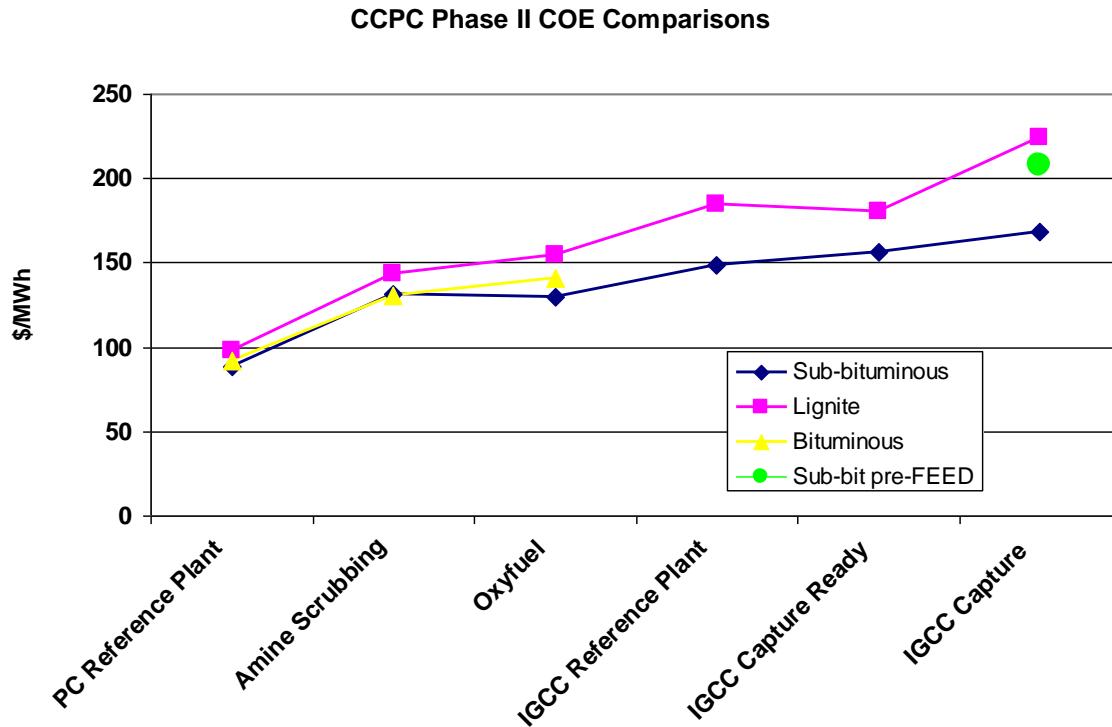


## Cost of Carbon Capture

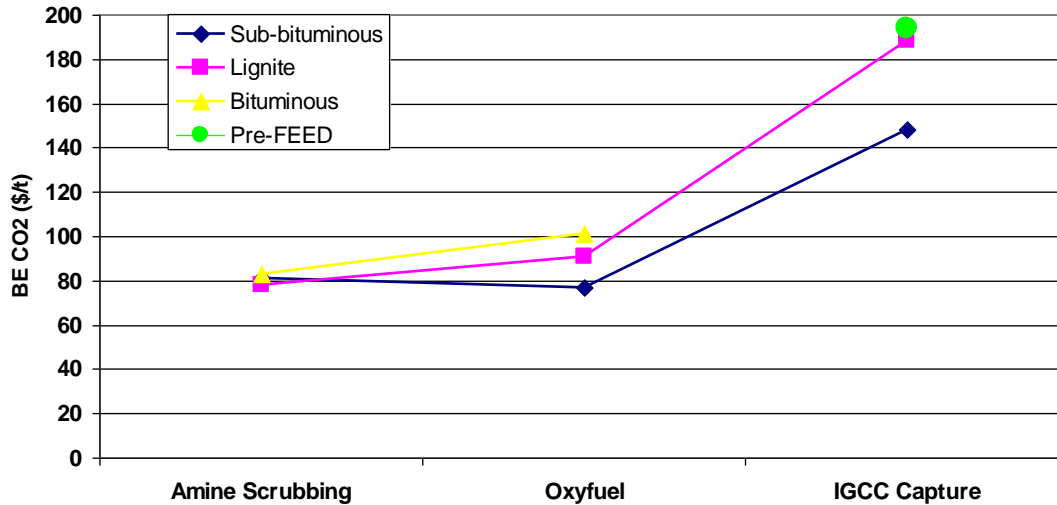
The results in the graphs below are taken from the latest study on CCS costs from the Canadian Clean Power Coalition. The following graph describes the first year cost of power for power plants fired with coal. First year cost is the price the power must be sold for, escalating by 2% in subsequent years, in order for the plant to recover all of its costs.



The first year costs of power from the advanced supercritical coal plants, for the three coal types evaluated, ranged from \$88 to 98/MWh. Both amine scrubbing and oxyfuel carbon capture technologies are estimated to increase the first year cost of power by about 50%. IGCC with carbon capture is expected to increase the cost of power compared to an advanced super critical coal plant by 90 to 130% depending upon the fuel type.

The following graph shows the price the GHG credits generated by the capture project must sell for, in order for the project to recover all of its costs net of power sales at about \$90/MWh. This is also the price GHG credits would have to rise to, before one would consider building a capture project.

### CCPC Phase II CO2 Cost Comparisons



However, there is still significant uncertainty about the cost of carbon capture. It will be difficult to establish the cost of carbon capture for any technologies until several plants have been built at a commercial scale.

It is also very difficult to compare the costs of CCS technologies in the literature. Each study has their own definition of what kinds of costs to include and rigor required to establish those costs. Studies also differ from one another based on the location established for the cost inputs and the time the cost estimates were created. Each study also has a set of assumptions and methodologies for evaluating the costs which may make it difficult to compare the results to other studies. Further each specific site, fuel source and market bring advantages and disadvantages when compared to other projects. Therefore one technology may be better suited for a given project and may not be advantageous for other projects.