



**The Bowman Centre
For Sustainable Energy**

Carbon Capture and Storage Evaluations

By Ed Brost

The IESO's P2D document, aligned with the Moratorium report, provides for additional natural gas fired power plants to be commissioned and operational by the end of 2027. The P2D report did not include provision for carbon capture utilization and storage (CCUS). This is *"because feedback from stakeholders, CCUS was determined to be ill-suited to peaking applications, which is the forecasted role for the continued use of emitting supply and was therefore not available as a resources option"*. (P2D, TABLE 2: MODELLING CONSIDERATIONS, page 12)

Although there may be some merit in the stakeholders' input, the IESO needs to show that they are cognizant of the fact we are in the 21st century. Emission estimates should include 100% of all Scope 1 & 2 sources including Scope 2 fugitive emissions. To that end, emissions estimates capital and operations costs (fixed and variable) resulting from including equipment to enable CCUS should be part of the P2D report. It should be noted that anything can be made to work if willing to spend the money required to make it work. This includes CCUS.

Building new gas plants without CCUS 'externalizes' the cost savings resulting from not capturing and sequestering the otherwise emitted CO₂. Other sectors in Ontario's and Canada's economy will need to reduce their emissions to offset emissions from the new gas plants. For that reason, the P2D report should include estimated emissions from the new and existing fleet of gas fired plants over their remaining life until their retirement.

CCUS should be included as part of any new gas fired plant capital and operating cost assessment. Even if a decision is taken to externalize those costs. In the 21st century we take it for granted that flue gas stacks will be included to disperse the inevitable NOx and VOC emissions resulting from fuel combustion. Low or ultra-low NOx burners are a societal expectation. Proponents need to internalize costs associated with minimizing priority air pollutant emissions. This should include GHG emission estimates and the externalized cost savings by not emitting GHGs, which include CO₂ and methane (fugitives and unburned fuel).

Recommendation

As a matter of transparency and openness, update the Appendices and the P2D report to include lifetime GHG emissions associated with continuing use of natural gas as well as cost savings associated with not deploying CCUS. This information will be useful to others to determine how much extra GHG reductions will be required by other sectors to offset Ontario's power generation related GHG emissions.