

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

Bil	Berita	Media	Capaian Berita Penuh
18 FEBRUARI 2019 (ISNIN)			
1.	<u>Becoming a zero single-use plastic nation</u>	The Star	Klik pada tajuk berita
2.	<u>Tangani pencemaran sisa plastik</u>	Utusan Malaysia	Rujuk lampiran 1
17 FEBRUARI 2019 (AHAD)			
3.	<u>Government opens tenders for RM2bil of large solar projects</u>	New Straits Times	Klik pada tajuk berita
4.	<u>Some of development needs in Kota Belud can be settled next year – Sivarasa</u>	Borneo Post	Klik pada tajuk berita
5.	<u>Jalan utama DUN Kadamaian perlu dinaiktaraf</u>	AsiaOutlook	Klik pada tajuk berita
6.	<u>Penduduk resah Sungai Baroh Pial tercemar</u>	Utusan Malaysia	Klik pada tajuk berita
7.	<u>Kakus readies 16 flood evacuation centres</u>	The Borneo Post	Klik pada tajuk berita
16 FEBRUARI 2019 (SABTU)			
8.	<u>Projek kuasa solar mampu turunkan kadar tarif TBB - Yeo Bee Yin</u>	Astro Awani	Klik pada tajuk berita
9.	<u>Tender projek LSS3 RM2 bilion dibuka akhir Februari</u>	Berita Harian	Klik pada tajuk berita atau rujuk lampiran 2

10.	<u>RM2 bln LSS3 project up for bidding from Feb 27 — Yeo</u>	Borneo Post	Klik pada tajuk berita
11.	<u>Darvel Bay to be gazetted as marine protected area</u>	Borneo Post	Klik pada tajuk berita
12.	<u>Coming soon, Yeo says on illegal factories update</u>	Free Malaysia Today	Klik pada tajuk berita
13.	<u>5 kilang kitar semula sisa plastik beroperasi secara haram</u>	Berita Harian	Klik pada tajuk berita
14.	<u>Sungai Keboi jadi warna hijau</u>	Sinar Harian	Klik pada tajuk berita
15.	<u>Yoursay: Why is gov't silent over golf course in forest reserve?</u>	Malaysiakini	Klik pada tajuk berita
16.	<u>Tawaran LSS3 bernilai RM2b dibuka</u>	Utusan Malaysia	Rujuk lampiran 3
17.	<u>ICPT: An electrifying issue</u>	The Star	Rujuk lampiran 4
18.	<u>RM2b Solar Projects Up for Grabs</u>	New Straits Times	Rujuk lampiran 5
19.	<u>Bekalan air tujuh empangan terkawal dan cukup</u>	Harian Metro	Klik pada tajuk berita
20.	<u>Suruhanjaya Tenaga tawar hadiah bernilai RM80,000</u>	Utusan Malaysia	Rujuk lampiran 6
21.	<u>Mayat dikerat, tunggu keputusan DNA</u>	Utusan Malaysia	Rujuk lampiran 7

TEMPATAN

Bil	Berita	Media	Capaian Berita Penuh
18 FEBRUARI 2019 (ISNIN)			
22.	<u>Tarik murid minat STEM</u>	Berita Harian	Rujuk lampiran 8
23.	<u>The next wave of start-ups</u>	New Straits Times	Rujuk lampiran 9
17 FEBRUARI 2019 (AHAD)			
24.	<u>Menjayakan agenda sifar plastik</u>	Sinar Harian	Klik pada tajuk berita
16 FEBRUARI 2019 (SABTU)			
25.	<u>Perak sedia kerjasama dengan aktivis peliharaan alam sekitar</u>	Astro Awani	Klik pada tajuk berita
26.	<u>MTIB nafi terbabit projek ladang hutan di Perak</u>	Berita Harian	Klik pada tajuk berita
27.	<u>Gempa bumi 5.4 skala richter gegar Papua</u>	Kosmo	Klik pada tajuk berita

ANTARABANGSA

Bil	Berita	Media	Capaian Berita Penuh
18 FEBRUARI 2019 (ISNIN)			
28.	Tiada berita yang berkaitan		
17 FEBRUARI 2019 (AHAD)			
29.	Sesak nafas! India cadang insentif AS\$12.4 bilion atasi pencemaran	Astro Awani	Klik pada tajuk berita

30.	<u>Researchers keep AI software under wraps</u>	New Sunday Times	Rujuk lampiran 10
31.	<u>European kids skip school to demand climate action</u>	New Sunday Times	Rujuk lampiran 11
16 FEBRUARI 2019 (SABTU)			
32.	<u>'Saman jerebu' gagal dibayar</u>	Utusan Malaysia	Rujuk lampiran 12
33.	<u>Haramkan robot pembunuh</u>	Utusan Malaysia	Rujuk lampiran 13

LAMPIRAN 1
UTUSAN MALAYSIA (FORUM): MUKA SURAT 16
TARIKH: 18 FEBRUARI 2019 (ISNIN)

Tangani pencemaran sisa plastik

SAUDARA PENGARANG,

PENCEMARAN plastik kini semakin meruncing di Malaysia sehingga mengakibatkan pelbagai kesan negatif seperti banjir kilat serta membahayakan hidupan liar.

Berdasarkan laporan antarabangsa yang dikeluarkan pada 2015, Malaysia berada di kedudukan kelapan antara 10 negara yang menyumbang kepada pembuangan sisa plastik.

Sejak dari 2011, beberapa negeri telah mengambil langkah drastik untuk mengharamkan penggunaan beg plastik seperti Pulau Pinang, Melaka dan Wilayah Persekutuan. Terbaharu, Wilayah Persekutuan juga telah mengharamkan penggunaan straw plastik.

Di pihak Kerajaan Pusat pula, **Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim** telah melancarkan Pelan Tindakan Menuju Penggunaan Sifar Plastik Sekali Guna.

Ia menasarkankan pengurangan pencemaran sisa plastik secara holistik bermula dari 2018 sehingga 2030. Kemajuan dalam bidang bioteknologi yang semakin berkembang dilihat mampu menangani pencemaran sisa plastik.

Pada 2016, sekumpulan penyelidik Jepun telah menemui bakteria yang mampu menghasilkan enzim *PETase* yang mampu mencernakan plastik dari jenis *polyethylene terephthalate* (PET).

Manakala penyelidik dari Eropah pula telah menemui sejenis serangga yang mampu menguraikan

beg plastik yang diperbuat daripada sumber petroleum.

Hasil penemuan bioteknologi ini berpotensi untuk digunakan bagi membersihkan sisa-sisa plastik dari petroleum yang telah tercemar dan tidak boleh dikitar semula.

Penggantian plastik yang berasaskan petroleum kepada plastik bio juga mampu mengurangkan kesan pencemaran.

Ini kerana plastik berasaskan petroleum mengambil masa beratus tahun untuk terurai sedangkan plastik bio hanya mengambil masa enam ke 12 bulan untuk terurai serta tidak mendatangkan mudarat kepada alam sekitar.

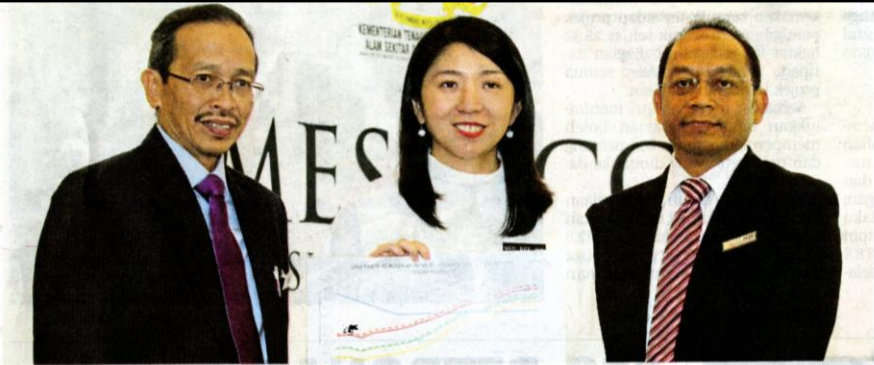
Selain kelestarian penghasilan plastik bio yang bahan asasnya boleh juga diperolehi dari sisa buangan pertanian, peluang untuk Malaysia menjadi hab industri plastik bio juga amat cerah kerana Malaysia sememangnya telah menjadi peneraju dalam industri plastik dunia.

Bagi memastikan aplikasi bioteknologi digunapakai secara menyeluruh dan menghasilkan impak maksimum dalam menangani isu pencemaran plastik, koordinasi dari pelbagai pihak termasuk kementerian serta agensi kerajaan yang berkaitan dan juga para penyelidik tempatan perlulah diperkembangkan dan diberi lebih perhatian oleh pihak kerajaan.

HERMADIANA MAT

Presiden Persatuan Biobahan
dan Bioteknologi Malaysia

LAMPIRAN 2
BERITA HARIAN (BISNES): MUKA SURAT 23
TARIKH: 16 FEBRUARI 2019 (SABTU)



Bee Yin bersama Ketua Setiausaha MESTECC, Datuk Seri Dr Mohd Azhar Yahaya (kiri) dan Ketua Pegawai Operasi Suruhanjaya Tenaga, Abdul Razib Dawood pada sidang media khas Pelaksanaan Pembidaan Terbuka Projek LSS3, di Putrajaya, semalam.

Tender projek LSS3 RM2b dibuka akhir Februari

➔ Tawaran sejajar komitmen kerajaan tingkat kapasiti jana tenaga

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Kementerian Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim (MESTECC) membuka tender bagi pelaksanaan projek pembangunan Loji Jana Kuasa Solar Berskala Besar pusingan ketiga (LSS3) bernilai RM2 bilion bermula 27 Februari hingga Ogos ini.

Menterinya, Yeo Bee Yin, berkata tawaran berkenaan sejajar dengan komitmen kerajaan untuk meningkatkan kapasiti penjanaan tenaga boleh diperbaharui sebanyak 20 peratus menjelang 2025.

Beliau berkata, MESTECC amat mengalu-alukan pengusaha menawarkan kadar terendah bagi pembinaan LSS3 ini yang secara tidak langsung akan memberi manfaat kepada pengguna.

"Bagi memastikan mekanisme penawaran dibuat secara adil dan berupaya memberikan kadar tarif yang terbaik, kerajaan turut membuat penambahbaikan untuk LSS3 ini seperti memansuhkan penawaran kuota berdasarkan julat kapasiti dalam proses bidaan seperti yang dibuat sebelum ini. Cara itu membolehkan pemaju dapat membida pada kapasiti yang lebih tinggi.

Kadar pembiayaan lebih baik

"Selain itu, had penawaran kuota kepada pemaju turut ditingkatkan kepada 100 megawatt (MW) berbanding sebelum ini sebanyak 30MW. Tawaran kapasiti dari 1MW kepada 100MW ini boleh dilaksanakan di satu lokasi atau pun secara agregat di lokasi berasingan.

"Langkah itu bertujuan untuk memastikan pemaju projek men-

dapat kadar pembiayaan yang lebih baik daripada institusi kewangan melalui skala lebih besar, seterusnya dapat menawarkan penurunan harga tarif elektrik," katanya pada sidang media khas Pelaksanaan Pembidaan Terbuka Projek LSS3, di Putrajaya, semalam.

Pembangunan projek LSS merangkumi beberapa lokasi seluruh Malaysia termasuk Sabah dan Sarawak.

Bee Yin berkata, kerajaan turut menetapkan komponen kejuruteraan, pembinaan dan pentauliahan bagi projek LSS3 perlu menggunakan sepenuhnya keupayaan dari kontraktor tempatan yang berdaftar dengan Lembaga Pembangunan Industri Pembinaan (CIDB).

"Bagi pembida yang berjaya mereka boleh mengambil bahagian dalam pasaran 'New Enhanced Dispatch Arrangement' (NEDA) yang dikendalikan oleh Single Buyer. Langkah ini akan memberi nilai tambah kepada pemaju projek kerana pendapatan tambahan dapat diperolehi melalui penjualan lebihan tenaga yang dijana," katanya.

Tarif lebih rendah

Beliau berkata, di bawah LSS2 pemaju solar dapat menawarkan kadar tarif serendah 33.98 sen kilowatt per jam dan dijangka terus menurun ke tahap yang lebih rendah serta menandingi kadar tarif yang ditawarkan loji jana kuasa yang menggunakan bahan api lain seperti gas dan arang batu menjelang 2030.

"Dengan pelaksanaan LSS3 itu, setiap 1MW loji solar dijangka dapat menjana tenaga sebanyak 1,490MW per jam yang berupaya membekalkan elektrik kepada hampir 160 rumah. Selain itu ia juga dapat mengurangkan pelepasan karbon dioksida sebanyak 1,034 tan setahun bersamaan dengan jumlah penyerapan karbon dioksida oleh kawasan hutan seluas kira-kira 1,000 ekar.

"Dari segi manfaat ekonomi pula, pelaksanaan projek LSS3 mampu menjana pelaburan berjumlah RM2 bilion dengan mewujudkan 10,000 peluang pekerjaan kepada rakyat di negara ini," katanya.

LAMPIRAN 3
UTUSAN MALAYSIA (BISNES): MUKA SURAT 39
TARIKH: 16 FEBRUARI 2019 (SABTU)

Tawaran LSS3 bernilai RM2b dibuka

■ PUTRAJAYA 15 FEB.

TAWARAN untuk membangunkan Projek Loji Jana Kuasa Solar Berskala Besar pusingan ketiga (LSS3) bernilai RM2 bilion dibuka pada 27 Februari hingga 19 Ogos, kata Menteri Tenaga, Sains, Teknologi, Alam Sekitar dan Perubahan Iklim, Yeo Bee Yin.

Beliau berkata, projek LSS3 dengan jumlah kapasiti 500 megawatt (mW) di Semenanjung Malaysia akan dilaksanakan melalui proses pembidaan kompetitif dan terbuka supaya memberikan kadar tarif terbaik untuk dimanfaatkan oleh rakyat.

Katanya, tempoh penjualan dokumen untuk permohonan cadangan bagi proses pembidaan bermula semalam hingga 27 Februari dan boleh dibeli

di Ibu pejabat Suruhanjaya Tenaga di Presint 2, di sini.

"Pembida LSS3 yang berjaya akan diumumkan pada akhir tahun ini. Pembinaan LSS3 merupakan komitmen kerajaan Persekutuan untuk meningkatkan kapasiti penjanaan tenaga boleh diperbaharui daripada dua peratus kepada 20 peratus menjelang 2025," katanya dalam sidang akhbar berhubung Pelaksanaan Pembidaan Terbuka Projek LSS3 di sini hari ini.

Menurut Bee Yin, kerajaan sedang melaksanakan dua kitaran projek LSS dengan kapasiti terpasang 958mW pada akhir tahun ini hingga 2020.



YEO BEE YIN

Melalui pelaksanaan LSS3, setiap 1mW loji solar dijangka dapat menjana tenaga sebanyak 1,490mWj (megawatt jam) yang berupaya m e m b e k a l k a n elektrik kira-kira 160 rumah dan dapat mengurangkan pelepasan karbon dioksida sebanyak 1,034 tan/tahun.

Oleh itu, katanya, pengurangan pelepasan karbon dioksida untuk jumlah 500mW dijangka dapat mengurangkan pelepasan gas itu sebanyak 517 kiloton/tahun.

Yeo turut menerangkan pelaksanaan projek LSS3 mampu menjana pelaburan berjumlah RM2 bilion dengan

menwujudkan 10,000 peluang pekerjaan kepada rakyat Malaysia.

Beliau berkata, kerajaan juga menetapkan komponen kejuruteraan, pembangunan dan pentaulihan bagi projek LSS3 perlu menggunakan sepenuhnya keupayaan tempatan dengan melantik kontraktor tempatan yang berdaftar dengan Lembaga Pembangunan Industri Pembinaan Malaysia (CIDB).

Namun katanya, pengendali projek yang berjaya dibenarkan memiliki rakan kongsi asing dengan pemilikan 49 peratus dalam projek itu dan boleh membeli perolehan dari negara luar.

Katanya, had penawaran kuota kepada setiap pemaju ditingkatkan daripada 30mW sebelum ini kepada 100mW, dan tawaran kapasiti daripada 1mW

hingga 100mW boleh dilaksanakan di satu lokasi atau secara agregat di lokasi berasingan dengan tawaran tarif yang sama untuk kesemua lokasi atau berbeza bagi setiap lokasi.

"Ia untuk memastikan pemaju projek mendapat kadar pembiayaan yang lebih baik daripada institusi kewangan melalui skala yang lebih besar dan dapat menurunkan harga tarif elektrik yang ditawarkan," katanya.

Dengan kadar tarif yang ditawarkan oleh pemaju solar pada kadar serendah 33.98 sen/kWj (kilowatt jam) di bawah LSS2, Yeo berkata, kerajaan yakin kadar itu akan turun ke tahap yang lebih rendah dan dapat menandingi kadar tarif yang ditawarkan oleh loji-loji jana kuasa yang menggunakan bahan api lain seperti gas dan arang batu menjelang 2030. - BERNAMA

LAMPIRAN 4
THE STAR (STARBIZWEEK): MUKA SURAT 3
TARIKH: 16 FEBRUARI 2019 (SABTU)

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WITH a review of power tariffs slated for the end of June, there have been rising concerns over what to do.

The imbalance cost pass-through (ICPT) mechanism would take into account the higher energy costs, namely, the price of coal, in pricing the new tariffs. This has the industry players jockeying over how to divvy the cost increase in the generation of power between the different stakeholders.

"The issue at hand is who will pay. Will it be the consumer, government or power companies?" asks an analyst.

Essentially a fuel price pass-through, the ICPT allows Tenaga Nasional Bhd (TNB) to reflect changes – either an increase or a reduction – in fuel and other generation-related costs in determining electricity tariffs.

The mechanism, which was introduced in 2014, has played a key role in electricity production and the price we pay to turn on the lights.

A system similar to the ICPT has been adopted by other countries such as Australia, the UK and closer to home in Singapore, Thailand and the Philippines.

Locally, tariffs are assessed and adjusted every six months to ensure that electricity prices can adapt to changing fuel prices.

Under this mechanism, consumers had enjoyed RM6.3bil in rebates as at end-December 2017 due to the low cost of coal, which makes up over 50% of the cost of generating electricity.

However, since 2017, rising coal and gas prices have impacted the ICPT adjustments. As a result, a surcharge for businesses was intro-

ICPT: An electrifying issue

How will the government deal with rising energy prices?

duced in July 2018.

For the period of January-June 2019, the national utility company has been allowed to continue implementing the ICPT mechanism.

The average base-tariff remained unchanged at 39.45 sen/kWh, but an additional cost of RM948mil or 2.15 sen/kWh ICPT surcharge will be passed through.

Businesses will once again pay an additional surcharge, while the surcharge for domestic customers amounting to RM308mil will be funded by Kumpulan Wang Industri Elektrik (KWIE). This electricity fund was also set up in 2014 to finance the difference between the cost of supply and end-user tariffs.

The money in this stabilisation fund originated mainly from savings gained from power purchase agreement renegotiations.

With the balance in the fund fast depleting and rising fuel prices, there are concerns on the continuity of the ICPT and the effect that it will have on power consumers.

In July last year, it was announced by the **Energy, Science, Technology, Environment and Climate Change Ministry** that the fund available in KWIE was RM760mil.

Should fuel costs remain high, this fund would likely be exhausted by the first half of next year.

Accounting for over 50% of the cost of generating electricity, coal plays a big role in Malaysia's ener-

gy scheme.

Gas accounts for the lion's share of the remaining cost.

As coal is imported, the dynamics of its market price impact tariffs.

Gas accounts for about 40%, while the balance comes from other types of fuel such as oil and distillates and hydro.

TNB's fuel cost has been on an uptrend in tandem with the rise in energy prices.

The average coal price delivered during the quarter was US\$102.5 per tonne, but coal prices had gone on to touch a high of almost US\$120 per tonne in the middle of last year.

Reference price

At press time, it was trading at around US\$95.65 per tonne, which is still well above the US\$75-per-tonne reference price that was set by the government.

As for regulated gas, it is purchased from national oil company Petronas at RM27.2 per million British thermal units.

Back to the ICPT, the issue is who will shoulder the high fuel bill especially when the stabilisation fund, which is part of the tariff revision policy, is depleting?

Looking at the various stakeholders in electricity generation, there are a few options.

As a regulator, the government could assume all responsibilities

and absorb the cost, say observers.

Chances of this happening are debatable, given the high fiscal deficit it is already running.

However, studies on whether it is best for the overall economy if the government foots the bill need to be conducted.

Alternatively, TNB as the only supplier of electricity, could be asked to bear the cost, but that would have a huge impact on its profitability. Its share price has been under pressure over the possibility that may become a reality.

Another option could be to review coal contracts, although the savings might not be substantial and might be insufficient to absorb the cost increase between the market price for coal and the reference price.

This is because coal prices are determined by market forces and not coal suppliers.

There have been suggestions that the second-generation power plants shoulder some of the burden by reducing the price they charge TNB for generating power.

Not unlike the first-generation independent power producers, they could be asked to lower their capacity payments, where some savings could be channelled back to the stabilisation fund.

According to statistics, some 1,600MW capacity is due for renewal in five to 10 years. While negotiations could lead to better

pricing, the savings generated again may not be substantial, according to analysts.

The other stakeholder in the electricity-generation equation is Petrolim Nasional Bhd (Petronas), which supplies natural gas to power plants that make up nearly half the fuel cost.

Some believe that since gas is no longer the overwhelming energy source to generate power, Petronas may be in a position to keep gas prices at the current levels, which could generate the largest source of savings for the system.

"But this would mean foregoing some of its revenue and it will take government intervention to make it possible," says an analyst.

To be fair, Malaysia is not the only country grappling with the changing cost of electricity generation.

Energy Watch noted that Singapore's electricity prices recently saw an average 6.9% rise, while in the Philippines, its power company Meralco had imposed a series of price increases on consumers last year. The weakening peso was one challenge the company faced, as rising fuel prices and relative increases in costs pushed up generation costs.

But the fact remains that increasing the electricity price is not something that would go down well with the public, who are already struggling with the high cost of living.

LAMPIRAN 5
NEW STRAITS TIMES (BUSINESS): MUKA SURAT 16
TARIKH: 16 FEBRUARI 2019 (SABTU)

CLEAN ENERGY

RM2B SOLAR PROJECTS UP FOR GRABS

Competitive bidding process is open for 6 months until August, says Yeo

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MALAYSIA has opened bids to undertake RM2 billion worth of solar projects this year and analysts said the move would open up more opportunities to power sector incumbents and new entrants.

The capacity to be tendered will be between one megawatt (MW) and 100MW, with a target aggregate capacity of 500MW in Peninsular Malaysia.

The projects are under the third round of large-scale solar (LSS) scheme to increase electricity generation from renewable en-



ergy, said **Energy, Technology, Science, Climate Change and Environment Minister Yeo Bee Yin**.

The government was expected to finalise the tenders by year-end, said Yeo.

She said the competitive bidding process was open for six months until August.

"This is an open tender. Whoever gives us the lowest price for the first 500MW, having passed all the required financial and technical qualifications, will be the winner," she said at a press conference, here, yesterday.

Contractors for the engineering, construction and commissioning sections must be 100 per cent locals, said Yeo.

Analysts said the latest round of LSS projects would benefit the likes of Cypark Resources Bhd, given its technical expertise and experience as a developer and operator of solar parks, and Mega First Corp Bhd.

"Mega First has voiced intentions of venturing into renewable energy after the successful operation of its Don Sahong hydropower plant in Vietnam," said Public Investment Bank Bhd.

Other beneficiaries may include Malakoff Bhd, YTL International Power Bhd, Tenaga Nasional Bhd and Ranhill Holdings Bhd.

PublicInvest said the first two cycles of LSS projects had a total installed capacity of 958MW.

The firm said five projects with capacities of 131MW had reached their commercial operation status, with the remaining having a commission operation date this year and next year.

"This is a positive development, considering the government's plan to increase the generation of electricity from renewable sources from two per cent currently to 20 per cent by 2025."

This means another 3,991MW of new energy capacity will be required.

The government also plans to increase electricity generation through various other feed-in-tariff sources, namely biogas, biomass, geothermal mini-hydro as well as solar and net-energy-metering mechanisms.

Energy, Technology, Science, Climate Change and Environment Minister Yeo Bee Yin says whoever gives the lowest price, and having passed all the required financial and technical qualifications, will be winners of tenders for the first 500MW of large-scale solar projects. With her is Energy Commission chief operating officer Abdul Razib Dawood. BERNAMA PIC

LAMPIRAN 6
UTUSAN MALAYSIA (DALAM NEGERI): MUKA SURAT 49
TARIKH: 16 FEBRUARI 2019 (SABTU)

Suruhanjaya Tenaga tawar hadiah bernilai RM80,000

KUALA LUMPUR 15 Feb. - Suruhanjaya Tenaga (ST) akan mengadakan pertandingan cekap tenaga Energy Efficiency Challenge (EE Challenge) 2019 sebagai usaha memastikan tenaga elektrik dapat digunakan dengan sebaiknya.

ST dalam kenyataannya memberitahu, pertandingan tahun keenam itu menawarkan hadiah keseluruhan bernilai RM80,000 dan terbuka kepada semua sekolah menengah di semenanjung dan Sabah.

"Pertandingan ini diadakan untuk mendidik dan memupuk budaya menjimatkan tenaga elektrik dalam

kalangan pelajar dan warga sekolah serta memberi kesedaran mengenai kesan penjiatan tenaga elektrik kepada alam sekitar.

"Pemenang akan dinilai melalui kadar pengurangan elektrik, kadar pengurangan intensiti tenaga, bilangan aktiviti yang dijalankan, impak serta laporan yang dikemukakan," katanya dalam satu kenyataan di sini hari ini.

Tambah kenyataan tersebut, bagi kategori utama hadiah sebanyak RM12,000 ditawarkan untuk tempat pertama dan diikuti RM10,000 bagi tempat kedua.

"Pemenang tempat ketiga pula bakal menerima wang tunai bernilai RM8,000 dan RM5,000 untuk enam pemenang zon.

"Kategori lain turut dipertandingkan adalah Video Pembentangan Paling Kreatif dan Video Paling Tular masing-masing menawarkan hadiah RM5,000 untuk tempat pertama, RM3,000 (tempat kedua) dan RM2,000 (tempat ketiga)," katanya.

LAMPIRAN 7
UTUSAN MALAYSIA (DALAM NEGERI): MUKA SURAT 7
TARIKH: 16 FEBRUARI 2019 (SABTU)

Mayat dikerat, tunggu keputusan DNA

PETALING JAYA 15 Feb. - Polis masih belum mengesahkan sama ada satu daripada dua mayat dikerat-kerat di Desa Coalfields, Sungai Buloh dekat sini pada 26 Februari lalu merupakan ahli perniagaan tekstil dari Indonesia, Ujang Nuryanto kerana sedang menunggu keputusan asid deoksiribonukleik (DNA) mangsa.

Ketua Polis Selangor, Datuk Noor Azam Jamaludin berkata, pihaknya telah mengambil sampel darah individu yang dipercayai mempunyai pertalian darah dengan kedua-dua mangsa bagi mengesahkan identiti mereka.

"Sampel darah telah dihantar ke **Jabatan Kimia** untuk dianalisis bagi mengetahui sama ada sepadan dengan individu yang dipercayai waris.

"Kita juga telah mengambil cap jari mangsa bagi mengenal pasti identiti kedua-dua mayat itu dan dijangka keputusan diperolehi dalam masa terdekat," katanya dalam si-

dang akhbar sempena Majlis Penganugerahan Op Selamat Ke-14 Tahun Baharu Cina di Persada PLUS di sini hari ini.

Turut hadir, Timbalan Ketua Polis Negara, Tan Sri Noor Rashid Ibrahim, Pengarah Jabatan Siasatan dan Penguatkuasaan Trafik, Datuk Azisman Alias dan Pengarah Urusan Malaysia PLUS Berhad, Datuk Azman Ismail.

Semalam, media melaporkan, Ketua Biro Penerangan Masyarakat Polis Republik Indonesia (POLRI), Brigedier Jeneral Dedi Prasetyo mengesahkan satu daripada dua mayat dikenal pasti sebagai Ujang Nuryanto, ahli perniagaan tekstil berdasarkan 12 titik kesamaan (cap jari) mangsa dengan waris.

Ujang Nuryanto dan seorang wanita iaitu rakan niaganya dikatakan ke negara ini pada 17 Januari lalu untuk mengutip hutang kira-kira RM547,000 (Rp2 bilion) daripada pengusaha di Malaysia.

LAMPIRAN 8
BERITA HARIAN (DIDIK): MUKA SURAT 58
TARIKH: 18 FEBRUARI 2019 (ISNIN)



Semua peserta bergambar kenangan selepas selesai program.

Oleh **Maria Uffa Zulkafeli**
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■ **Petaling Jaya**

Tarik murid minat STEM

➔ Usaha penyelidik UM seiring pelaksanaan inisiatif pengajaran PAK-21

Sekumpulan penyelidik Universiti Malaya (UM) menganjurkan aktiviti berkonsepkan Sains, Teknologi, Kejuruteraan dan Matematik (STEM) bagi menggalakkan murid sekolah rendah meminati bidang berkenaan, baru-baru ini.

Aktiviti yang dijalankan bersama murid Tahun Lima di Sekolah Kebangsaan (SK) Satu Sultan Alam Shah (SKSSAS) itu sebahagian daripada program *Let's Go To Mummies' Lab*.

Program itu adalah sebuah projek kemasyarakatan yang menerima dana geran penyelidikan dari Pusat Komuniti dan Kelestarian UM (UMCares) dan turut menerima kerjasama dari Pusat STEM UM.

Pensyarah Kanan Jabatan Kejuruteraan Bioperubatan UM merangkap penyelaras program, Dr Wan Safwani Wan Kamarulzaman, berkata galakan dalam bidang STEM adalah satu usaha yang dijalankan pelbagai pihak seiring dengan pelaksanaan inisiatif pe-

ngajaran dan pembelajaran abad ke-21 (PAK-21).

Tambah minat

Beliau berkata, program itu bertujuan untuk menambah minat murid sekolah dalam bidang sains dan matematik menerusi aktiviti menarik.

"Percambahan minat ini diharapkan menjadi pendorong kepada mereka untuk lebih bersungguh-sungguh dalam mengulang kaji pelajaran Matematik dan Sains, terutamanya apabila membuat persiapan menghadapi Ujian Pencapaian Sekolah Rendah (UPSR) nanti," katanya.

Seramai 38 orang murid mengambil bahagian dalam program yang turut mendapat kerjasama daripada Persatuan Ibu bapa dan Guru (PIBG) SKSSAS.

Mengulas mengenai program berkenaan, Dr Wan Safwani berkata,

berbeza dengan program sebelumnya, kali ini peserta diminta untuk membina struktur binaan tertinggi dengan hanya menggunakan pencungkil gigi dan manisan jelly bean.

Serlah kreativiti

Katanya, aktiviti itu memerlukan pembabitian murid untuk bekerja secara berpasukan dan mengerah daya kreativiti masing-masing dalam menyiapkan tugas yang diberi.

"Saya yakin pembentukan hasil secara kolektif sebegini, terutamanya dalam menghasilkan sesuatu yang praktikal dan dapat disentuh, bakal mencetus minat mereka dalam subjek Matematik dan Sains," katanya.

Sementara itu, Pensyarah Kanan Pusat Asasi Sains UM, Dr Faridah Sonsudin, berkata berbekalkan bahan dan masa terhad dalam aktiviti itu, peserta perlu

menggabungkan pengetahuan asas dalam matematik dan sains untuk menghasilkan struktur binaan yang kukuh dan stabil.

Katanya, biar pun tanpa pengetahuan khusus dalam penentuan daya dan sifat bahan digunakan, pada kebiasaannya diperlukan dalam bidang kejuruteraan, semua peserta dilihat mampu menggunakan pengetahuan asas mereka untuk mereka bentuk struktur dikehendaki.

"Binaan struktur yang dibina oleh setiap kumpulan dinilai pada akhir program berdasarkan kriteria ketinggian dan kekukuhan.

"Penerapan kepentingan matematik dan sains yang cuba disampaikan melalui aktiviti ini diharapkan turut membina kemahiran penyelesaian masalah, sekali gus dimanfaatkan murid pada masa akan datang," katanya.

LAMPIRAN 9

NEW STRAITS TIMES (BOTS/LIVE): MUKA SURAT 24

TARIKH: 18 FEBRUARI 2019 (ISNIN)

The next wave of start-ups

Uber and Airbnb were part of an early generation of tech start-ups that quickly reached US\$1 billion in value. The up-and-coming generation is looking very different, writes **Erin Griffith**

TECHNOLOGY start-ups worth US\$1 billion (about RM4 billion), once as rare as unicorns, are now plentiful enough and old enough that there's a new generation behind them — one that looks very different. Silicon Valley's current crop of highly valued tech start-ups, which include now-household names like Uber and Airbnb, all benefited from the spread of smartphones and cheap cloud computing.

Many of these companies built global empires by simply taking existing businesses — like taxis, food delivery and hotels — and making them mobile.

Some of the start-ups became giants: Uber, for instance, may reach a US\$120 billion valuation this year.

But as those companies matured and prepare to go public, the easy opportunities for disrupting old-line industries are drying up.

Now, many of the up-and-coming start-ups that may become the next unicorns have names like Benchling and Blend. And they largely focus on software for specific industries like farms, banks and life sciences companies.

That's according to an analysis for *The New York Times* by CB Insights, a firm that tracks venture capital and start-ups. CB Insights used a variety of data — including financial health and the strength and size of the market a company serves — to identify 50 start-ups that may be on a path to achieving a US\$1 billion valuation (though there is no guarantee they will get there).

POTENTIAL UNICORNS

Software start-ups may seem boring. But many of them are growing fast because industries like agriculture require more software tools as they adapt to the tech era, said Jason Green, an investor at Emergence, a venture capital firm that invests in

cloud software companies.

"Maybe it's not as sexy as the companies in the first wave," said Kirsten Green, a venture capitalist at Forerunner Ventures. "A lot of those industries are big giant industries that we need in our lives and in business, and they need to be modernised," she said.

Other potential unicorns, such as Checkr and Earnin, are building businesses off the last generation of unicorns by offering services to them.

CB Insights also pinpointed three start-ups that are popular with millennial women — Glossier, Zola and Faire — as unicorn candidates.

Some of these companies may reach the US\$1 billion threshold quickly, as unicorn start-ups are created more quickly than ever, said Anand Sanwal, chief executive of CB Insights.

Funding rounds of US\$100 million or more — a once eye-popping sum of capital — have become common. Today, there are 315 unicorns, compared with 131 in 2015.

"If you are one of those high-momentum companies, investors are going to be beating down your door because there is so much interest in investing in the next big winner," Sanwal said.

SOFTWARE FOR SCIENCE, FARMS, FINANCE AND MORE

In 2012, Sajith Wickramasekara founded Benchling. His goal: To solve some of the personal frustrations he had with the outdated technology tools that he used in the molecular biology labs of the Massachusetts Institute of Technology when he was a student.

Benchling, based in San Francisco, began providing software that allows lab scientists to replace their paper notebooks with searchable records stored in the cloud. That way, scientists could more easily use the records to collaborate with one another, Wickramasekara figured. Younger researchers were also increasingly asking for such tools.

"Software has touched a lot of different sectors of the economy, but it has not kept up in the field of science," said Kaiser Mulla-Feroze, Benchling's chief marketing officer. Today, 140,000 scientists use Benchling's software, including academics at Harvard and M.I.T. who use a free version, and paying customers like Pfizer and Regeneron.

Benchling charges smaller companies US\$15,000 a year, while large customers who use more advanced features pay millions of dollars a year, Mulla-Feroze said.

Benchling has raised nearly US\$30 million in funding. Last year, the start-up tripled its revenue and number of customers, Mulla-Feroze said.



Seventeen of the fast-rising start-ups are dispersed internationally, illustration by Tyler Comrie. PHOTOS BY ERIN DYBEAHL AND HANNAH MENTZ

The company is a representative of a new class of software start-ups as different industries adopt more technology. Green, the venture capitalist, said it's become clear that software aimed at niche sectors offers larger opportunities than previously expected.

Other fast-growing start-ups that fit this description include Farmers Business Network, which was founded in 2014 by Charles Baron, a former Google program manager, and Amol Deshpande, a serial entrepreneur and venture capitalist.

The company charges farmers US\$700 a year to share and analyse data about their farms, buy supplies and sell crops. Baron said the start-up counts 7,700 farms as customers and has raised nearly US\$200 million in funding.

A company like Farmers Business Network wouldn't have been possible 10 years ago, before the proliferation of cloud computing and the "digitisation" of farming processes, Baron added. Now, farms produce a lot of data, which Farmers Business Network is helping them to process and use to make decisions.

"Agriculture is going through a digital revolution," he said.

SERVING MILLENNIAL WOMEN

In 2013, when Shan-Lyn Ma's friends began getting married, she noticed that most digital tools for wedding planning were outdated, poorly designed or cost money.

So Ma, who previously worked at a site that held flash sales for designer merchandise, Gilt Groupe, started Zola, which offers a streamlined place to create free wedding registries.

Zola now sells 70,000 gift items in its registry. It has also developed tools like online guest lists and RSVP tracking, all designed to lure more couples to its registry product. The site has been a hit with millennials, allowing the company to raise US\$140 million in funding and reach a val-

uation of US\$600 million.

NEXT-GENERATION GIG ECONOMY

The rise of companies like Uber and Airbnb has created its own mini-economy of start-ups.

One of those is Checkr, which was founded in 2014 by Daniel Yanisse and Jonathan Perichon, who worked as software engineers at Deliv, a delivery start-up.

Both had become frustrated at the slow-moving background checks for the delivery drivers they wanted to hire for Deliv, so they created their own business to expedite the process.

Now Checkr works with Uber, Lyft and Instacart. It has also added other types of customers like the insurance company Allstate.

Checkr is selling "picks and shovels" to the gig economy, said Rich Wong, a partner at Accel, a venture firm that invested in the start-up.

Another potential unicorn that serves gig economy workers is Earnin, founded in 2012 and based in Palo Alto, California. Earnin, which makes an app that provides free cash advances to workers, has a partnership with Uber that lets its drivers cash out immediately after a ride.

Ram Palaniappan, Earnin's founder, said the app has been downloaded more than one million times and its users open the app 25 times a month on average.

AND THE REST

Notably, 17 of the fast-rising start-ups are dispersed internationally.

CB Insights identified five companies in India, four in China, and three in Latin America as possible candidates to reach US\$1 billion in valuation. They ranged from CarGoX, a Brazilian start-up using technology to make trucking companies more efficient, to Deputy, an Australian company that provides tools to businesses to manage their hourly workers. **NYT**



Today, 140,000 scientists use Benchling's software. PICTURE FROM FREEPIK

LAMPIRAN 10
NEW SUNDAY TIMES (WORLD): MUKA SURAT 53
TARIKH: 17 FEBRUARI 2019 (AHAD)

Researchers keep AI software under wraps

WASHINGTON: Researchers this week announced they had developed an automatic text generator using artificial intelligence which is very good – so good, it is keeping details private for now.

That software developed by OpenAI could be used to generate news stories, product reviews and other kinds of writing, which may be more realistic than anything developed before by computer.

OpenAI, a research centre backed by Tesla's Elon Musk, Amazon and Microsoft, said the new software "achieves state-of-the-art performance on many language modelling benchmarks", including summarisation and translating.

But it will not be releasing the programme to the public.

"Due to our concerns about malicious applications of the technology, we are not releasing the trained model," said the OpenAI researchers on Thursday.

The news suggested a potential breakthrough in efforts to develop computer-generated text which may be believable, but also potentially dangerous.

The researchers said there were numerous ways the programme could be used for nefarious purposes, including to generate fake news, impersonating others online, and automating fake content on social media.

In one example, the programme was fed one paragraph about "a herd of unicorns living in a remote, previously unexplored valley in the Andes Mountains", and wrote a 300-word news story about it.

"The public at large will need to become more sceptical of text they find online, just as the 'deep-fakes' phenomenon calls for more scepticism about images," the researchers wrote, referring to AI-manipulated videos, which have been on the rise.

The researchers said their model, called GPT-2, "outperforms other language models" trained on tasks such as Wikipedia entries, news or books without needing any specific training. **AFP**

LAMPIRAN 11
NEW SUNDAY TIMES (WORLD): MUKA SURAT 53
TARIKH: 17 FEBRUARI 2019 (AHAD)

COORDINATED WALKOUT

European kids skip school to demand climate action

LONDON: Thousands of students streamed out of schools across Europe on Friday, waving placards and carrying banners as they marched as part of a co-ordinated walkout to demand action on climate change.

Students in the capital here chanted "Save our planet!" as they gathered in Parliament Square, where they brought traffic to a standstill. Others held signs that read, "Change the politics not the climate".

In Paris, about 200 students gathered outside the Ecology Ministry, saying they hoped to repeat the protest every week until their demands were heard.

Similar protests have been steadily gaining momentum since emerging in Sweden last year.



French students protesting near the Ecology Ministry in Paris on Friday. (Inset) A British student with her face painted to resemble Planet Earth. AGENCY PIX



Greta Thunberg, a 16-year-old activist, has been cutting class weekly since September to stage sit-ins at the Swedish Parliament demanding government action on climate change.

Last month, she was in Davos, Switzerland, to bring her message to the World Economic Forum. Inspired by her, a movement known as Youth Strike 4 Climate was founded in Britain and has since grown rapidly.

On Friday, demonstrations

were held in Belgium, Britain, France, Germany, Ireland, Sweden, Switzerland and elsewhere.

While some politicians rallied in support of the students, others, including Prime Minister Theresa May, were sceptical.

A spokesman for May said: "Everybody wants young people to be engaged in the issues that affect them most so that we can build a brighter future. But it is important to emphasise that disruption increases teachers' work-

loads and wastes lesson time."

The prime minister's reaction was criticised by some, including Thunberg.

"British PM says that the children on school strike are 'wasting lesson time'. That may well be the case," Thunberg tweeted.

"But then again, political leaders have wasted 30 years of inaction. And that is slightly worse." **NYT**

LAMPIRAN 12
UTUSAN MALAYSIA (LUAR NEGARA): MUKA SURAT 42
TARIKH: 16 FEBRUARI 2019 (SABTU)

'Saman jerebu' gagal dibayar

JAKARTA 15 Feb. - Beberapa syarikat perladangan Indonesia dilaporkan gagal membayar saman berjumlah ratusan juta dolar selepas didakwa melakukan pembakaran terbuka di kawasan tertentu sejak 2009.

Lapor *al-Jazeera*, syarikat minyak kelapa sawit dan pulpa itu masih mempunyai baki hutang saman sebanyak AS\$220 juta (RM897 juta).

Selain itu, jumlah hutang penalti kerana menyebabkan kemusnahan pada alam sekitar termasuk melibatkan

kes pembalakan haram pada 2013, meningkat kepada AS\$1.3 bilion (RM5.3 bilion).

Perkara itu didedahkan dalam laporan kes berasingan oleh pertubuhan Greenpeace serta Kementerian Alam Sekitar dan Perhutanan.

Pembakaran terbuka di Indonesia pada 2015 telah memusnahkan 2.6 juta hektar tanah dan mengakibatkan jerebu di seluruh negara ini, Singapura, selatan Thailand dan Malaysia.

Bank Dunia turut meng-

anggarkan Indonesia mengalami kerugian sebanyak AS\$16 bilion (RM65.3 bilion) akibat aktiviti pembakaran terbuka.

Sementara itu, kajian oleh Harvard dan Columbia menunjukkan jerebu terbit turut meragut 100,000 nyawa di rantau ini.

Menurut Greenpeace, hutang saman itu boleh digunakan untuk menjalankan usaha-usaha pemulihan hutan dan infrastruktur kesihatan serta kecemasan apabila kebakaran berlaku lagi.

JEREBU akibat pembakaran hutan di Palangka Raya, tengah Borneo, Indonesia pada Oktober 2015. - AGENSI



LAMPIRAN 13
UTUSAN MALAYSIA (LUAR NEGARA): MUKA SURAT 44
TARIKH: 16 FEBRUARI 2019 (SABTU)

Haramkan robot pembunuh

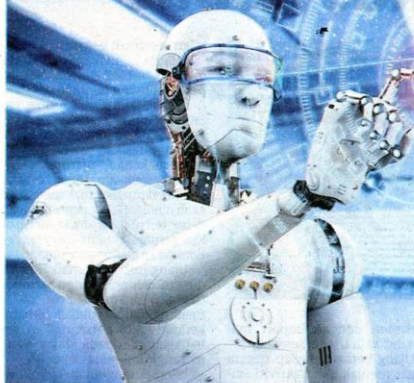
■ WASHINGTON 15 FEB.

ROBOT pembunuh perlu diharamkan bagi mengelak mesin itu daripada mengakibatkan manusia pupus di dunia ini berikutan perkembangan kemajuan dalam bidang kecerdasan buatan yang memberinya lebih kuasa.

Mail Online melaporkan, amaran itu dibuat oleh saintis yang percaya kemajuan dalam kecerdasan buatan bermakna, mesin dengan kuasa untuk memilih dan menyerang sasaran tanpa input manusia akan dibangunkan tidak lama lagi.

Menurut mereka, robot seperti itu mewakili revolusi ketiga perang selepas penggunaan senjata api dan nuklear.

Aktivis kempen hentikan robot pembunuh, Mary Ware-



SAINTIS berpandangan robot pemusnah perlu diharamkan sebelum mengancam kehidupan manusia. - AGENSI

ham berkata, keselamatan dunia dan masa depan manusia bergantung kepada pengharaman robot tersebut.

“Senjata automatik adalah satu contoh negatif yang ber-

laku akibat salah guna bidang kecerdasan buatan.

“Apabila dibiarkan, mereka akan bertambah dan akhirnya gagal dikawal,” katanya.

Ramai tampil menyokong cadangan pengharaman tersebut termasuk Setiausaha Agung Pertubuhan Bangsa-Bangsa Bersatu (PBB), Antonio Guterres yang menyifatkan senjata automatik sebagai satu kekejaman dan tidak boleh diterima.

Dalam pada itu, aktivis mendesak Britain menandatangani perjanjian untuk mengharamkan mesin atau robot pembunuh.

Desakan tersebut dibuat selepas Setiausaha Pertahanan Britain, Gavin Williams memperkenalkan rancangan untuk menggunakan dron bersenjata untuk tujuan pertahanan.

- AGENSI