

ORAPA POWER STATION REPORT – BOTSWANA POWER CORPORATION

31st January 2012

COMMENT

The following news story highlights the importance of CBM to the Botswana Government.

Botswana is solving two problems through the development of CBM. The first being diamond production which accounts for the majority of current GDP is expected to stop in 2020. The government is actively seeking alternative revenue sources before this eventuates. The second is that CBM is far cheaper than diesel.

The following article highlights both the diesel consumption per hour of the new Orapa Power Station and also the cost difference between using gas vs diesel.

CBM is being actively encouraged by the Botswana Government and is seen as a key strategic imperative to develop this resource and provide whatever assistance necessary for the industry to gain critical mass.

Even with this new power station, the electrical grid is still suffering rolling blackouts (see: <http://www.mmegi.bw/index.php?sid=4&aid=948&dir=2012/January/Tuesday10>)

MMEGIONLINE ARTICLE

<http://www.mmegi.bw/index.php?sid=4&aid=5796&dir=2010/October/Friday22>

DEVELOPERS OF ORAPA'S 90MW PUSH FOR 60 % COST REDUCTION

Developers of Orapa's 90 megawatt power station are pushing for the **conversion of fuel feeding the turbines from diesel to Coal Bed Methane (CBM) by next year**, an adjustment that **will save the government 60 % in running costs**.

At its commissioning in December, it is estimated that Government will spend P7, 000 per megawatt per month in fixed costs at Orapa, the lion's share of expenditure directed towards the **17, 000 litres of diesel per hour consumed by the two turbines**.

The World Bank estimates that emergency power like the Orapa station will cost the local economy P29 billion in the next three years, due mainly to the high costs

associated with the primary fuel being employed - diesel.

This week, the Chief Executive Officer of Karoo Sustainable Energy (KSE), Steve Martin, said while the dual-fired power station will initially run on diesel, all efforts are being made to convert the operation to gas by next year.

"We are hoping to convert the power station to CBM by 2011/12," Martin told a Mining in Botswana conference on Wednesday. **"When we convert to gas, we will be below 10 US cents per kilowatt, as opposed to 24 US cents per kilowatt under diesel."**

"Upon commissioning, the plan is to run the power station for as few hours as possible because of the costs. However, the government will do everything possible to ensure power for the mine's needs."

The power station is expected to remove Debswana's electricity weight from the national grid, freeing up supplies for other consumers.

KSE, a tripartite partner with Government and Debswana, is also ramping up towards the commissioning of the 90MW power station, with start up operations already underway.

The Botswana Power Corporation (BPC) recently completed work connecting the power station to the national grid in preparation for the facility's start-up.

Martin explained that KSE was also developing a 180MW CBM-fired facility with commissioning of the first 90 MW planned for 2012. Together with the 90 MW at Orapa, the 180 MW project is part of an independent power producer tender awarded by the BPC to KSE in July 2008.

"We were awarded the tender in July, but as we went forward, it became clear that the mining industry needed urgent power and we were asked to split the project into two different sites," said Martin. "One is the Orapa and the rest are in our CBM leases in Mmashoro."

"We were trying to meet the difficulties that BPC was facing in meeting the mining industry's requirements. We therefore started working together to fast track the 90MW and we were asked to allow Government to finance it themselves. We are looking at the beginning of 2012 for the first 90MW of the balance of 180MW, then 2013 for the rest."

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