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ICO$_2$N Advisory:

Report on conducting cost analyses of CO_2 capture technologies adds to ICO$_2$N's already extensive analysis of Carbon Capture and Storage

ICO$_2$N, the Integrated CO_2 Network, continues to add to public knowledge and understanding of Carbon Capture and Storage (CCS) with a recently released report on ***Perspectives on conducting cost analyses of CO_2 capture technologies***. The document is just one of many studies and research documents that ICO$_2$N has prepared or participated in to advance the science, technology and deployment of CCS in Canada.

The new report addresses the challenges arising when conducting a cost analysis of CO_2 capture technologies, and offers recommendations on how to ensure cost analyses of capture technologies are as robust as possible, and are truly comparable and contrastable to other cost analyses.

A number of capture cost analysis considerations were identified:

- **The overall basis for capture costs**: this includes defining what is to be included in capture cost analyses and how to define the capture process start and end points; inclusion of direct and indirect costs; inclusion of taxes; new versus retrofit; and facility location, which can affect construction and operating costs.
- **Financial considerations**: capture costs can be calculated in more than one way – to ensure comparisons can be made with other capture work, the methodology for calculating the capture costs must be clearly presented.
- **The need for an accurate cost reference point**: several comparative analyses can be done to ensure capture cost estimating is as robust as possible, included comparing base case costs to plants recently built (and adjusted as necessary for location) and being clear as to whether the cost estimates are for first-of-a-kind plants being built now or for future plants that will be modeled on existing facilities.
- **CO_2 volume calculations**: an important element in reporting CO_2 capture costs on a "per unit of CO_2" basis is to clearly define how CO_2 volumes are calculated. The identification of unit costs expressed on a captured (physical volumes) basis or an abated (net physical volumes after accounting for all on-site and off-site effects of capturing CO_2) is critical. Abated volumes are the preferred measurement since they provide a fuller assessment of net CO_2 reductions.
- **Cost portrayal**: Capture costs should be made available in the form of "cost per unit of commodity produced" (e.g. cost per MWh production) as well as in "cost per tonne of CO_2". This will enable the broadest analysis of the implications of CO_2 capture at a plant.

Access the report: www.ico2n.com/about/ico2n-research/perspective-on-capture-cost-analyses

ICO$_2$N is a group of Canadian companies representing multiple industries, including coal and oil sands. All ICO$_2$N members have a strong interest in and commitment to developing CCS in Canada. For six years the group has been working to accelerate CCS deployment as a means of reducing CO_2 emissions, and has completed extensive technical, economic and policy analysis on CCS, including development of a large-scale economic model to understand CCS deployment potential over the next decade.

Just a few of the studies undertaken by ICO$_2$N include:

- Ongoing review of promising capture technologies and economics,
- A comparative analysis of the volume potential and relative costs of various CO_2 reduction options, and
- A CO_2 purity study to define a "made in Alberta" CO_2 purity standard.

For additional information about these studies, the new report on *Perspectives on conducting cost analyses of CO_2 capture technologies*, and about ICO$_2$N please visit the ICO$_2$N website at www.ico2n.com, or contact:

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