

The Future Paradigm of Energy Pricing in South America

By Philip Walsh*

Increasing volatility in energy pricing is a relatively recent global phenomenon that has perplexed regulators and energy policy makers in both developed and developing nations. For those countries who have adopted policies of deregulated energy markets, the volatility factor has been cause for concern. Nations whose energy markets are still state-regulated may have mitigated the impact of energy pricing volatility domestically but the costs related to minimizing consumer costs are ultimately borne by the citizens themselves in increased government deficits.

South America is comprised of have and have-not states in terms of domestic energy supply. These varying levels of energy security have led to different regulatory structures marked by a dominance of state-owned or controlled energy companies and varying degrees of privatization and foreign investment in energy-related capital projects. These differing approaches increase the barriers to co-ordinated regional development of energy resources that could contribute to a more efficient energy marketplace and related pricing benefits to domestic customers.

Energy pricing in South America, like that in Southeast Asia, has been influenced by, and is complicated by government subsidization. For those countries seeking to enter into global energy trade agreements and/or increased foreign investment to expedite the development of energy resources and related infrastructure, there are market pressures to equalize domestic energy pricing with global prices. These market pressures are resisted by domestic economies that rely on lower cost energy to grow.

Energy Supply

South America can be divided into “energy have” and “energy have not” countries. Relying on 2008 data provided by the International Energy Agency the latter category includes certain countries such as Brazil, Chile, Peru and Uruguay, who are, on balance, net consumers of energy (See Figure 1). The former category includes countries such as Venezuela, Columbia, Ecuador, Bolivia and Paraguay who are net suppliers of energy. Of course, the energy balance of each of these countries can be dominated by one or more energy types (See Table 1). For example, Paraguay may be a net supplier of energy but this is due entirely to its abundant (relative to its own needs) hydro-electric resources. In fact, Paraguay is essentially the only country that has sufficient excess electrical generation capacity to be a dominant exporter of electricity on the continent, with Brazil its primary beneficiary. However, it remains heavily dependent on the import of refined oil products. For Venezuela, a similar situation exists in that its net supplier status is predominantly associated with crude oil exports but, as opposed to Paraguay, it has sufficient reserves of coal, natural gas and installed hydro-electric power generation to potentially satisfy all of its energy needs. In terms of conventional fossil fuels, the ratios of reserves to annual consumption vary greatly among the South American countries (See Table 2).

Energy Policies

With the variation in energy self-sufficiencies the respective policies of each country also vary. Emboldened by their relatively excessive reserves, Venezuela, Ecuador and Bolivia have implemented policies that have increased state ownership of energy reserves and subsidized domestic energy costs, risking future alienation of foreign investment both from within, and outside of, South America. However, such policies may be unsustainable. Argentina’s experience with artificially low utility tariffs (16 to 27 times lower than residential tariffs found in neighbouring Chile and Brazil) and the dominance of state-owned energy companies have limited investment in the energy sector to the point that Argentina has seen its energy reserve base deplete to a point that it is now facing becoming an “energy have not”. Venezuela and Ecuador can currently rely on revenues generated from the exporting of high priced crude oil to offset the impact of subsidies on their respective GDPs but Bolivia, whose greatest energy asset is its natural gas reserve, is in a more difficult predicament. Its recent energy

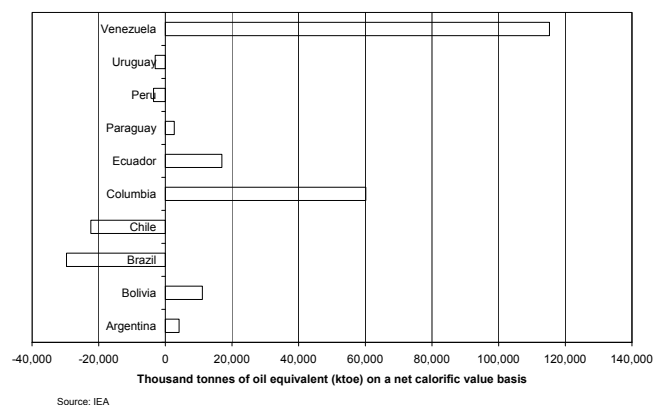


Figure 1
Net Annual Energy Balance (2008)

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	Coal and Peat	Crude Oil	Oil Products	Natural Gas	Electricity	Total
Argentina	-1136	2830	3137-	236	-471	4124
Bolivia	0	333	-480	11241	0	11094
Brazil	-11805	2683	-7468	-9451	-3630	-29671
Chile	-4111	-10881	-6638	-655	-99	-22384
Columbia	44057	13467	2452	71	120	60167
Ecuador	0	18217	-1205	0	-43	16969
Paraguay	0	0	-1317	0	3982	2665
Peru	-650	-3998	1116	0	0	-3532
Uruguay	-1	-2029	-851	-83	-81	-3045
Venezuela	4346	79470	32068	-669	40	115255

Source: IEA

Table 1

Net Energy Balance¹

¹ in thousand tonnes of oil equivalent (ktoe) on a net calorific value basis

policies have led to significant declines in its natural gas reserves which are now jeopardizing its ability to maintain export agreements that generate revenues. On the other hand, the so-called “energy have not” states of Brazil and Chile, with their historical need for energy imports, have adopted policies that are more favourable to investment. These countries are recognizing that energy price volatility is best ad-

ressed through security of supply that comes with continual investment in energy infrastructure and supply. Brazil in particular is on the verge of becoming, if it is not there already, an “energy have” country.

The Future Energy Price Paradigm

The apparent unsustainable nature of nationalization and domestic energy price subsidies will see a return to negotiated arrangements with foreign energy companies, the result of which will be increased investment and additional domestic energy supply. Mutual satisfaction on the part of both sides lies in the ability to “balance” the market pressure to equalize domestic energy pricing and global prices with the resistance exerted by domestic economies seeking to grow through lower energy costs. Interest in negotiating with those South American states that have pursued nationalistic energy policies has re-surfaced as exemplified by potential investments in Bolivia by Russia’s Gazprom and China’s Sinopec. A more likely scenario to emerge will be the continuation in activities by dominant South American state-owned energy companies that will see further integration of energy ownership within the continent and lower price volatility as security of supply risk is lessened. Firms such as Petrobras, the Brazilian state-owned oil company, with its recent announcement of new oil and natural gas projects in Bolivia (natural gas), Argentina (natural gas) and Uruguay (offshore oil) are increasing their access to continental energy reserves and promoting greater energy supply options. The overall impact on energy pricing will

be a short-term increase in energy pricing at the domestic level for those countries currently employing policies of subsidization. Higher prices will encourage greater development which in turn will provide more reliability of supply. For those jurisdictions with market-based energy pricing, further integration of South America’s vast energy resources will provide economies of scale leading to lower energy prices and improved reliability of supply.

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