INTERNATIONAL CCS KNOWLEDGE CENTRE

About the International CCS Knowledge Centre

Operating since 2016 under the direction of an independent board, the International CCS Knowledge Centre (Knowledge Centre) was established by BHP and SaskPower with a mandate to advance the global understanding and deployment of large-scale carbon capture and storage (CCS) to reduce global GHG emissions. The Knowledge Centre provides the know-how to implement large-scale CCS projects as well as CCS optimization through the base learnings from both the fully-integrated Boundary Dam 3 CCS Facility and the comprehensive second-generation CCS study, known as the Shand CCS Feasibility Study.

Why CCS is part of COP24:

As CCS is identified in the majority of the Intergovernmental Panel on Climate Change (IPCC)'s pathway scenarios to get to 1.5°C, an intentional and tactical approach is needed for global effort in commercial scale CCS. Being in Katowice, a city well known for its connections to coal, highlights the need for emission reduction technologies that can allow the jobs and economies of cities such as this to continue, while also reducing emissions in a significant way for energy security and energy transitions.

While CCS is applicable beyond the energy sector, it is the only option for abatement in certain industrial sectors such as cement or iron and steel. Lessons learned from operational projects such as Boundary Dam show integration understandings about "post" combustion CCS. As the carbon dioxide (CO_2) is captured after the combustion process, the same technologies can apply to any emission stream – meaning what is used for coal and be applied also to other sources of emissions. This means deployment for CCS on industrial facilities can be done in the near future.

Additional background on the Knowledge Centre

The Knowledge Centre provides the know-how to implement large-scale CCS projects as well as CCS optimization. The team actively engages with financiers and decision makers to ensure high-level information on CCS is conveyed with political, economic and other broad considerations; and with practical, hands-on development experience, technical advice is provided in planning, design, construction, and operation of CCS. This experience-based approach de-risks future applications of the technology.

Through the base learnings from both BD3 lessons learned have recently been applied directly in a new second-generation CCS study, known as the Shand CCS Feasibility Study. Significant cost reductions between first-generation and second-generation CCS have been identified: capital cost reductions at 67% per tonne of CO_2 captured; a cost of capture at USD$45/t CO_2; as well as 92% savings to power plant integration capital cost. The Knowledge Centre's staff are available to provide experience-based guidance to future pioneers in CCS, including case-by-case feasibility analysis such as this.

A key step to successful CCS deployment is the application of operational understanding at an early stage to avoid unnecessary costs and delays.

For more information, see: ccsknowledge.com or contact us at info@ccsknowledge.com

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