

# Food for Thought

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## **MEMORANDUM ON WATER AND ENERGY SECURITY FOR MALAYSIA**

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WEDNESDAY, MAY 29, 2013 | Comments(3)

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### **MEMORANDUM ON WATER AND ENERGY SECURITY FOR MALAYSIA**

to

- > Newly elected Members of Parliament (MPs)
- > Newly elected State Assemblymen (ADUNs)
- > State Governments
- > Federal Government
- > Members of Media

#### **1. INTRODUCTION**

Association of Water and Energy Research Malaysia (AWER) has always engaged with various stakeholders on issues related to water, energy and the environment. While some of the issues are either solved or being solved, the list of problems that are unsolved continue to increase faster than what it was earlier. The newly elected MPs and ADUNs must understand that the water and energy related issues are national security issues. Members of public also must not fall into "sweet" promises that are made during election. Failure to achieve water and energy security in Malaysia is equivalent to losing the country in totality.

#### **2. WATER SECURITY**

## 2.1 Raw Water Protection

AWER hopes all state governments to gazette the water catchment areas (including forest, rivers, lakes, etc.) as permanent reserve by end of year 2015 and no development should be allowed. For existing developed areas, the wastewater discharge standards must be upgraded periodically and implemented by the state governments and Department of Environment. This information must also be made available for access of all parties transparently by end of 2015.

Failure to carry out this, AWER will moot for a national referendum to remove state governments' power over water resources and place it directly under Parliament (not a ministry) to ensure transparency. We will also seek guidance from The Yang Dipertuan Agong and His Royal Highnesses the Rulers of States to ensure well being of the people and nations' development is protected via raw water security.

A raw water quality based raw water tariff should also be in place to ensure the state governments are receiving equitable income from protecting of the raw water sources including transboundary raw water. This shall be spearheaded by Suruhanjaya Perkhidmatan Air Negara (SPAN).

## 2.2 Selangor Water Services Industry Restructuring & Water Crisis

We urge SPAN to reveal the forensic investigation's findings of the water crisis that occurred early this year. The water crisis was linked to the failure of Wangsa Maju Pump House. Many politicians were pointing fingers to each other without looking at actual facts during the crisis.

We urge also the Selangor State Government that is given mandate by the people to be committed to restructure Selangor Water Services Industry and end the concession agreements via Water Services Industry Act 2006 (WSIA) by end of year 2013. The latest offer by Selangor state government before the election is deemed a good offer. The concessionaires should accept this offer. There ***must also not be any backdoor funding to SYABAS*** from any party until restructuring is completed.

Based on AWER's modelling study early this year, the annual average increase in treated water production is 2.09% from year 2007 to 2011 in Selangor, Kuala Lumpur and Putrajaya. A 2% of annual demand increase will cause water crisis in year 2020. However, an increase of annual demand between 3.5 % and 5.0% will cause water crisis in year 2016 and 2014 respectively. It is vital that all parties work closely to increase the treated water reserve margin in Selangor, Kuala Lumpur and Putrajaya to prevent shortage of treated water supply. Currently, the annual demand increase is controlled due to non-approval of new projects and application to increase capacity of existing users.

## 2.3 Water Services Industry Restructuring for All States

We urge the new state governments of Kedah, Terengganu, Pahang and Kelantan as well as Federal Territory of Labuan to complete water services industry restructuring by end of year 2013. A lot of catching up is needed to ensure water services industries in these states are on par

with world standards.

In addition to that, AWER encourages both Sabah and Sarawak to join the WSIA regime to improve the water services industry in both states. We hope both the states complete this process by year 2015. Giving rainwater harvesting systems alone is not a long term solution to rural water supply. Furthermore, the economy development in both states will also be jeopardised without reliable treated water supply. Therefore, the new MPs and ADUNs of Sabah and Sarawak must ensure both states restructure and improve its water services to people and businesses.

## 2.4 IWK Restructuring

Restructuring of Indah Water Konsortium (IWK) should have completed as early as year 2008. What is delaying Ministry of Finance (MoF) from doing so? Furthermore, IWK is also seeking tariff increase and will be receiving allocations for sewerage infrastructure recovery projects continuously. AWER would urge Federal Government not to allow any tariff review for IWK without restructuring it first. We hope the newly elected Federal Government will ensure MoF to surrender the concession agreement first to lead by example. In the long run, IWK will be broken to state based entities to merge with water supply companies at state level to increase the economic sustainability of the water services industry. This is the complete WSIA model.

## 2.5 Closing Down Redundant Agencies

We urge the newly elected Federal Government to close down Jabatan Bekalan Air (JBA) and Jabatan Perkhidmatan Pembentungan (JPP). Both agencies are operating redundantly with SPAN, Pengurusan Aset Air Berhad (PAAB) and in some cases with IWK in terms of regulatory, project management and project implementation. They are actually duplicating and messing up duties and functions that should be carried out by SPAN, PAAB and IWK. Redundancy will not only slow down effectiveness of regulator to implement its duties but also open rooms for abuse of power and mismanagement from officers of JBA and JPP. For example, ***JPP has given recommendation for a project involving IWK and a private company to be implemented where it has NO REGULATORY POWER.*** Regulatory power for sewerage services falls under SPAN according to WSIA. Therefore, JBA and JPP must be closed down and the officers can be absorbed into SPAN, PAAB and IWK as an option or opt out to other government vacancies.

## 3. ENERGY SECURITY

### 3.1 Energy Resources

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o ensure energy security, a short term, midterm and long term energy mix policy must be clearly defined and published for public knowledge by Federal Government. This includes in depth study on energy resources that are utilised in Malaysia. Fossil fuels and nuclear resources are non-renewable energy resource and also will deplete one day. This study must be completed by end of year 2013 before government announces any

more new power plant construction projects.

### **3.2 Open Up Independent Power Producers' (IPP) Books**

What was the model used by Energy Commission (ST) to extend few of the first generation IPPs' Power Purchase Agreement (PPA) end of year 2012? The new Prai Plant which can achieve 60% efficiency received lower levelised tariff compared to the extended first generation IPPs' power plants which are junks technically. This is where transparency is vital in terms of what were the clauses that made the extension offers more lucrative compared to building a new and more energy efficient power plant. If we can have 2 more gas power plants at 60% efficiency, an equitable tariff can be achieved while reducing national electricity carbon footprint. This is because the first generation IPP power plants are having much lower efficiency at a higher levelised tariff. We urge the newly elected MPs and ADUNs to ensure all IPPs' books are opened simultaneously with government's effort in opening up Tenaga Nasional Berhad's accounts. Rakyat are paying the tariff and they definitely have the rights to know the deals that were signed and what exactly they are paying for.

### **3.3 Closedown Sustainable Energy Development Authority (SEDA) and Suspend FiT**

Feed-in-Tariff (FiT) mechanism was adopted and not indigenously developed by Ministry of Energy, Green Technology and Water (KeTTHA) for implementation of Renewable Energy (RE) projects. Till date the formula to set FiT unit cost is not made known. There is no transparency on how Capital Expenditure (capex), Operational Expenditure (opex), Regulated Profit and Efficiency Perks were derived. The FiT is funded by the people and people must be made known of the mechanism and the details of the calculation.

In addition to that, RE implementation via FiT mechanism is still questionable. The current model does not guarantee a sustainable and continuous growth of RE industry. What happens after the 'lucrative years'? Will the investors continue to invest? The government agencies do not reply to AWER's doubts on FiT professionally but provided some answers copied from Wikipedia. Currently, Germany itself is already facing serious issues with FiT mechanism based on AWER's consultations with some experts from Germany and reports published. Therefore, Federal Government's usage of Germany as a leading example for RE implementation via FiT mechanism becomes questionable.

Last year (2012), information about how solar PV FiT were monopolised by certain individuals were highlighted by few Members of Parliament. However, SEDA (the Chairman, CEO and staffs) simply pointed the finger to a dead object like a computer system for such a flaw and hail it as 'transparent' mechanism. A computer can only be a control mechanism as human still control its inputs and outputs. This matter must be investigated in detail and independently by Federal Government immediately to ensure integrity and transparency promised by YAB Prime Minister is upheld.

We urge the newly elected Federal Government and MPs to set up Independent Panel to study the implementation of Renewable Energy Act 2011 directly under Energy Commission to prevent redundancy and wastage of operational funds. Section 14 of the Energy Commission Act 2001, clearly stipulate the jurisdiction to develop RE is under Energy Commission. This means also SEDA Act 2011 must be repealed due to

its gross redundancy and SEDA must be closed down. It is important to build a growing RE industry but the current model will fail miserably as it is not sustainable and Malaysia is not the technology owner at all. The panel must also investigate those whom have misled the Parliament into implementing a flawed FiT mechanism via SEDA and take stern action against them to prevent such blunders from reoccurring. Stop taking people and their representatives for a ride.

### **3.4 Not Clear on Nuclear**

AWER urges the Malaysia Nuclear Power Corporation that is placed under Prime Minister's Office to be more transparent in its day to day operation. We urge the new Federal Government to address the following issues that are being NOT CLEAR:

- i. All proposed location of nuclear power plant must be disclosed from the beginning of planning;
- ii. Radioactive leakages, emergency response and reporting procedures must be made clear to public;
- iii. Decommissioning cost of nuclear power plant is always a concern. We have not seen this aspect being discussed at all;
- iv. Professional and experienced human capital to manage a nuclear energy facility is vital as many reports have also indicated that the leakages or nuclear incidents are very much linked to human errors;
- v. Nuclear waste (spent fuel) disposal is the mother of all issues related to nuclear. The safety of the waste storage process and facility are the main environmental concerns. What are the projected cost of the facility and its impact to electricity tariff also?; and
- vi. Cheap electricity from nuclear energy is not a reality. How could a country achieve low electricity tariff via nuclear energy where so many issues and costs need to be taken care of?

### **3.5 Energy Intensive Industry**

According to US Department of Energy, the energy intensive industries are related to aluminium, metal casting, chemicals, mining, forest products, petroleum refining, glass and steel. Based on Malaysian Industrial Energy Efficiency Improvement Project (MIEEIP), there are 8 energy intensive industrial sub-sectors namely, iron & steel, cement, wood, food, glass, pulp & paper, ceramics and rubber. The study later introduced 3 additional sub-sectors which are oleo-chemical, plastics and textiles. Energy intensive industry poses huge risk on energy security and energy prices. There might not even be a breakeven of bringing this type of industries to Malaysia or sustaining such non-energy efficient giants here. The government should identify the total number of energy intensive industry in Malaysia and categorise them accordingly. It should also include their energy consumption and current operational condition status. Energy use per unit product manufactured will be able to do a quick benchmarking. We would like to suggest that this step to be headed by Energy Commission.

The process of enrolling new operation of energy intensive industries is not clear currently. Before a new energy intensive industry is brought in, Energy Commission must first assess the energy efficiency performance of the particular industry to ensure it is sustainable. AWER would like to caution that the Detailed Environment Impact Assessment (DEIA) and Preliminary Environmental Impact Assessment (PEIA) do not carry out any energy or water efficiency study or examination. This two documents (DEIA and PEIA) are both water efficiency and energy efficiency

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The nature of these industries puts high strain to the environment. Therefore, the government must impose environmental tax on such operations beginning year 2014. This tax should be based on the inefficiency of such energy intensive industry. In fact, many countries are already imposing hefty taxes on inefficiency by energy intensive industries.

### **3.6 Energy Performance Contracting (EPC) Must Be Stopped**

AWER would like to caution all ministries and government agencies in implementing EPC programmes. First and foremost, all government buildings must do a thorough energy audit to identify three key energy efficiency investment components that are no investment, low investment and high investment opportunities.

Government must implement no investment initiatives immediately. No investment initiatives are directly related to behaviour patterns, consumption pattern and simple adjustment to daily operations. Low investment initiatives are those that involve changing of equipments, electricity wiring redesigning to introduce zoning (lighting), changing of glass panels, etc. These low investment initiatives can be done directly by the government and there will be no need for a third party involvement to waste tax payers money.

Saving from both the initiatives (no investment and low investment) can be used by the government later on. For example, after 5 years of full implementation of NO and LOW investment initiatives, government will be able to reduce close to 20% of its total electricity consumption (sometimes more). This saving can be used to invest in high investment energy efficiency measures. This is how energy efficiency implementations should be done for government agencies. If EPC is done, these companies will make use of NO and LOW investment strategies for their benefit in the contract.

EPC does not save government expenses as the saving needs to be passed on to the EPC contract owner. This is a seriously misleading statement released by Ministry of Energy, Green Technology and Water (KeTTHA) end of last year. Furthermore, KeTTHA could not prove the RM 800 million saving at all when we raised the issue to the previous minister. We urge that the cabinet to be aware of the negative repercussion in implementing EPC contracting. The registration document by Energy Commission for energy servicing companies (that will use EPC contracting method) is also so vague that any Tom, Dick and Harry can register as long as they fulfill the basic criterion.

Government must lead by example in implementing "actual" engineering based solution to be energy efficient and prevent being misled by unscrupulous businesses.

## **4. CONCLUSION**

The above matters are pending issues that needs immediate action. AWER will forward this memorandum to all ADUNs, MPs, state governments and Federal Government as their 'to do list'.

Moreover, promising cheap water and electricity alone does not make a politician better. The elected ADUNs and MPs must ensure equitable tariffs and prices as well as continuous and reliable supply of water, energy resources and electricity to the rakyat. Politicians must use responsible and professional methods such as transparent tariff setting process, renegotiation of PPAs, transparent open bidding and cost benchmarking practices to ensure people and businesses pay only what they should for water and energy usage. This is a more matured and responsible promise that can be delivered to the rakyat. AWER had managed to push the Federal Government into implementing Transparent Tariff Setting Process for the water tariff. We are now working to do the same for electricity tariff.

So, we urge all ADUNs and MPs to carry out their responsibilities in ensuring Water and Energy Security in Malaysia a professional way!

Yours sincerely,

Piarapakaran S.  
President

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## Comments (2 Posted)

G. Lalchand

2013-07-02

Dear Mr. Piara, I congratulate you for being quite "fast on the draw" to get the new YBs to start earning their keep by giving them some homework to do. You are more directly involved in the water industry & I agree with some, but not all, of your criticisms, comments & recommendations. I hope you succeed in getting the key ones attended to. As for EE & RE, you know me quite well & we have been involved together in some of the Workshops on these programmes. I wish you had been able to put AWER's weight behind Zaini & other Malaysian Green Professionals Group members (including yours truly)'s "hammering" of the lack of action from KETTHA & ST to get the NEEMP going. Even the Green Prospects Asia's comment on the matter failed to get any response. We've lost about 2.5 years since the APEC Peer Review Team of Experts conducted the review in Dec. 2010. Malaysia could have gained a lot of demand reduction thru' EE & reduced the need for more power stations. However, I have to disagree with some of your proposals on the EE & RE topics in your memo. You had previously quoted me as "the consultant who called SEDA a Robin Hood in Reverse". Yes I have issues with SEDA on the lucrative FiT rates granted for the PV systems & support you fully on the need to rectify that anomaly. In fact I'm still carrying on that

"battle" to SEDA's discomfort, I think ;-). But that does not justify any proposal for the "liquidation" of an agency set up under an Act of Parliament to perform a function. This is more so as the agencies that existed then had failed, or been unable to perform those functions for whatever reasons. I'm glad that you've commented on the nuclear issue but surprised that you seem to have missed out on the ST's proposal to develop 3,000 MW of (polluting) coal-fired power plants before 2020. Do we really need this additional power capacity, or will it lead to too high a reserve margin again? I think it would be more to the national benefit if AWER can initiate the formulation of suitably competent & independent panels to review the issues you've raised especially for energy. I know there was a gov/private sector group under ST to discuss some of these issues but I'm not sure if such a group still exists. I have no axe to grind against ST, but sadly ST had not been very successful in pursuing EE (after the DANIDA supported EE/DSM project) & RE under the SREP programme. I think that ST, as a Regulator, should concentrate on regulatory issues like Licensing & Competency certification & registration, power supply security, effective IPP & Utility performance, tariffs & consumer interests, MEPS & efficiency grading of appliances etc. & should not be burdened with having to implement programmes like EE & RE. Sorry to be so long in my comments (& that is without trying to address each issue separately). For the record, I have to state that I have been involved in most of the projects & programmes that I have referred to above & am willing to participate in any discussions on these topics. I also offer myself as an "industry veteran" of about 50 years in the electricity supply industry from utility TNB/LLN & CEB from 1963) & being involved in EE & RE policy & projects since 2000.

*Piara, 2013-07-17*

*Dear Mr Lal, Thanks for the comment and sorry for the late approval coz i have received a lot of spams as comments recently. Many meeting that I have attended is more of how KeTTHA (certain officer) preventing ST from doing its work. One of the former Chairman was not also supportive of ST going into EE and RE. So, it is not entirely ST's fault. Centralised agency is vital to reduce operational cost and increase efficiency in long term. I'm sure you are also very aware of the office politics of the policy makers that sours all implementations. EE and RE can be implemented under ST and RE Act was ready sometime back. I met Hadri in 2008 where he asked my support to push FiT. Unfortunately, when I asked details on the calculations and related issues, I didn't get the answers. I did postpone an appointment with you, no worries it is still in the back of my mind. Will find a suitable time to meet up. We have not raised the coal power plant issue as it is already raised in Panel Perunding Tenaga and few other close door meetings which "they" are now studying the "approval" as well as reasons such as green field and brown field (due to EIA process) used for the approvals. There are few issues I cannot mention here, but, there must be an independent panel to investigate SEDA and the first batch of approval. Thanks.*



Mei Lan

2013-06-02

Dear Piara, Well said, I do hope the changes are put in place. For us the average people, we just want things to be in order. If my children does not get water, does that mean I have failed as a parent? Certainly, I still have limited power to make major shifts. But, as a community we still can demand for a better change. Perhaps, every politician must have a lie detector attached 24-7. Thanks.