

### **CARBON CAPTURE, UTILIZATION AND STORAGE: POLARIZATION, PUBLIC CONFIDENCE AND DECISION-MAKING**

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#### **Study in Brief**

Over the past 20 years, Canada has developed extensive expertise and experience in carbon capture, utilization and storage (CCUS) technologies. Yet despite this expertise, CCUS faces challenges across a range of mostly socio-economic and political “risk issues” that threaten public confidence in the technology and decisions that govern it. This study offers a detailed account of these risk issues. The authors undertook a comprehensive review of academic, industry, and government publications, and in-depth interviews with decision-makers from a variety of different sectors related to CCUS policy and implementation.

#### **Key Findings**

The study identifies risk issues as the highest concern to stakeholders: how to achieve tolerable costs; incomplete knowledge and inadequate information provision; industry pace of innovation and demonstration; perceptions of other mitigation alternatives; and fairness with respect to the distribution of costs and benefits of CCUS.

The authors make 11 recommendations, grouped into five categories, to effectively respond to these risk issues and accelerate the deployment of CCUS. The categories relate to 1) policy/regulatory measures, including a national vision for the technology, stable and coherent climate policy (including carbon pricing), and enhanced federal-provincial collaboration 2) economic/financial measures such as private-public cost sharing 3) advisory/communications measures including broader perspectives on CCUS, enhanced public education and international knowledge sharing 4) community-based measures focused on transparent engagement and trust building, and 5) technological measures including the potential application of CCUS to ‘hard to abate’ sectors like heavy industry.

### **Discussion and Implications**

A small subset of the risk issues emerged as potentially polarizing. For instance, social acceptance of CCUS technologies is vulnerable to polarized debates given the high capture costs and perceptions that certain CCUS technologies may extend the life of fossil fuel development and infrastructure. This final point is important: the question of whether stakeholders consider CCUS to be “clean tech” is crucial to public confidence. Two different conceptions of clean tech emerged from this work: a narrower conception that focuses on emissions reductions, and a broader conception that extends to environmental, health or economic impacts beyond emissions. Which conception will dominate over time will shape the role of CCUS in meeting emissions targets.

This study is particularly timely in the context of the COVID-19 pandemic. Economic and fiscal uncertainty in the short and medium term may cast a shadow over the future of CCUS. The federal government recently released an enhanced climate policy plan, including a forward path for carbon pricing to 2030. Stimulus for a range of clean technologies will likely follow in the coming months and years. The findings suggest that a variety of actions in the short and medium term will help CCUS make the contribution to emissions reductions that many have envisioned for it. The announcement of a new CCUS working group struck by the federal and Alberta governments is another helpful step.

### **Relevance for Decision-Makers**

This research identifies aspects of CCUS technology and decision-making surrounding it that could weaken public confidence and be polarizing. Positive Energy’s public opinion polling has shown that Canadians agree that oil and gas will continue to be important to the country’s economic future, but the issue can be polarizing along ideological and partisan lines. Decision-makers involved in emissions reduction initiatives should carefully consider the risk management options identified to improve public confidence in CCUS technologies and their decisions about them.

### **Next Steps for Positive Energy**

In the coming months, Positive Energy will release additional studies on how Canada can effectively navigate polarization and build public confidence in decision-making for its energy and climate future.