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RIO TINTO PLC
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The following are slides comprising a presentation that was given by Graeme Hunt, President Uranium and Olympic Dam Development, BHP Billiton at the Macquarie Australian Conference on May 7, 2008.

Uranium: A clear future
Macquarie Australian Conference
Graeme Hunt
President Uranium and Olympic Dam Development

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This presentation contains certain forward-looking statements relating to the business, financial performance and results of BHP

Forward-looking

statements

concern

future

circumstances

and

results

and

other

statements

that

are

not

historical

facts,

sometimes

identified

by

the

words

believes ,

expects ,

predicts ,

intends ,

projects ,

plans ,

estimates ,

aims ,

foresees ,

anticipates ,

targets ,

and

similar

expressions.

The

forward-looking

statements

contained

in

this

presentation,

including

assumptions,

opinions

and

views

of

BHP

Billiton
or
cited
from
third
party
sources
are
solely
opinions
and
forecasts
which
are
uncertain
and
subject
to
risks.
For
more
detail
on
those
risks,
you
should
refer
to
the
sections
of
BHP
Billiton's
annual
report
on
Form
20-F
for
the
year
ended
30
June
2007
entitled
Risk
factors ,
Forward

looking
statements
and
Operating
and
financial
review
and
prospects
filed
with
the
US
Securities
and
Exchange
Commission
(the
"SEC").
A
multitude
of
factors
can
cause
actual
events
to
differ
significantly
from
any
anticipated
development.
Neither
BHP
Billiton
nor
any
of
its
subsidiary
undertakings
nor
any
of
its
officers
or
employees

guarantees
that
the
assumptions
underlying
such
forward-looking
statements
are
free
from
errors
nor
does
any
of
the
foregoing
accept
any
responsibility
for
the
future
accuracy
of
the
opinions
expressed
in
this
presentation
or
the
actual
occurrence
of
the
forecasted
developments.
The
SEC
generally
permits
mining
companies
in
their
filings
with

the
SEC
to
disclose
only
those
mineral
deposits
that
the
company
can
economically
and
legally
extract.
Certain
measures
in
this
presentation,
including
deposits",
would
not
generally
be
permitted
in
an
SEC
filing.
The
material
denoted
by
such
terms
is
not
proven
or
probable
Reserves
as
such
terms
are
used
in

the
SEC's
Industry
Guide
7,
and
there
can
be
no
assurance
that
BHP
Billiton
will
be
able
to
convert
such
material
to
proven
or
probable
Reserves
or
extract
such
material
economically.
BHP
Billiton
urges
investors
to
refer
to
its
Annual
Report
on
Form
20-F
for
the
fiscal
year
ended
June

30,
2007,
for
its
most
recent
statement
of
mineral
Reserves
calculated
in
accordance
with
Industry
Guide
7.
Information
Relating
to
the
US
Offer
for
Rio
Tinto
plc
BHP
Billiton
plans
to
register
the
offer
and
sale
of
securities
it
would
issue
to
Rio
Tinto
plc
US
shareholders
and
Rio
Tinto

plc
ADS
holders
by
filing
with
the
SEC
a
Registration
Statement
(the
Registration
Statement),
which
will
contain
a
prospectus
(the
Prospectus),
as
well
as
other
relevant
materials.
No
such
materials
have
yet
been
filed.
This
communication
is
not
a
substitute
for
any
Registration
Statement
or
Prospectus
that
BHP
Billiton
may

file
with
the
SEC.
U.S.
INVESTORS
AND
U.S.
HOLDERS
OF
RIO
TINTO
PLC
SECURITIES
AND
ALL
HOLDERS
OF
RIO
TINTO
PLC
ADSs
ARE
URGED
TO
READ
ANY
REGISTRATION
STATEMENT,
PROSPECTUS
AND
ANY
OTHER
DOCUMENTS
MADE
AVAILABLE
TO
THEM
AND/OR
FILED
WITH
THE
SEC
REGARDING
THE
POTENTIAL
TRANSACTION,
AS
WELL
AS

ANY
AMENDMENTS
AND
SUPPLEMENTS
TO
THOSE
DOCUMENTS,
WHEN
THEY
BECOME
AVAILABLE
BECAUSE
THEY
WILL
CONTAIN
IMPORTANT
INFORMATION.

Investors
and
security
holders
will
be
able
to
obtain
a
free
copy
of
the
Registration
Statement
and
the
Prospectus
as
well
as
other
relevant
documents
filed
with
the
SEC
at
the
SEC's
website

(<http://www.sec.gov>),

once

such

documents

are

filed

with

the

SEC.

Copies

of

such

documents

may

also

be

obtained

from

BHP

Billiton

without

charge,

once

they

are

filed

with

the

SEC.

Page 3
Page 3
Page 3
Disclaimer
(Continued)
Information
for

US
Holders
of
Rio
Tinto
Limited
Shares
BHP
Billiton
Limited
is
not
required
to,
and
does
not
plan
to,
prepare
and
file
with
the
SEC
a
registration
statement
in
respect
of
the
Rio
Tinto
Limited
Offer.
Accordingly,
Rio
Tinto
Limited
shareholders
should
carefully
consider
the
following:
The
Rio
Tinto
Limited

Offer
will
be
an
exchange
offer
made
for
the
securities
of
a
foreign
company.
Such
offer
is
subject
to
disclosure
requirements
of
a
foreign
country
that
are
different
from
those
of
the
United
States.
Financial
statements
included
in
the
document
will
be
prepared
in
accordance
with
foreign
accounting
standards
that

may
not
be
comparable
to
the
financial
statements
of
United
States
companies.
Information
Relating
to
the
US
Offer
for
Rio
Tinto
plc
and
the
Rio
Tinto
Limited
Offer
for
Rio
Tinto
shareholders
located
in
the
US
It
may
be
difficult
for
you
to
enforce
your
rights
and
any
claim
you

may
have
arising
under
the
U.S.
federal
securities
laws,
since
the
issuers
are
located
in
a
foreign
country,
and
some
or
all
of
their
officers
and
directors
may
be
residents
of
foreign
countries.
You
may
not
be
able
to
sue
a
foreign
company
or
its
officers
or
directors
in
a

foreign
court
for
violations
of
the
U.S.
securities
laws.
It
may
be
difficult
to
compel
a
foreign
company
and
its
affiliates
to
subject
themselves
to
a
U.S.
court's
judgment.
You
should
be
aware
that
BHP
Billiton
may
purchase
securities
of
either
Rio
Tinto
plc
or
Rio
Tinto
Limited
otherwise
than

under
the
exchange
offer,
such
as
in
open
market
or
privately
negotiated
purchases.
References
in
this
presentation
to
\$
are
to
United
States
dollars
unless
otherwise
specified.

Page 4
Agenda

Olympic Dam is a world class and superior resource

Strong nuclear demand growth prospects

Nuclear key to address climate change

Carbon price rewrites nuclear economics

China impact in the uranium industry

Page 5

0

20

40

60

80

100

120

140

160

Page 5

Olympic Dam: A world class resource

mt

Copper

kt

U₃O

8

moz

Au

~1100

1050

1000

Sources: Company Annual Reports and press releases (as at 30-Sep-2007).

International Atomic Energy Agency

Note: Witwatersrand figure is BHP Billiton estimate and is approximate only

a)

Based on reported resource inventory .

0
500
1000
1500
2000
2500
The largest uranium
deposit in the world
4th
largest copper
deposit in the world
0
50
100
150
200
250
5th largest gold
deposit in the world

Page 6

Page 6

Olympic Dam: A world class resource

Notes:

a)

100%

of

production
shown.
Split
of
bubble
55%
Rio
Tinto,
45%
BHP
Billiton.
b)
Bubble
size
reflects
Rio
Tinto's
current
19.9%
exposure
to
Oyu
Tolgoi.
Rio
Tinto
has
options
to
increase
its
ownership
interest
to
46.6%.
Olympic Dam relative to Rio Tinto's undeveloped copper projects
La Granja
Resolution(a)
Oyu Tolgoi(b)
Pebble
Olympic Dam
0.0
0.5
1.0
1.5
2.0
2.5
3.0
0
50
100

150

200

250

Contained copper equivalent mineralisation - Mt

Solid bubble = Existing production

Transparent bubble = Targeted annual production

Note: Bubble size reflects forecast annual copper capacity

Page 7
Agenda

Olympic Dam is a world class and superior resource

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Page 8
0
2,500
5,000
7,500
10,000
12,500

15,000
1900
1910
1920
1930
1940
1950
1960
1970
1980
1990
2000
2010
2020
2030

World Primary Energy Use
(million tonnes of oil equivalent)

* At a hypothetical world average growth rate of 1% p.a.

Source of data: 1965-2006: BP Statistical Review of World Energy; bntoe

= billion tonnes oil equivalent

1900-1965: Derived from Maddison, UK Select Committee on Economic Affairs.

400 bntoe

= 600 billion tonnes of hard coal

The world is well on its way to consuming as much energy in the
next 25 years as it has consumed throughout modern history

OECD

FSU

Emerging

Markets

1900-2006

Total = 400 bntoe

2007-2030

Total = 300 bntoe*

Page 9

Primary energy consumption is strongly correlated to economic development

Source: World Bank, Government Statistics for Taiwan, BP Statistical Review of World Energy (2007)

Primary energy use (tonnes of oil equiv/capita)

0

2

4
6
8
10
0
5,000
10,000
15,000
20,000
25,000
30,000
35,000
40,000
45,000
50,000
GDP/Capita (Jan 2008 Constant US Dollars)
China
Germany
India
Japan
Korea, Rep.
United States
Taiwan

Page 10

China's annual power output is growing at a rate equivalent to
a major European country

426

400

0

500

1000
1500
2000
2500
3000
3500
1999
2000
2001
2002
2003
2004
2005
2006
2007

Power output added from previous year

UK's total

power

output

today

China's Growing Power Output (in billion kWh)

Energy Issues?

Power generation and distribution

Energy efficiency and intensity

Urban environment and transport

Emissions

Page 12
Notes:
a)
Source:
International
Nuclear
Safety

Centre
at
ANL,
Aug-2005
(www.insc.anl.gov/pwrmaps/world_map.pdf).

b)
Source:
World
Nuclear
Association
(www.world-nuclear.org/info.reactors.html),
17-Oct-2007.

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Olympic Dam: Exposure to strong forecast nuclear
demand growth
especially in the East
Under construction (reactors)
33 reactors

(b)
Proposed (reactors)
> 222 reactors

(b)
Planned (reactors)
> 94 reactors

(b)
Operational (power plants)
439 reactors

(b)
Existing operational power plants
(a)

Page 13
Notes:
a)
Location
of
reactors
that

are
planned,
under
construction,
and
proposed
is
by
country,
but
does
not
necessarily
show
their
exact
geographical
location
in
a
country.

b)
Source:
International
Nuclear
Safety
Centre
at
ANL,
Aug-2005
(www.insc.anl.gov/pwrmaps/world_map.pdf).

c)
Source:
World
Nuclear
Association
(www.world-nuclear.org/info.reactors.html),
17-Oct-2007.

Page 13
Olympic Dam: Exposure to strong forecast nuclear
demand growth
especially in the East
Under construction (reactors)
33 reactors

(c)
Proposed (reactors)
> 222 reactors

(c)
Planned (reactors)
> 94 reactors

(c)

Operational (power plants)

439 reactors

(c)

Existing operational power plants and future development of nuclear power reactors

(a),(b)

Page 16
Agenda

Olympic Dam is a world class and superior resource

Strong nuclear demand growth prospects

Nuclear key to address climate change

Carbon price rewrites nuclear economics

China impact in the uranium industry

Page 17

Carbon price rewrites nuclear economics

Relative economics at no carbon cost

0

50

100

150

Nuclear

Coal

Gas

Relative economics @ \$30/t CO2

0

50

100

150

Nuclear

Coal

Gas

Relative economics @ \$50/ t CO2

0

50

100

150

Nuclear

Coal

Gas

Sources: WNA, UIC/AUA, CERA, OECD/IEA, US DOE, UK govt, CRU group

Nuclear power is competitive with other generation technologies at current prices

At carbon cost of \$50/ t CO2, the carbon cost of coal fired generation is on par with the capital cost for nuclear

These are indicators for the western world. Developments in other industries, such as Alumina, have proven that the Chinese are capable of substantially decreasing both lead-time and capital cost on construction, significantly reducing the issue of the substantial capital cost of nuclear power

\$/MWh

\$/MWh

\$/MWh

Capital cost

O&M cost

Fuel cost

Carbon cost

Decommissioning

Page 18

*Including wind, biomass, oil, etc

** Include power sector and non-power sector thermal coal use (excluding coking coal)

Source:NDRC power plant project database; Interviews; expert interviews; BHP Billiton;
team analysis

Uranium

What if China goes nuclear?

1,532

2,054

1,532

2,054

12%

4%

26%

33%

GW Installed

% Nuclear

Traditional China 2030 electricity
demand

Nuclear China electricity demand 2030
what if

42

17

150

88

Ktpa U308

Case B, rapid move

away from energy

intensity

Case A, low gains in
energy efficiency

337

676

251

346

426

262

400

680

Case B, rapid move

away from energy

intensity

Case A, low gains in
energy efficiency

262

555

1,281

251

346

426

182

75

Coal

Hydro

Gas

Other

Page 19

Impact of carbon emissions

Global green house gas emissions growth and abatement requirements (GT CO₂ e*)

4.8

6.7

38.5

2005

China

2.8

US

0.9

EU

8.6

RoW

45.3

59.3

2030

23**

Abatement

requirement

2030 including

abatement

RoW

EU

US

China

+155%

21.5

*

Total

emissions,

including

green

house

gas

emissions

from

non-power

sectors

**

Total

global

abatement

requirement

based

on

need

to

minimize

global

warming

to

2-3°

Celsius

Source:

WRI;

IEA;

Team
analysis
41
China
13
US
4
EU
41
RoW
Growth 2005-2030
100% = 21 GT
DSM
2.4
Other**
1.5
China Nuclear
0.8
4.5
CCS
2.7
Approach
Impact GT
-12
-24
3
15
Cost
\$/tCO₂e
GT CO₂
Ave = 7.5GT CO₂e
emission acceptable
from China in 2030
(+36% Higher than
2005 level)
4.5**
Australia
0.5
8.5
5.5
14.0
31.3

Page 20

China has been predictable in re-writing capital intensity and delivery

60-66 Months US\$3000-

US\$5000/t installed

capacity

40 Months, Greenfields

US\$1000-
1300/t installed capacity Detailed
engineering through commissioning
Copper smelters
40 Months +
400kt/yr alumina refinery
construction time 10 months
Kaiman
alumina
40 Months +
400kt/yr alumina refinery
construction time 14 months
Jinbei
Alumina
40 Months +
800kt/yr alumina refinery
construction time 10 months
East Hope
Alumina
40 Months +
10x 300mw power stations and
3500kt/yr alumina refinery
construction time 10 months
Alumina refinery
Shangdong
province
Western Benchmark
China

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Greenfields
Olympic Dam well positioned to meet energy demand
Expand open pit add
Greenfield concentrator
and hydrometallurgy
circuits and expand

smelter capacity
Further expansion of
open pit, build new
concentrator and
hydrometallurgy circuit
Sell excess concentrate
Stages
CONCEPTUAL
Output
Cu
(ktpa)
U₃O
8
(ktpa)
Au
(kozpa)
540
14
600
730
19
800
Further growth
opportunities
Add Hydrometallurgy
circuit
350
9
400
Brownfields
Optimise current
configuration
Develop open pit
production build
Greenfield concentrator
sell excess concentrate
Current
350
4.5
400
200
4.5
120
180
4
100
+3Mtpa
+2Mtpa
Mining
Concentrating &

Hydrometallurgy

Smelting

5
4
+
2
3

Notes: Unless specified all capacities are in tonnes of ore.

Actual timing of Underground phase out is not yet determined

+2Mtpa (100ktpa con)
+20Mtpa (250ktpa con)

1.1
1
2
0
0

10Mtpa
9Mtpa
0Mtpa
+20Mtpa
+20Mtpa
+20Mtpa
+20Mtpa
20Mtpa
72Mtpa
52Mtpa
10Mtpa
(500ktpa con)
+20Mtpa (800ktpa con)
+20Mtpa (800ktpa con)

Page 22

Mining investment cycle: Escondida
case study

Low price cycles

High price cycles

Discovery

Discovery

0.60

1.10

1.60

2.10

2.60

3.10

3.60

0

200,000

400,000

600,000

800,000

1,000,000

1,200,000

1,400,000

1,600,000

Grassroots

Exploration

Resource

Definition

Feasibility

& Financing

Construction

Operation and

additional growth

options

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Page 23
Page 23
The world at night