Advanced Coal Technology Workgroup ▪ March 29, 2007

EPCOR Experience

Meeting New Emissions Targets

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Forward Disclaimer

Certain information in this presentation is forward looking and related to anticipated financial performance, events and strategies. When used in this context, words such as “will”, “anticipate”, “believe”, “plan”, “intend”, “target” and “expect” or similar words suggest future outcomes. By their nature, such statements are subject to significant risks and uncertainties, which could cause EPCOR’s actual results and experience to be materially different than the anticipated results. Such risks and uncertainties include, but are not limited to, operating performance, commodity prices and volumes, load settlement, regulatory and government decisions, weather and economic conditions, competitive pressures, construction risks, obtaining financing and the performance of partners, contractors and suppliers.

Readers are cautioned not to place undue reliance on forward-looking statements as actual results could differ materially from the plans, expectations, estimates or intentions expressed in the forward-looking statements. Except as required by law, EPCOR disclaims any intention and assumes no obligation to update any forward-looking statement even if new information becomes available, as a result of future events or for any other reason.

- Investments in Canada and the United States
- Responsible for operating power generation with gross capacity of > 3,400 MW
- Owns 30.6 per cent of EPCOR Power L.P., Canada's largest power Partnership
- EPCOR-operated facilities generate power from renewable sources; wind, small hydro, biomass, landfill gas and waste heat recovery

- Provides electricity, water and natural gas
- Owns and operates power plants
- Owns and operates electrical transmission & distribution networks
- Builds, owns and operates water and wastewater treatment facilities, infrastructure
- Provides water and power solutions to commercial, industrial customers

An Integrated Utility Company

EPCOR Utilities Inc.

OPERATIONS
- Water
- Power
  - Generation
  - Distribution & Transmission
  - Regulated Retail

REGIONAL GROUPS

EPCOR Alberta

EPCOR Ontario

EPCOR BC / PNW
- Construction
- Planning
- Commercial Services
- Special Projects

Generation Portfolio

- EPCOR is responsible for operating power generation with a gross capacity of more than 3,400 MW
- EPCOR owns 30.6 per cent interest in EPCOR Power L.P., Canada's largest power Partnership
- Genesee 3, co-owned with TransAlta, is Canada's most advanced coal-fired generator; features supercritical combustion technology
- With 22 turbines, Kingsbridge I – located near the shores of Lake Huron – adds 40 MW of electricity to the Ontario power grid
- EPCOR-operated facilities generate power from renewable sources; wind, small hydro, biomass, landfill gas, and waste heat recovery (wood chips, discarded tires)

Industry Recognition

Genesee 3
generates power …

"most economically and reliably, and with the least environmental impact"

World's Top 12 Power Plants, 2005
Platt's Power

Coal-Fired Project of the Year
POWER-GEN International Summit, 2005

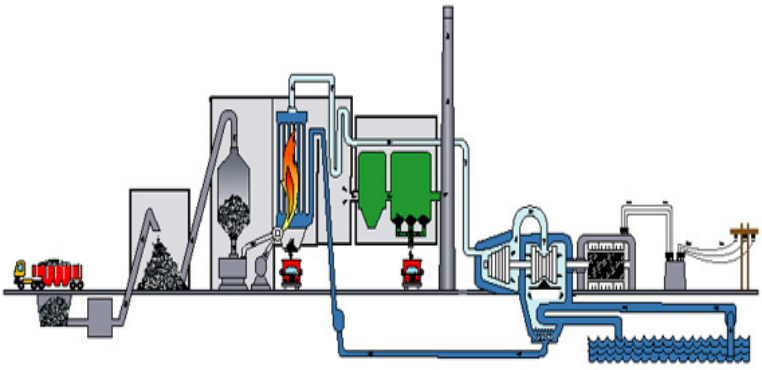
Finalist, International Edison Award
Edison Electric Institute

Environmental Stewardship Award
Leduc County, Alberta

Genesee 3, Leduc County, Alberta

- Genesee 3, co-owned with TransAlta, is Canada's most advanced coal-fired generator; features supercritical combustion technology
- Largest single unit ever added to Alberta power grid at 450 MW (net); merchant plant
- March 2005 commercial operation
- On budget, on time with lost injury rate 25 times better than average for Alberta industrial construction sites
- $90 million in clean air technologies
- EPCOR is the operator

Supercritical Combustion at Genesee 3



Alberta's Generation Capacity*

Alberta's installed generating capacity at the end of September 2006 was 11,497 MW

- 5,840 MW of coal-fired power
- 4,278 MW of gas-fired generation
- 869 MW of hydroelectric power
- 510 MW of wind and other sources

* AESO 10-Year Transmission System Plan (2007)

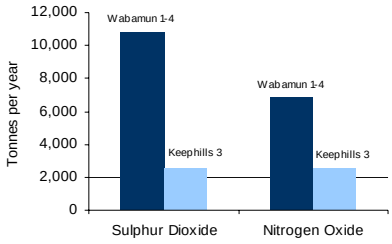
Powering Alberta's Growth*

- Alberta power use has increased approx. 3,500 MW since 1998
- In the last four years, power demand has grown at a rate equal to adding two cities the size of Red Deer (about 80,000 people) every year
- If growth continue as forecast, AESO projects 3,800 MW of new generation capacity may be needed by 2016
- New baseline generation capacity is also required to replace the decommissioning of older units Wabamun 4 and Battle River 3 and 4
- A portion of the power produced by the retired units will be replaced by the lower emission Keephills 3 project

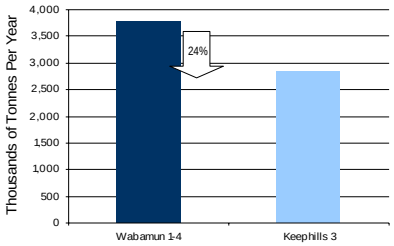
* AESO 10-Year Transmission System Plan (2007)

Keephills 3, Parkland County, Alberta

Power of Capital Stock Turnover: Cleaner Air
New Baseload Plants Lower SOx/Nox Emissions 60-80%



Power of Capital Stock Turnover: Lower GHGs
New Baseload Plants Lower CO2 Emissions 24%



- EPCOR and TransAlta to proceed with 450 MW Keephills 3, estimated cost approx. $1.6 billion
- Like Genesee 3, the plant will feature supercritical boiler technology to provide improved environmental performance
- The four obsolete Wabamun units being fully retired by TransAlta in 2010 produced an average of 3.1 million MWh in 2000-02
- To produce the same amount of power, Keephills 3 will emit 24 per cent less CO_2
- Emissions of SO_2, NO_x, and mercury will each be reduced by 60 to 80 per cent in comparison to power produced by the four Wabamun units
- Construction expected to be complete by end of first quarter 2011
- TransAlta will be the plant operator

Development of cleaner coal-based electricity generation

1970s to 1990s

Subcritical Pulverized Coal

- typical of vintage plants
- pulverized as fine powder; burns in suspension inside furnace
- 2500 psi –17 MPa

2005 (G3)

Supercritical Pulverized Coal

- Genesee Phase 3 is the first supercritical generator in Canada and today's best available technology economically achievable
- technology evolved in Japan over 20+ years
- Keephills 3 will be the second supercritical generator
- 3500 to 4500 psi –24 MPa to 31 MPa and rising: higher temperatures and pressures improve efficiency, reducing CO_2 emissions by 18% compared to average Alberta coal generation
- $90 million clean air technology suite designed to capture 77% of SO_2 reduce NO_x emissions by 70% compared to existing facilities, and capture 99.9% of particulates

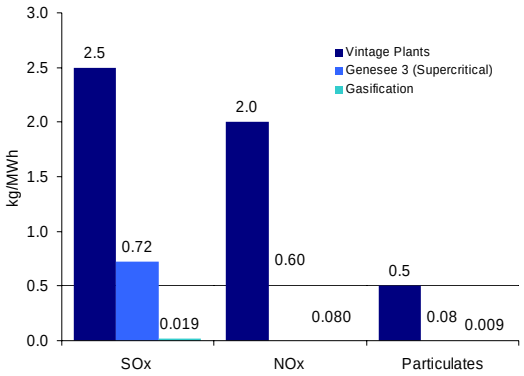
2012-15 (est.)

Integrated Gasification Combined Cycle (IGCC)

- combined cycle plant with coal handling facilities and chemical plant to convert coal to synthetic gas
- air separation, gasification, CO_2 and contaminant removal

Create step-change improvements in emissions

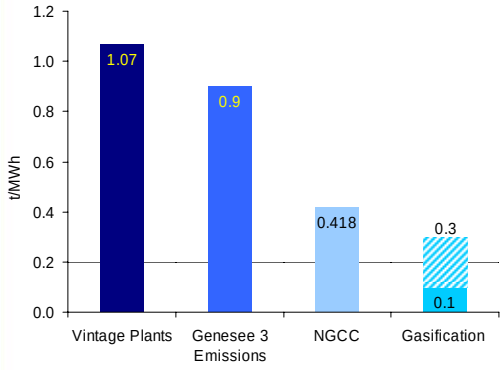
Clean coal technology leads to real air quality improvement by reducing smog-related emissions



- Supercritical technology such as that in use at Genesee 3 has already achieved a step-change improvement in emissions compared to vintage plants.
- Gasification is the next significant step: emissions from gasification have a fundamentally different profile than those associated with vintage or supercritical coal.

Reducing Canada's greenhouse gas emissions

Through supercritical technology and offsets, CO_2 emissions from new coal have already been reduced to the level of a combined-cycle natural gas plant



- Supercritical technology such as that in use at Genesee 3 reduces CO_2 emissions 18% compared to the average Alberta coal plant.
- Genesee 3 owners are further offsetting CO_2 emissions to the same level as a natural gas combined-cycle facility: an additional 52% reduction.
- Gasification presents the opportunity to capture and sequester CO_2: its potential emissions profile is fundamentally different than even the best present-day technology.

Genesee 3 Offsets - I

License 773-02-00, dated January 31, 2006
for the Genesee thermal electric power plant

4.1.15 The net annual GHG emissions for Unit 3 shall not exceed the equivalent to NGCC, calculated as follows:

Net annual GHG emissions limit for Unit 3 in tonnes = 0.418 tonnes/MWh x annual MWh output

Genesee 3 Offsets - II

License 773-02-00, dated January 31, 2006
for the Genesee thermal electric power plant

1.1.2 (z)
"**equivalent to NGCC**" means the emissions of GHGs at a rate equivalent to that of a natural gas combined cycle power plant which is 0.418 / MWh as per "*Full Fuel Cycle Emissions Analysis of Existing and Future Electric Generation Options in Alberta, Canada* 1995*"*;

1.1.2 (xx)
"**offsets**" means either:

(i) off site reductions of greenhouse gas emissions or removals of greenhouse gases from the atmosphere which are:
  (A) real and demonstrable actions that constitute actual decreases in atmospheric greenhouse gas concentrations;
  (B) quantifiable and measurable, so amounts can be measured directly or estimated by accurate and replicable techniques;
  (C) from an action taken that is not otherwise required by law at the time the action is initiated; and
  (D) owned by the party claiming the offsets; or

(ii) other recognized emission reduction equivalencies as defined in the document, *Transition Principles Regarding Greenhouse Gas Emission Requirements For New Coal-Fired Electric Facilities in Alberta,* March 2004, Alberta Environment;

Genesee 3 Offsets - III

License 773-02-00, dated January 31, 2006
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4.1.36
The "Greenhouse Gas Summary" shall include, at a minimum:
...
(c) a section detailing the offsets used to achieve the reported net annual GHG emissions for Unit 3, verified by an independent third-party auditor, including but not limited to:
  (i) a summary of offsets total CO_2 equivalents applied to Unit 3;
  (ii) percent of offsets achieved in Alberta and in Canada;
  (iii) information on the projects used to obtain offsets, including but not limited to:
    (A) a brief description of the project, including type and location;
    (B) a summary of the calculation methods used to determine the GHG reductions or removals;
    (C) total quantity of emission reductions or removals delivered by the offset project over the year, and the amount being applied to Unit 3 in the reporting year;
    (D) confirmation that the offsets being claimed are being used only once and applied only to Unit 3 in the reporting year; and,
    (E) if registered, the registration number of the offsets.
  (iv) the report by the independent third-party auditor including a statement on the ownership of the offsets being claimed.

Genesee 3 Offsets - IV

License 773-02-00, dated January 31, 2006
for the Genesee thermal electric power plant

4.1.37
The independent third party auditor referred to in 4.1.36(c) chosen by the approval holder must be a suitably qualified **Professional Engineer** or **Certified Professional Accountant** approved by the Director in writing.

Alberta Initiative – Bill 3

Proposed Climate Change and Emissions Management Act – 2007

Bill 3, *Climate Change and Emissions Management Amendment Act,* if passed, and its accompanying Specified Gas Emitters Regulation state companies that emit more than 100,000 tonnes of greenhouse gases a year will be required to reduce their emissions intensity by 12 per cent starting July 1, 2007.

It is expected the regulation will apply to about 100 facilities which represent about 70 per cent of Alberta's industrial emissions.

Emissions intensity can be reduced in one of three ways:

- Straightforward operational changes which result in lowered emissions;
- Contributing $15 per tonne of carbon dioxide equivalent gas emitted in excess of the 12% target to a new greenhouse gas emissions reduction technology fund; or
- Purchasing an offset, which must be derived from a project located in Alberta and possess third-party verification.

Impact of Proposed Regulation on Genesee 3

- Offset rules in Bill 3 are more constraining than those in the current approval as all offsets are required to be generated in Alberta
- Unclear how/whether the proposed Bill 3 will affect the existing Genesee 3 License
- Unclear how/whether new, soon expected, federal rules will affect existing provincial regulations and the existing Genesee 3 License

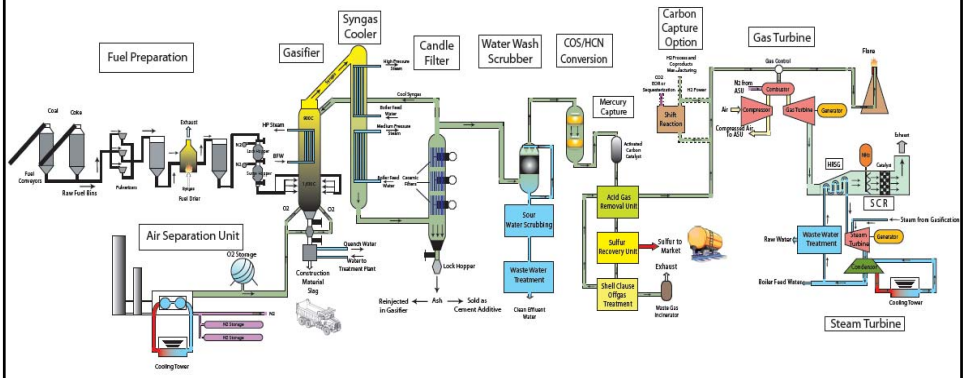
Canadian Clean Power Coalition (CCPC)

The Canadian Clean Power Coalition is an association of responsible, leading Canadian coal and coal-fired electricity producers. Its aim is to secure a future for coal-fired electricity generation, leading Canadian coal and coal-fired electricity within the context of Canada's multi-fuelled electricity industry, by proactively addressing environmental issues with governments and stakeholders.

CANADIAN CLEAN POWER COALITION

EPCOR, Sherritt International, Nova Scotia Power, SaskPower, TransAlta, Alberta Energy Research Institute (AERI), Electric Power Research Institute (EPRI), Basin Electric Power Cooperative (North Dakota)

Coal Gasification Process



How can gasification technology be commercialized?

ISSUE: The technology is known, but has not yet been proven at a utility-sized facility or with Alberta's low sulphur mid-rank coal

- Demonstration plants built in other countries have experienced high capital and operating costs (at least 1/3 higher) and issues with operating reliability.
- Experience on a utility-sized (400+MW) IGCC facility is needed to better understand and manage construction and operation costs in a northern climate.
- To develop this facility, engineering and design work is required, focused on:
  - Adapting the technology to work with the type of coal found in Alberta;
  - Removing emissions of concern;
  - Commercial-scale geological storage of CO_2;
  - Cost competitiveness and cost certainty, related to both capital and operating costs;
  - Construction and operation in a northern climate.

Canadian commercialization of gasification technology

Commercialization is expected to take place over three phases with a total requirement of $33 million, following which a consortium of investors would be in a position to make a decision on building a utility-scale pilot plant. To facilitate the timeline, EPCOR and the Alberta Energy Research Institute have both agreed to commit up to $11 million each to the project so it can proceed expeditiously.

Phase I	Technology Selection and Project Definition *(completed)*
Phase II	Front-End Engineering Design, 2006-2008
Phase III	Regulatory Environmental Permitting for Construction leads to a decision to build an IGCC facility in Alberta, 2009-2015

GHG Reduction Initiatives in Alberta

Alberta eyes carbon dioxide pipeline for oil sands

Calgary — Alberta is looking to invest several hundred million dollars in a $1.5-billion carbon dioxide pipeline, a project that would help the province control its massive emissions of greenhouse gases.

The provincial government delivers its first Throne Speech today under new Premier Ed Stelmach, who sees the pipeline as a key way to reduce greenhouse gas emissions. "We view it as a project that can be achieved through a partnership between the province, Ottawa and the oil and gas industry," said Tom Olsen, spokesman for Mr. Stelmach.

The Globe and Mail, 06-Mar-2007

Questions?