

## Our Electricity Concern

Written by Tengku Razaleigh Hamzah

Wednesday, 02 November 2011 15:57 - Last Updated Wednesday, 02 November 2011 23:21

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### (Updated with video)

The impetus for the Independent Power Producers (IPP) programme in Malaysia in the early 1990s was several as noted in an article by Jeff Rector entitled "The IPP Investment Experience In Malaysia". "Malaysia's economic expansion created a surging need for power" in terms of industrialization and continued Foreign Direct Investment (FDI) into the country. Tenaga Nasional Berhad's (TNB) monopoly on generation was dismantled following a massive blackout in 1992 and the IPP programme was aggressively pushed forward to "restore an adequate safety margin of capacity and to ensure that the country could meet its anticipated future power needs.

However the new capacity "grossly overshoot demand growth" and several months before the Asian financial crisis struck Malaysia, Peninsular Malaysia had almost 50% surplus capacity."

2. The five successful investors of the first wave of IPPs appeared to be those who were well connected with the government and did not necessarily possess experience in the power sector. All five IPPs were gas fueled, sourced from domestic natural gas resources supplied by Petronas, and financing for the IPPs was also completely domestic with EPF being a key uptaker of the bonds that were issued. "It is said that the five consortiums in the first wave of investment were guaranteed returns of 20% and that their actual returns were even higher.

3. The Power Purchase Agreements (PPAs) signed between TNB and the IPPs upon the Government's decision to allow for independent power generation in the country are protected under the Official Secrets Act and as such are not available for public scrutiny despite many calls for transparency. What is known is that the agreements are of a long term nature on a 'take or pay' or fixed pay charges basis such that TNB incurs payment obligations regardless of whether the power generation capacity is utilized optimally. With regard to the first generation agreements, it appears that fuel cost risk was borne entirely by TNB and the terms of the PPAs strongly favour the IPPs. In addition, it is reported that unit cost of electricity purchased from IPPs in some cases was nearly double TNB's own generation cost. And although the PPAs are regarded as bipartite agreements, many accounts state that there was a "strong government presence during the contracting phase. The government had and still maintains a golden share in TNB.

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4. One of the IPP projects was the Bakun Hydropower dam project, expected to generate 2400MWs and provide electricity supply to Peninsular Malaysia from Sarawak through undersea cables. The project was originally awarded in 1994 to a Sarawakian timber tycoon who did not have any prior experience in dam construction. Vast tracts of forest were already cleared of timber and natives were moved from their native customary homes when the Asian financial crisis struck causing the project to be shelved. Compensation reportedly in the region of a billion ringgit was paid to the concessionaire. The project has been subsequently revived incurring massive cost overruns. Today there is a lack of clarity as to whether the original goal of the dam to supply electricity to the Peninsula will be realized, and if so, at what cost, both financial and environmental. The Bakun dam was included in Transparency International's Monuments of Corruption Global Corruption Report 2005.

5. As TNB is required to purchase a pre-determined amount from the IPPs at fixed costs, when demand falls, as was the case during the 1998 economic crises, TNB faced overproduction and had to put a stop to its own power generating plant, resulting in both inefficiency and loss of profitability. Additionally, "a higher than necessary cost of power resulted in financial losses to the government controlled utility, higher prices to consumers, and arguably an inefficient allocation of society's resources". Against this however is the fact that "timely expensive power is a far superior outcome than blackouts that discourage FDI and domestic investment and stunt economic growth.

6. Whilst this is arguably true, the type of FDI that is attracted should also be considered. For example, with Bakun, the power is expected to be used in aluminium smelting plants. Apart from the numerous environmental concerns this poses, this arguably fails to fit into our plans of becoming developed by 2020, a high income nation with skilled workers. Aluminium smelting is considered a sunset industry in many developed countries.

## **PROPOSAL**

7. In light of the increase in electricity tariff to the consumer (average 7%) resulting from gradual reduction of fuel subsidy amidst an increase in global fuel prices, and potential future tariff increases, it is to be studied:

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- a) The impact on the economy especially in terms of the direct and indirect inflationary pressures this presents;
  
- b) The impact in terms of purchasing power to different segments of the Malaysian society;
  
- c) Is this the appropriate time to remove subsidies when the global economic pressures are already resulting in inflationary pressures in the country, or are there other concerns such as the high electricity supply reserve margin or leakages due to corruption/patronage that should be addressed first to remove the shortfall in finances?
  
- d) What would be an adequate reserve capacity? What are the costs/benefits of operating at the present considerably high reserve capacity and is it feasible to continue this in the future? Are there special circumstances in Malaysia that warrant this high reserve capacity which incurs both capital and operating costs?
  
- e) How should the additional profits that Petronas makes with the subsidy removal be invested for the national interest?
  
- f) Can this tariff increase be assuaged by the proposed Feed-in-Tariff for renewable energy and if so to what extent?
  
- g) Do the circumstances of this increase present opportunities which the nation should seize, for example, to move towards cleaner electricity production and efficiency in electricity use as well as reduction in wasteful spending/consumption? Is enough being done to optimize this, and what are the expected positive outcomes? It is encouraging to see that Malaysia is one of the six ASEAN countries that have agreed that member countries should use peak demand management measures to cope with the up-trend in regional power consumption. Measures that have been employed in other countries include providing "subsidies to industries and businesses that use electricity during off-peak hours so as to reduce the government's massive financial burden of having to invest in power-reserve capacities". What are the measures that Malaysia is considering to manage peak electricity demand?

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h) Is the tariff increase expected to contribute towards achieving Malaysia's aspiration of reducing carbon emissions intensity of GDP by up to 40% of 2005 levels by 2020 as announced by YAB Prime Minister in 2009? If so, what is its anticipated impact?

i) How would coal prices be affected by the rise in oil and gas prices? There appears to have been a "sympathetic" increase in coal prices already, should this trend continue, would the public be subjected to further tariff rises given the move towards coal making up a greater portion of the energy mix under the fuel diversification policies? Would this be in line with the country's carbon emission reduction aspiration?

8. In order to answer at least some if not all these questions comprehensively, a transparent analysis of what has occurred in the past in terms of the IPP agreements is required. Such an analysis is expected to show:

a) If there was an incremental cost to TNB as a result of the IPP agreements and if this was reasonable or excessive. If excessive, what proportion of this cost was passed on to the consumers? In other words, could the nation have enjoyed the same tariffs with gas subsidies being lower if TNB was not burdened with these excessive incremental costs?

b) If there was an incremental cost, was it justified? For example, was this an appropriate price to pay for power supply security and hence reasonable?

c) What was the analysis conducted to warrant the high reserve margin of about 40% and what analysis in terms of scenario planning and cost/benefit analysis was undertaken to justify this high reserve? In other words, was such a high reserve planned for, in which case what is its justification? Or, could better planning, have enabled TNB to lower operational costs and hence electricity tariffs? It is interesting to note that neighbouring countries like Thailand operate at reserves of around 22% which is already considered relatively high. In other words, how much

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savings would TNB have made without being encumbered with payments for this high reserve margin? Would it have made a difference if TNB was not obligated with contractual payments to IPPS, partly as a result of this high reserve capacity, or would the costs of potential electricity supply uncertainty outweighed any such savings?

d) What was the actual cost of encouraging consumers to use more electricity (to absorb the excess that TNB was obliged to pay for regardless of the reduction in demand) as was reported during the fall in demand during the Asian financial crisis? Subsidised gas would have been in a manner of speaking "wasted" to meet this artificial demand. A related issue is to examine to what extent this oversupply of electricity and TNB's payment obligations to the IPPs resulted in disincentives to promote electricity savings/efficiency even after the financial crisis ended, which in turn consumed more subsidized gas than necessary. Did this again give an inaccurate picture of electricity demand for the future which was then met by more capital costs being expended in building power plants?

e) To what extent did the IPPs, especially the first generation producers, benefit from the decision to allow IPPs into the business of power generation? What was the cost/benefit to the nation of operating on a closed private negotiations basis? Are accounts that despite being private sector players, the IPPs operations are not optimal and rely on the fuel price subsidy to mask their inefficiency justified?

f) What is the true cost/benefit of the Bakun dam project to the public? Who were the gainers, who were the losers, and what are the financial as well as other costs such as environmental, loss of native cultural rights, impact on ecological services? What are the benefits of this project?

g) Did we produce cheap energy for the right reasons? Have we formulated cohesive policies to ensure this? Were the benefits distributed equitably, particularly to benefit the lower income groups or did the rich receive a disproportionate size of the benefit? Did we attract "good quality" FDI which brought rise in local income, technology and raised quality of life across different 'income stratas or "bad quality" FDI which increased disparity in income, damaged the environment and quality of life and trapped us in the resource curse.

9. Taking an honest look at these issues will allow Malaysia to learn from the earlier experience in future undertakings and guide future decision making in managing and meeting electricity demand. Making the findings public will instill a much desired sense of confidence in the ability

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of the system to be accountable to the electorate. This is especially so at a time when managing energy/electricity security is required to not only be met in a cost efficient manner, but also to effectively meet the challenge of depleting resources and limiting carbon emissions to address global warming.

10. In meeting our future electricity demands, an open and transparent tender process for future IPP arrangements is imperative. This will allow for more competitive pricing of electricity while also meeting requirements for clean, secure and sustainable energy sources. Additionally, future arrangements with existing IPPs, especially those of the first generation should take into account the fact that they would have fully amortised their capital cost and already enjoyed considerably high profits. A relatively lower profit margin should therefore be negotiated with these IPPs in the interest of the nation, which could translate to unit cost savings for consumers.

## CONCLUSION

11. Overall, Malaysia should take a holistic and integrated approach in planning for future electricity supply that includes not only security of supply at affordable costs, but also issues that affect development such as income distribution and sustainability as well as issues of growing concern such as environmental degradation and carbon emissions. In achieving a robust framework within which this can be done, we must learn from the successes and mistakes of the past. Transparency and openness are critical elements in enabling us to do so.

Speech by Y.B.M. Tengku Razaleigh Hamzah at the Kelab Rotary Kuala Lumpur Diraja Official Presentation for Living & Learning Aids to School Children on Wednesday, 2.11.11 at 12.45 pm at Shangri-La Hotel ,Kuala Lumpur

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