

THE BARBADOS ECONOMIC REPORT
ENERGY CHAPTER 2006

OIL AND GAS EXPLORATION

ONSHORE

During the period under review no new wells were drilled by the Barbados National Oil Company Limited. The total amount of product available for 2006 consists of 2.116 million barrels (bbls) of crude oil and 4,391,785 million cubic feet (mcf) of gas. These figures represent the reserves as June 30th, 2007. The products extracted during the year came from existing wells as well as the well drilled in 2005 and commissioned in 2006.

PRODUCTION

During the period mentioned above for 2006 the production of crude oil decreased by approximately 3 percent. It decreased from 348,728 barrels (bbls) to 339,692 barrels in 2006. This decrease was due to the fact that no new wells were drilled to help complement the existing ones. Natural Gas production decreased by 2 per cent to 826,342 mcf in 2006, compared with 847,416 mcf in 2005. There was no liquefied Petroleum Gas (LPG) production during 2006 since the LPG plant was taken out of commission in September 2003. In 2004 the decision was made not to extract condensate from the Gas in order to boost gas sales.

OIL AND GAS SALES AND CONSUMPTION

Oil sales increased by 1 per cent, from 342,164 bbls in 2005 to 347,070 bbls in 2006, while gas sales decreased by 9 per cent to 461,225 mcf in 2006. Total sales by volume in the National Petroleum Corporation (NPC) inventory decreased by 6 per cent, from 11,918,416 mcf in 2005 to 11,250,970 mcf in 2006. This was, in turn, responsible for the decrease in the value of sales by 0.2 per cent to \$12,248,454 in 2006. Slight increases were seen in residential and commercial sectors consumption, these can be attributed to an increase in the

average use by the various consumers. However there was a decrease in the category of Special Industrial Gas. The expansion programme of the NPC continued by increasing its network of mains by 10.55 miles and its connections by 3 per cent to 21,677 customers.

ELECTRICITY

Electricity sales for 2006 increased by 2 per cent to \$903.3 compared to \$884.7 million in 2005. This can be attributed to an increase in sales to all categories of customers. The largest category of users continues to be the Domestic Sector, accounting for 33 per cent of total sales or \$294.7 million. The Barbados Light & Power Company Limited (BL&PL) expanded its services by investing \$44.16 million to upgrade its capital infrastructure and to accommodate forecasted demand.

REFINED PETROLEUM PRODUCTS

There was an overall increase in the demand for refined petroleum products during 2006 when compared to 2005. The consumption of gasoline decreased by 1 per cent to 808,260 bbls from 819,505 bbls in 2005 while diesel consumption increased by 2 per cent to 653,141 bbls from 640,488 bbls in the previous year. Fuel oil, in contrast with the previous year increased some 26 per cent to 1,691,968 bbls. Kerosene sales declined 65 per cent to 4596 bbls from 12,999 bbls in 2005. In response to price increase on the international market, the domestic fuel prices were adjusted numerous times depending on the movement in the international oil market. There was an increase in January 2006 when the local price of gasoline was increased from \$2.10 to \$2.30 per litre; kerosene was raised from \$1.10 to \$1.38 per litre and the price of diesel from \$1.35 to \$1.49 per litre. Prices were once again adjusted in May 2006 with gasoline increasing from \$2.30 to \$2.46 per litre; kerosene was raised from \$1.38 to \$1.51 per litre and the price of diesel from \$1.49 to \$1.67 per litre.

Two more price adjustments were made during 2006 and both were reductions. In October 2006 gasoline decreased from \$2.46 to \$2.21 per litre; kerosene decreased from \$1.51 to \$1.42 per litre and the price of diesel from \$1.58 to \$1.43 per litre. The price on the international market continue to decline and another price adjustment was made in December 2006 where gasoline decreased from \$2.21 to \$2.15 per litre; kerosene decreased from \$1.42 to \$1.37 per litre and the price of diesel from \$1.58 to \$1.43 per litre.

RENEWABLE ENERGY

FUEL CANE

The major source of bio-fuel has been bagasse, which is used to drive the sugar industry (evaporating sugar from cane juice, driving machinery and producing electricity). This bagasse has yielded approximately 1.19 giga joules representing over three (3) percent of the national energy budget. Very little of this was converted for supply to the electricity grid network.

A plan to produce a high fibre “fuel cane” was developed following the conclusion of a feasibility study. The cost of this feasibility study was two hundred thousand (Bds. \$200,000). This study suggested five hundred and fifty thousand (550,000) tonnes of fuel cane can be harvested as a new energy crop. This fuel cane would produce twenty-seven thousand (27,000) tonnes of sugar and one hundred and twenty-three (123) Gwh of electricity. This would be fourteen (14%) percent of the current electricity supply and constitutes in addition to the bagasse used for heat in the factory.

This process is now at varietals trials where persons are exploring the correct type of fuel cane to give Barbados the correct amount of products it needs to produce from this fuel cane and which variety is more suited to this country. Estate sites have already been chosen to launch this pilot project.

RENEWABLE ENERGY CENTRE

Government is still committed to the increased use and research of renewable energy alternatives and the establishment of a Renewable Energy Centre. The process for its creation has been approved by the Planning and Priorities Committee and thus far \$220,000 Bds has been allocated for the first phase of activities. The application for the conversion of two (2) acres of land at Coverley, Christ Church for the use of a renewable energy centre has been approved by the Town Planning Department and access to this land is being sought from the Ministry of Housing and Lands. An architect has been hired to prepare the initial plan for submission to Priorities Planning Committee. This centre will be completed by December 2009.

SOLAR HOUSE

The solar house is an initiative of the Ministry of Energy & the Environment that will be used to create greater awareness of renewable energy and the benefits of using various energy conservation technologies for enhanced energy efficiency. Construction of this house began in November 2006 and it is expected that it will be completed in early 2007.

The house has different kinds of insulation in the roof to act as a thermal barrier. Insulation is also strategically placed in the walls that will be heavily exposed to sunlight for the same purpose. The windows have a reflective tint to deflect sunlight allow for cooling, this is enhanced by overhangs at each window. In addition to the foregoing, Ceiling fans are also included in four of the rooms to enable any warm air that gathers to circulate. To reinforce the idea of efficiency, the toilet chosen is a low flow one, and the faucets have been fitted with aerators to reduce water wastage.

The house is powered by five (5) sets of four (4) photovoltaic (pv) panel arrays leading to 2 kilowatts (KW). These are used to maintain the charge in 12 deep cycle batteries which will

actually power the house. The batteries generate a direct current (dc) and must be converted to an alternating current (ac) in order for it to be utilized by normal appliances, this is done using an inverter.

Within the house a number of other renewable energy devices will be displayed such as solar powered chimes, solar powered toys, solar powered fans, sunpipe extensions and a sunpipe skylight.

Tours of the house will be held for schools and the general public, in addition to these it will be used to teach individuals and groups how to conduct home energy audits.

The grand opening of the house is expected to be March 7th, 2007.

