

# WHAT OTHERS ARE SAYING ABOUT THE SHAND CCS FEASIBILITY STUDY

*"This innovative study destroys the myth, once and for all, that Carbon Capture Utilization and Storage (CCUS) in the power sector is not a cost-effective mitigation option. The study clearly demonstrates that CCUS on coal can be competitive with natural gas even with the very low gas prices in North America."*

- John Gale, General Manager, IEAGHG

*"The public report of The Shand CCS Feasibility Study provides an important and welcomed analysis of how the next generation of carbon capture and storage technology can be designed to achieve substantially lower costs together with even greater emission reductions than the pioneering first-generation plant at SaskPower's Boundary Dam Unit 3. The study's consideration of the site-specific characteristics and operation of the Shand Power Station makes it especially credible and valuable as an indication of progress down the CCS learning curve."*

- Prof. Edward S. Rubin, Carnegie Mellon University

*"CCS provides an important tool in reducing our CO<sub>2</sub> emissions. And it works! This report illustrates that continuous improvement from lessons learned can help bring about cost reduction; and in this case significant cost reduction through novel application. The availability of CO<sub>2</sub> enhanced oil recovery (EOR) as a utilization option for CO<sub>2</sub> provides a stepping stone for larger scale CCS deployment. With a risk based, site specific measurement monitoring & verification (MMV) program, secure storage can be demonstrated in the reservoir."*

*CCS has applications beyond Oil and Gas. It is required in Fertilizer manufacture, cement manufacturing, steel fabrication, and power generation. CCS when integrated with Renewables provides an effective means for CO<sub>2</sub> emission reduction. For example, 1 million tonnes of emission reduction from CCS is the equivalent of 1 year of Tokyo transportation emissions. When combined with biofuel production, it can even provide an effective means for achieving negative emissions."*

*In addition to the value CCS brings with CO<sub>2</sub> reduction, it plays a key role in job creation. A 1 million tpa CCS installation can generate hundreds of jobs over several year of construction and provide ongoing employment for the Maintenance, Operations, and Technical staff to operate the facility."*

- Tim Wiwchar, Business Opportunity Manager, Shell

*"The Feasibility Study for applying CCS to the Shand Power Station is a valuable contribution to the growing body of knowledge on the environmental and economic necessity of CCS. Most importantly, the Study proves the point that there is nothing like learning by doing to dramatically improve the engineering, project management and economics of new technologies. The Saskatchewan Government and the International CCS Knowledge Centre have shown the value gained from their world leading investment to deliver the ground-breaking Boundary Dam 3 CCS facility, the experience of which has enabled the dramatic improvements for the next-of-a-kind plant that are described in the Shand Feasibility Study."*

- Global CCS Institute

*"The team at the International CCS Knowledge Centre has shown how costs can be reduced through learning by doing. The new CCS retrofit design from the Shand CCS Feasibility Study shows how all nations will save time and money implementing next generation CCUS technologies as part of the global effort to tackle climate change. It further enable's energy markets to choose coal-fired power plants as a source of reliable, low-emissions energy while also developing a CO<sub>2</sub> solution for industry."*

- Stephen Malss, Director, Low Emissions Technology COAL21

*"We are encouraged by the findings of this important study by the International CCS Knowledge Centre, which further highlights the importance of 'learning by doing' through project execution as they build off the success at Boundary Dam. It's one more example of the momentum that can be obtained toward carbon capture, use and storage, which is viewed as paramount by global leaders to meeting societal goals."*

*Coal continues to be an essential part of the global energy mix, and hundreds of new coal-fueled generating plants are in construction around the world. We are highly supportive of continued financing, development and deployment of advanced technologies."*

- Glen Kellow, President and CEO, Peabody