

### KEMENTERIAN TENAGA, SAINS, TEKNOLOGI, ALAM SEKITAR DAN PERUBAHAN IKLIM

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### **UKK MESTECC/ 19 OKTOBER 2019**

Akhbar Tempatan

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### LAMPIRAN 1 NEW STRAITS TIMES (NATION): MUKA SURAT 10 TARIKH: 19 OKTOBER 2019 (SUNDAY)

# Continue pressure to resolve haze issue, says Lee

**KUALA LUMPUR:** Malaysians should continue to exert pressure on the respective authorities to do more in solving the haze menace once and for all.

Social activist Tan Sri Lee Lam Thye said the transboundary haze, which has become an annual problem to Malaysia

and other Southeast Asian countries, should not be taken lightly despite the situation having improved over the past two weeks due to the monsoon season.

"The haze, which hit Malaysia more than a month ago, has affected the daily lives of many people, causing them to express their dissatisfaction on social and mainstream media.

"However, many Malaysians tend to forget about how bad the haze could be after the situation gets better.

"This process is repeated every time a haze occurs."

"Therefore, I would like to remind the public not to forget

about the issue, but to continue putting pressure on the authorities," he said in a statement yesterday.

Lee said Malaysia needed to have its own cross-border haze act, like Singapore with its Transboundary Haze Pollution Act, which allows legal action to be

taken against those causing haze in the country.

"The Energy, Science, Technology, Environment and Climate Change Ministry's proposal to establish our very own cross-border pollution act is a necessary step and I hope that the process for submission to the cabinet will go smoothly.





Tan Sri Lee Lam Thye



## LAMPIRAN 2 THE STAR (PEOPLE): MUKA SURAT 20 TARIKH: 19 OKTOBER 2019 (SABTU)



### **LAMPIRAN 3** THE STAR (VIEWPOINT): MUKA SURAT 8 TARIKH: 19 OKTOBER 2019 (SABTU)

### Little glitter in large-scale solar projects

It's not all that financially lucrative and a luxury that Malaysia can do without



THE drive towards having 20% of power generated from renewable energy (RE) has resulted in the popularity of large-scale solar (LSS) plants and the building of an ecosystem revolving around the sector.

tor.
The growing number of companies participating in the government's series of exercises to award private companies the mandate to build and operate LSS power plants with a capacity of up to 100MW is a clear indication that there is a receipt in the property of the companies of the property in capacity of the property in capacity is present in capacity.

rooms is a clear indication that there is a growing interest in solar power plant projects. From manufacturers of solar panels to companies specialising in installation works and operators of solar plants, the ecosystem of the gment of power-generation

Solar platis, the ecosystem of the LSS segment of power-generation is growing. The hype has reached the capital markets, where companies are seeking a listing to raise money on the back of participating in solar-related projects. However, can the solar-power ecosystem grow at a sustained pace for the longer term?

So far, there is little to show that the LSS projects are viable for the longer term. Even though the prices of the rates to supply solar power and panels are dropping, there are doubts on their financial viability. The government has conducted three exercises inviting the private sector to bid for LSS power plants. The first exercise in 2017



Third round: Contractors installing solar panesl at a LSS project site at Kuala Langat. The third round of bidding for LSS power plants attracted 112 companies, with the lowest offering 17.7 sen for 100MW.

attracted 70 bidders. The second in 2018 saw 116 companies participating and the third exercise attracted 112 bids.

112 bids.

The rates have been coming down, just like the prices of solar panels. In the first exercise, the rates offered were between 39 sen and 55 sen per unit. Finally, 19 were awarded at an average rate of 40 sen per unit.

and 55 Sen per unit. Finally, 19 were awarded at an average rate of 40 sen per unit.

Among the bigger names that got the award were Tenaga Nasional Bhd (TNB), Mudajaya Group Bhd, a consortium with Scomi Group as a partner, a joint venture of Malakoff Corp Bhd and DRB-Hicom Bhd, and a little-known private company, Gading Kencana Sch Bhd.

Several operators that have put up their power plants when they were awarded LSS projects under the first competitive bidding exercise in 2017-do not find the proposition attractive.

Among the reasons are that

there are problems with the efficiency of the plants, as they are not able to hit near-capacity, Generally, they say that the peak period for sunlight is only four hours a day. Apart from efficiency, the maintenance of the panels can be difficult because solar power plants require vast amounts of land. The rule of thumb is four acres of land for every one megawatt of solar power. For instance, a 50MW LSS power plant requires 200 acres of land and several hundred thousand solar panels. Maintaining the panels is difficult, as detecting the faulty ones can be a tedious exercise if the system is not well-built and fenced up. The cost of replacing solar inverters is huge and it trends to happen once every seven or eight years. Also, because of the requirement

once every seven or eight years.
Also, because of the requirement for vast tracts of land, the solar plants are located far away from the main grid. The company under-

Is 17.7 sen for 100MW.

taking the LSS power plant has to build the transmission line to the main grid at its cost. TNB places its meters to record the power intake near the grid.

As more and more companies embark on LSS power projects, more land is being sought. The location of LSS gets further and further away from the grid and the cost becomes higher.

Hence, there are some bidders who had been awarded LSS projects under the second competitive bidding exercise who have not put up their power plants yet. Out of the 116 companies that had participated in the exercise in 2018, 41 bids were shortlisted and awarded about 560MW.

Industry players say the rates are at about 34 sen per unit, which two feel is still francrially wishle.

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Industry players say the rates are at about 34 sen per unit, which they feel is still financially viable, given that the cost of the panels is coming down. However, there are several successful bidders who

have yet to put up their plants even though they had been awarded the project last year because they are not able to get the financing.

The third round of bidding for LSS power plants attracted 112 companies, with the lowest offering 17.7 sen for 100MW. The rest of the bids offered rates of between 25 and 32 sen per unit. The outcome is not known yet, but industry players feel that the LSS power plants are not viable at rates of below 30 sen per unit unless the below 30 sen per unit unless the operators do not have to pay for

the cost of the land.

The government's efforts to push for more RE is good and in accordance with what the developed countries would like to see happen. However, it is a costly exercise for a country like Malaysia because energy from solar power plants is generally only used during peak periods.

periods.

It cannot replace the reliability and consistency of the base load power plants that are fired by gas, coal or oil. So, the government still needs to facilitate the building of gas and coal-fired power plants.

The spate of LSS power plants will not reduce the need to continue building gas and coal-fired power plants. The duplication in having multiple sources of electricity-generating plants is a cost to the country.

ountry.

It is a cost that the well-developed nations with healthy coffers that champion clean energy can afford. Malaysia, which is still a developing country, cannot afford. 20% of its energy needs coming from renewable sources, especially

The views expressed here are the

## LAMPIRAN 4 THE STAR (NATION): MUKA SURAT 6 TARIKH: 19 OKTOBER 2019 (SABTU)

## Only 46% of rivers considered clean

Sg Kim Kim incident casts spotlight on health of Malaysia's waterways

By SIM LEOI LEOI, RAZAK AHMAD and REMAR NORDIN

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PETALING JAYA: The pollution incident in Sungai Kim Kim earlier this year has cast a spotlight on the country's waterways, but the river in Pasir Gudang is not even the dirtiest in Malaysia.

The country's most polluted river is actually Sungai Tukang Batu, which is also located in the Johor industrial town of Pasir Gudang.
Data from the Department of Environment's

Data from the Department of Environment's (DOE) Environmental Quality Report (EQR) 2017 shows that Sungai Tukang Batu has a Water Quality Index (WQI) reading of 30, the worst among the 477 rivers nationwide which water quality it tracks.

Sungai Tukang Batu is the only river listed in Class 5, meaning its water is so dirty, it is not suited for use even for irrigation, let alone for drinking.

The WQI divides rivers into three categories: Polluted (0-50), Slightly Polluted (60-80), and Clean (81-100).

The report also separates rivers into five classes with Class 1 being pristine and Class 5 being the most polluted.

An analysis by *The Star* ranked the 477 rivers based on their respective WQI readings as recorded in the DOE report.

The result shows that Sungai Tukang Batu is in the "top spot" in terms of pollution, with Sungai Kim Kim in the 38th position.

Sungai Kim Kim has a WQI reading of 57, the same as five other rivers.

They are Sungai Sarang Buaya and Sungai Sanglang (Johor); Sungai Pinang and Sungai Perai (which both originate in Penang and flow to Kedah); as well as Sungai Bunos, which runs from Selangor to Kuala Lumpur.

Of the 477 rivers monitored by the DOE, 219 (46%) were found to be clean, 207 (43%) were slightly polluted while 51 (11%) were polluted.

Twenty-seven rivers or more than half of the 51 rivers classified as polluted are located in Johan

Asked if the country's highly polluted rivers could be rehabilitated, water quality expert Dr Zaki Zainuddin said that while this could be done, it would be very difficult.

"Name me one river where the attempt to improve the water quality from polluted to clean has succeeded." he said.

Malaysian authorities, he said, should ins-



tead focus on maintaining the clean rivers that the country still has, and improving the water quality of those which were slightly polluted.

"How many clean rivers do we still have left and how to ensure these do not get polluted five years down the road – that's more achievable," said Dr Zaki.

The EQR 2017 report measured river water quality based on a total of 5,697 samples

taken from 891 manual monitoring stations. Released in December last year, this report is the most current, with the 2018 EQR expected to come out later this year.

The report also noted a slight decrease in water quality in terms of WQI for 2017 compared to the year before

pared to the year before.

This was due to organic pollutants including wastewater from industrial, domestic and commercial activities; continuous discharge of treated and untreated sewage into the rivers; and inefficient control against improper earthworks and land clearing activities in certain areas.

Sabah has the biggest share of clean rivers

in the country – of the 219 rivers nationwide classified as clean, the state is home to 53 or nearly a quarter. Sungai Nyior in Perak meanwhile has the

Sungai Nyior in Perak meanwhile has the best water quality among all the 477 rivers monitored in the report.

The river, which has a WQI reading of 93, is the only one given a Class 1 rating.

This effectively means that the water of Sungai Nyior does not need to be treated to be used as a water supply source and can sup-

port very sensitive aquatic species.

Want to know about the dirtiest rivers in the country, or even check the quality of the one flowing near your area? Go to https://www.thestar.com.my/visual-stories/river-pollution/ to check out The Star's special interactive graphics on the 477 rivers monitored in the DOE report.

How polluted is your river? Check it out! thestaronline

The human stain: A debris trap in Sungai Gombak, which was part of the River of Life project to rehabilitate waterways and part of the Greater Kuala Lumpur project that began in 2011. — Bernama





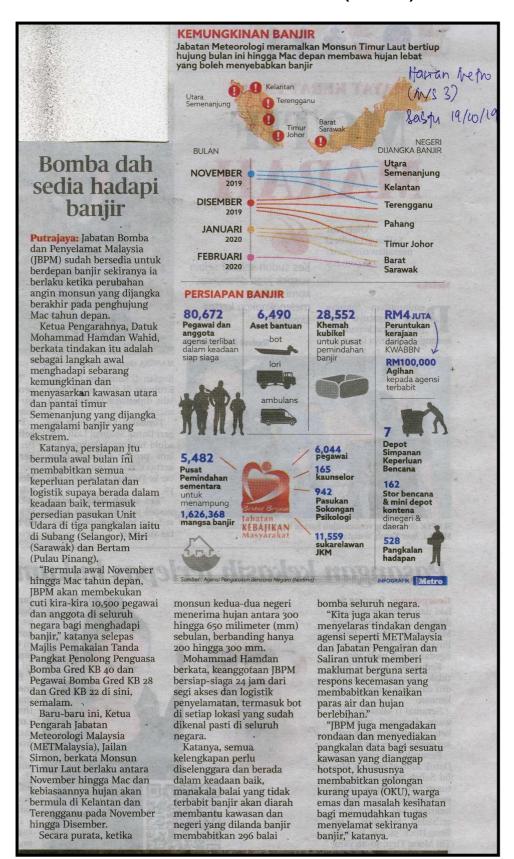




## LAMPIRAN 5 NEW STRAITS TIMES (BUSINESS): MUKA SURAT 10 TARIKH: 19 OKTOBER 2019 (SABTU)



## LAMPIRAN 6 HARIAN METRO (LOKAL): MUKA SURAT 3 TARIKH: 19 OKTOBER 2019 (SABTU)



#### LAMPIRAN 7 HARIAN METRO (LOKAL): MUKA SURAT 2 TARIKH: 19 OKTOBER 2019 (SABTU)



### LAMPIRAN 8 BERITA HARIAN (NASIONAL): MUKA SURAT 6 TARIKH: 19 OKTOBER 2019 (SABTU)





#### LAMPIRAN 9 BERITA HARIAN (NASIONAL): MUKA SURAT 7 TARIKH: 19 OKTOBER 2019 (SABTU)

