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Energy for the Hemisphere: Reflections on the Energy Aspects of the Draft Declaration of Commitment

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About the Hemispheric Think Tank Working Group in Support of the 2009 Summit of the Americas

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The Working Group brought together researchers and policy analysts from the Western Hemisphere's leading think tanks to engage in intensive debate and dialogue and develop a strong intellectual and policy foundation for preparing and conducting the Summit.

In meetings in Ottawa and Washington, D.C., attended by leading national and multilateral officials, the group explored the critical problems the Summit could address, identified key areas of agreement and disagreement among countries, deeply probed the disagreements, and, where possible, sought to develop pragmatic approaches. These discussions and research have resulted in a series of policy papers that hope to mobilize and raise awareness of the Summit amongst regional governments and civil society.

I. Introduction: The Energy Scenario in the Americas

Supply, Demand and Infrastructure

Today, the Western Hemisphere is roughly self-sufficient in energy. This does not mean, however, that energy security does not pose a significant policy challenge for the Americas. Energy integration, in both infrastructural and institutional terms, remains relatively underdeveloped, while the region's supplies of traditional energy sources are very unevenly distributed: the United States and the Southern Cone are the two principal centers of heavy and increasing consumption and external dependence, while Canada, the Gulf of Mexico and the Andean zone are the principal foci of hydrocarbons production and net exportation. Meanwhile, less than one per cent of the Americas' primary energy demand is met with "classic" renewable energy sources (i.e. wind, solar and the various forms of ocean power as opposed to nuclear, hydroelectric and biomass, the other "conventional" low-carbon energy sources). Traditional fossil fuels continue to dominate (over 80 per cent) the Hemisphere's primary energy mix and will continue to do so well into the future if the region's energy scenario is not radically transformed.

There exists much potential for increased energy supply, particularly in the realm of so-called "unconventional" and "difficult" hydrocarbons such as Canada's tar sands and Venezuela's ultra-heavy oil, which together (some 500 billion barrels) might be the equivalent of two Saudi Arabias, and the hemisphere's many potential sources of offshore and ultra-deep water oil and gas, particularly in Brazil and Mexico, but also potentially in the United States, Caribbean and Andean zones. The obstacles to increasing supply, including energy nationalism and the rising costs of technical and material inputs which both exercise a negative impact upon investment, are immense, while primary energy demand is set to continuing growing, although less so in North America (0.6 per cent annually to 2030) but significantly in Latin America (two per cent). Nevertheless, despite the region's apparent energy potential, the Hemisphere will become ever more dependent on hydrocarbon imports from the Persian Gulf—and ever more vulnerable to the destabilizing impacts of fossil fuel-induced climate change—unless *status quo* dynamics are drastically altered.

On the other hand, both the quantity and quality of energy infrastructure (including power plants, transmission grids and electricity distribution networks, oil and gas pipelines, refineries and LNG export and import terminals) is insufficient across most of the region, while nearly a quarter of Latin America's population lacks access to electricity. The International Energy Agency (IEA) reference (or "business as usual") scenario foresees a tripling of electricity generation and a doubling of capacity, requiring an enormous amount of investment (over US\$1 trillion in the electricity sector) if demand is to be met in Latin America during the 25 years leading up to 2030. Even in North America, rising demand is already placing strains upon an increasingly antiquated energy infrastructure system. The infrastructure challenge alone is significant enough to constrict demand in many parts of the region, to say nothing of placing severe

constraints on renewable energy deployment, particularly centralized forms wind and solar power (i.e., wind and solar farms), across the hemisphere. The IEA estimates that Latin America will need to invest the equivalent of 1.5 per cent of its total GDP to 2030—some 50 per cent more than average energy investment requirements worldwide— in expanded energy supply and infrastructure if its “business as usual” energy demand is to be satisfied.

Energy Nationalism and Market Pragmatism

Another salient characteristic of the region’s current energy scene has been the return of energy nationalism, now influencing the energy policies of many of the hemisphere’s oil and gas producers. While many emerging markets in Asia successfully took advantage of the economic globalization of the last 20 years and, as a result of their consequent economic growth, contributed to much of the new energy demand that has been partially responsible for the recent spike in prices, a number of less-than-developed oil and gas producers in Latin America (particularly Argentina, Bolivia, Ecuador and Venezuela) have become skeptical, even resentful, of globalization dynamics. Such economies have remained, for whatever reason, for better or for worse, on the margins of the globalizing economy. Partially as a result, they have also become highly dependent on oil and gas exports, while their energy sectors have become increasingly dominated by the state. Although prices have recently collapsed from their peaks, and now stand at only 30 per cent of their historic levels some six months ago, the massive revenues that such historically high prices potentially represent have combined with brewing resentment towards liberal-tinged globalization to produce the potent political cocktail of energy nationalism.

The ultimate result has been more prohibitive restrictions on foreign and private sector exploration, production in the form of tighter fiscal and access conditions for international oil and gas companies in Latin American hydrocarbons provinces, and a stagnation of upstream investment and oil and gas output levels. Now that oil prices have fallen just as dramatically as they rose, national oil companies are faced with even more severe financial pressure to skimp on investment even more. Even with high prices, energy nationalism prejudices the level of upstream investment; with low prices, the effect of energy nationalism on upstream investment is potentially mortal. The impact can be seen in the evolution of production levels. Both Venezuela and Argentina are producing approximately 25 per cent less petroleum than their respective production peaks some ten years ago.

At the same time, a number of other countries in the region, including Brazil, Chile, Peru and Colombia, have continued to pursue more pragmatic energy policies which, without abandoning or denying a legitimate role for the state, remain more open, transparent, rules-based and market-oriented. Such policies not only acknowledge the reality of global economic integration, even in the realm of energy, but actually embrace it as a positive, constructive force. These pragmatic, rules-based, market-oriented energy policies express a broader political and economic stance of openness, transparency and flexibility that

reveal such countries to be rising above the region's traditional ideological deadlock between "good revolutionaries" and "free marketers" to forge what Javier Santiso has called a new "political economy of the possible" in Latin America.

Other countries, such as Mexico, remain stuck between these two ideologies, for the moment incapable of overcoming the domestic geography of special interest resistance to energy sector reform, even though they continue to engage the liberal and globalizing economy beyond energy. Central America and the Caribbean nations, on the other hand, as the poorest and most energy import-dependent economies of the region (except Trinidad and Tobago), remain the most vulnerable to energy price volatility and the least equipped institutionally and economically to handle energy and challenges related to climate change.

The Brazilian Example

If Venezuela is currently the regional leader of the energy nationalists and globalization skeptics, a grouping President Hugo Chavez has tried to articulate in the so-called "Alba" formation, Brazil is the epitome of the new energy pragmatism. Brazil is the only country in the hemisphere that has significantly reduced not only its excessive dependence on external sources of fossil fuels, but also its very dependence on fossil fuels themselves. Since the energy crises of the 1970s, Brazil has consistently maintained strategic support for its sugar-based ethanol industry, now the largest in the world. As a result, Brazil has become the world's largest producer and exporter of biofuels, which domestically provide for more than 25 per cent of the Brazilian transportation sectors' energy needs. Brazil has also tapped the massive potential of hydroelectric power (which provides as much as 80 per cent of the national power supply), making it one of the only countries in the world, along with France (where nuclear power accounts for some 80 per cent of the electricity mix), to have displaced the dominance of fossil fuels in the electricity mix with a low-carbon energy source.

Furthermore, as Petrobras has developed into a world-class petroleum company, discovering as much as 50 billion barrels of oil (along with large amounts of gas) in the country's offshore provinces and developing a niche as one of the world's leaders in ultra-deep water drilling, Brazil has also become one of the only countries in recent times to have moved from oil import dependency to self-sufficiency (while maintaining a good chance of becoming a significant net oil exporter in the not-so-distant future). Finally, Brazil has achieved these significant improvements in its energy outlook while maintaining a pragmatic, rules-based market-oriented energy model, characterized by significant government guidance and strategic state direction on national energy policy without falling prey to the temptation to nationalize the energy sector, shut out private and foreign investment, and seize the sector's rents. The hydrocarbons sector remains liberal and open, while the state holds only a minority — if large (40 per cent) — stake in Petrobras, the Brazilian national oil company, and does not intrude upon company investment decisions.

Brazil's evolving regional leadership could also prove useful in the hemispheric effort to expand the use of biofuels. Given the persistence of the traditional shortcomings of Brazilian regional leadership, however, such efforts may need to be underpinned by deeper hemispheric collaboration with the U.S. An interesting and constructive example of such collaboration is the recently launched U.S.-Brazil Biofuels Partnership. At this juncture, however, Brazil should also attempt to extend its energy revolution beyond sugar-based ethanol to second-generation cellulosic biofuels production, and even beyond biofuels themselves to renewable energies like wind, solar, geothermal and ocean power, among others, that are capable of generating electricity, reducing the country's —and the region's— excessive dependence on hydroelectric power, moderating the growing demand for gas, and avoiding a future desperate rush to coal. Aside from producing controversial cultural and local environmental side-effects, hydroelectric power is also far more vulnerable to the impacts of climate change than are these other “classic” renewable energy sources.

But Brazil's biggest energy challenge will be to avoid the temptation to follow so many other oil and gas producers down the road of energy nationalism, particularly once oil prices begin to rise again in the future (as they most surely and eventually will), in a risky and attempt by the state to monopolize the country's rents from hydrocarbons. So far, President Lula's pragmatism on economic policy, in general, and energy policy, in particular, suggest that Brazil will continue to set this realistic example for other countries in the region. But significant oil discoveries in the Santos and Campos basins, together with the spike in oil prices last summer to US\$145/barrel, have generated demands from certain quarters in Brazil to significantly alter the national hydrocarbons legislation, a development which would likely undermine the revolution in Brazilian oil and gas production currently underway. Such demands are unlikely to thrive in the current low-price environment, but should prices rise significantly again in the future, the Brazilian government will face intense pressure, not only to tighten fiscal conditions on oil production, but also to limit foreign and private sector access to oil and gas, and possibly even to take over Petrobras altogether. While higher taxes and royalties might be called for with prices well over US\$100/barrel, a state monopoly over the hydrocarbons sector would eliminate its potential to become a significant net exporter.

II. The Changing Context: From Energy Crisis to Economic Crisis

In the five years from 2002 to 2007, world oil prices tripled; during 2008 oil prices doubled again, reaching nearly US\$150/barrel in July. Then prices plummeted to as low as US\$35/barrel in December and rose again in January 2009 to almost US\$50/barrel. This oil price level was still nearly double the long-term average in real terms, if only 30 per cent of July 2008 peak levels and still below the US\$60/barrel threshold that many large oil producers, such as Venezuela, use as their national budget reference price.

Such price volatility has implied a rapid change of context. For most of this decade, the world lived in a context characterized by rapid economic growth and rising energy, food and other commodity prices. While such growth was beneficial in general, and helped to generate unprecedented wealth, rising energy and food prices ultimately began to prejudice the poor (offsetting the anti-poverty effects of growth), threatened the continued viability of sustainable inflation-free growth (particularly in net-importing countries,) and generated a sense of crisis in the realm of energy and food. Meanwhile, such dynamics implied large transfers of income and wealth from consumers to energy and commodity producers — both nation-states and companies — provoking the reemergence of energy nationalism, the elaboration of ambitious social spending programs, the articulation of foreign policy challenges to the U.S. by particular oil and gas producers (like Russia, Iran and Venezuela), and the rise of geopolitical competition between China, Europe, India, and the U.S. for (politically, if not geologically) limited oil and gas supplies.

In six brief months, however, all of this has changed, as the world as lurched abruptly into a different context, one defined by worldwide financial crisis, economic recession, slowing growth in energy demand, and plummeting energy and commodity prices. Given the increasing openness of Latin American economies and their deepening integration with not only the U.S. and Europe but also the rising emerging market powers in Asia, the “end of dependence” and the economic “decoupling” that so many observers had recently perceived in Latin America has proved to be an illusion. All American economies —North, Central and South— are being intensely affected by the financial and economic crises. Energy prices have fallen once again as a result, but aside from the perennial problem this presents (i.e. the undercutting of investment in future traditional sources, like oil and gas, but also in low-carbon alternatives, like renewables,) the current recession and collapse of energy prices have also dried up investment funds for new energy ventures and pushed energy security and climate change, as policy priorities, down several positions on national agendas.

Furthermore, as lower prices translate into intense budgetary pressures in producer economies, the international political subsidization of energy imports in poorer countries (e.g., Venezuela’s subsidization of Central America and the Caribbean through Petrocaribe) become more and more difficult to sustain, with implications both positive (less radical influence exerted within hemispheric relations) and negative (increasing economic vulnerability of the poor and deepening energy poverty).

Currently a battle is on within the U.S. political elite over what kinds of initiatives to include in the economic stimulus package which their new president, Barack Obama, wishes to sign into law soon after taking up office. Some are pushing for investments in energy efficiency and renewable energies to be included, while others are resisting the inclusion of such significant policy agenda items, such as energy transformation or healthcare reform, considered to be incompatible with economic recovery. This battle mirrors a broader struggle around the world over

the relative prioritization of energy and climate change policies –both of which are widely perceived to imply significantly higher costs to consumers, companies and national economies—within the current context of the global economic crisis.

However, while the critical nature of the climate change challenge, and the concomitant need to significantly cut fossil fuel consumption on a global scale, became apparent during the unfolding of the first context, it remains even more so in the new scenario. While nearly everything else has changed with the abrupt shift in context from energy crisis to economic crisis, the imperative to transform the world's energy economy and fight against climate change remains as an important continuity between these two scenarios.

The Draft Declaration for the upcoming Fifth Summit of the Americas in Port of Spain was originally conceived and written just as the first context of growth and high energy prices began to give way to a transition to the current context of economic recession and slumping energy demand. This should be remembered during discussions of possible revisions to the draft Declaration.

Furthermore, given that dependence has not died, and that interdependence is now clearly the defining framework of the world economy, a hemispheric approach to energy issues, while not as ideal as a global, multilateral framework, is certainly superior to an uncoordinated or even competitive jostling of possibly incompatible national strategies. The draft Declaration's commitments to the articulation of a regional collaborative strategy for energy security and the fight against climate change could come at no better moment.

III. Proposed Energy Goals, Commitments and Policies of the Summit of the Americas Draft Declaration

In the energy terrain, the draft Declaration expresses a goal, establishes a target, makes a commitment, defines several particular directions for policy action, acknowledges diversity, differences and limitations, and commissions a task.

The Goal

The overarching energy goal of the draft Declaration is to reduce the carbon- and energy intensity of the economies of the hemisphere through increased energy efficiency and conservation, the development of low-carbon and alternative energies, and the cleaner and more efficient use of fossil fuels (see paragraph 30). This is an appropriate overall goal, including as it does an emphasis on both demand management (efficiency) and the transformation of energy supply (the development and deployment of renewable and other low-carbon energies), as well as an acknowledgement that current fossil fuel dominance implies a realistic approach to defining the future energy mix, which necessarily must to include some fossil fuels for some time.

If fossil fuels can be produced and burned in a way in which significantly less carbon dioxide is released into the atmosphere than is currently the case, then the overall goal becomes much easier to achieve. Presumably, this would entail the development and use of carbon capture and storage (CCS) techniques and infrastructure, possibly linked to enhanced oil recovery techniques through the injection of carbon dioxide into mature oil fields to increase yields. However, the draft Declaration includes no direct mention of CCS, an omission which might be considered for revision, given that significant hydrocarbons and “unconventional” and “difficult” oil and gas sources still exist in the hemisphere.

Nevertheless, the goal’s emphasis on reducing the carbon and energy intensity of economic activity is far more appropriate than a goal to simply increase national or regional “energy independence”. By itself, “energy independence” is a muddled concept; if it were to be achieved without an accompanying diversification of energy technologies, sources, and modes of trade and transport, and without a significant reduction in carbon dioxide and other green house gas (GHG) emissions, “energy independence” would be nothing more than a pyrrhic victory.

The Target

The draft Declaration’s goal is expressed in concrete terms in the form of a specific target: “to increase the contribution of renewable and low-carbon energy sources to meet a minimum of 50 per cent of our national primary energy demands by 2050 at the latest” (paragraph 30). Such a target seems appropriate, given that the current contribution to the hemisphere’s primary energy mix from low-carbon and renewable energy sources is no more than 20 per cent and possibly as low as 10 per cent. This depends on the particular levels of GHG emissions stemming from the energy use of biomass and wastes, which currently contribute 19 per cent of Latin America’s primary energy mix, much of it presumably in the form of firewood, charcoal and dung, as opposed to sugar-based ethanol fuels.

A tripling of the low-carbon and renewables contribution would appear to be a necessary, if not necessarily sufficient, requirement for the hemisphere to carry its share of the burden in reducing GHG emissions so that their level in the atmosphere stabilizes at no more than 550ppm. It also seems appropriate that the target is not limited to “renewable” energy sources, and allows for contributions from low-carbon energy sources, which could include nuclear power or clean coal (using CCS), particularly given that currently less than one per cent of the hemisphere’s primary energy mix comes from the “classic” renewable sources, like wind, solar, ocean and geothermal energy. This flexibility, while diluting the intensity of the commitment to “classic” renewable energy, does provide for more realism and pragmatism.

The Commitment

The commitment made at the outset of the draft Declaration’s section on “Promoting Energy Security” is to provide the financing and policy frameworks necessary to achieve these goals and targets (paragraph 30.) The likelihood of

reaching these targets depends strictly on the seriousness and the intensity of such a commitment, and on the competent design of the supporting policies. All of this is, of course, completely up in the air.

Identified Policy Lines

In this regard, however, the Draft Declaration outlines a number key policy lines to pursue:

1. ***Demand management***, particularly through improved energy efficiency and heightened conservation in transportation, industrial and household sectors. In particular, mention is made of the introduction of minimum efficiency requirements, harmonized ratings systems for both domestic and industrial appliances, reviews of building codes, enhanced standards for energy efficiency, and development of urban planning guidelines to encourage more energy-efficient cities (paragraph 31.)
2. ***Diversification*** of energy technologies, infrastructures, supplies and routes of transport. Although the draft Declaration is not explicit in this regard, such a diversification policy should promote the significant expansion of new liquefied natural gas (LNG) infrastructure, new sources of hydrocarbons, particularly gas, in the Americas, as well as new oil and gas pipelines. On the other hand, specific mention is made of the further development and use of “on and off-shore wind turbines, conventional and polymer photovoltaics, solar towers, geothermal and hydropower, hydrogen fuel cells and other new energy technologies” (paragraph 33.)
3. ***Expanded and sustainable use of biofuels***. In addition to the call for further development and diversification of alternative energies suitable to electricity generation, the draft Declaration makes a special call for the expanded use of biofuels, including:
 - the “development, manufacture and use of both current and next-generation biofuels including sugar-based, cellulosic, algal and bacterial biofuels” (paragraph 33);
 - the development of “a set of compatible specifications by the end of 2015 in order to facilitate their trade and increased use, taking into account existing and planned standards” (paragraph 33);
 - the development of “strategies for sustainable biomass cultivation and production, with particular regard to the need to ensure food

security and, by the end of 2012 at the latest, develop a strategy for second-generation and more advanced biofuels that will ensure that they do not compete directly with other agricultural crops for land, water or fertilizer” (paragraph 33.)

4. Overhaul of energy infrastructure and promotion of cross-border electricity integration. This key policy line calls on the nations of the hemisphere to expand and upgrade their current energy infrastructures, deepen the hemisphere’s web of energy integration and trade, and improve and guarantee the physical integrity of the region’s energy supply chain, as well as its critical energy infrastructure (paragraph 34).

5. Defense of market-based principles and implementation of effective, transparent regulation. In particular, the draft Declaration calls for:

- “non-discriminatory third-party access to transit infrastructure to encourage the development of transparent, efficient and orderly energy markets” (paragraph 32);
- A commitment “to making planning and regulatory requirements simpler, more coherent, transparent and effective by the end of 2012” (paragraph 32).

6. Pursuit of R&D, technology transfer, international collaboration and information sharing. The Draft Declaration makes a particular commitment to:

- “the promotion of clean energy through research and development, the transfer of environmentally sound technologies, and the commercialization of new, cleaner energy solutions”; and
- “increasing international cooperation and sharing [of] information in the search for solutions that can benefit all our nations” (paragraph 35.)

The Commissioned Strategy

The draft Declaration’s energy section ends with the commissioning of the elaboration of a new collaborative regional energy strategy by 2011, capable of achieving the goals and targets outlined above and pursuing the particular policy lines previously analyzed. In particular, the draft Declaration would commit

participating nations of the Americas to: “Instruct all Ministers with responsibility for Energy, Planning, Regulation and Finance, within the framework of the OAS and the Sustainable Energy Partnership of the Americas (SEPA), with the support and guidance of the IDB and the World Bank, taking into account the diverse conditions, opportunities, legislative and regulatory frameworks in our countries, and building on existing energy cooperation and integration initiatives, to develop a strategy of cooperation among our nations, international organizations and the private sector that will increase energy efficiency, diversify energy sources, minimize environmental impact, strengthen energy independence, and secure access to safe, affordable energy supplies for all, especially the poorest. . . . by the end of 2011 at the latest” (paragraph 38).

IV. Comments on the Energy Aspects of the Draft Declaration

Although the draft Declaration does not explicitly articulate its philosophy as such, it does put forward a range of proposals which suggest a consensus preference for a region-wide energy policy model based on the “market-regulatory-technology nexus,” as opposed to a nationalist or state interventionist model. Such an approach views the market —always well-regulated by the state— as the optimal organizational mode for generating and deploying the most appropriate mix of technologies for managing energy demand, maximizing energy supply and minimizing carbon emissions and other negative externalities stemming from the energy economy. It also offers the most flexibility for making energy security goals compatible with both human prosperity and poverty reduction.

Certain key aspects of this regulated market approach, however, are not articulated clearly. The following comments are meant to underline what could be made more explicit.

1. Market pricing and the internalization of costs

The first would be to clearly state the importance of **market pricing** for energy products. This would include the reduction or **elimination of energy consumption subsidies**, particularly in net importing countries. It would also include the significant, if not full, **internalization of negative externalities** stemming from the production and consumption of energy, particularly fossil fuels. This could be achieved either through the **imposition of a carbon tax** on most, if not all, transactions which imply emissions of carbon dioxide (or perhaps even other greenhouse gases) or through a tax on the consumption of particular fuels. It could also be achieved through the creation of a **well-designed and regulated cap-and-trade system** that established a market in carbon emission rights.

Whatever the mechanism used, however, the necessary implication would be the same: **higher energy prices**, at any given moment, with any given supply-and-demand balance, than otherwise would have been the case. Internalizing energy's externalized costs to generate higher relative prices would achieve two objectives:

- 1. a reduction in energy demand growth** and an increase in energy efficiency in response to higher prices and a rising opportunity cost for energy consumption; and
- 2. the creation of market signals to promote a switch to low-carbon and renewable energy sources.**

While the draft Declaration does commit to further regulatory actions designed to help stimulate greater efficiency and increased use of low-carbon and renewable energies, there is no explicit mention of the use of market incentives to foster the particular goals, targets and policy lines. There is also no reference as to how to deal with market price issues internationally, as in the case, for example, of **tariffs on the importation of alternative energies** (such as biofuels), although there is a call for the creation of an internationally compatible set of standards to facilitate the international trade of biofuels (see paragraph 33). Nevertheless, it would be more productive to address the issue of direct price intervention in the international energy trade, at least within the hemisphere. Ideally, imported oil or gas would be taxed with a tariff (thus discouraging its consumption, stimulating alternatives, and offsetting some of the economic and political power accruing to producer countries by allowing the importing governments to share in the income windfalls,) while imports of any low-carbon or carbon-free renewable energy should be imported tariff-free.

2. Subsidies and multiple-pricing regimes

On the other hand, the centrality of the well-regulated market and **the price mechanism must be compatible with the goals of the first section of the raft Declaration, "Promoting Human Prosperity"**. This would imply providing a mechanism whereby energy consumers, particularly the poor and most economically vulnerable, would be capable of absorbing the impact of potentially higher international energy prices, stemming from either market volatility (as during the period from 2006 to July 2008) or the introduction of a carbon price or tax (as may happen in the future).

One way to shield the poor from the deleterious effects of higher energy prices would be to embark on far-reaching economic policy changes capable of generating strong economic growth and development, progressively eliminating poverty through the lifting of incomes and living standards in general. However, such strong economic growth could actually contribute still further to significantly higher energy prices, thus undercutting at least some, if not all, of the growth gains, in real terms, in the form of higher nominal income.

Another more direct method would be the direct provision of energy subsidies focused on the poor, while maintaining a system of full market pricing for consumers. This could be achieved by direct transfers and income support for the poor, although this would place significant budgetary pressures on increasingly fragile fiscal situations across Latin America as the world recession takes a deeper hold over the region. Alternatively, the same objective could be achieved through the creation of dual, or multiple, pricing regimes in which the wealthy and middle classes pay higher energy prices (perhaps with higher gasoline taxes as well) while the poor pay lower regulated prices. This kind of regime is harder to implement, regulate, and enforce than a standard unified pricing regime, but it has the advantage of providing access to affordable energy to the poor, while generating at least some incentive to check energy demand growth through higher price signals to the more prosperous segments of the population which typically consume more energy. Such a regime also enhances the incentive for investment in energy infrastructure and supply on the part of private sector energy producers and providers (as compared to a simple unified pricing regime with low regulated prices for all).

The Argentine example is illustrative in this context. While electricity and gas prices remained frozen for years after the Argentine crisis of 2002, private investment in electricity and gas infrastructure and supply languished as private companies struggled to break even, despite the rise of global energy prices. This situation has placed serious energy supply limitations on the Argentine economy, and has repeatedly threatened the economy with blackouts and cut-offs.

This concern for investment incentives is particularly important in light of the need to invest in a significant expansion and improvement of the electricity transmission grids and distribution systems across the region, including in North America, given the planned parallel expansion of intermittent and region-specific renewable energy sources, like wind, solar, tidal and wave power.

3. Electrification of the vehicle fleet

There is no consideration in the draft Declaration of the potential for **electrification of the vehicle fleet**. Biofuels represent an obvious alternative to petroleum-based gasoline and diesel, justifying an emphasis on the manufacture of flex-fuel vehicles. Nevertheless, it would be best to diversify the transportation sector's fuel base, relying not only on petroleum-based fuels and biofuels, but on electricity generated from a broadly diversified base of energy resources (including renewables) as well. This would call for some strategic consideration as to how to promote the penetration of flex-fuel electric-hybrids, which could run on electricity, gasoline (diesel) or ethanol (bio-diesel).

4. Less emphasis on “energy independence” at the national level

Although the draft Declaration makes only one reference to energy independence, even that reference is one too many. Much more emphasis should

be placed on energy collaboration and integration at the regional level, based upon open, transparent, and rules-based, market principals. Although it has had a checkered history in more recent years, the Europe's Energy Charter Treaty, which extends the EU's open, transparent rules-based market principles (an "*energy acquis*") to the energy sectors of Eurasia, offers the hemisphere a reference point for future regional energy integration and hemispheric collaboration, helping as it does to facilitate "non-discriminatory third-party access to transit infrastructure to encourage the development of transparent, efficient and orderly energy markets."

Also, more explicit emphasis should be given to promoting further physical integration and regulatory harmony in the hemisphere's energy arena, building on current efforts, like the SIEPAC electricity system in Central America, and the regulatory coordination and harmonization efforts of the Asociación Iberoamericana de Entidades Reguladoras de Energía (ARIAE), working in collaboration with the Spanish National Energy Commission (Comisión Nacional de Energía, CNE).

It is true that there are indeed some problematic countries (Venezuela, Ecuador, Bolivia, and even Argentina) which might make a strategy oriented toward integration and collaboration less viable. But problematic countries exist within the space of the ECT in Eurasia (Russia, Kazakhstan, Turkmenistan, even EU countries like France and Germany), but the ECT still has been able to thrive. If the majority of the hemisphere's countries can commit to a new Hemisphere Partnership for Energy Security, like that proposed by U.S. President-elect Obama (and included in the draft Declaration), it is possible that energy nationalism —particularly in an environment of relatively moderate prices— can be kept at bay, and the future may be brighter for more rational regional energy integration and more rapid transformation of hemispheric energy economies. In this sense, more explicit hemispheric backing should be given to the U.S.-Brazil Biofuels Partnership and possibly even to an extra-hemispheric arrangement such as a new Spain-U.S. Renewable Energy Partnership.

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