

From: [SAFECC TEAM](#)
To: events@saeconfed.org.za
Subject: 2022 DECEMBER NEWSLETTER
Date: Thursday, 15 December 2022 12:03:23

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Christmas message to our SAEEC Member

Dear SAEEC Members,

2022 is drawing to a close, and many of us who celebrate Christmas and to all who do not there is a 'Spirit of Good Will' that the season brings, may you and your families all enjoy this Spirit and the festivities of the Christmas holidays.

For the New Year 2023, we wish you and your families every happiness, good health and prosperity.

May there be Peace in the World and let us be considerate and show kindness towards each other. May this be our motto for 2023.

We thank you for the support you have given the SAEEC over the years. As we move into 2023, we will celebrate our 21st year of promoting Energy Efficiency - a wonderful achievement!

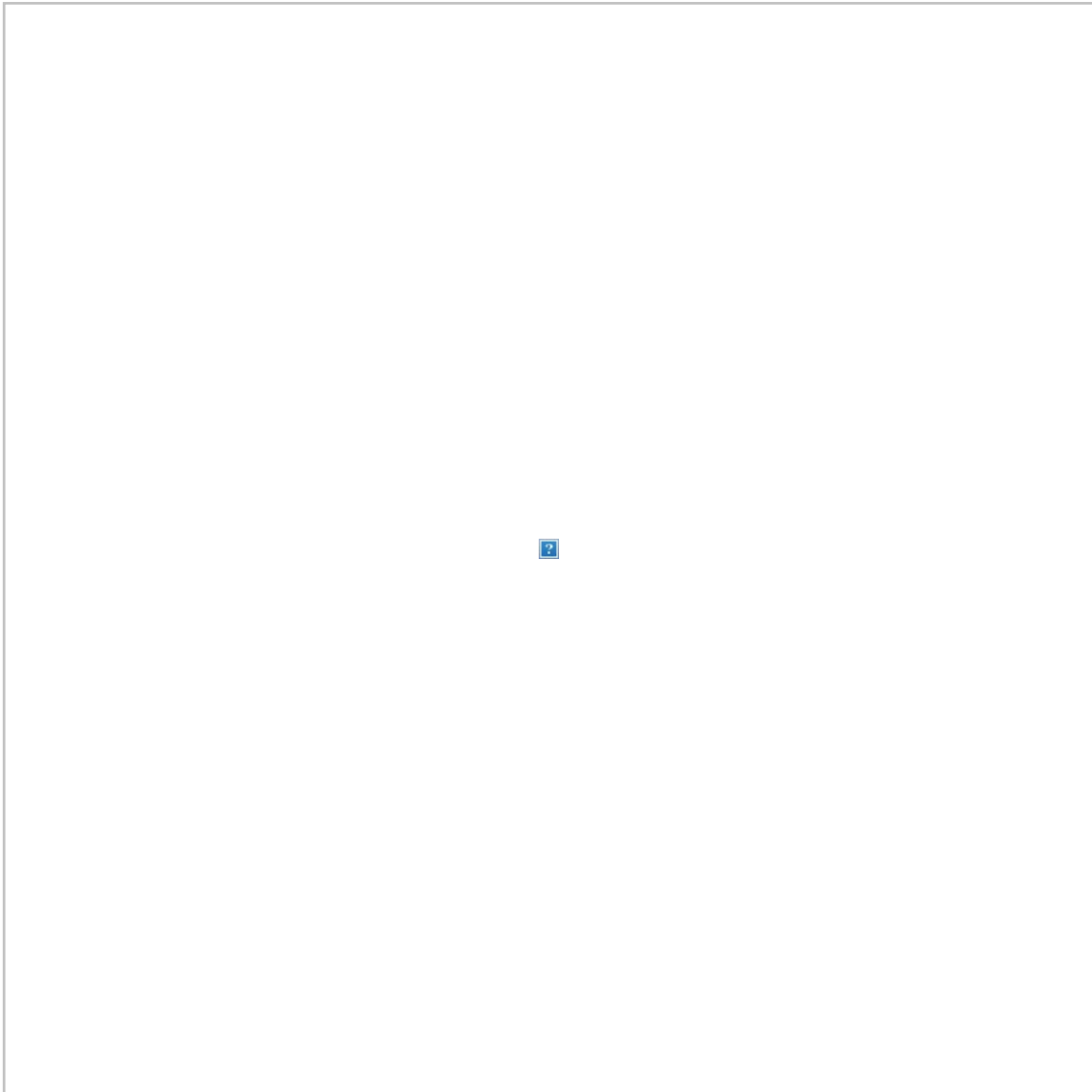
Our office will close on 16 December 2022, and we will re-open on 9 January 2023.

Our contact e-mail address : secgen@saeefconfed.org.za

With good wishes and keeping Energy Efficiency in mind

Thieda, Motlatjo, Helen and The SAEEC Board Members

The SAEEC team



Techno-economic analysis of a grid-tied solar-PV paired with Battery Energy Storage System for a foundry business.



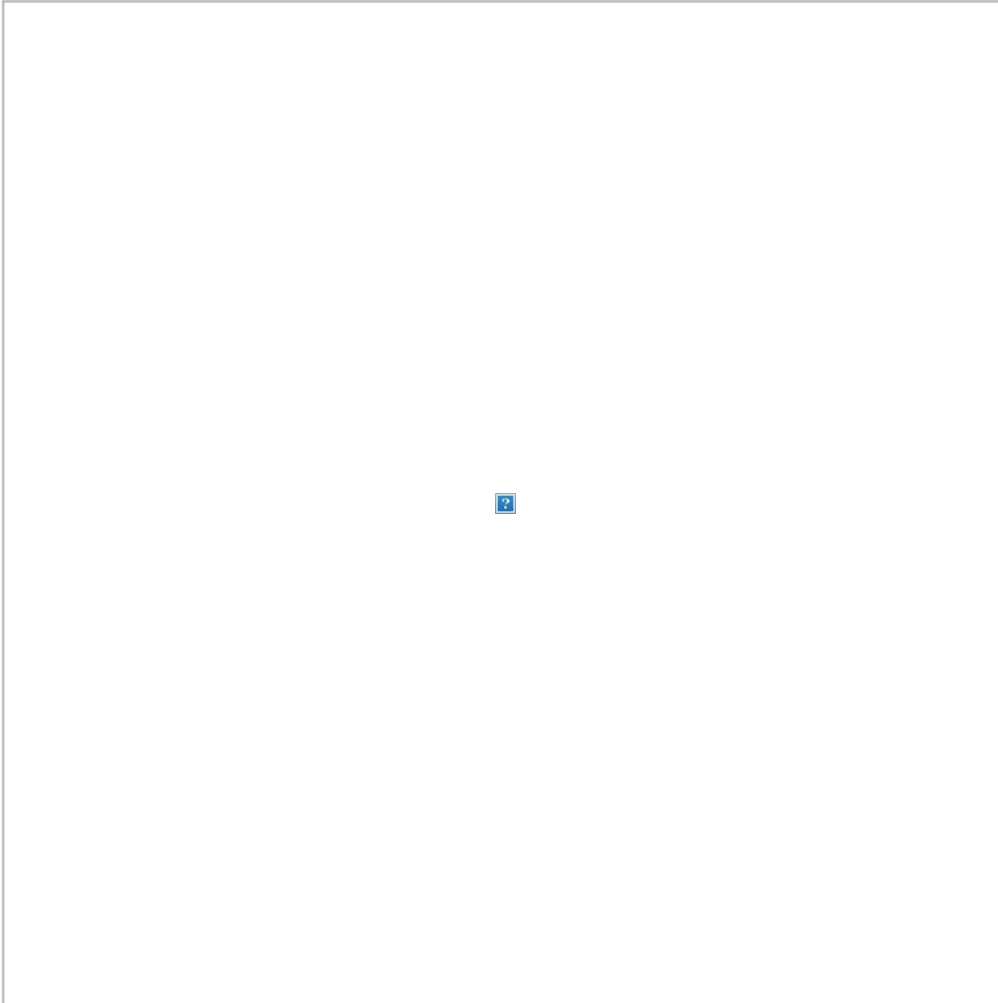
Talent Duma
Electrical Technologist/Researcher
Council for Scientific and Industrial Research (CSIR)

The South African energy landscape is rapidly changing due to national power grid decarbonization and supply-demand imbalances also known as 'load shedding'. Load shedding is a never-ending occurrence of scheduled blackouts since electricity supply is not able to keep up with the electricity demand. According to the Council for Scientific and Industrial Research (CSIR), South Africa experienced about 650 hours of load shedding (1 284 GWh) in the first six months of 2021. More so, they were significant since these were an upsurge compared to previous annual figures of 127 hours (192 GWh) in 2018, 530 hours (1 352 GWh) in 2019, and 860 hours (1 798 GWh) in 2020. Expressed differently, this means approximately 10 500 MW of the national utility is unavailable due to unscheduled breakdowns, while another 3500 MW is in scheduled maintenance. Unfortunately, these numbers are a serious concern to businesses that depend on the national power grid to meet its power demand.

More so, Eskom's continuous escalation of the electricity tariffs are hitting everyone hard. Notably, between year 1988 to 2007 electricity tariffs increase by approximately 223% while the inflation over the same period increased by 335%. From the 2008 electricity crisis until present time, it has been reported that there has been a sharp inflection point for electricity tariffs in South Africa. Now, between 2007 and 2022, the tariffs increased by approximately 700% while the inflation over the same period increased by 129%. This data shows that the electricity tariffs in South Africa quadrupled over the past 14 years. Considering Eskom's terrible financial state (R566 billion in liabilities) and its interest expense that exceeds its operating profit which proves that the utility is unable to service its debt (R402 billion is interest-bearing debt), Above everything, Eskom has recently applied to NERSA for a 32% tariff increase in April of 2023. Indeed,

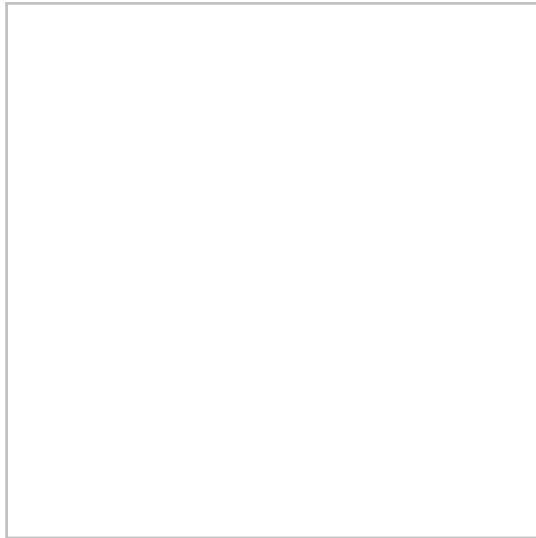
customers can expect a continuation of higher tariff increases in the short to medium-term in South Africa.

As mentioned, over the past 15 years, the electricity prices have increased by 700% averaging at a selling price of 17 c/kWh in 2006 and 120 c/kWh in 2022. Such cost is critical for many businesses, particularly price takers such as the metal casting industry. With many large industrial businesses such as the foundry industry, often charged on a combination of either the Fixed Charge (Rand/month), Demand Charge (Rand/kVA), Network Access Charge (NAC) (Rand/kVA) and Energy Charge (R/kWh) with Time-of-Use. That is why many businesses are seeking the energy supply solution (small-scale embedded generation) and demand side management (energy efficiency, demand response and load management). Energy intensive businesses such as foundry companies are urgently in need of implementing energy and cost saving solutions. Foundry companies use ferrous or non-ferrous casting methods that can reach about 9MWh/ton of metal produced.



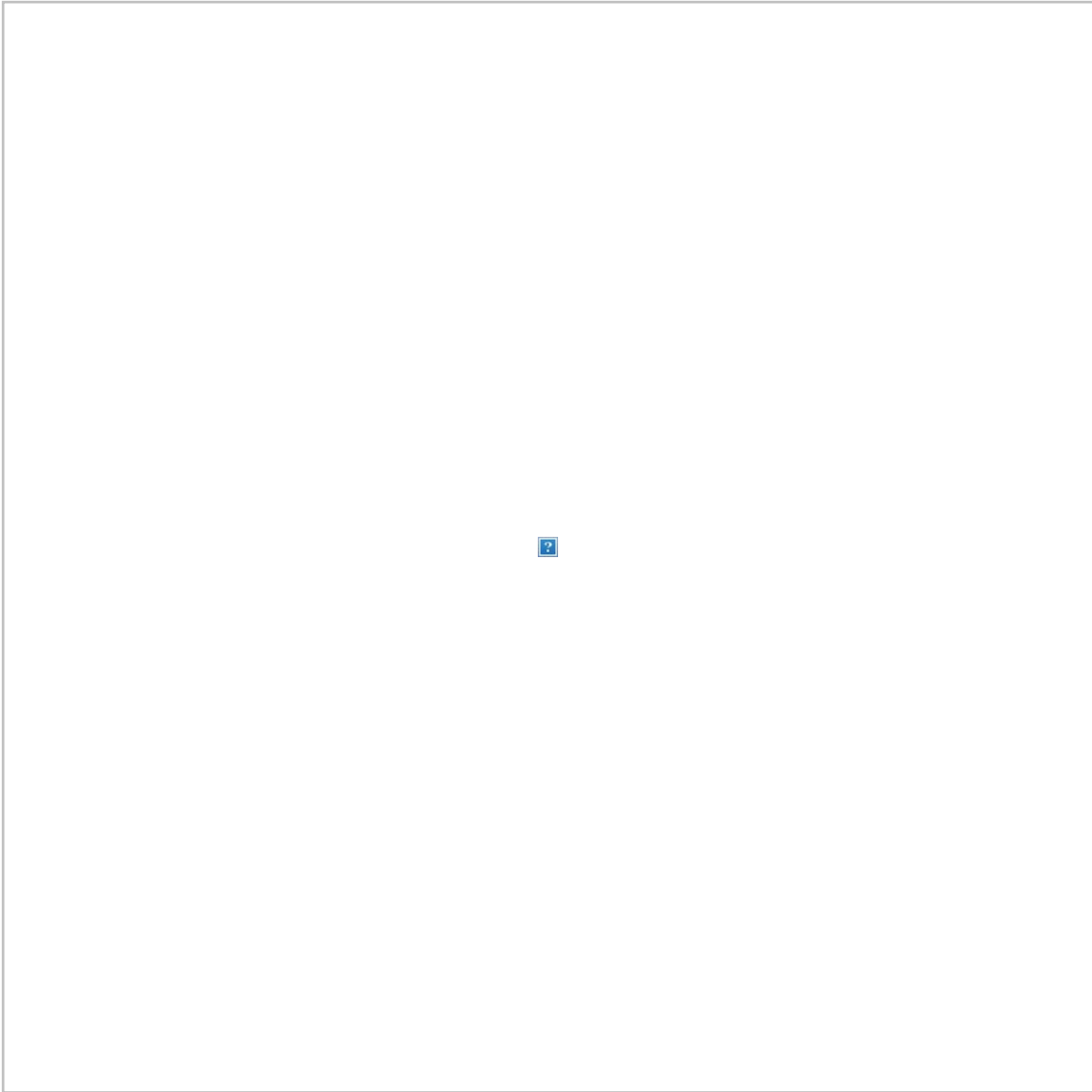
Foundry metal casting, courtesy of CSIR.

This is an enormous amount of energy that when not supplied at affordable electricity prices may lead to foundry shutdowns. Since 2003, the shut-down of many foundries in South Africa relate to high costs of electricity. The current issues of high energy consumption, load shedding and high energy bills are still going to haunt the foundry industry, unless it commits to short-medium or long-term green energy investments i.e., energy efficiency, embedded generation using solar-PV or hybrid systems.



Grid-tied solar energy storage, courtesy of OSNPower.

To assist industrial businesses such as foundry companies, as the CSIR we have modelled a performance-cost ratio analysis of a solar-PV paired with battery energy storage system for a foundry company. The ultimate aim is to provide a financially viable business case for the foundry company to make an informed financial investment on a solar-PV/battery energy storage system. The proposed solution will assist the foundry during load shedding whilst reducing its energy bill without changing its load profile but maximizes on net savings.



ALERT ! ALERT!

Dear Members,

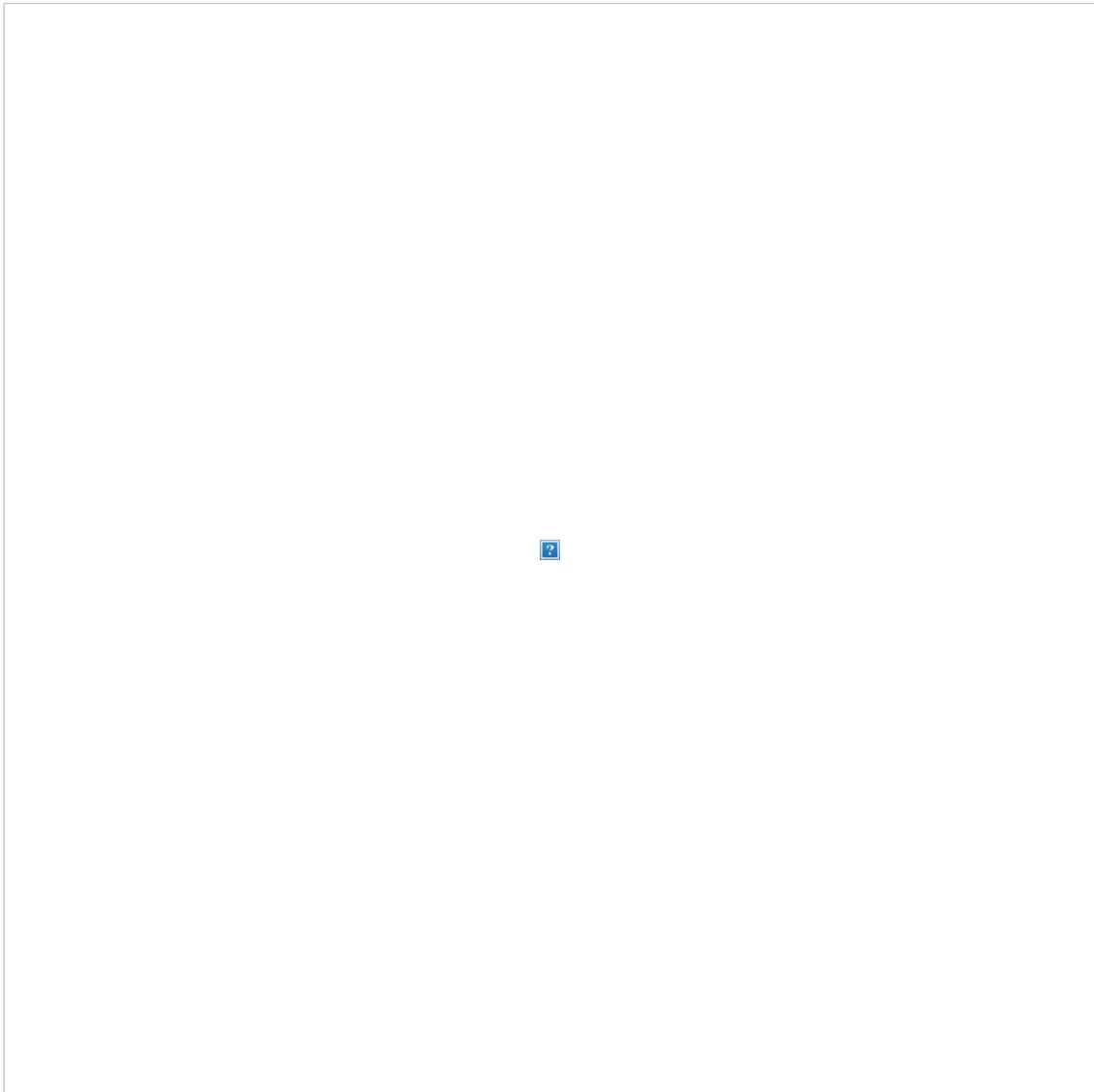
In order to streamline the SAEEC Membership renewal system, we have introduced the following calendar :

Corporate Members renewal date : 31 July each year

Individual Members renewal date : 30 April each year.

For **Corporate members whose membership is due 31 December 2022**, you have been invoiced for 7 months only instead of the full 12 months. In July 2023, you will be invoiced the full amount for your annual Corporate membership 2023/2024.
For **Individual Members whose membership is due 31 December 2022**, you have been invoiced for 4 months instead of the full 12 months. In **April 2023** you will be invoiced the full amount for your annual Individual membership 2023/2024.

[APPLY / RENEW YOUR SAEEC MEMBERSHIP HERE](#)



- 1.You have successfully completed and implemented your project and it is recording the energy savings/water savings in the factory/plant.
- 2.Your innovative project has been implemented in a rural area. You have improved the life of the people in the area by giving them an easier access to electricity and water.
- 3.You have designed and set-up an innovative system in factory automation and process automation, which has saved a manufacturer funds and energy usage.
- 4.How have you saved the energy and water costs of your company? What methods have you successfully implemented and are they environmentally sound ?
5. Do you know an individual , Youth or Female who has made outstanding contributions to the energy profession and to the candidate's community in any or all of these areas: educational and collegiate achievements; professional and technical society activities; civic and humanitarian activities, continuing competence; energy management achievements; climate change activities and achievements; and renewable energy activities and achievements?

Closing Date: 20 January 2023

[NOMINATE HERE](#)

The Winners of the 2022 SAEEC Energy Awards will be entered into the Association of Energy Engineers (AEE) International and Regional Awards.

Please consider entering our 2022 SAEEC ENERGY AWARDS, by nominating those Individuals and share those projects.



With only a few days of the year left, it's time to start prepping for the upcoming year.

Attached find the preliminary training courses and dates for 2023. These courses offer you a great opportunity to expand your knowledge on Energy Efficiency

Please save the date in your 2023 Training **calendar** Or visit <https://www.saeeconfed.org.za/training/>



When We Say Family, We Mean It...

When you join AEE as a member, you're joining a global community that has your back. We're here to help you find praise for the hard work you put in day in and day out, get awarded for your recent projects or research, and play a role in continuously teaching and or learning the latest trends in energy and sustainability. AEE is more than just a membership; we're **family!**

Hear Straight from Our Community

"Joining AEE is the single most effective thing that made me successful bar none, and the key of it is the people you meet and the family you meet." - **Rich Costello**

AEE enables local individuals and communities to really make a difference on a global and national stage, so think global, act locally." - **Sol Haroon**

Here's a special code just for you...
45YEARS
for 45% off your first year of membership

*Code not valid on special member types such as corporate delegate, young energy professional, retired, student, or other special rates. The discount expires on 12/31/2022. Valid on first-time membership only. **Not applicable to all certification programs, including CEA

REGISTER HERE FOR AEE MEMBERSHIP



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2021 Subscriber import

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