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## **STRATEGIC PERSPECTIVE**

**René B. Azurin**

### **Renewable energy barriers**

Chatting at the just-concluded Energy Summit with the very charming Dr. Nandita Mongia, Regional Coordinator for the Energy Program for Poverty Reduction in Asia and the Pacific of the UNDP, I learned that Indonesia mobilizes funding for renewable energy for the poor through taxes on fossil fuels. That, to me, is an example of a logical public finance policy: Penalize, through taxes, what you wish to discourage and use the funds raised to help develop what you wish to encourage.

It is also a manifestation of a strategic perspective, the kind of system-wide thinking and long-run view we need to see exhibited by more of our own government's finance and economic managers. One of the things our highest officials sometimes seem to be unconscious of is a principle I drum repeatedly into the minds of my strategy students: Outcomes are the product of the prevailing structure of incentives; if you want a particular outcome, you must first design the incentive system to lead to it. Exhortations and directives without an accompanying incentive structure consistent with the desired outcomes are no more than expressions of wishful thinking. The exhortations are simply ignored and the directives simply make people waste time and, uh, energy inventing ways to avoid complying while vigorously pretending to be absolutely, completely in favor of the announced action. Filipinos are particularly creative in this regard.

We say – or, more precisely, our public officials say – that the country's energy strategy should be to develop more renewable and alternative energy sources – solar, wind, geothermal, ocean, hydro, biomass – that, because they are indigenous and climate friendly, will reduce our country's dependence on imported fossil fuels that pollute our environment. Currently (according to Department of Energy figures), power plants using renewable energy have an installed capacity of 5,260 megawatts, or 33.5% of total power generating capacity in the country. This is broken down into hydro (3,257 MW), geothermal (1,978 MW), and wind (25 MW). The DOE, according to the hardworking Director of DOE's Energy Utilization Bureau, Mr. Mario Marasigan, launched in August 2003 an aggressive Renewable Energy Policy Framework that targeted the doubling of renewable energy capacity by 2013. A proposed Renewable Energy Bill, says Mr. Marasigan, will “provide incentives and remove some major market and financial barriers to renewable energy development [and] should create a better investment environment for private proponents.” Unfortunately, the bill remains stuck in Congress. A workshop participant wryly commented that congressional energy is naturally directed more toward increasing congressional pork barrel allocations than achieving energy independence for the country.

The principal barrier to renewable energy development is the fact that the energy it produces is still generally more costly than the energy produced by conventional fossil fuels. One estimate indicates that electric power from renewable or alternative fuels is 25% to 50% more expensive than electric power from oil or coal. The higher costs stem in large measure from the site-specific nature of renewable energy projects – you cannot set up a windmill farm where there is no wind or a mini-hydro plant where there is no water – which leads to high construction costs and, later, high transmission costs. Moreover, the modern imported technologies required to build efficient renewable energy plants are hardly cheap.

This is why the structure of incentives needs to be modified as proposed in the RE Bill. The RE Bill provides for the usual tax-break incentives but complement these with the setting up of an RE Trust Fund that can finance research and development, help pay for preparatory studies, and provide loan guarantee facilities. Non-fiscal, market development-directed incentives are also provided, like the mandating of a 1% bio-diesel mix which increases to 2% by 2009, and a 5% bio-ethanol gasoline blend in 2009 which increases to 10% by 2011. Similarly, for electric utilities, it will be mandated that the electric power produced from renewable energy sources must constitute 7% to 12% of the total electric power mix and, further, that such power must be dispatched as soon as it is made available.

Currently, the incentive system is actually biased against renewable energy projects. For example, investors in geothermal projects must pay 60% of their operating income to government. For investors in windmill farms, a “national wealth share” of 15% of net income is imposed, presumably for using Philippine wind. (Aside: I wonder if the hot wind generated in Congress has the same price.) And, investors in mini-hydro plants are charged the same rate for water as water utilities even if, in the case of the former, water is merely diverted to flow through their turbines but is used elsewhere, while, in the case of the latter, water is actually consumed.

For the poor that Dr. Mongia is so passionately concerned about, the situation is actually even worse because, often, their communities are too isolated to be connected to a power grid. In their case, electricity must be bought from tiny third party providers whose costs are even higher. A World Bank-funded study by alternative energy expert Marcial Ocampo, for example, indicates that the cost of electricity for a community of 1000 homes using a micro-hydro plant or a small wind generator will be about P42 to P44 per kw-hr. Compare this to the cost of power in Manila of about P9 to P10 per kw-hr and one understands why Dr. Mongia correctly contends that marginalized communities must be helped with subsidies funded by those who benefit from the use of fossil fuel.

In that respect, I therefore find any talk of removing taxes on oil products or giving any sort of assistance to sectors that use fossil fuels completely illogical. These will only tilt the incentive system further in favor of fossil fuels and against alternative fuels. In fact, the more logical action is to increase taxes on polluting oil products and just reduce taxes elsewhere (e.g., by abolishing income taxes). With present incentives directly in conflict with the desired goals, renewable and alternative energy development will simply not happen.

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