

The Global Power Company



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# RESSUE · SEPTEMBER 2006 Vapiti News

# What is the **AESWapiti Project?**

The \$500 million AESWapiti project is a state-of-the-art, "clean coal" power generation facility that will burn 80 percent coal and 20 percent waste wood biomass to generate 184 megawatts of electricity. The plant will be located one kilometer east of the Heritage Highway and 43 kilometres by road from Tumbler Ridge and will feed the BC Hydro power grid via a 35 kilometer power transmission line.

The power project will be located at and supplied by the Hillsborough Resources Wapiti thermal coal property. The project will contribute firm power to help meet northeastern BC's and the province's growing electricity needs.

AESWapiti was chosen by BC Hydro under an open call for tender.



AES Hawaii uses state-of-the-art clean coal technology based on a Circulating Fluidized Bed (CFB) boiler that makes the plant one of the cleanest in the world.

The project is a key component in a portfolio of projects designed to meet the province's growing electricity needs and environmental objectives. The project is planned to break ground in November 2007 and will begin operation three years later.

The project will contribute firm power to help meet northeastern BC's and the province's growing electricity needs.

# Who is AESWapiti Energy Corporation?

We are a joint development effort that brings together a long-time BC coal producer, Hillsborough Resources, and AES Corporation, a global power company that among other things leads in developing and deploying clean coal technologies.

Hillsborough has operated the Quinsam underground thermal coal mine in Campbell River for many years and is also developing substantial metallurgical coal deposits near Tumbler Ridge as well as in the Elk Valley region of southeastern BC. AES is a global power company that operates 122 power generation facilities on five continents. AESWAPITI NEWS



# Permanent and construction jobs to be created

The AESWapiti project is planned to begin construction in late 2007 and to commence operation in 2010. At the peak, the company will need up to 500 construction workers. Once the plant begins operation it will need 60 permanent staff in plant operations and 40 in mine operations. Indirect employment will generate at least twice this number of jobs among suppliers and other businesses. Residents of northeastern BC will receive first preference in hiring and contracting.

# What about air emissions and greenhouse gases?

The AESWapiti project will use proven and best available emission control technology and operating methods to minimize air emissions. This modern clean-coal technology substantially reduces air emissions as compared to older coal-fired power plants. The project will meet or exceed all BC, federal and EPA air emission standards.

By using up to 20% biomass (wood waste) as fuel, regional greenhouse gas emissions will be reduced as compared to burning 100% coal. This reduces regional emissions by ensuring the waste is not left to decompose (releasing greenhouse gases) or burned in traditional incinerators (releasing greenhouse gases and toxins). The BC Hydro tender process and our contract deal directly with requirements to offset remaining greenhouse gas emissions. BC Hydro will determine how and where to do the required offsets, but the costs of required greenhouse gas offsets were provided for in the evaluation of our contract bid. For instance, BC Hydro may invest in future carbon dioxide recovery efforts such as reforestation.

"British Columbia has adopted new air quality emission guidelines which are among the highest standards in North America."

- Richard Neufeld, Minister of Energy, Mines & Petroleum Resources



# **'Clean Coal' technology will deliver electricity with vastly reduced emissions**

"Clean coal" plants bear little resemblance to the coal-fired power plants of yesteryear. A "clean coal" plant is built around a fluidized bed boiler that mixes powdered lowsulphur coal, waste wood biomass and powdered limestone. Combustion operates at a lower temperature than older coal-fired boilers and this with the addition of limestone drastically reduces the production of sulphur and nitrogen oxides (the chief culprits in acid rain). Thus the AESWapiti plant will be able to provide 184 megawatts of electricity to the region while drastically reducing the sulphur and nitrogen compounds associated with earlier-generation coal-fired power



plants. In addition, stack gas from the plant will be virtually dust-free.

The ash from the fluidized bed boiler is environmentally benign – it is partially gypsum – and has potential beneficial uses as a construction or road-building material or as fertilizer.

The design of the AESWapiti project has one further environmental benefit. Up to 20% of the boiler fuel will be biomass (mostly 'hog fuel' or waste wood from forestry operations). Operation of the plant will greatly curtail the burning of forest waste by more polluting means. And use of dry cooling technology will minimize the project's consumption of water.

- Coal / Waste Wood / Limestone
- 2. Combustion Zone
- 3. Hot Cyclone
- 4. Convective Pass
- 5. Fabric Filters
- 6. Turbine Generator
- 7. Ash Products

# Putting nature back together after mining

## AESWapiti project will 'reclaim as it goes'

The physical impact of the AESWapiti complex will be carefully planned to minimize disturbance to the region's environment. In addition, Hillsborough's goal will be to reclaim the land as it is disturbed, leaving no scars behind. The total area of the project lease that is anticipated to be disturbed over 40 years of operation is 800 hectares (about three square miles). Of this, 750 hectares (2.9 square miles) will be for the mine and 40 hectares (0.15 square mile) for the power plant. It is estimated that no more than 150 hectares (six-tenths of a square mile) of land will be distrubed for mining at any one time. Hillsborough will pursue 'progressive reclamation' – reclamation that marches in lock step with mining – to ensure that disturbed land is returned to productive forest within months of mining, rather than decades.

## You asked us...

Answers to some of the questions we're asked most often

#### Why is this project needed?

BC is already a net importer of electricity and northeastern BC is booming so electricity demand in the region is climbing. BC Hydro has determined that AESWapiti's 'clean coal' plant can supply part of the provincial and region's growing electricity needs affordably and sustainably.

# Will local people be given preference for jobs and contracts?

Yes. Policies and procedures will be developed to ensure that local people get first opportunity to get jobs and win contracts.

#### What about First Nations' claims?

AESWapiti has begun the process of consulting with First Nations and Metis groups in the region. The formal consultation as part of the provincial environmental assessment process will occur as directed by the BC Environmental Assessment Office.

#### How many jobs will be created?

At the peak of construction, 500 jobs. Once the plant goes into operation, 100 permanent jobs will be created in plant and mine operations. Indirect employment is expected to at least double these numbers.

#### What are your water requirements?

The entire plant will use approximately 80 gallons per minute, thanks in part to a \$10 million investment in an air condenser system that will

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## You asked us... Answers to some of the questions we're asked most often

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eliminate the need for cooling towers and cooling water make-up and disposal.

#### Will the project impact our water supply?

We estimate that the plant's impact on water resources of the area will be minimal. Water runoff from the plant and mine will be controlled. There will be no impact on Muskeg Lake.

#### Is this an underground or surface mine?

Hillsborough will be employing both surface mining using a dragline and a form of underground mining using horizontal coring into the side of the excavated wall of the mine. This combination will minimize the total area to be disturbed.

#### Where will this 'biomass' wood waste come from?

From the forest industry, where some of it is now burned in "beehive burners" throughout the region.

#### Will there be a construction camp, and if so, where?

Due to the favorable location between Dawson Creek and Tumbler Ridge and proximity to Chetwynd, we expect that most of the workforce will reside in towns in the region. As is common for projects of this size and location, we expect we will need to have a construction camp located near the plant site during peak phases of construction.

Will this plant conflict with wind power and other renewable power? BC Hydro has determined that a mix of technologies is needed. Renewable energy projects were approved by BC Hydro at the same time as it approved the AESWapiti proposal. By procuring a portfolio of projects, BC Hydro is able to balance both firm and intermittent new sources of electricity.

#### Will burning coal put you at odds with the Kyoto Protocol?

No. By burning up to 20% waste wood biomass there will be a reduction in carbon dioxide emissions compared with burning 100% coal. In addition, the BC Hydro tender process and contract provides for offsetting greenhouse gas emissions to meet all federal and provincial requirements over the life of the facility. BC Hydro evaluated the bid using a greenhouse gas adder formula to finance those requirements. BC Hydro will determine how and where the offsets will occur, but the cost of required greenhouse gas offsets is provided for. BC Hydro will invest in future carbon dioxide recovery efforts such as reforestation.

#### Will the plant generate any toxic waste?

No. Clean coal technology will remove 99.5% of particulate matter. AESWapiti will use a bag house for particulate filtration and activated carbon injection to remove mercury. The circulating fluidized bed boiler will remove 95% of all sulphur emissions and nitrogen oxides well below permissible levels. Ash from the plant is a benign material similar to gypsum and will be stored near the plant.

#### Will our roads be full of coal trucks?

No. The plant is a "mine mouth" complex – the mine will be close to the power plant. The furthest coal will need to be transported is 10 kilometres, and this will be on a private mine road, not the Heritage Highway.

#### Isn't coal-fired electricity on its way out in other Provinces?

Not at all. Alberta and Saskatchewan already generate some 70% of their electricity from coal. And the AESWapiti plant will utilize the most advanced "clean coal" technology in the country. This project will meet all Canadian and U.S. air quality standards and its emissions will be considerably lower than typical coal-fired power plants in use today.

## **PUBLIC OPEN HOUSES**

Before construction begins in late 2007, there will be public consultations and information sharing. The first meetings will introduce the project and provide an opportunity to review the draft Terms of Reference for the Environmental Assessment.

The first public open houses for the AESWapiti project will take place as follows:

Tuesday, September 19, 2006: Tumbler Ridge Community Centre, 340 Front Street, (Room 4+5)

Wednesday, September 20, 2006: The George Dawson Inn, 11705–8 Street, Dawson Creek (Macoun/Davis Room)

For more information, visit us online at www.aeswapiti.com

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