Security of supply and integration

INTERVIEW WITH MAURICIO CÁRDENAS SANTA MARÍA
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He was General Manager of the Bogotá energy company, and subsequently Minister of Economic Development, of Transport, and then Director of National Planning. Before his current appointment, he was Director of the Latin America Initiative at the Brookings Institution of Washington DC. He was appointed to this ministry last year.

What are the key objectives in terms of energy policy in Colombia?

The key objectives of Colombian Energy Policy are:
- Ensuring the supply of oil, gas and electricity for domestic demand in the long term
- Guaranteeing the access of vulnerable populations to electricity and gas
- Promoting regional integration with neighbouring countries via electrical interconnections in order to export electricity.

In terms of gas sector policy, the Central Government has set the goal of guaranteeing the supply of natural gas in the medium and long term. It will achieve this objective first, through the design of policies that generate incentives for new investments in exploration and production; unconventional sources; and improvements to existing infrastructure; and second, through the establishment of service reliability criteria to guarantee the supply of internal demand.

In the hydrocarbons sector, the main objectives are to increase the exploration and production of hydrocarbons (both conventional and unconventional) and ensure the reliable supply through the development of the required infrastructure such as new pipelines, refineries and fuel storage. In terms of regulation, the Central Government is working towards the development and strengthening of the regulatory framework through the establishment of a liquid fuel regulation commission in order to guarantee the emergence of competitive prices and infrastructure expansion.

The issue of energy security and its impact on international relations is now top of the policy making agenda. How do you view this issue especially with regard to oil and gas transmission?

Concerning the supply of hydrocarbons, the Central Government is undertaking studies that aim to improve the reliability of the natural gas supply, as well as the construction and operation of a new strategic storage capacity for liquid fuels (gasoline and diesel).

Particularly, with respect to gas transmission, we are currently implementing projects to expand the capacity of existing infrastructure in order to face the new perspectives in terms of gas supply. Capacity is expected to increase by an additional 275 MCF/D (thousand cubic feet per day) by 2014.

How should risk be shared in the development of energy infrastructure?

There are technical, political and environmental risks for the development of infrastructure projects. These risks must be the responsibility of whichever party can best handle them. Along this line, the current practice within the energy sector has been that these risks are usually assumed by the sector companies and the duty of the Colombian State has been to guarantee the right conditions to reduce both political and legal risks. In this sense, Colombia has a long tradition of political stability as well as respect for agreements which has allowed for significant investments in the field.

In the case of electric transmission projects, the Central Government drafts a long-term plan by which it indicates to both agents and investors what new infrastructure is required and when it has to come into place. The latter is done in order to guarantee an adequate supply of electricity and power to meet the demand on a 15 year basis for both national and regional transmission grids. All risks associated with financing and licensing are undertaken by investors.

In the case of generation projects, these are proposed by the investors. Colombia has regulatory instruments such as the 'Reliability Charge' for promoting the construction of a new power generation installed capacity. These are basically 20-year call options of firm electricity issued by plant owners and taken by the electricity market administrator. We don't count with a power market and therefore, power purchase agreements are not applicable. Bilateral electricity purchase agreements do exist and may be negotiated amongst generators, distributors, traders and large customers.

With respect to gas sector projects, the risks of infrastructure construction involving natural gas are mainly related to accessing certain areas, such as indigenous reservations or Afro-Colombian territories. In this sense, it is necessary to carry out a dialogue process beforehand with these communities and socialize the projects. This dialogue is part of the company's responsibility but the Ministry of Interior coordinates the process. If the latter is not carried out appropriately it can lead to a delay or even a halt in the development of the project.

Our regulation seeks to guarantee supply, reliability and efficient prices for the end user

Finally, there are other risks concerning subversive attacks on transmission infrastructure, as well as obstacles for undertaking infrastructure works as a result of social or political demands from the population.

What is your position on the development of renewable energy resources including hydro, solar and wind power plants? What is the government policy in this area?

Colombia is open to the installation of all power generation technologies if they fulfill all our environmental requirements. The Government is eager to see local and international investors in order to increase the new power generation installed capacity for diversifying our electricity matrix and ensuring long-term supply of the electricity demand even during extreme droughts, such as El Niño phenomenon (Colombia's power generation installed capacity is reaching 14.5 GW, 70 per cent hydro, 25 per cent natural gas, 5 per cent coal).

Our regulation seeks to guarantee supply, reliability and efficient prices for the end user; therefore, competitiveness in price is a must for the new power plants entering the electricity market.

Norms and regulations have been put in place to ensure the competitiveness of non-conventional renewable electricity sources, such as establishing a formula to calculate firm electricity for wind power and biomass power generation plants, granting tax exemptions for the import of wind power, solar and geothermal plants.

We also require that operators of the off-grid concessions must guarantee a minimum percentage of electricity coming from renewable sources in their areas.

Finally, we have established goals for the percentage of electricity coming from unconventional renewable sources on and off the grid for 2015 and 2020 in a policy document named Action Plan for the Rational Use of Energy.

How do you see the coal mining sector developing in the coming years?

With a lot of optimism and expectations. Coal is the main mining product of Colombia and its evolution during the last few years has been positive. Coal production has grown fourfold during the last two decades and the world's greatest coal-producing companies operate in Colombia. Certain projects have been expanding their production capacity and they will soon be able to reach their maximum curve, and there are others with significant potential whose development is currently starting.

International circumstances remain favourable, as coal continues to be an essential fuel for energy generation and the Fukushima incident has turned it into a strategic mineral, which means that demand will increase in the medium term.

In the same manner, Colombia has a significant potential in terms of metallurgic coal, which has led to increased investment, and this sector is expected to develop further within a short period of time.

Environmental protection and social responsibility are key issues in the energy sector. How are you addressing this issue?

This administration has identified the need to improve support concerning social and environmental issues related to mining and energy projects in such a way that there will be a friendly and balanced relationship with neighboring communities, following modern social responsibility strategies. At the same time, it has been recognized that there is a need to expedite existing procedures for the environmental licensing of projects and providing implementing support for handling this matter.

We are aware of the importance of protecting our biggest resource, the environment and the people that live there, that is why we are planning on having a new office within the Ministry that will ensure inter-institutional cooperation and supervise that all the environmental demands are meet in the development of mining and energy projects. This office will work hand in hand with both the Ministry of Environment and the Ministry of Interior, following the process of each environmental license, and articulating a strong relationship with the communities involved in the development of mining and energy projects.

What are the key challenges and opportunities facing the global energy sector?

In the case of electricity, the main global challenges are:

• Lowering the prices of equipment needed to generate power and electricity from non-conventional renewable sources.

• Developing more efficient residential, commercial and industrial equipment in terms of electricity consumption.

• Developing new technologies such as hydrogen fuel cells.

• Developing affordable technologies for making existing grids smarter.

Local challenges:

• Establishing protocols for determining the adequate use of river basins in order to take rational advantage of their energy potential and complement (instead of competing with) other activities such as irrigation, domiciliary consumption, etc.

• Establishing protocols for regularizing relationships with local authorities, in order to determine whether a transmission line should be built underground or not, and for taking other similar decisions.

• Implementing swifter procedures for environmental licensing and for the previous consultation of ethnic minorities.

• Speeding up negotiations with neighboring countries in order to allow electricity exports and reach higher levels in shorter terms.

International challenges:

In terms of the hydrocarbons industry, it has a global and international perspective. In this sense, it is important for Colombia to maintain and improve its attractiveness for worldwide companies dedicated to the exploration and production of hydrocarbons, in order to continue exceeding the established goals for oil and natural gas production, and for drilling exploratory wells. It is also necessary to continue taking steps to promote regional energy integration, which in terms of hydrocarbons includes the legal import of petroleum-derived fuels from neighboring countries.

Concerning the issue of fuel gas, one of the main challenges consists of promoting exploration activities that will allow us to find new gas reserves, in order to maintain self-sufficiency when our existing natural gas reserves begin to decrease.

What is your vision of the energy sector in Colombia over the coming decade?

Colombia will become an important clean electricity exporter to its neighbours. Non-conventional renewable sources will supplement and diversify our electricity matrix. Electrical public and cargo transportation systems will be introduced.

Concerning the gas sector, the Central Government has been working on strengthening the legal and regulatory framework that will allow the fortification, consolidation and growth of the gas sector. Promoting the development of unconventional gas sources and opening new markets for exporting gas and LNG (liquefied natural gas) to our neighbouring economies.

As for the hydrocarbons sector, our vision consists of a modern and competitive upstream industry that through the extraction of current resources, including those known as unconventional, will continue to be an economic engine that will generate significant resources for the Colombian population in general, as well as for the central and regional administrations. Furthermore, it is very important to realize the wealth produced by hydrocarbons reflected in the undertaking of regional economic development projects.

Finally, Colombia will be able to count on an efficient and competitive downstream industry, which will provide fuels with the necessary quality and pricing. As a result, national refineries will have the capacity to meet internal demand, presenting high conversion rates for valuable products and making use of heavy and acid crude oils.

What opportunities are there in other mining sectors in Colombia?

Colombia has a historical mining tradition. Nevertheless, it has not fully developed its own potential. The country still has many unexplored territories and a variety of minerals are available. Current geological knowledge is inadequate compared to other mining countries, as basic geological studies extend to only 51 per cent of the territory.

Precious metals, copper, iron, phosphate, nickel and precious stones are attractive enough to bring investment and for developing projects dealing with the extraction of these minerals. Today, there are over 40 junior mining companies listed in the Toronto Stock Exchange which are carrying out exploration and production activities with very good results.

Opportunities are not only available in the mining activity per se but in other related services such as the building of roads, railways and port infrastructure, development of laboratories for mineral certification, commercialization of safety equipment and other machinery, as all of which are crucial to be able to materialize Colombia´s greater potential and be able to transport and export the extracted minerals.

In order to guarantee the inflow of investment in this sector, we recently created the ANM (National Mining Agency) an entity that will promote and manage our mining resources in an efficient way and will foresee all exploration activities carried out in Colombian territory. The ANM will perform the hiring and supervision of mining operations in order to increase the productivity and competitiveness of the sector. This agency will ensure prompt answers to mining hiring applications and widen the monitoring and control of all mining activities. F

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Opposite: A Colombian worker looks on as a mining truck drives away at the Cerrejon coal mine near Barrancas, Guajira province