

Economics Legislation Committee
ANSWERS TO QUESTIONS ON NOTICE
Industry Portfolio
Supplementary Budget Estimates Hearing 2013-14
21 November 2013

AGENCY/DEPARTMENT: DEPARTMENT OF INDUSTRY

TOPIC: Mining Sector

REFERENCE: Written Question – Senator Urquhart

QUESTION No.: SI-157

Why does the Bureau of Resources and Energy Economics consider that the energy efficiency of the mining sector has declined over recent years?

ANSWER

It is not strictly correct to state that the Bureau of Resources and Energy Economics (BREE) has concluded that energy efficiency in the mining sector has declined in recent years.

The BREE report “*Economic Analysis of End-use Energy Intensity in Australia*” released in May 2012 indicated that “*energy intensity in the mining sector grew at an annual rate of 2.3 per cent over the period 1989-90 to 2009-10*” (p. 20). The report also noted that “*the Australian mining sector is a highly energy-intensive industry that accounted for 11 per cent of gross value added and 13 per cent of final energy consumption of the Australian economy in 2009-10*” (p.20).

Trends in sectoral energy intensity - which are defined as changes in the total energy consumed by mining activity relative to the sector’s economic output (measured by share of Gross Value Added) - is a broad measure that encompasses changes in technical energy efficiency, compositional changes in the structure of the sector and increases in overall levels of activity.

Therefore it is possible for changes in overall energy intensity to be driven by a range of factors in addition to energy efficiency.

Nonetheless, key factors that BREE considers are likely to have contributed to the reported increase in energy intensity over the study period include:

- Depleting quality of ore bodies. As the resources that are easy to access (generally those closer to the surface) are depleted, the extraction of resources that are harder to access (generally located deeper underground) is required to maintain or continue production. To sustain production, more energy will be required to extract those resources that are located deeper underground than those closer to the surface;
- The increase in the production of liquefied natural gas (LNG) with the extraction and liquefaction activities for LNG being energy intensive; and
- Production lags. The mining sector has undergone a major period of expansion and construction prior to a massive increase in production. This has increased energy consumption across the sector ahead of the economic benefits flowing from large scale production.