Appendix
Appendix A
Definitions and classifications

A.1 Exchange rates
In this report, the AUD/USD exchange rate (Australian dollar relative to the US dollars) is based on the median of economic forecasters at the time that the report is prepared. The source is the Bloomberg survey of economic forecasters.

World commodity prices are typically denominated in US dollars, and exchange rate movements can have a significant effect on the actual outcomes of commodity prices and export earnings. A change in the value of the US dollar against other floating international currencies can influence movements in world resources and energy prices. A change in the Australian dollar against the US dollar will impact on export earnings for domestic commodity exporters and producers. There is substantial uncertainty surrounding any exchange rate forecast, with changes to exchange rates influenced by changes in financial market sentiment, sometimes resulting in strong volatility.

A.2 Conversion to real dollars
Nominal values and prices are converted to real dollars using on the Australian and US consumer price indexes (CPI). The Australian and US CPI forecasts are based on the median of economic forecasters at the time that the report was prepared. The source is the Bloomberg survey of economic forecasters.

A.3 Time horizons
It is important to distinguish between different time horizons, as factors affecting production, consumption and prices in the short-term differ from factors affecting these components in the medium to long-term. Forecasts also become increasingly imprecise over longer time horizons, due to increased risk and uncertainty. For these reasons, the OCE uses different terminology to distinguish between short-term forecasts and medium to long-term projections, as outlined in Table A2.

<table>
<thead>
<tr>
<th>Outlook period</th>
<th>Years</th>
<th>Terminology</th>
</tr>
</thead>
<tbody>
<tr>
<td>Current period</td>
<td>Current (Incomplete data or subject to revision)</td>
<td>Estimate</td>
</tr>
<tr>
<td>Short-term</td>
<td>1 to 2 years</td>
<td>Forecast</td>
</tr>
<tr>
<td>Medium-term</td>
<td>3 to 5 years</td>
<td>Projection</td>
</tr>
</tbody>
</table>

Source: Department of Industry, Innovation and Science (2018)
A.4 Commodity classifications

The Office of the Chief Economist (OCE) defines exports for each commodity by a selected set of 8-digit Australian Harmonised Export Commodity Classification (AHECC) codes. Where possible, the choice of AHECC codes is based on alignment with international trade data, to ensure that direct comparisons can be made. For example, groupings for various commodities are aligned with classifications used by the International Energy Agency, World Steel Association, International Nickel Study Group, International Lead and Zinc Study Group, International Copper Study Group and World Bureau of Metal Statistics.

In this report, benchmark prices and Australian production and exports are forecast for 21 commodities, as shown in Table A3. In estimating a total for Australia’s resources and energy exports, the remaining commodities, defined as ‘other resources’ and ‘other energy’, are forecast as a group.

<table>
<thead>
<tr>
<th></th>
<th>Resources (non-energy)</th>
<th>Energy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definition</td>
<td>Resource commodities are non-energy minerals and semi-manufactured products produced from non-energy minerals</td>
<td>Energy commodities are minerals and petroleum products that are typically used for power generation</td>
</tr>
<tr>
<td>Australian Harmonised Export Commodity Classification (AHECC) chapters</td>
<td>25 (part); 26 (part); 28 (part); 31 (part); 73 (part); 74; 75; 76; 78; 79; 80; 81</td>
<td>27 (part)</td>
</tr>
<tr>
<td>Commodities for which data is published, forecasts are made and analysed in detail in this report</td>
<td>Aluminium; alumina; bauxite; copper; gold; iron ore; crude steel; nickel; zinc, lithium</td>
<td>Crude oil and petroleum products; LNG; metallurgical coal; thermal coal; uranium</td>
</tr>
</tbody>
</table>

Notes: The AHECC chapter is the first two digits of the trade code. Groupings are made at the 8-digit level.

Source: Department of Industry, Innovation and Science (2018)
<table>
<thead>
<tr>
<th>Term</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AISC</strong></td>
<td>All-In Sustaining Cost — an extension of existing cash cost metrics and incorporates costs related to sustaining production.</td>
</tr>
<tr>
<td><strong>Benchmark</strong></td>
<td>A standard specification used to price commodities.</td>
</tr>
<tr>
<td><strong>Blast furnace and basic oxygen furnace</strong></td>
<td>Used in an integrated steelmaking process that uses iron ore and coal.</td>
</tr>
<tr>
<td><strong>CFR</strong></td>
<td>Cost and freight — Seller clears exports, and pays freight.</td>
</tr>
<tr>
<td><strong>Coke</strong></td>
<td>Made by heating coal at high temperatures without oxygen, and used to reduce iron ore to molten iron saturated with carbon, called hot metal</td>
</tr>
<tr>
<td><strong>CPI</strong></td>
<td>Consumer Price Index — measures quarterly changes in the price of a basket of goods and services which account for a high proportion of expenditure by the CPI population group (i.e. metropolitan households).</td>
</tr>
<tr>
<td><strong>Crude steel</strong></td>
<td>Steel in the first solid state after melting, suitable for further processing or for sale.</td>
</tr>
<tr>
<td><strong>DES</strong></td>
<td>Delivered Ex Ship — price of LNG including shipping and insurance.</td>
</tr>
<tr>
<td><strong>Economic growth</strong></td>
<td>An increase in the capacity of an economy to produce goods and services, compared from one period of time to another. It is measured in nominal or real gross domestic product (GDP).</td>
</tr>
<tr>
<td><strong>Electric arc furnace</strong></td>
<td>A furnace that melts steel scrap using the heat generated by a high power electric arc.</td>
</tr>
<tr>
<td><strong>ETF</strong></td>
<td>Exchange Traded Fund — an exchange traded fund that allows investors to invest in gold on the exchange.</td>
</tr>
<tr>
<td><strong>FOB</strong></td>
<td>Free on board — seller clears export, buyer pays freight.</td>
</tr>
<tr>
<td><strong>GAD</strong></td>
<td>Gross air dried basis — For measuring coal quality.</td>
</tr>
<tr>
<td><strong>GAR</strong></td>
<td>Gross as received basis — For measuring coal quality.</td>
</tr>
<tr>
<td><strong>GDP</strong></td>
<td>Gross Domestic Product — measures the value of economic activity within a country/group.</td>
</tr>
<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>---------</td>
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<tr>
<td>GST</td>
<td>Goods and Services Tax — a value-added tax levied on most goods and services sold for domestic consumption.</td>
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<tr>
<td>HCC</td>
<td>Hard coking coal — The best grade of metallurgical coal used in the steel production process. Australian hard coking coal is regarded as the industry benchmark.</td>
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<tr>
<td>IEA</td>
<td>International Energy Agency</td>
</tr>
<tr>
<td>IMF</td>
<td>International Monetary Fund — an international organisation that promotes international financial stability and monetary cooperation.</td>
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<tr>
<td>ISM</td>
<td>US Institute for Supply Management</td>
</tr>
<tr>
<td>IP</td>
<td>Industrial Production — measures the output of the industrial sector that comprises mining, manufacturing, utilities and construction.</td>
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<tr>
<td>JCC</td>
<td>Japan Customs-cleared Crude (or Japan Crude Cocktail) — average price of crude oil imported by Japan and a common price index in long-term LNG contracts.</td>
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<tr>
<td>LBMA</td>
<td>London Bullion Market Association</td>
</tr>
<tr>
<td>LNG</td>
<td>Liquefied natural gas</td>
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<tr>
<td>LME</td>
<td>London Metal Exchange</td>
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<tr>
<td>LPG</td>
<td>Liquefied petroleum gas</td>
</tr>
<tr>
<td>NAR</td>
<td>Net as received basis — For measuring coal quality.</td>
</tr>
<tr>
<td>NEV</td>
<td>New energy vehicle — term used for plug-in electric vehicles eligible for public subsidies (battery electric vehicles and plug-in hybrid vehicles)</td>
</tr>
<tr>
<td>OECD</td>
<td>Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>OPEC</td>
<td>Organisation of the Petroleum Exporting Countries</td>
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<tr>
<td>OPEC+</td>
<td>Informal reference for OPEC agreements that include an additional 10 countries beyond traditional OPEC members, including Russia and Mexico.</td>
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<tr>
<td>PCE</td>
<td>Personal Consumption Expenditure — a measure of the changes in price of consumer services and goods.</td>
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<tr>
<td>Acronym</td>
<td>Description</td>
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<tr>
<td>---------</td>
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<tr>
<td>PCI</td>
<td>Pulverised coal injection — PCI coal is used for its heat value and injected directly into blast furnaces as a supplementary fuel, which reduces the amount of coke required.</td>
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<tr>
<td>PMI</td>
<td>Purchasing Managers Index — an indicator of economic health for manufacturing and service sectors.</td>
</tr>
<tr>
<td>SHFE</td>
<td>Shanghai Futures Exchange</td>
</tr>
<tr>
<td>SCC</td>
<td>Semi-soft coking coal — A type of metallurgical coal used in the steel production process alongside hard coking coal, but results in a lower coke quality and more impurities.</td>
</tr>
<tr>
<td>Tariff</td>
<td>A tax on imports or exports that is used by governments to generate revenue or to protect domestic industries from competition.</td>
</tr>
<tr>
<td>TWI</td>
<td>Trade Weighted Index — a measure of the foreign exchange value of the US dollar against a basket of major foreign currencies.</td>
</tr>
<tr>
<td>WEO</td>
<td>The International Energy Agency’s World Energy Outlook</td>
</tr>
<tr>
<td>WTI</td>
<td>West Texas Intermediate crude oil price</td>
</tr>
</tbody>
</table>
### Appendix C  Contact details

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