

Technologists Keep The World Working.

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No 2. Jobless Survey.

The recent request for information originating from the Department of Public works via ECSA was circulated to members. Unfortunately, due to information later received from ECSA and CBE, the data we had accumulated was not of use. This was mainly due to changed requests and some confusion as to exactly what was required. The format of the data was also not clear. A suggested template from the CBE only catered for Companies and not individuals, mentors etc.

Other Voluntary Associations have experienced the same problems.

The net result is that this project has been put on hold and will await discussion with the South African Forum for Engineering (SAFE).

The State appears to be willing to spend vast sums of money on all sorts of random activities. They should then also be prepared to spend money getting the sort of information that they require. Getting it free from Voluntary Associations such as ours may undermine its value right from the onset. The engineering profession and our association have provided piles of data in the past and it rarely added any value to the situation.

SAFE is finalising a response in the form of a letter to ECSA, signed by the various VA's declining the request for information, and instead requesting a list of vacant posts be made available from the State to be distributed to the members of the various organisations for their direct response.

We therefore ask members not to forward any further information to us until this whole question has been clarified.

No 3. ECSA Fees.

With regard to ECSA Annual fees which were due in April, we have been told that the invoices sent out do not show the discount given to our members as a separate amount. ***The ECSA invoice however does show the correct discounted total figure.***

The ECSA annual fee is **R4480** and for our members **R3800** with a further discount of **R100** for early payment. Thus if ECSA registered and a member in good standing of IPET at 1st March 2020, the **discount amounts to R 680** which is much more than our annual fee!

So it pays to belong to IPET as you get two for less than the price of one and an overall saving on the combined accounts.

Candidate figures are full fee R 1810, discounted fee R1570 with a R50 off for early payment.

You may check this on the ECSA Website www.ecsa.co.za.

Our Treasurer checked and gives the following guide to the ECSA website.

Go to the ECSA website, home page, and look under CPD Continuing Professional Development. In the middle of the page on the right hand side you will find Annual Fees (the second last point).

There is NO exemption for people NOT members of a Voluntary Association like IPET

Partial Exemption is for those who are members of a Voluntary Association like IPET.

No 4. Annual Audit.

Our books will be delivered to our Auditor, Mr D T Eriksson, Chartered Accountant SA, probably in June if the next phase of the national lock down allows this.

No 5. Message from the President of IPET.

To all IPET members,

As we are busy preparing for the change of lockdown from level 4 to level 3, we all go to special measures to protect ourselves and colleagues. The key to success in this situation is constant positive communication with employers, employees and colleagues. With the current economic situation let us think of innovative ideas to keep our companies afloat.

There is an abundance of accredited online CPD courses that are actually accredited and are for free. If you know of any free accredited CPD courses please share with us at IPET so that we can notify all our members.

Herewith at least two that I know of:

- <https://www.hilti.co.za/#login> (Register and there are currently 4 accredited courses that are 0,1 CPD each. Please note you have to register on their website)
- <http://kaytech.co.za/welcome-to-the-kaytech-online-cpd-lecture-series/> (this is a free accredited CPD course. Please note you have to register on their website)

If links don't work please type in the text into your internet browser.

If you have journal or conference papers that we can make available to fellow members for CPD points, please forward them to us for accreditation. We will then add them to the website for use of our fellow members. The papers should contain relevant information/knowledge that could be applied in member's engineering practices. A paper should take at least 50 minutes to read and must have a seven-question multiple-choice questionnaire at the end, to be completed by the reader for receipt of his/her CPD certificate. (For accurate marking purposes, the correct answer to each question should please be indicated to us.)

Regards,

Chris Mynhardt
President

No 6. Services Offered By Members.

(Free ads for members)

Please visit our Website

<http://engineersdirectory.co.za/>

If links don't work please type the text into your internet browser.

The Website is being updated with quite a few new entries from Individual members and Companies.

We ask that you also advertise the website!

If links don't work please type in the text into your internet browser.

Wherever possible support your fellow members!

No 7. Office News.

As we indicated in December our telephone number has changed. See above! All other contact details remain the same. Watch this space.

If you have anything that you think may be of interest to other members please send it to us. Any contribution to our newsletter is greatly valued.

No 8. Enlighten us: We welcome your ideas.

As an IPET member you may have ideas on how we could improve our products and services. Please let us know. You may have good ideas about E mails, Meetings, CPD, the Websites, On Line meetings, lectures etc. If it's something that can be implemented, measured, and affordable, and if it ties in with the IPET values, we'll investigate and try to make it happen. Any suggestions will be welcome.

Volunteers to assist in the implementation of ideas etc. are most welcome. Just let us know.

Please also read the Presidents message above for more details.

E mail them to us under the Subject Heading; **IDEAS FOR IPET.**

Send your E Mail to engineer@netactive.co.za.

No 9. Association Fees for 2020.

Please note that fees were due in April. Invoices have been sent to all members. Another batch of reminder invoices will be sent out at the end of May. To those of you who have paid we say a great thank you. You are stars!

To those who have not paid we ask that you check and pay soon. If you are unsure of the amount, or have any other queries, please E Mail us stating your name and membership number and query so we can check and advise you of the status.

Unfortunately some members pay but don't supply names and invoice numbers and it becomes impossible for us to identify whose account has been paid. This applies to companies who pay but don't indicate the member that they are paying for!

We will have an updated list of paid members on our Website by the end of May. If your name does not then appear please check your payments and advise us.

Thanks for your co-operation.

See www.ipet.co.za

If links don't work please type in the text into your internet browser.

No10. National Science and Technology Forum.

Nominees announced: 2019/2020 NSTF-South32 Awards

Recognizing excellence and outstanding contributions to science, engineering and technology (SET) and innovation in South Africa (#NSTFawards2020)

The National Science and Technology Forum (NSTF) is pleased to announce the group of nominees contending for the 22nd prestigious NSTF-South32 Awards.

The NSTF-South32 Awards: The NSTF Awards were established in 1998 as a collaborative effort to recognise outstanding contributions to science, engineering and technology (SET) and innovation by SET-related professionals and organisations in South Africa. This includes experienced scientists, engineers, innovators, science communicators, engineering capacity builders, and organisational managers/leaders, as well as data and research managers.

Our partner: South32 is a mining company that de-merged from BHP Billiton in 2016. It took over the co-branding sponsorship agreement for the annual NSTF Awards.

The ‘Science Oscars’: The NSTF –South32 Awards are referred to as the ‘Science Oscars’ of South Africa. They are the largest, most comprehensive, and sought-after national awards of their kind in the country. They were also the first science awards in South Africa.

See <https://www.nstf.org.za>

No 11. Snippets.

The following mini articles, notices and news follow the trend of interesting scientific, engineering developments and general interest items that we come across. Read and enjoy!

Please feel free to contribute by sending your items to share with our members!

Ed

New UK statistics reveal biofuels boost.

The UK government has announced that 2,351 million litres of liquid biofuels were used in transport last year, which was an increase of 24% on the year before. In 2018, 1,899 million litres were consumed. The Renewable Transport Fuel Obligation (RTCO) put up the percentage of biofuel production for transport fuel produces from 7.25% in 2018 to 8.5% last year.

“Plants are solar powered air purifiers whose filter never needs replacing.” — Khang Kijarro Nguyen

Fast-charging super-capacitor technology.

Experts believe their dream of clean energy storage is a step closer after they unveiled their ground-breaking

super-capacitor technology that is able to store and deliver electricity at high power rates, particularly for mobile applications.

In a paper published by the journal Energy and Environmental Materials, researchers from Surrey's Advanced Technology Institute (ATI) revealed their new technology which has the potential to revolutionise energy use in electric vehicles and reduce renewable based energy loss in the national grid. The team also believe their technology can help push forward the advancement of wind, wave and solar energy by smoothing out the intermittent nature of the energy sources.

The ATI's super-capacitor technology is based on a material called Polyaniline (PANI), which stores energy through a mechanism known as "pseudocapacitance." This cheap polymer material is conductive and can be used as the electrode in a super-capacitor device. The electrode stores charge by trapping ions within the electrode. It does this by exchanging electrons with the ion, which "dopes" the material.

In their paper, the team detail how they developed a new three-layer composite using carbon nanotubes, PANI, and hydrothermal carbon that demonstrates remarkable rate-capability at high energy densities, independent of the power use.

Source University of Surrey.

For an interesting talk on Electric Car Charging Stations on you tube go to the link below.

(It's just short of an hour).

<https://youtu.be/QwabIZ8il6w>

If links don't work please type in the text into your internet browser.

*Electrolysis: Chemists have discovered how to produce better electrodes*

Another step forward for renewable energies: The production of green hydrogen could be even more efficient in the future. By applying an unusual process step, chemists have found a way to treat inexpensive electrode materials and considerably improve their properties during electrolysis.

Hydrogen is thought by many to be the solution to storage of renewable energy. It can be produced by electrolyzers, stored and efficiently converted to Electricity in a fuel cell. The production of Hydrogen from Electricity is hampered by the stability and efficiency of the electrodes. The group has discovered a method of improving Nickel Hydroxide electrodes which are cheaper than Iridium and Platinum.

Source; ACS Catalysis Journal [Martin-Luther-Universität Halle-Wittenberg](#)

In numbers **35-years**

SA business confidence obliterated - now at a 35-year low

REHVA calls for a stop in recirculating air.

In Europe, REHVA, the Federation of European Heating, Ventilation and Air Conditioning Associations, is calling for engineers to stop recirculating air in buildings where there has been a CoVID-19 outbreak.

According to CIBSE Journal, April 2020, REHVA's interim guidance on the operation and use of building services with a coronavirus disease, states that virus particles in return ducts can re-enter a building if centralised air handling units have recirculation. It recommends avoiding central recirculation during SARS CoV-2 episodes and closing the recirculation dampers, even if there are return air filters. As the REHVA guidance says, these don't normally filter out viruses. REHVA's guidance also recommends local fan coil systems should be turned off to avoid resuspension of particles at room level.

REHVA notes that the two-meter rule was based on analysis of large droplets:

However, some recent research indicates that large droplets from sneezing can travel much further than 2 metres, even if there are no air movements. Small particles (<5 microns), generated by coughing and sneezing, may stay airborne for hours according to the REHVA guidance, and can travel long distances. A Coronavirus particle is only 0.8 to 0.16 microns diameter so there could be many virus particles in a 5-micron droplet floating around in the air.

Electric vehicle (EV) sales are forecast to fall 18% in 2020, to 1.7 million worldwide.

(with the coronavirus crisis interrupting ten successive years of strong growth).

However, sales of combustion engine cars are set to drop even faster this year, by 23%. The long-term electrification of transport is still projected to accelerate in the years ahead. The latest annual report, recently published by research company Bloomberg NEF (BNEF), shows electric models accounting for 58% of new passenger car sales globally by 2040, and 31% of the whole car fleet. They will also make up 67% of all municipal buses on the road by that year, plus 47% of two-wheelers and 24% of light commercial vehicles. The figures have major implications for oil and electricity markets. Transport electrification, particularly in the form of two-wheelers, is already taking out almost 1 million barrels of oil demand per day and by 2040 it will remove 17.6 million barrels per day. EVs of all types are seen adding 5.2% to global electricity demand by 2040.

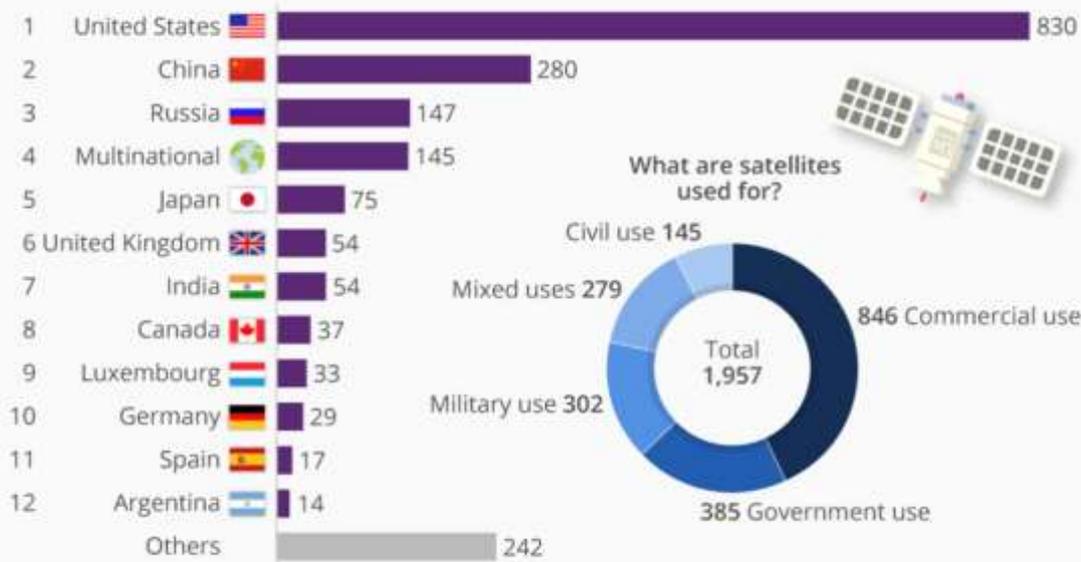
Source Long Term Electric Vehicle Outlook by Bloomberg NEF.

Efficiency during National Lock down?!

According to a new Consumer Pulse from GfK South Africa into the behaviours of online consumers during the Level 5 lockdown, some 85 percent of consumers who usually work full time reported significant impact on their working habits. **Nearly half (47%) of fulltime employees were able to work remotely, but among this group 74 percent claimed they were working less than normal.**

The Countries With the Most Satellites in Space

Satellites currently orbiting Earth by country* (as of Nov 2018)



* Country of operator/owner
Source: Union of Concerned Scientist Satellite Database

statista

A "moment" and "jiffy" are both legitimate units of time.

No 12.



The Joke Column.

Warning / Disclaimer.

Sensitive readers are warned that the following may erroneously and unintentionally be taken to contain sex, violence, strong language, gender, race, ethics etc. Readers are warned not to read or have any of the following read to them. Recommended readers age is limited to 140 and 161 years of age. A further requirement is you must have a sense of humour. No Persons or animals are intended to be harmed in any way by this column.

A lawyer, an engineer and a mathematician are called in for a test.

The engineer goes in first and is asked, "What is 2+2? The engineer thinks a while, does some checking, and then answers 4.

Then the mathematician goes in and is asked the same question. The mathematician answers 4.

Then the lawyer goes in and gets the same question. He immediately answers, "What do you want it to be."

Brains are awesome! Just wish more politicians would use theirs!

This is good for a laugh. It's about 9 minutes long.

https://www.youtube.com/watch?v=_QdPW8JrYzQ

If links don't work please type in the text into your internet browser.

Part 13.

Unsubscribe Option.

As a member of IPET you should want to receive the E News. If however u do not want to receive the IPET E News as an E Mail then you have the option to unsubscribe.

To unsubscribe send an email with "IPET unsubscribe newsletter" in the text to engineer@netactive.co.za

Part 14.

O. & O. E.

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Scroll down to next page for update form.

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To All
Members

We no longer post items. Post only used in special cases. Please get an E Mail address so we can communicate with you.

Your E mail, if you have one, does not always work! Please complete & return this form.

Note that E mail addresses that end in Spoornet, Transnet, Eskom and Gov (Government) are usually blocked at your end.

Some Consulting firms addresses are also blocked at the receivers end. Aurecon & ones ending in Telkomsa.net included!

You have to fix this at your receiving end as we cannot solve this from the senders end.

We recommend members use private individual E Mail addresses instead of Company addresses.

Provide us with your E mail address so we can send our regular News etc to you. Thank you for co-operation.

Last name		Initials	
First Names			
Your Preferred Postal address		Postal code	
Alternative or Work Postal address		Postal code	
Name of Employer / Company			
Your or your Company's main field of engineering			
Work Tel (include area codes for all numbers)	Work Fax		
Home Tel	Home Fax		
Cell No		E Mail (Large font please)	
Membership Number			
Engineering Council of SA Registration Number (If applicable)			

ID Number		Birthday, Year, Month, Day
Race (For statistical purposes only)	Asian (Indian etc) = A Black = B Coloured = C White = W	<---The Government often requests this info from us.

IPET/InfoUpdateFormE2019.doc

Visit our Web site
www.ipet.co.za