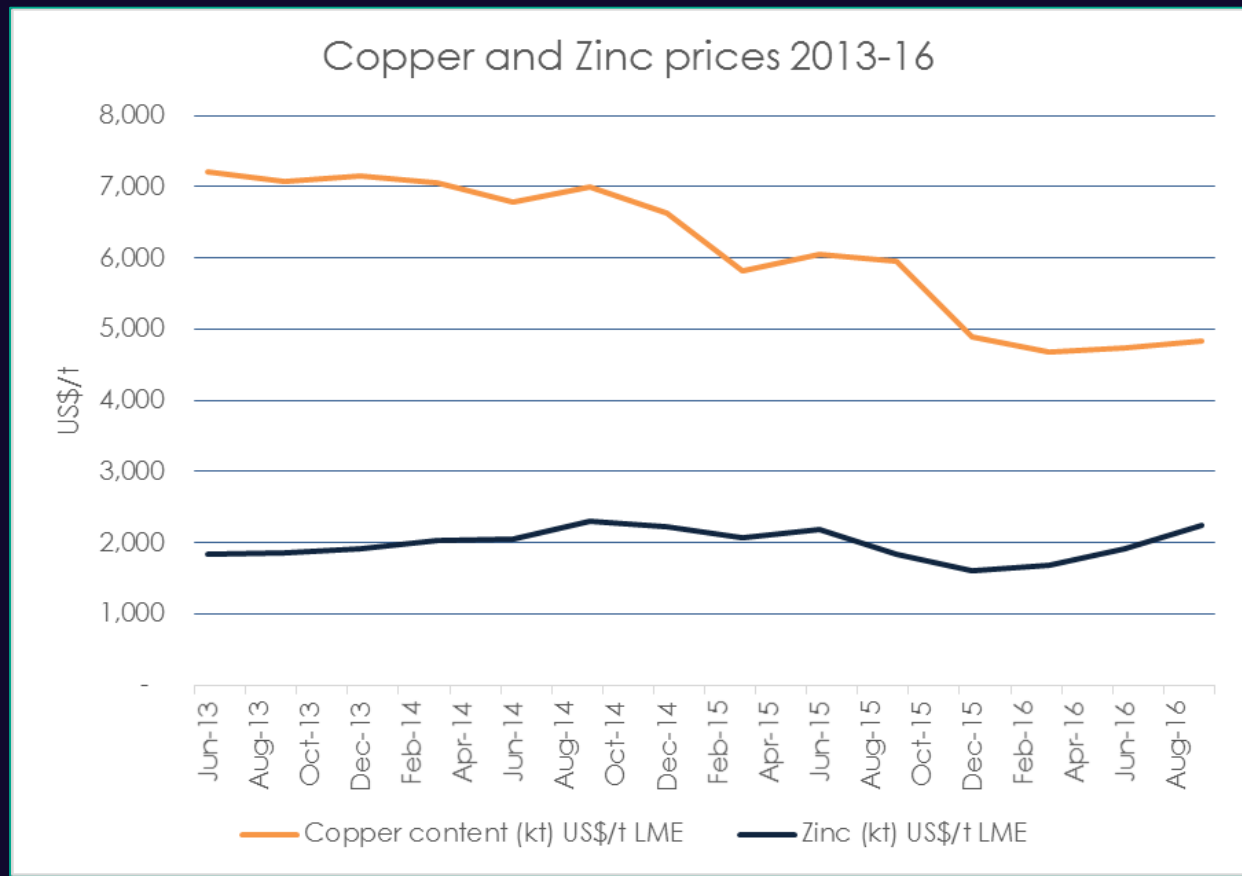
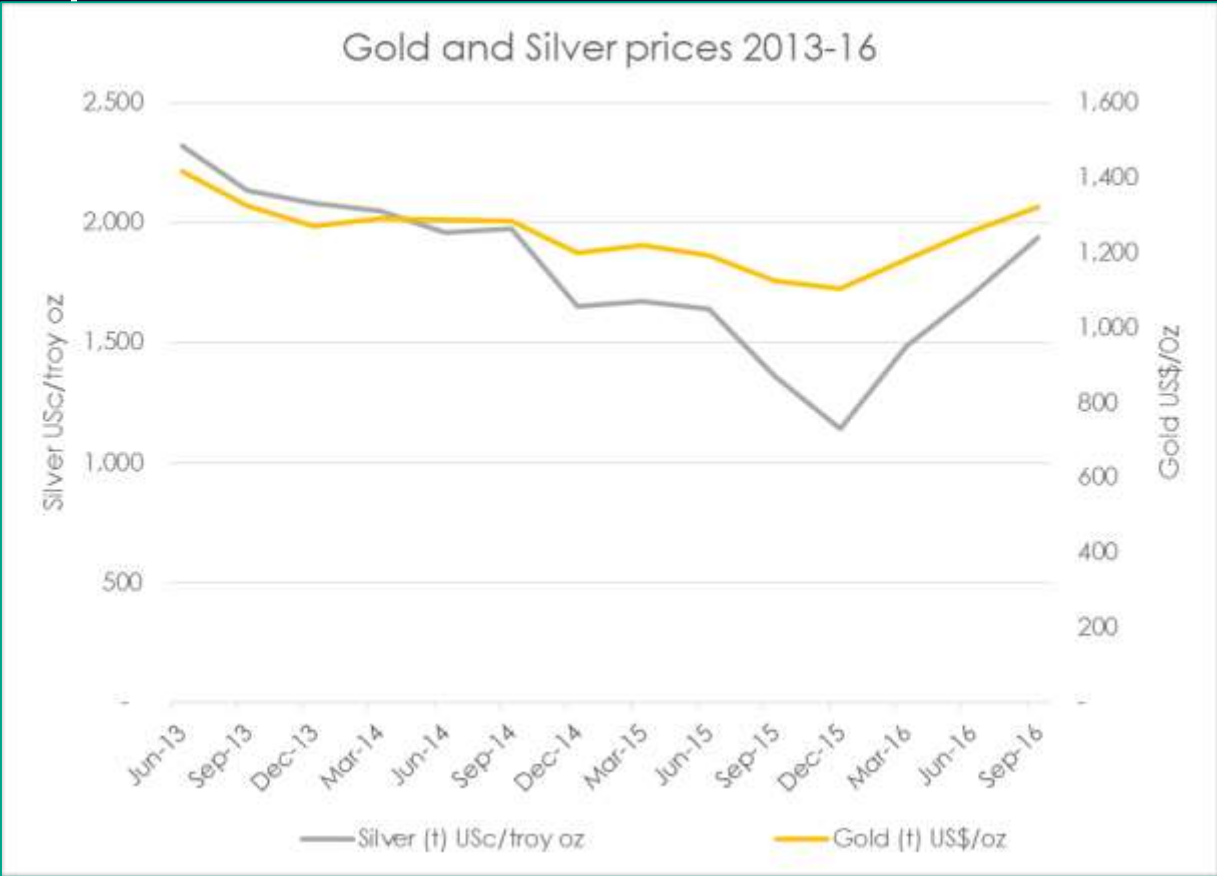
Source: IHS McCloskey

## Prime hard coking coal prices (\$US)



Source: IHS McCloskey

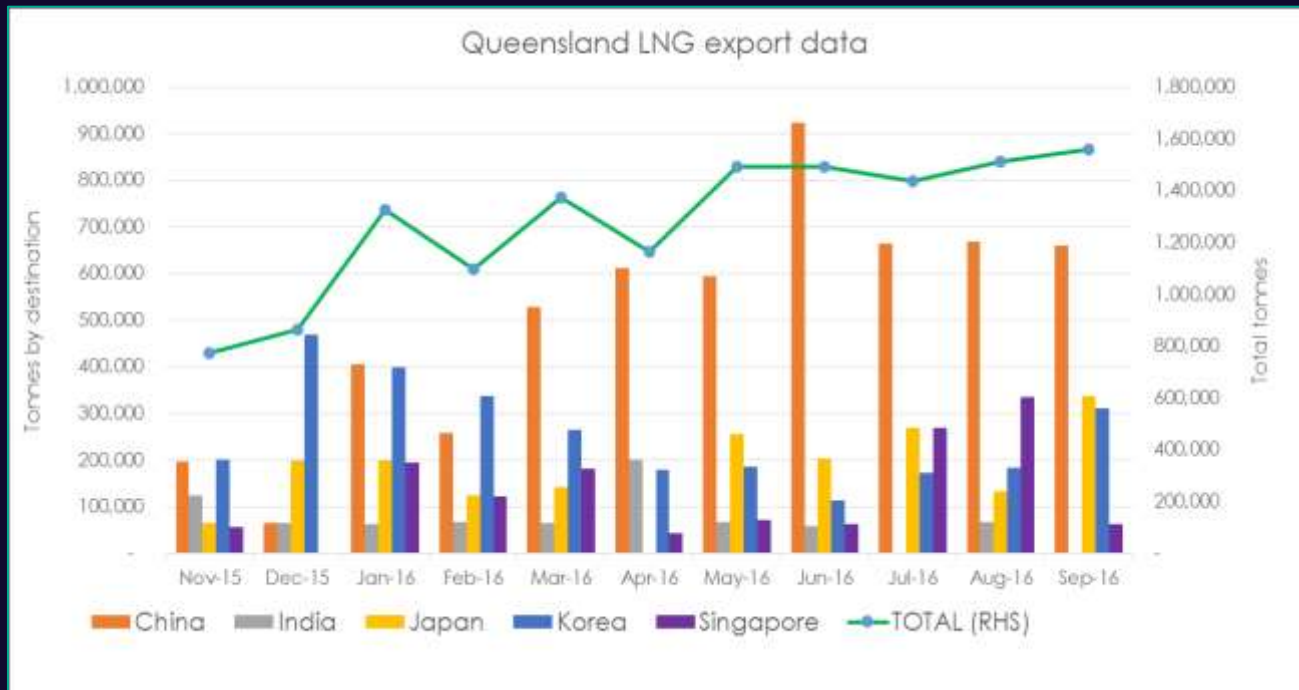
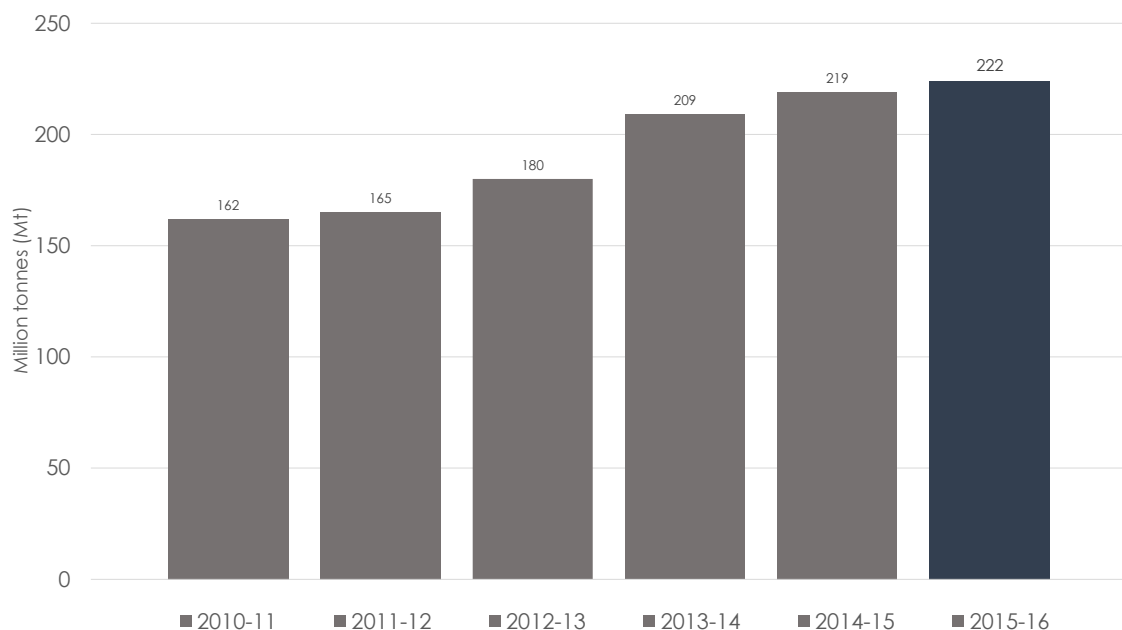
# METALS PRICES HAVE BOTTOMED



*'We expect ongoing increases in global living standards over the longer term, with urbanisation, industrialisation and pro-trade liberalisation to underpin commodity demand. The development trajectory of emerging economies in Asia should provide particular support for industrial metals and energy'* BHP Annual Report 2016

# STRONG EXPORT VOLUMES COAL & LNG

Source: QRC & GPCL

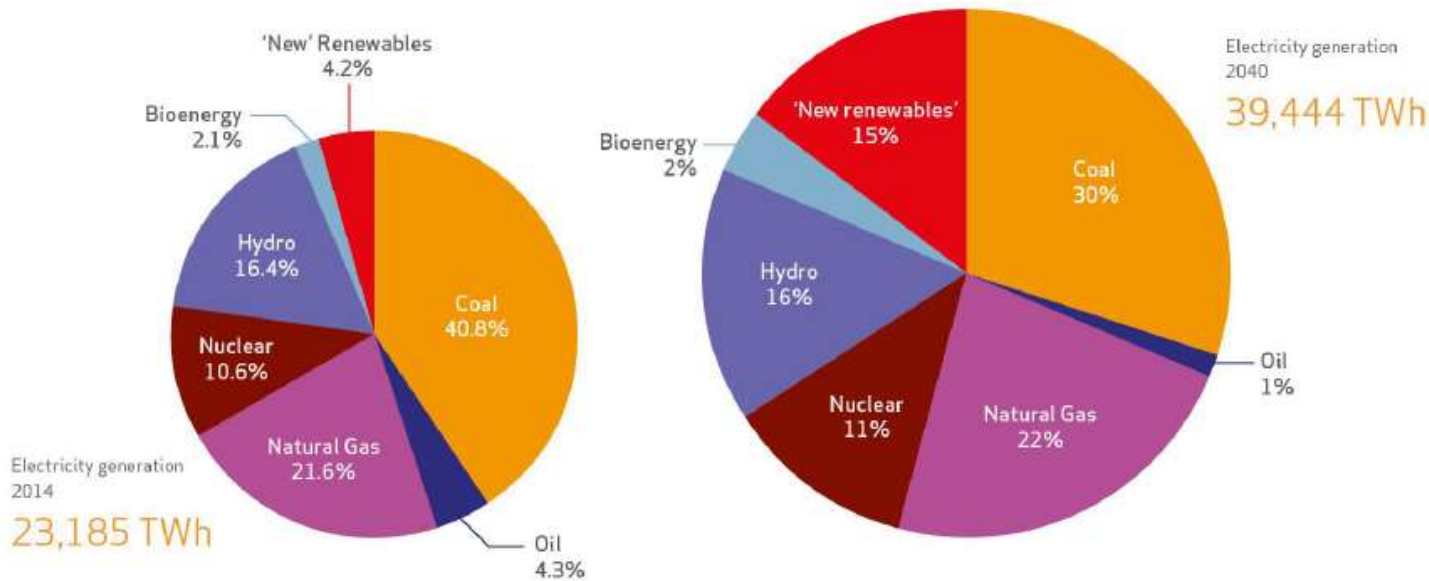


- Australia's coal exports are expected to grow by 36.7 percent by 2040, with 45% of the growth in coking coal
- Gas is the fastest growing fossil fuel with production increases of as much as 47% and 160% growth in Asia.

Source: WEO 2015

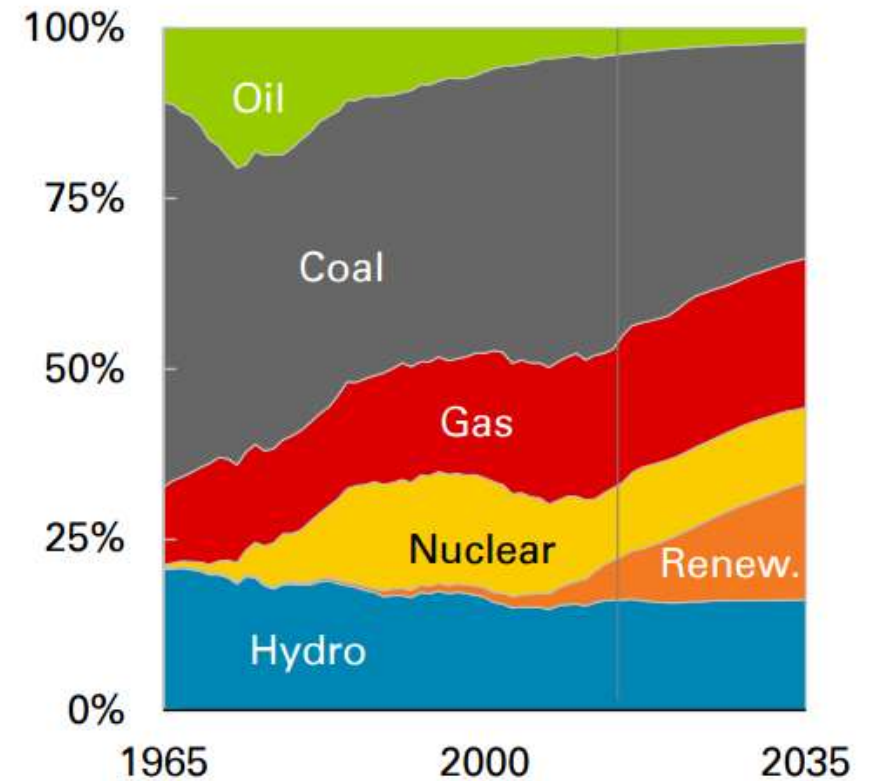
# GLOBAL FUEL MIX & INPUTS TO POWER

Global electricity mix



Source: IEA WEO 2015

Primary inputs to power

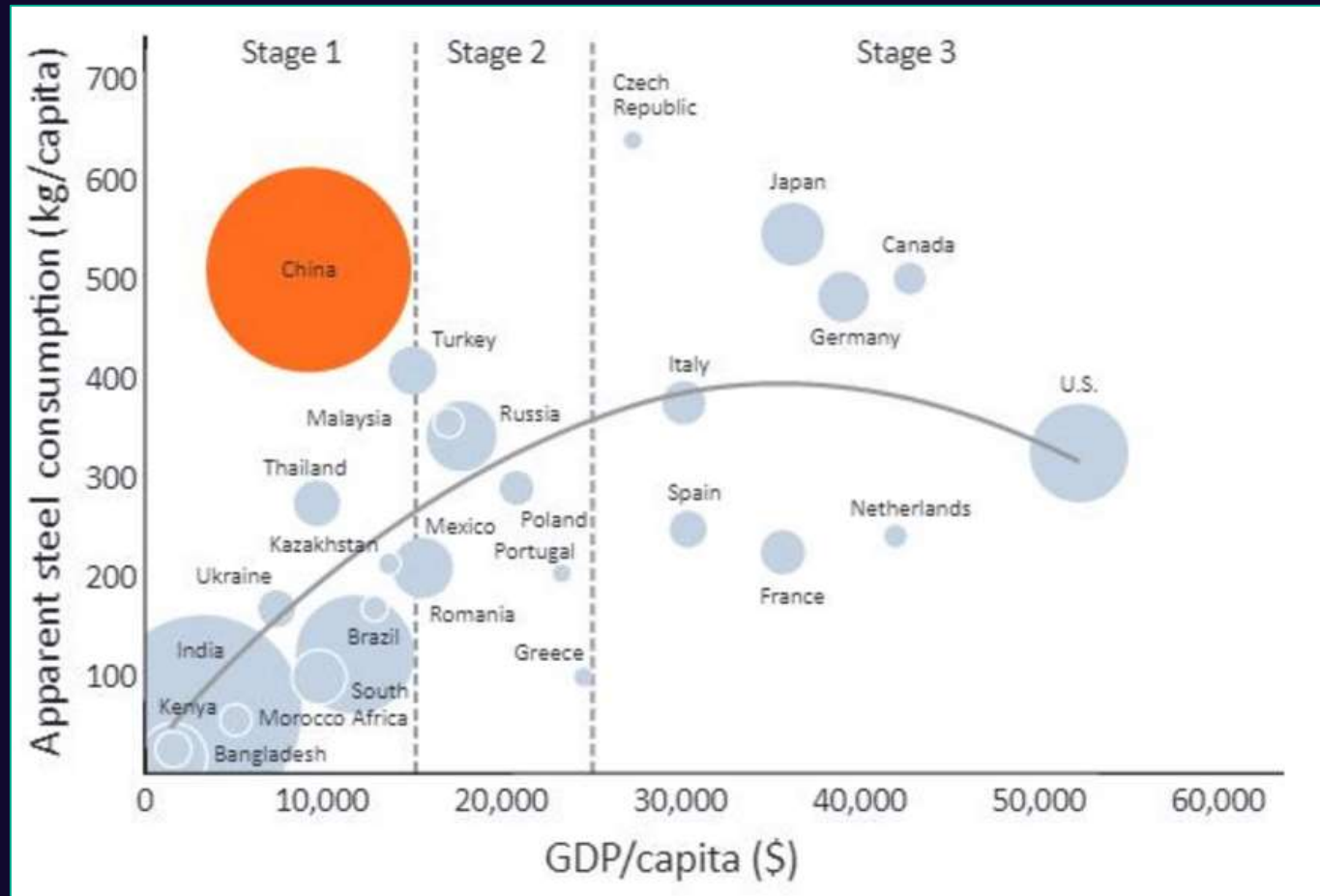


Source: BP 2016



# STEEL CONSUMPTION

URBANISATION AND INDUSTRIALISATION DRIVES INCREASED STEEL CONSUMPTION



*'The long-term outlook remains robust, as the supply of premium hard coking coal becomes scarce and demand is driven by steel production growth in emerging markets, particularly India'*

**BHP Annual Report 2016**

# REEF 2050 PLAN: RAISING THE ENVIRONMENTAL BAR

- Most Queensland resource exports use ports adjacent to Great Barrier Reef (GBR)
- **Ban on capital dredge material disposal in GBR World Heritage Area**
- **Indefinite restriction of capital dredging to just 4 existing priority ports** – greenfield areas off-limits
- Shipping uses deep, wide and naturally-occurring **reef channels managed 24/7** via world leading, reef-wide REEFVTS ship tracking system.
- **One shipping incident** in REEFVTS coverage zone in more than 10 years
- By 2020 just **8 coal and LNG ships a day** visiting ports in GBR zone - plus another 8 ships a day carrying grain, sugar, beef, tourism & imports
- Industry-initiated, award winning **ship and crew vetting system** (RightShip)
- Resource companies providing substantial financial and in-kind investments in contributions to **GBR research, protection and recovery programs**

# DID YOU KNOW?

**DID YOU KNOW?**

EVERY SMART PHONE DEPENDS ON MINED RESOURCES

**ELECTRONICS**  
COPPER  
GOLD  
SILVER

**SCREEN**  
INDIUM TIN OXIDE

**40 MINED METALS & MINERALS**

**DID YOU KNOW?**

**FLAGPOLE**  
81 METRES TALL & IS MADE OF STAINLESS STEEL

**STEEL = IRON ORE + COKING COAL**

**STRUCTURE**  
CONTAINS 300,000 CUBIC METRES OF CONCRETE =

**PARLIAMENT HOUSE WAS BUILT AND OPERATES USING RESOURCES**

**THERMAL COAL HELPED BUILD AND HELPS POWER FEDERAL PARLIAMENT**

**DID YOU KNOW?**

EVERY PART OF A WIND TURBINE DEPENDS ON STEEL

**GENERATOR**  
65% STEEL  
35% COPPER

**BLADES**  
STEEL HOLDS THE BLADES IN PLACE AS THEY TURN

**TOWER**  
90% STEEL  
TUBULAR STEEL TOWERS

**FOUNDATION**  
MADE FROM STEEL RE-INFORCED CONCRETE

**GLOBAL STEEL PRODUCTION IS DEPENDANT ON COAL**

**70% OF STEEL\* IS MADE FROM COAL**

**1MW OF WIND TURBINE CAPACITY REQUIRES 220 TONNES OF COAL**

**= 220 SMALL CARS!**

\* STEEL IS MADE THROUGH A PROCESS OF MELTING IRON ORE WITH COKING COAL

**GLASS**

**THERMAL COAL = MAKE GLASS FOR SKYLIGHTS & OTHERS**

**DID YOU KNOW?**

SOLAR POWER CANNOT OPERATE WITHOUT MINED METALS AND MATERIALS

**SOLAR CELLS**  
SILICA  
TELLURIUM  
CADMIUM

**PANELS**  
TITANIUM DIOXIDE

**WIRING**  
COPPER

**FRAME**  
ALUMINIUM  
STEEL

**BATTERIES**  
LEAD  
LITHIUM

**MANUFACTURING & PRODUCTION OF SOLAR PANELS IS DEPENDANT ON RESOURCES**

**16 MINED METALS & MINERALS ARE REQUIRED FOR PRODUCTION OF A SOLAR PANEL**

RAW MATERIALS UNDERGO CHEMICAL PROCESSES TO BE USED IN THE PRODUCTION OF SOLAR PANELS. STEEL = IRON ORE + COKING COAL

# RESOURCING INNOVATION



[www.resourcinginnovation.com.au](http://www.resourcinginnovation.com.au)

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*Resources into the future*

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