COAL, COLOMBIA, AND PROSPECTS

Coal is the most abundant fossil fuel of the world, so much that proven reserves have been established in more than 100 countries and, with the present rate of production, its availability is over 200 years, in contrast with the reserves of petroleum and gas, which are projected to last 40 and 60 years, respectively, at the present rate of production.

Examining the main statistics of world supply and demand, coal production has grown more than the 50% in the last 25 years, and is the second in importance in the world after the petroleum.

Coal has unique characteristics that differentiate it from petroleum and natural gas. Present proven reserves reach 984.000 million tons and will last some 216 years at the present rate of consumption. Its importance and usefulness is proven as source for the generation of electricity and as raw material in numerous sectors of the economy, but more importantly, research initiated from the late nineties oriented to improve the environmental performance of coal, are beginning to show very encouraging and positive results for the industry.

As for research, the US the country with the largest reserves of coal of the world, has been very active in research and development that will allow general utilization of coal reducing with lessened environmental impact. The initiative for generation of electricity from clean coal, is a key component of the national energy policies of President Bush and seeks to improve the reliability and availability of energy supply in the country, particularly generated from the coal.

The main challenge of coal sector is to conquer the environmental challenges, and even though technologies capable of eliminating pollution from coal combustion in the generation of energy have been developed, particularly nitrogen oxides (NO_x) and sulfur dioxides (SO_x), the challenge is that these technologies extend their global use (Brown, 2004).

Colombia is at present the world's forth largest exporter of thermal coal and in recent years accounted for more than 5% of the world exports. This panorama at world level, contrasts with the statistics at a national level, where coal, in spite of being the most abundant energy source, is barely 8% of the consumption of primary energy (Ingeominas, 2004), below petroleum, gas and biomass.

Resources

In the Latin-American environment, Colombia occupies a place of privilege in that it possesses the largest reserves of bituminous coal of excellent quality. The coals are distributed in the three mountain range, with the deposit The Cerrejón in the Department of La Guajira the most studied one to date; followed in order by the deposits in Cesar and Cordoba. Smaller deposits are found Antioquia – Antiguo Caldas, Valle del Cauca – Cauca. Of less well known geological knowledge are those at Borde Llanero and

Llanura Amazonica. Regarding metallurgical coal, the better deposits are located in the altiplano cundiboyacense and Norte de Santander.

Mining policies

Mining policies in the period 1994 – 2004 experienced important changes: in 1997 the National Counsel of Social and Economic Politics CONPES approved the document "Strategies for Strengthening the Colombian Mining Sector", whose objective was to favor a structural change that would lead to the modernization of the sector. As a result of this decision, the new Code of Mines, Law 685 of 2001, was issued, in which the basic guidelines that govern the relations of the State with the mining investor are provided.

Among these policies, the most important one is the one that defines the new role of the State in the management of the sector. The so-called "State as Entrepreneur" disappears from the mining business and, within the concept of the State as facilitator, it strengthens its role as manager of the resource, as regulator, and as controller of its exploitation. Also of importance is the policy to include the concept of sustainable development in the mining activity and of greater clarity and stability in contractual rules.

As part of the general policy is that of decentralization, whereby the Department of Mines and Energy has delegated some functions of mining authority to six (6) gobernaciones and to Ingeominas. In addition, it has been proposed to restructure the management, to decentralize the mining authority, to simplify and to reduce permitting procedures, and administrative procedures and to purge and to bring up to date the mining survey.

Production

For the case of the coal, the policy in one of consolidation and expansion of production in the Caribbean coast as well as in the of the interior of the country. The production in the department of La Guajira, initiated in the middle of the eighties, has maintained a growing rhythm and the involvement since 2002 of the multinationals Billinton, Angloamerican and Glencore as operators and owners of the Cerrejón Mine, ensures this trend to the future. Likewise, Drummond, which work the Cesar mines since the nineties, is turning that Department into the major producer of the country. In turn, the departments of Boyacá, Cundinamarca and Norte de Santander, although in smaller scale, register increases in production, marked mainly by the increase of the demand of coking coal as well as by the external and internal prices of thermal coal.

Exports

In the period 1994 – 2003 Colombian exports of mineral products, without including hydrocarbons, represented between 12 and 14% of the total, but in the last year its share approached 20%. This leap, that signified an increase closely of the 70% with respect al previous year, was the result of the increase in exports of coal from 2001, when they reached the second place among the exports, displacing coffee. There was also an important increment of the ferronickel from the 2002 and of gold in the 2003, with increases of 45% and 459% respectively.

In the annex, Table 1, the production is presented and exports of coal pertaining to the decade 1995 –2004.

Perspectives on coal

The national perspectives in matter of coal are very extensive and in that sense, they require of a greater attention on the part of the State. Coal tends to improve its participation in the energy portfolio by its enormous proven reserves in the world and its better environmental performance.

Colombia possesses an important potential compared with the other countries of the region and has been building an infrastructure of transportation and shipping that gives it a regional advantage from its strategic geographical position.

Coal has grown as a component of GDP and is the second largest export product. If this trend continues, that is to say, production of hydrocarbons continues to decrease and if new coal projects are consolidated, this mineral would be able to be become the largest export, supporting the trade balance and the finances of the Nation and of the producing regions (Pardo, 2004).

The proposals for tax exemption of thermal coal and coke they are hugely beneficial for the country, since the majority of countries involved in these negotiations support an immediate tax exemption, given that are not producers and require of this mineral for their industry and their generation of electricity. Colombia, in turn, would not need to be concerned that tax- free importing of coal would have an impact, given its lower costs of production.

Colombia needs focus on improving its infrastructure of river and terrestrial transportation and of management and harbor shipment. Moreover the State should consolidate a productive chain above all for the coal of Cundinamarca and Boyacá.

Perspectives on coal coke

Colombia possesses an important coking coal exploitation potential, its opportunities of export are extensive since the internal demand is limited. The coking coal resource would have a direct impact on potential state revenues, employment and the development of some zones of the country.

The increase of the global demand is tied to the price of the exports. The growth of China has led to increases in the prices of gas, coal and petroleum. Colombia is the fourth world exporter of coal, between the 2003 and the 2004 passed from 43 to 52 million tons of coal that are translated in US$1490 million at more than US$2000 millions, and if no more petroleum wells are discovered, it is possible that coal will be the main product of export of the country.

Coke is a determinant commodity in the production of the steel. The increase of this industry has brought with himself the increase of the prices of the coke to levels over the 400 dollars per ton, which makes its production viable in various countries, among them, Colombia, in which has generated all kinds of expectations and promises of development for zones where there is presence of this mineral, as in Boyacá, Cundinamarca and Norte de Santander.

In that order of ideas turns out to be opportune to be asked for the size of the bonanza, the possibilities of Colombia within these, the perspectives of the industry of coke in the medium term and the real impacts in terms of social and fiscal aspects it would have on the regions already mentioned.

The bonanza is given for the decrease of exports of China and the increase of its internal demand for the production of steel and generation of energy, what is translated in the increase in the price of the coke, and while there be not significant changes in the offering, the tendency will be from prices to increase.

It is necessary to note that the coke is produced artisenally, but if managed adequately this can change with a technological restructuring, in such a way that when finish the current bonanza ends, the country can be competitive and continue generating employment and tax revenues.

Investments for 2005

As for investments, the Coal Producers Confederation FENALCARBÓN, estimates that during 2005 the sector will receive investments of nearly US$ 270 million in infrastructure, that will permit to improve exports of the mineral. Among the main projects are Propuerto in the Atlantic Coast with an investment of US$100 million and a ferrous corridor between the departments of Cesar and Magdalena with a cost close to US$ 170 million.

Attentively,

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Annex 1. Coal Statistics

Table 1. Production and exports of coal

Thousands of tonnes

Production / Zone	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004_p
Guajira	15.895	17.701	19.459	19.849	19.548	22.100	23.676	18.077	22.584	24.547
Cesar	3.695	6.454	8.566	9.297	9.794	12.029	15.385	16.386	21.152	25.010
Córdoba	76	120	100	100	63	100	141	119	204	351
Subtotal Costa Atlántica	**19.666**	**24.275**	**28.125**	**29.246**	**29.405**	**34.229**	**39.202**	**34.582**	**43.940**	**49.908**
Antioquia	954	900	784	700	610	700	648	674	780	257
Boyacá	1.620	1.288	1.215	1.295	1.030	1.200	1.765	1.549	1.900	1204
Cundinamarca	1.800	1.566	1.250	1.150	556	970	1.029	1.440	1.500	707
Valle del Cauca	500	377	413	400	267	294	242	272	269	106
Norte de Santander	1.200	1.142	955	960	787	760	929	906	1.600	1283
Otros	nd	16	nd	nd	99	89	96	62	39	0,5
Subtotal Interior	**6.074**	**5.289**	**4.617**	**4.505**	**3.349**	**4.013**	**4.709**	**4.903**	**6.088**	**3.558**
PRODUCTION TOTAL	**25.740**	**29.564**	**32.742**	**33.751**	**32.754**	**38.242**	**43.911**	**39.485**	**50.028**	**53.466**
EXPORTS	**18.274**	**24.781**	**27.580**	**30.061**	**29.932**	**35.391**	**38.868**	**36.510**	**45.644**	**50.755**
Source: Ingeominas										
(p = provisional)										