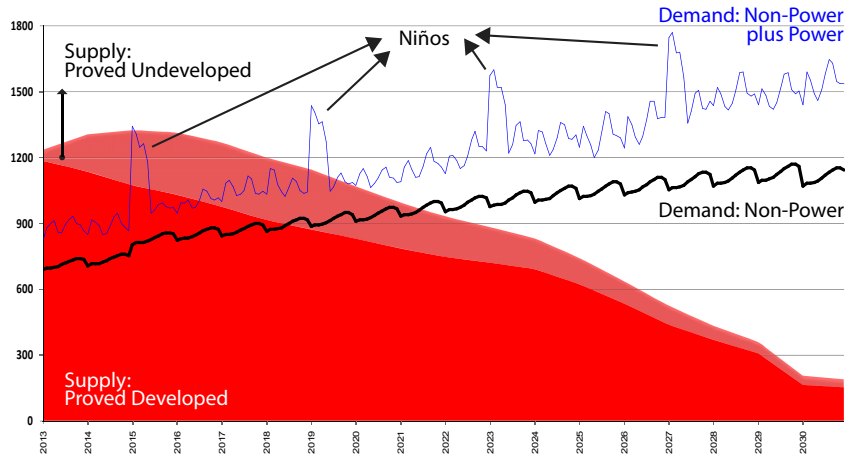
The Colombian Natural Gas Market: 'The Paradox of Scarcity'

By Tomás de la Calle

'The Phantom of Rationing' is a term coined in Colombia back in the early 90's after suffering a 13-month long electricity blackout. In 1992, President Gaviria dismissed around one hundred top power sector civil-servant executives during a prime-time TV show. For such executives (mostly the heads of the Planning departments), there followed costly and endless legal processes whereby they tried to demonstrate they were not guilty of the blackout. But this was not the worst of it: I once asked one of these executives about the financial burdens steaming from such legal allegations and he replied: "It's not the money I've spent in lawyers; it's the money I've spent in psychologists!" Since then, the energy sector in general, but in particular, Ministers of Mines and Energy, have developed a strong aversion to the risk of rationing, hence the so-called: 'Phantom of Rationing'.

And this is all to the good if it translated into better planning, but we wonder if this is actually the case under the current circumstances of the Colombian natural gas market. The graph below (based on data from the National Energy Planning Unit - UPME) depicts two supply curves: the dark red area represents the domestic supply arising from current Proved Developed (PD) reserves, and the light red area on top of the former one represents the Proved Undeveloped (PUD) reserves. This is the Base Case adopted by UPME. It does not take into account Yet-to-Find (YTF) reserves nor non-conventional resources, namely Coal Bed Methane (CBM) and shale gas. From the demand side there are also two projections: the black line indicating the non-power demand (i.e. domestic, industry, etc.) and the former one plus the demand arising from the power sector (blue line) assuming one 'El Niño' phenomenon every five years as of 2015 (and lasting for five months every time).

So, shall we then import gas? The discussion about importing gas first arose when the energy regulator (i.e. CREG) was dealing with the 'reliability' of the power sector: since about two-thirds of the installed capacity of the power system is hydro-based, when a drought arrives (caused by the El Niño phenomenon) gas-fueled plants should be available to support the system. And this may be possible on one condition: that the gas-fueled power generators agree to sign long term gas supply agreements (GSA) with the gas producers including take-or-pay clauses. It is a harsh provision for power generators since it may mean they will be paying for gas that the system requires only every five years or so. But for gas producers the issue is no less challenging: it is difficult to ask for funds to drill a gas well that will be sold only 'when it doesn't rain'!



Recognizing that the puzzle is not an easy one, the CREG came out with the idea of building a regasification and storage facility by the Atlantic coast to provide reliability to the system when El Niño shows up. But the question is: who is going to pay for that capital investment over time?

In the meantime, almost all the power generators decided to upgrade their power plants allowing them to burn diesel when gas is not available. This is the rational solution for them, although some argue that burning liquids makes the electricity so generated extremely expensive. Such arguments, though, confuse cause and effect: the electricity does not become expensive because it is generated with liquids; the electricity becomes expensive because of the scarcity of water.

Or, shall we rather export gas? Attached with the idea of importing gas, comes the proposition of exporting gas. The advocates of the simultaneously-importing-and-exporting-gas theory, maintain that it will create liquidity and transparency to the market, and that may be the case, but again the question is: at what cost, and who is going to pay for it?

Let's take an example: the US, the king advocate of the free trade ... except for some strategic commodities. The US crude producers are hopelessly constrained in their capacity to export domestic crude (N.B. exports to Canada and México are exceptions to this rule, basically for geographic reasons): the Export Administration Act of 1979 governs the sale of US crude overseas and allows the president to prohibit or curtail the export of commodities – basically crude – deemed to be in 'short supply' (N.B. refined products, however, are not restricted under US law). And what about natural gas exports now that the shale revolution is creating surpluses: the Department of Energy has

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emphasized that applications for rights to export LNG are to be reviewed on a 'case-by-case' basis. However, many major domestic consumers have expressed opposition as they fear that exports will push up the low prices that they have enjoyed: "by allowing producers to export LNG, profits would shift from natural gas consumers to producers, who would be able to sell their LNG into higher priced markets."

Our suggestion to energy policy makers down here is: Why don't they have a chat with, for instance, Pacific Rubiales and ask them about their net-backs after finding, developing, producing, transporting, liquefying, shipping and selling their gas to Panama? Or why don't they sit together with Equion and find out about the economics to make their recent off-shore discovery (Mapalé-1) a commercial success?

Bottom-line: Psychological scientists contend that obesity stems from people that perceive a future world of deprivation: they react by ingesting all the possible short-term calories they can. By the same token, now that our energy policy makers perceive an upcoming gas supply shortage, the reaction is alike: they promote higher short-term overseas consumption: let's export all we can now!