

**Written Submission for the Pre-Budget  
Consultations in Advance of the  
Upcoming Federal Budget**

**By: Capital Power**

## **List of Recommendations**

**Recommendation # 1:** That the Government of Canada allocate up to \$730 million in economic stimulus to up to three Alberta-based projects proposed by Capital Power that will support jobs, innovation, recovery, and decarbonization in the electric power generation and industrial process sectors through deployment of carbon capture, conversion, utilization and storage technologies as well as through recovery, processing and conversion of coal fly ash.

## **Body of Submission**

Capital Power provides the following submissions for consideration by the Standing Committee on Finance as part of its Pre-Budget Consultations in advance of the 2021 budget.

Capital Power is a growth-oriented North American power producer, publicly traded (TSX: CPX), and headquartered in Edmonton, Alberta. We create dependable, cost-effective and innovative electricity solutions to power a sustainable future for generations to come.

As a group of experts and innovators in our field, we work to deliver responsible power for communities across Canada and the U.S. We develop, acquire, own, and operate power generation facilities using a variety of energy sources. Currently, we own over 6,400 megawatts (MW) of power generation capacity at 28 facilities. Roughly 3400 MW of this capacity is located at 17 facilities in Alberta, BC, and Ontario. Capital Power employs over 670 individuals across our Canadian offices and generating facilities.

**Recommendation # 1: That the Government of Canada allocate up to \$730 million in economic stimulus to up to three Alberta-based projects proposed by Capital Power that will support jobs, innovation, recovery, and decarbonization in the electric power generation and industrial process sectors through deployment of carbon capture, conversion, utilization and storage technologies as well as through recovery, processing and conversion of coal fly ash.**

Capital Power has three projects in Alberta that are available and could be advanced to stimulate job creation, innovation and economic recovery while also supporting decarbonization and the transition to a low carbon future. These are: 1) a new natural gas cogeneration facility with carbon capture that would be developed as part of an existing refinery that produces low-sulphur diesel; 2) what would be Canada's first carbon nanotube manufacturing facility deploying carbon conversion technology at our Genesee Generating Station; and 3) a new Genesee fly ash processing facility that would create a product that would reduce emissions in the concrete manufacturing process.

An overview of each of the three projects is provided below. Note that certain project parameters reflect current estimates and are subject to revision through further engineering and design activities.

### **Overview of Projects**

#### **1) Cogeneration w/Carbon Capture & Sequestration (CCS) (~\$660 MM Est. Project Cost)**

- 135 MW cogeneration facility that will utilize carbon capture and storage - a first of its kind in Alberta

- The project will produce on-site steam and electricity for an existing operational refinery, as well as capture and sequester 40% of the emission produced by the cogeneration facility
- The refinery currently takes Alberta produced hydrocarbons and creates low-carbon diesel and diluents for the market. The refinery is currently equipped with CCS technology to feed CO2 emissions into an existing enhanced oil recovery CO2 pipeline.
- The CO2 emissions related to the power and steam used by the refinery will drop more than 40% with the addition of CCS to the on-site cogeneration facility, from ~0.63 tonnes CO2 per megawatt-hour (tCO2e/MWh) to ~0.36 tCO2e/MWh.
- Project cost – approximately \$660 million
- Region – central Alberta
- Construction jobs – approximately 1,000 jobs during peak construction
- Timeline – Engineering/Permitting 2020/21, Equipment Orders 2021, Construction 2022
- COD - 2024
- Permanent employment – approximately 20 full time employees
- Public/Community benefit of project –
  - Short term construction for skilled trades
  - Long term permanent employment for operational staff (Operating Engineers, Chemical Engineers, Red Seal trades)
  - Ongoing municipal tax
  - Ongoing community benefits agreements

## **2) Genesee Carbon Conversion Centre (GC<sup>3</sup>) – (\$20 – 25 MM Est. Project Cost)**

- First commercial Scale facility in Canada attached to the existing Genesee Generating Station
- Carbon capture and utilization of CO2 off gases, reduction of GHG emissions both at the Genesee site as well as in secondary industries such as concrete. (approx. 6 million tonnes/yr. at 7,500 tonnes CNT)
- Conversion of CO2 into carbon nanotubes (7,500 tonnes/yr. at peak capacity) that can be used in a variety of industrial manufacturing and production processes including: concrete production, aerospace technologies, police/security protective equipment, automotive parts production, carbon fibre manufacturing, and medical applications
- Project cost (\$20-\$25 million)
- Region – west central Alberta (rural)
- Construction jobs – approximately 100 jobs during peak construction
- Timeline – Summer/fall 2020
- COD - 2021
- Permanent employment – approximately 25 full time employees for 7,500 tonnes of CNT
- Public/Community benefit of project –
  - Short term construction for skilled trades
  - Long term permanent employment for operational staff (Operating Engineers, Chemical Engineers, Red Seal trades)
  - Ongoing municipal tax (County of Leduc)
  - Ongoing community benefits agreements (Warburg, Genesee, Thorsby, Leduc County)

**3) Genesee Mined Fly Ash Processing Facility – (\$35 – 45 MM Est. Project Cost)**

- Construction of a new processing facility to convert existing fly ash recovered from the Genesee mine into a marketable product for the cement industry
- Fly ash, which is a waste product from coal power generation units, displaces cement in the production of concrete, reducing GHG emissions from cement production by up to 20%, reducing GHG emissions from concrete production by approximately 0.25 tCO<sub>2</sub>e/t of cement
- Project cost (\$35-\$45 million)
- Region – west central Alberta (rural)
- Construction jobs – approximately 125 jobs during peak construction; 100 man-years of work
- Timeline – construction start Q4 2020
- COD – Q4 2021
- Permanent employment – approximately 15 -20 full time employees
- Public/Community benefit of project –
  - Short term construction for skilled trades
  - Long term permanent employment for operational staff (Mine/Facility Operations & Maintenance)
  - Ongoing municipal tax (County of Leduc)
  - Ongoing community benefits agreements (Warburg, Genesee, Thorsby, Leduc County)

Capital Power appreciates the opportunity to provide this submission in advance of Budget 2021 and looks forward to contributing to Canada's economic recovery and transition to a low carbon future.

Should you have any questions or wish to discuss the information in this submission, please contact the undersigned at (780) 975-5206 or [djurijew@capitalpower.com](mailto:djurijew@capitalpower.com).

Regards,

*<Submitted Electronically>*

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