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SUSTAINABLE DEVELOPMENT INDICATORS FOR THE AUSTRALIAN COAL INDUSTRY

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ABSTRACT

What does sustainable development mean to the Australian coal industry? While OECD countries have accepted the philosophy of sustainable development, the Australian coal industry deals with finite resources. Can it contribute to sustainable development through the extraction of Australia's extensive but finite coal resources? The practice of implementing sustainable development principles will be effectively achieved at business and project level. Sustainable development can be defined as "meeting the needs of the present without compromising the ability of future generations to meet their own needs". To contribute to sustainable development the Australian coal industry requires a sustainable development framework and practical indicators for companies to measure the total economic, environmental and social impact of their operations or projects. Fundamentally these indicators must be cumulative and therefore based upon resource data in order to benchmark the current or future impacts of an operation or projects against others. This paper outlines a framework for the Australian coal industry and selects practical indicators to benchmark the impacts. Proprietary resource simulation software modelling coal preparation plant performance has then been used to quantify these fundamental indicators. The selected indicators are product yield, specific energy target, CO₂ intensity, water intensity, reject impoundment quantities and resource utilisation. These indicators are then used within the proposed sustainable development framework to determine the economic, environmental and social impact for a specific coal project. This case study from the Australian coal industry is assessed for the selected indicators by comparing the impact of different project alternatives using the proposed sustainable development framework.

Reference:

Graham, J. (2010). Sustainable Development Indicators for the Australian Coal Industry. In B. & Atkinson (Ed.), *Proceedings of the Thirteenth Australian Coal Preparation Conference* (pp. 180-194). Mackay, Queensland: ACPS.