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अध्यक्षांच्या कलमातून....





वामन गोदाबाई भगवान भुरे अध्यक्ष, इकॅम

नमस्कार मित्रांनो,

उदयोग क्षेत्र असो किंवा रोजचे दैनंदिन जीवन असो ज्याच्या शिवाय आज जगणे अवघड आहे. तसे विद्युत क्षेत्र सतत दुर्लक्षित राहिलेले क्षेत्र आहे असे म्हणणे नकीच वावगे ठरणार नाही. खरंतर ज्याच्या शिवाय आम्ही थोडावेळ सुद्धा राहू शकत नाही. माणसाला रोजचे जीवन जगण्यासाठी अन्न. वस्त्र. निवारा. आणि त्याच बरोबर विज ही तितकीच गरजेची आहे, विजे शिवाय जगणे आज कठीणच आहे. अशी ही बाब महत्वाची पण एवढी दुर्लक्षित का आहे याचं कारण याकडे गंभीरतेने पाहणे आवश्यक आहे. परंतु पाहिले जात नाही. माननीय पंतप्रधान श्री. नरेंद्र मोदी साहेब यांचे मेक इन इंडिया यासाठी विज ही फार महत्वाचा आणि गरजेचा घटक आहे. विज क्षेत्रातील सुधारणा आणि सुरक्षा याबाबत काही महत्वाच्या बाबी आहेत याकडे प्रकर्षाने पहाणे आवश्यक आहे. यातील DSR ही बाब महत्वाची आहे.

महाराष्ट्र शासनाचा विद्युत विभागाकडून (बांधकाम विभाग), दरवर्षी दरसूची ज्याला DSR म्हटले जाते हा प्रसारित होत असतो आणि महाराष्ट्र राज्यातील सर्व शासकीय – निमशासकीय कार्यालये, महामंडळ,

आता आंदोलन करण्याची वेळ आली आहे.....

महानगरपालिका, नगरपरिषद, राज्य परिवहन महामंडळ, रस्ते विकास महामंडळ अशा अनेक जवळपास सर्वच ठिकाणी वापरला जातो. गेली दोन वर्ष ही बाब दर्लक्षित झाली आहे. हा DSR २१-२२ नंतर प्रसारित न झाल्याने सर्वच ठिकाणी नवीन आणि दुरुस्तीची कामे करण्यासाठी अंदाजपत्रक बनविताना २१-२२ चीच दरसूची वापरली जात आहे. गेल्या दोन वर्षात बाजारामधील साहित्याचे दर भरमसाठ वाढलेले आहेत. कोरोना नंतर जी परिस्थिती निर्माण झाली, त्यानंतर सर्वच क्षेत्रावर झालेला परिणाम यामुळे सर्व जग बदलून गेले. कोरोना मुळे व्यापाराची रीत बदलली आहे, पूर्वी माल आणि काही काळानंतर पैसे, आता आगाऊ पेमेंट नंतर माल अशी उलटी परिस्थिती तयार झाली आहे. बाजारातील दर वाढल्याने आणि आज DSR मधील दर आणि साहित्याचे दर याचा ताळमेळ घालून कुशल-अकुशल कारागिरांचे वाढलेले पगार आणि इतर खर्च अशा परिस्थितीत काही साहित्याचे दर DSR च्या दरापेक्षा जास्त झालेले आहेत अशा परिस्थितीत ठेकेदारांना कामे करणे अवघडच नाही तर कठीण झाले आहे. आपण ही बाब शासनाच्या लक्षात आणून दिली आहे. नवीन दरसूची यावी याकरिता शासन दरबारी प्रयत्न चालू आहेत, मात्र त्यास यश येताना दिसत नाही. आता आपल्याला यासाठी पाठपुरावा करून नवीन DSR लवकरात लवकर आला पाहिजे ही आमची मागणी आहे. शासनाचे यामध्ये लक्ष घालून DSR लवकरात लवकर बाजारात आणावा ज्यामूळे ठेकेदारांना कामे करणे सोपे होईल आणि होणारी कामे अधिक पद्धतीने चांगली होण्यासाठी नक्कीच मदत होणार आहे. आज आपण पाहतो, कोणत्याही प्रकारे आग लागली की शॉर्ट सर्किट मुळेच लागली किंवा लागली असावी हे वाक्य प्रथम दर्शनी येते. ही परिस्थिती आपण सर्वच जण अनुभवत आहोत. बाजारातील दर, कामे मिळविण्यासाठी ठेकेदार यांच्यातील स्पर्धा यामुळे कमी दराने भरल्या जाणाऱ्या निविदा यामुळे कामाचा दर्जा हाही महत्वाचा भाग आहे. महावितरण कॉस्ट डाटा हाही महत्वाचा भाग आहे. MSEDCL यांचा स्वतंत्र कॉस्ट डाटा आहे. त्त्यांच्या कडील सर्व कामे करण्यासाठी त्याचा वापर करण्यात येतो. यामध्ये अशीच स्थिती आहे. प्रत्यक्ष बाजारामध्ये असणारे दर आणि कॉस्ट डाटा मधील दर यामध्ये DSR प्रमाणेच स्थिती आहे. आज विद्युत क्षेत्राकडे ज्या गंभीरतेने पहाणे आवश्यक आहे. तेवढ्या गांभीर्याने पाहिले जात नाही. मा मुख्यमंत्री, तसेच उपमुख्यमंत्री, सार्वजनिक बांधकाम मंत्री यांना आपण निवेदन देऊन या बाबी लक्षात आणुन दिल्या आहेत. याबाबत आपण महाराष्ट्र शासन आणि त्यास सलग्न असणाऱ्या सर्व विभागात विद्युत क्षेत्रात अत्यन्त महत्वाचा घटक आहे. तो आत्मा आहे हे म्हणणे वावगे ठरणार नाही. परंतु तो दुर्लक्षित होत आहे. हे होऊ नये या करिता आपण शासन दरबारी याकडे लक्ष देण्यात यावे या करिता प्रयत्न करीत आहोत.

जर आपणास यामध्ये शासनाचे लक्ष वेधण्यात अपयश आले आणि सतत दुर्लक्षित असणारा विद्युत विभाग याकडे लक्ष वेधण्यासाठी वेळप्रसंगी आंदोलन करावे लागले तरी आपणास हा पवित्रा घ्यावा लागेल.



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'विद्युत सुरक्षा' हेच आपले ध्येय!

नमस्कार मित्रांनो,

पावसाळ्यात शॉर्टसर्किट होऊन विजेच्या तारा तुटणे तसेच विद्युत प्रवाह वाहून नेणारे खांब उन्मळून पडणे असे प्रकार होत असतात. सभासदांनी पावसाळा चालू होत असल्याने आपल्या हाती घेतलेल्या कामांमध्ये विद्युत सुरक्षेला स्थान देऊन सदर कामे पावसाळा चाल् होण्यापूर्वी पूर्ण करण्यासाठी प्रयत्न करावेत आपण करीत असलेल्या कामांचे योग्य ते परिक्षण करून पावसाळयामध्ये विद्युत अपघात घडू नये विद्युत सुरक्षिततेचे उपाय योजणे तसेच सदर बाब आपल्या ग्राहकाच्या लक्षात आणून देऊन त्याचे प्रबोधन करणे अत्यंत गरजेचे आहे. तरच पावसाळ्यात होणाऱ्या अपघातांवर आपणास नियंत्रण ठेवता येईल.

दिनांक ४ जुलै २०२४ रोजी इकॅम, आय ई.सी.टी आणि नॅशनल सेफ्टी कौंसिल (National Safety Council) यांच्या संयुक्त विद्यमाने गरवारे क्लब चर्चगेट येथे विद्युत सुरक्षिततेसाठी एकात्मिक उपाय (Integrated Solutions for Electrical Safety) या विषयावर



सेमिनार आयोजित करण्यात आला. या सेमिनारला सुमारे १५० सभासदांनी उस्फूर्तपणे सहभाग नोंदवला होता.

आपली सभासद संख्या वाढवून आपली संस्था सामर्थ्यशाली बनविणे हा आपला मूळ उद्देश आहे. – त्यादृष्टीने सभासदवाढीसाठी आपण सर्वानी प्रयत्न करणे गरजेचे आहे आपली इकॅम संघटना शक्तिशाली करण्यासाठी तसेच संपूर्ण महाराष्ट्रात पसरवण्यासाठी आपण नवीन सभासद बनविण्याचा प्रयत्न करावा.

नवे आर्थिक वर्ष २०२४-२०२५ सुरू झाले आहे, तरी सर्व सभासदांनी आपली आर्थिक वर्षाची सभासद वर्गणी इकॅमच्या कार्यालयात जमा करावी तसेच आपण GST क्रमांक घेतला असेल तर तो इकॅम कार्यालयाला कळवावा. सभासदांना सूचित करण्यात येते की, आपण आपल्या विभागीय इकॅम कार्यालयाशी संपर्क साधून आपली वर्गणी जर भरली नसेल तर त्वरीत भरावी दरवर्षी वर्गणी भरण्याच्या अडचणीतून मुक्त होण्यासाठी जे सभासद साधारण सभासद असतील त्यांनी जास्तीत जास्त संख्येने तहहयात सभासद (Life Member) व्हावे असे मी आपणास आवाहन करतो.

सभासदांची यादी अद्ययावत करण्याचा आमचा प्रयत्न अविरतपणे चालू आहे. सभासदांचे बरचसे पत्ते बदलले आहेत आणि त्यांना पाठवलेले मेल परत येत आहेत ज्या सभासदांचा पत्ता, दूरध्वनी क्रमांक तसेच ईमेल आय डी बदलला असेल तर त्यांनी तो त्वरीत इकॅम मुख्य कार्यालयाला कळवावा.

आपल्या आय.ई.सी.टी. मासिकामध्ये आपण आपल्या व्यवसायासंदर्भात विविध लेख छापत असतो. मी आपणास आवाहन करतो की ज्या सभासदांना आपले लेख किंवा उपक्रमांसंबंधी काही माहिती आपल्या आय ई सी टी मासिकामध्ये छापण्यास द्यायची असेल तर ती इकॅम कार्यालयाकडे पाठवावी.

आपल्याला आपला व्यवसाय करताना काही समस्या येत असतात त्या समस्या आपण इकॅम मुख्यालयाला लेखी कळवाव्यात इकॅमच्या सभासदांना येणाऱ्या समस्या सोडवण्यासाठी आम्ही प्रयत्न करू. आपल्या सभासदांना येणाऱ्या समस्यांचे निराकरण करण्यासाठी सभासदांच्या बाजूने आम्ही कायम कटीबद्ध राहू असे आम्ही आपणास आश्वासन देतो .

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Satish Sinnarkar Editor, IECT

In sops for the middle class, Finance Minister Nirmala Sitharaman hiked standard deduction by 50 per cent to Rs 75,000 and tweaked tax slabs under the new income tax regime to provide more money in the hands of salaried class with a view to boost consumption.

The standard deduction for salaried employees is proposed to be increased from Rs. 50,000 to Rs. 75,000 annually. Similarly, deduction on family pension for pensioners is proposed to be enhanced from Rs 15,000 to Rs 25,000. "This will provide relief to about four crore salaried individuals and pensioners," Sitharaman said in her Budget speech. In the last fiscal, more than two-thirds individual taxpayers have availed the new personal income tax regime. Over 8.61 crore I-T returns were filed in 2023-24 fiscal. The new tax slabs under the new income tax regime will be effective from April 1, 2024. (Assessment Year 2025-26). Sitharaman said income of up to Rs. 3 lakh will continue to be exempted from income tax under the new regime. As per the proposal, a 5 per cent tax will be levied on income between Rs. 3-7 lakh, 10 per cent between Rs. 7-10 lakh, 15 per cent



Budget will focus on employment, skilling, MSME and middle class

for Rs. 10-12 lakh. However, 20 per cent tax will continue to be levied on income between Rs. 12-15 lakh and 30 per cent for income above Rs 15 lakh. Under the existing new I-T regime, a 5 per cent tax is levied on income between Rs. 3-6 lakh, 10 per cent for income between Rs. 6-9 lakh. Shares of gold and jewellery retailers surged after Finance Minister said the government will reduce the basic customs duty on the yellow metal and silver to 6 per cent.

Nuclear energy is expected to form a crucial part of the energy mix of Viksit Bharat and it will partner with private firms to develop small and modular nuclear reactors and conduct research on newer technologies.

The finance minister has announced the abolition of the unpopular Angel Tax on all classes of investors.

Three cancer treatment medicines to be exempt from basic customs duty..."

20% TDS on repurchase of Mutual Funds or UTI is withdrawn.

Significant investments have been made to build robust infrastructure. Over 11 lakh crore rupees for capital expenditure have been allocated for infrastructure development. Private investment in infrastructure by the private sector will be promoted through viability gap funding and enabling policies..."

Union Finance Minister has proposed the creation of employment of about 4.1 crore youth over the next five years. Towards it, the finance minister has made an allocation of Rs 2 lakh crore. Similarly, for skilling the citizens so as to generate job opportunities, she proposed Rs 1.48 crore. 20 lakh youth will be skilled over a five-year period.

A total of 1,000 industrial training institutes will be upgraded, She proposed a one-time wage to all first time employees in all sectors.

The government will launch internship opportunities in 500 companies to one crore youth in five years. Interns will get exposure to real-life environment and an allowance of Rs. 5000 per month, she said. The Pradhan Mantri Janjatiya Unnat Gram Abhiyan for improving the socio-economic conditions of tribal communities in the country has been announced.

The programme aims at achieving saturation coverage for tribal families in tribal-majority villages and aspirational districts. The programme will cover 63,000 tribal villages, benefitting 5 crore tribals.

"Working women hostels will be set up. Higher participation of women in workforce to be promoted through hostels and creches...

Government will bring National Cooperation Policy for overall development.

It will provide financial support for loans upto 10 lakhs for higher education in domestic institutions.

The Government will launch a scheme to provide internship opportunities to 1 crore youth in 500 top companies with Rs 5000 per month as internship allowance and one-time assistance of Rs 6000. Other announcements.....

Credit guarantee scheme for MSMEs to facilitate term loans without collateral or third party guarantee

Budget provides Rs 2.66 lakh crore for rural development.

100 branches of India Post Payments Bank to be set up in North East Govt allocates over Rs 3 lakh crore for schemes benefiting women, girls.



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'Fire Is Always A Concern In Mumbai' 'As the city grows, so do its fire incidents.'



Twenty-four hours after a fire broke out at a chemical unit in Dombivli, on the outskirts of Mumbai, a charred, chemical stench hangs in the air.

The unit, which belongs to Indo Amines, an industrial chemical manufacturer, stands amidst several other factories, commercial establishments and a school, all within a radius of 500 metres.

This was the third major industrial fire incident reported in the city in less than a month. The firm, with a market capitalisation of about Rs 900 crore (Rs 9 billion), has informed the exchanges that the reason for the fire is yet to be ascertained.

Stakeholders in the fire safety space point out that there is a common set of reasons for fire mishaps in Mumbai: Electrical faults, the relentless growth of the city, congestion, mis-segregation of materials, and the costs involved for putting in robust fire safety equipment.

The industrial fires are in addition to the fire mishaps that occur in residential areas and non-industrial commercial establishments.

The Indo Amines unit is located in Dombivli's Maharashtra Industrial Development Corporation (MIDC) area. The previous month, 10 people died in a similar chemical factory fire in the same industrial area.

The Mumbai Metropolitan Region (MMR), estimated to be spread over 6,300 sq km, is home to several industrial areas, and many of them report minor fire incidents regularly.

A common lament among those struggling to manage the fire incidents is the continuous commercial growth of the city, which leads to over-crowding.

Santosh Warick, director, Maharashtra Fire Services, pointed out that although the Fire Act operates in Maharashtra, it was put in place only in 2008, and many of the establishments came up much before that.

"We cannot implement laws retrospectively," Warick said, adding: "The older units do not have the space to expand, so they end up storing both raw materials and finished goods in the same place."

Warick's department has its own problems. With just 250 fire officers for Mumbai city, we face a manpower crunch when it comes to conducting fire safety surveys, he says.

Over the past few decades, Mumbai has expanded and forced industrial units to move out of the main







island city.

For instance, multiple businesses from Dharavi's slums (situated in the centre of the city), which is also home to several micro industrial units, have shifted to suburban areas, such as the old parts of Bhiwandi that are filled with older establishments with little regard for fire safety norms.

"Fire is always a concern in a city like Mumbai. There is just one trend, an upward one, and as the city grows, so do its fire incidents," said a surveyor with an insurance company who did not wish to be identified.

Last month a diaper factory in Bhiwandi caught fire. In fact, fires are so common in this area that the insurance industry prefers to give the entire locality a miss.

"Some areas are best avoided. For instance, the old Bhiwandi area," said the surveyor. Despite the frequency of fire incidents, most agree the norms that exist are stringent enough.

"The NOC (*no objection certificate*) from the fire department is quite extensive and there are enough checks and balances. Post the Kamala Mills incident, these are being followed and inspected rigorously," said Pranav M Rungta, vice-president, National Restaurant Association of India.

In December 2017, a fire broke out at a pub in Mumbai's Kamala Mills complex, one of the biggest commercial complexes in the city.

High cost of fire safety equipment

The costs of fire safety equipment also act as a deterrent to putting them in place, say experts.

"The main cause of fires in small businesses is not following the norms. These require a good amount of investment; which small industries do not wish to make. Miheer Ghotikar, director for HD Fire Protect, which manufactures fire safetyrelated products, said the onetime cost of fire protection equipment in small-scale industrial units ranges between Rs 2. 5 million and Rs 10 million.

His own office premises,

in Thane's Wagle Estate, are equipped with automatic sprinkler systems, fire extinguishers, among others, and these are regularly maintained and fire drills conducted, Ghotikar added.

"Our fire system is regularly audited by a licensed contractor," he said.

Representatives from the micro, small and medium scale enterprises (MSME) said the encroachment of residential areas into the buffer zones around industrial areas was another matter of concern.

"A major issue that small industries face in cities like Mumbai and Thane is the encroachment of residential areas in the buffer zones around the declared industrial areas." said Ashish Sirsat, vice-president and spokesperson, Thane Small Scale Industries Association, which represents MSME players in the MMR region.

"There needs to be a definite, long-term plan for industrial areas, as industries cannot be shifting from one place to another as residential areas crop up around them," Sirsat added.

Fighting fire with tech

Warick's fire safety department has started outsourcing surveys to third-party agencies to address its problem of manpower shortage.

"This has helped reduce instances through awareness, particularly in the case of industries and highrises," Warick said.

Plans are also afoot for using Internet-of-Things (IOT) based technology for regulations.

"We are looking to regulate residential buildings through IOT," Warwick added. "This is at the public discussions and suggestions phase."



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India's Leaky Electricity Grid

- Amitabh Banerjee

Connectivity is the buzzword today.

Every kind of connectivity is expanding – 5G phones, TV channels, highways, faster trains, more airports, satellite Wi-Fi (coming soon). Billions of rupees are being poured into connectivity.

No, I am not alleging that this is money being thrown away, apart from the 'investments' in the bottomless pit of a certain communications company (which shall remain unnamed for fear of brickbats).

Better connectivity, they say, means higher efficiency and lower costs. For instance, highways and dedicated freight corridors are expected to reduce India's logistics costs from 13%-14% of gross domestic product (GDP) to 8%, matching global standards.

(National Council of Applied Economic Research - NCAER-says that it is already at around 8%-9%, but that's another story.)

Let's turn to a connectivity which we need 24x7 - electricity.

Bijli is now a primary need and steady and limitless power supply is taken for granted.

Happily, there is no shortage of electricity. Power production capacity exceeds 420 gigawatts (GW) today, while peak demand is 250GW.

What's the problem then, you ask?

Ah – all this power has to reach the consumer, you know.

Therein lies the rub – about one-fifth (20%) of it simply 'disappears' somewhere.

Let me explain.

India has a vast network of electric lines that connect power producers to power consumers all across the country. This is called the India grid (IG). Earlier, we had five separate regional power grids, which have been progressively combined into one massive IG by 2013.

As you can easily figure out, IG is a patchwork of multiple systems, equipment and power lines, some of which are quite old. Putting all these bits and pieces together was a huge challenge in itself, but keeping the whole structure working non-stop, 24x7, is an even bigger challenge.

As may be expected, IG is not a very efficient network. Many losses in the system mean that all the electricity that is produced does not generate revenue. This wastage is called T&D (transmission and distribution) losses.

Much of the T&D losses arise from inefficiencies in the power grid equipment, such as:

- Losses in the power transmission lines due to the inherent nature of electricity – resistive, capacitive, and inductive losses.

- Losses in transformers, and switchgear.

- Losses due to imbalances in supply and demand of power.

Apart from these 'technical' losses, there are also 'non-technical' losses – mainly theft of electricity.

All in all, about 20% of the power produced by our power plants is 'lost in transit', i.e., a big chunk of it doesn't reach consumers and some consumers don't pay for the power they use.

(Incidentally, the government is trying to reduce the theft of electricity by installing 'smart' meters which are said to prevent theft. Unfortunately, as against a plan to install over 230mn (million) such meters by 2025, only 8mn have been installed by December 2023.)

Back to T&D losses. How are other countries doing?

The world average of T&D losses is about 8%. US and most of Europe score around 5%-6%, as does China. The average for developing countries is said to be 16%.

Going by these numbers, our T&D losses are 12% higher than the international norm.

How much does this cost our country?

Here are the numbers:

- India consumed 1,221bn (billion) units of power during April-December 2023, which can be extrapolated into an annual demand of approximately 1,830bn units.

- 12% loss = 220bn units.

- At Rs7.5 per unit, this amounts to Rs1,650bn, or Rs1.65 lakh crore every year.

Since it is a recurring annual loss, one should look at its net present value (NPV) at the Reserve Bank of India (RBI)



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reporate (6.5%) over 15 years – Rs22 lakh crore.

Put differently, this means that reducing our T&D loss by just 1% will save our country Rs1.83 lakh crore in today's money.

Apart from the losses, India grid faces another problem – stability.

Renewable power plants (mostly solar) are being built at great speed, the target being 500GW by 2030, about 1.5 times today's number. While renewable power is clean and cheap, it comes with two problems:

- Fossil fuel power plants produce electricity at a steady rate with a very stable frequency, which is easy for a power grid to handle and distribute. Solar/ wind power is much more volatile, and consequently more difficult to manage.

- Huge chunks of solar power are coming up in far corners of our country, e.g. the 30GW solar plant in Gujarat. This power needs to go to far-off places, but the effective capacity of the grid to transfer power between regions is said to be limited, probably around 50GW or so.

If we keep loading our grid with more power production from one side, and more demand from the other, we might see a repeat of the disastrous grid failures in 2012, when half our population was without electricity for many hours.

There is, therefore, a good case for investing in our power grid, to reduce our losses and save money, as well as protect our population from power failures. Besides, lower grid losses mean that less coal will be burnt and less pollution created.

It should be possible to identify some areas where investment in grid equipment will produce the quickest results. For example, in FY21-22 transmission losses in the western region amounted to 9,713GW hours; twice that of the eastern region, suggesting a good starting point.

Apart from replacing ageing and inefficient equipment in the grid, there is scope for reconductoring power lines, i.e., replacing the existing power cables with newgeneration cables. These can carry twice as much power with lower losses, besides saving the costs of building additional power lines to carry the ever-increasing loads.

Bottom line - money needs to be spent on our power grid, not only on power plants.

Will we see some hefty allocations for the India grid in the coming Budget, Madam FM?



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Strategic Planning in Building Automation and Electrical Installation with WSCAD

As electrical engineering becomes increasingly integrated into general construction planning, more and more projects are requiring the use of bespoke solutions to handle tasks ranging from drafting building automation schematics to designing control cabinets and sockets. A reliable, highquality Electrical CAD (E-CAD) environment is essential for designers to deliver these solutions effectively as well as enable cohesive planning and project execution...

The six stages of strategic planning building automation with WSCAD

One: Plan hardware and software

The first step along the strategic planning pathway for building automation planners is to select the hardware and software that will be used throughout the rest of the process. This includes automation stations and systems, as well as field devices like fire protection, smoke extraction systems, valves, actuators and sensors.

Two: Draft system and control schemes

Next, planners use WSCAD's software to create detailed diagrams for the building automation systems. Between the included database and the free resources available at wscaduniverse.com, all system and control plans can be standardised, made easy to understand, and prepared according to industry best practices.

Pre-built macros within the software suite can speed up the creation of any automation schemas. Planners can also build their own custom macros, allowing them to easily include a wide range of components and specifications.

Three: Define and record objects and data points

In the next major stage of planning, all objects and data points for the schemes along with their properties, must be defined and recorded within the software. This ensures they're available via the electrical schematics right up to the time the PLCs are programmed, eliminating the need for them to be entered repeatedly as the project continues.

Four: Design the communication structure

The next step is designing the communication structure for the project. This means determining the locations of automation and control equipment rooms, network configurations, protocols, interfaces, and the placement of control and distribution cabinets. Identifying systems like AMEV's Building Automation Control Twin (BACtwin) or identifiers following the ISO IEC EN 81346 standard can help designers to create distinct structures and label components clearly.

WSCAD's software suite automatically generates a variety of lists required for project documentation, such as sensors and actuators, which streamline the ordering process and support compliance as well as assembly instructions.

Five: Create electrical installation plan and circuit diagram

WSCAD's software allows designers to place any field devices in the system and integrate BACS automation schemes into the floor plan without the need to create new entries. This can either be added into floor plans, either as PDFs or DWG files, or with new ones scanned in using WSCAD's Building AR app. As all disciplines use the same data model and database, these components can be accessed by any of the teams working on the project and be quickly and easily switched out if they need to be changed.

After the electrical installation plan is drawn up, it's usually followed by a circuit diagram. Again, this process can be speed up with macros, and all the symbols used are automatically linked to the relevant information in the database.

Six: Design the control cabinet

Without leaving the engineering software and still using the components and data up to now all components from the electrical schematics will be transferred or will be used into the cabinet structure and arranging them to scale. WSCAD software allows you to automatically route connections, calculate wire lengths, and ensure the cabinet's layout is optimised for space and accessibility. It can also generate photorealistic 3D views that help in detecting space issues and optimise component positioning.

The data this generates can immediately be used for cable labelling and for producing wire sets. It can also be used to manufacture wire harnesses as well as cabinet enclosures, mounting plates and doors on NC machines.

Documentation at the push of a button

Once the planning phase is finally complete, all the documentation – laid out in accordance with all relevant standards – can be converted into cross-referenced PDFs at the push of a button. This can even be produced in different languages as needed.

Data can also be delivered to the Cabinet AR app, giving engineers access to digital wiring lists, electrical plans, 3D views, item data and manufacturer data sheets via tablet or smartphone. If builders ever need to make changes to the plans, WSCAD's innovative redlining function can share changes and comments with everyone involved in the project, including the design departments. This simplifies communication, creates transparency and ensures traceability.



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INTEGRATED SOLUTIONS FOR ELECTRICAL SAFETY

Inauguration



Chief Guest, Shri Shreegopal Kabra lighting the lamp of awareness



Shri M D Salvi, Guest of Honour, lighting the lamp

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Shri Devang Thakur, Gen Secretary, Ecam, Felicitating Shri Rajesh Deoghare of NSC



Shri Satish Sinnarkar, Editor of IECT, Felicitating the guest of honour

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Release of IECT issue of July at the hands of dignitaries



Release of Seminar book at the hands of dignitaries



Shri Devang Thakur, GS, Ecam, Shri Devang Thakur Felicitating Felicitating the faculty, Shri Sunil Borse



Chairman of first session. Shri Satish Kazi



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Appreciation by the Senior Most!

Dear Satishji,

Yesterday's Seminar was the best one of ECAM in many years, thanks to the untiring efforts by you and your young team. Prasanna did very good compearing.

Subjects of the Seminars were very well chosen and in sync with the main theme of ECAM's centenary year "safety".

Participants were enthusiastic, venue was very comfortable with good stage and audio- visual facilities and the food for lunch was sumptuous.

Thanks for inviting me.

All the best I for all your endeavours.

My good wishes to Prasanna and your team.

Thanks & Regards

Satish Kazi



Shri Satish Kazi



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Safe Currents @ TATA Power Empowering Contractors for Electrical Safety

Mr. Muzammil Khan - Head Safety - Distrubution

Electrical safety is a critical concern of the power industry, particularly for contractors who are often on the front lines of electrical work. In India, we are seeing a rapid growth in development and urbanization, the importance of adhering to electrical safety standards cannot be overstated. This article delves deeper into the essentials of electrical safety for contractors, highlighting the current landscape, common hazards, best practices, technological advancements, and training programs that can be made available to ensure a safer working environment for our stakeholders and workers.

The Current Landscape

India's power sector is one of the largest in the world, contributing significantly to the nation's GDP and development. However, it is also one of the most hazardous sectors, with electrical accidents being a major cause of injuries and fatalities. Workers and contractors often face numerous electrical safety challenges, including inadequate training, substandard equipment, and lax safety protocols. Addressing these challenges is imperative to safeguarding lives and maintaining the integrity of power projects.

Common Electrical Hazards

Electrical hazards are omnipresent on every site. Some of the most common hazards encountered by workers are:

Electrocution caused by direct contact with live wires or equipment.

Arc Flash resulting from electrical faults that produce a high-energy discharge.

Faulty Wiring poorly installed or damaged wiring that can lead to fires or electrical failures.

Damage to Underground Services causing fatal accidents and severe injuries

Statistics indicate that a significant number of workrelated accidents in India are due to electrical issues. These incidents emphasize the need for stringent safety measures and continuous vigilance.

Tata Power's Commitment to Safety

Tata Power, as a leading electricity utility company in India, is unwavering in its commitment to safety. We believe that "safety" is not just a compliance requirement but is our "core value" that drives our operations. Our dedication to creating a safe work environment is reflected in our stringent safety protocols, continuous training programs, and investment in cutting-edge technologies. Tata Power aims to set the benchmark for electrical safety in the industry, ensuring that all contractors and employees operate in a risk-controlled environment.

Implementing best practices is crucial to mitigating electrical hazards. Let's look at some key safety protocols that should be implemented:

Best Practices for Electrical Safety

Training & Competency Building Ensures that all workers, especially electricians, are regularly trained and upskilled.

Personal Protective Equipment (PPE) usage to be made mandatory at all times during work.

Regular Inspections conducted on regular routine for electrical systems and equipment to identify and rectify standard deviations and eliminate potential hazards.

Lockout/Tagout & "Test-Out" Procedures must be implemented to ensure that electrical equipment is properly isolated and cannot be inadvertently reenergized during maintenance work.

Golden Rules for our Electricians

Wear PPE such as E Class Helmets, Face Shields, Arc Flash Suits, Electrical Safety Shoes and Electrical Hand Gloves.

Avoid Trip Hazards Be aware of potential trip hazards at work and clear the area for safety.

Use Safety Harnesses When working at height.

Approved Equipment Only BIS/ISI marked equipment for maintenance must be used.

Standard Tools Contractors must use tools and tackles such as Neon Testers, Discharge Rods, Portable



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Clamps/ Earthing Clamps that are in standard and sound condition.

Report Defective Tools Immediately report defective gear, tools, and tackles to the supervisor so they can be taken out of service.

Insulated Tools Do not use tools without the required insulation.

Follow Work Permit System Adhere strictly to the work permit system for all non-routine activities.

Isolating Procedure LOTOTO (Lockout-Tagout-Test Out) must be followed to prevent the hazardous energy release.

By adhering to these practices, contractors can significantly reduce the risk of electrical accidents on their sites.

The advent **Tethnologisch Advignese miftets** promising solutions for enhancing electrical safety. Innovations such as smart grids, advanced insulation materials, and safety monitoring systems can greatly reduce the likelihood of electrical accidents. Tata Power has been at the forefront of adopting these technologies, demonstrating their benefits through pilot projects and large-scale implementations. Contractors are encouraged to explore and invest in these advancements to improve safety outcomes.

Training and Awareness Programs

Continuous training and education are fundamental to maintaining good electrical safety standards. Numerous training programs and resources are available for contractors in India. Tata Power, for instance, offers comprehensive training modules to workers that cover various aspects of electrical safety, from basic principles to advanced techniques. These programs are designed to keep contractors updated on the latest safety practices and regulatory changes.

"Together we can make: Sustainable Attainable"

Electrical safety is a non-negotiable aspect of the industry, particularly for contractors who are directly exposed to potential hazards. By adhering to regulations, implementing best practices, leveraging technological advancements, and participating in continuous training, contractors can create a safer working environment. Tata Power actively helps all contractors to prioritize electrical safety, not only to ensure the successful and timely completion of our projects but more importantly to protect the lives of our front-line workers.

Lighting accessories in electrical work include :



- 1. Light fixtures_ (e.g., ceiling lights, table lamps, floor lamps)
- 2. Lamp holders_(e.g., socket, bulb base)
- Bulbs_ (e.g., LED, incandescent, fluorescent)
- 4. Switches_ (e.g., toggle, dimmer, smart switches)
- 5. Outlets_ (e.g., receptacles, socket outlets)
- 6. Circuit breakers_ (or fuses) for overload protection
- 7. Wiring and cables_ (e.g., Romex, THHN, XHHW)
- 8. Connectors and fittings_ (e.g., wire nuts, lugs, bushings)
- Lighting controls_ (e.g., timers, photocells, occupancy sensors)
- 10. Dimming modules_ (e.g., 0-10V, DALI)
- 11. LED drivers_ (for LED lighting)
- 12. Ballasts_ (for fluorescent lighting)
- 13. Lamp shades and diffusers_ (for light distribution and aesthetics)
- 14. Mounting hardware_ (e.g., brackets, clips, screws)

These accessories are used to install, connect, and control lighting systems in various settings, including residential, commercial, and industrial applications.





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At Efficienergi Consulting Pvt Ltd, we pride ourselves on being India's most reputed consulting firm dedicated to improving the health and efficiency of electrical power networks. With over 20 years of experience in the industry, our team of highly qualified professionals, including Chartered electrical safety engineers and BIS committee members, has been at the forefront of delivering innovative solutions to complex electrical challenges.

Our mission is to reshape the way electrical networks are managed by enhancing power quality and safety through technology-enabled, data-driven tools. As part of this mission, we have developed secqr[®], a cutting-edge platform designed to digitize and streamline your electrical audits, tests, and inspections which we have been using for the past 5 years to carry out our operations.

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We believe advanced and innovative solutions to be the key to taking the services and value we generate for our clients to a new high, which is why we carry out our services through secqr[®], our own flagship cloud analytics and IoT platform, designed to optimise test execution and data collection processes, enabling automated actionable insights and report generation, remote monitoring and control of our advanced Power Quality Analyzers, and much more.

secqr[®] is designed with a partner-centric approach, making it an ideal solution for electrical contractors, facility managers (FMs), auditors, and other professionals in the electrical industry. Our partnership model ensures that our partners can leverage the full potential of secqr[®] to deliver exceptional services to their clients.secqr[®] is a platform specially designed for electrical network testing and analysis, secqr[®] has automated tests that cover the entire electrical network - from power distribution to the last mile of electrical equipment. It has the potential to revolutionize the way we manage electrical network

The goal of secqr[®] is to provide a one-stop integrated solution for Electrical Network Health, Performance, Reliability and Safety.

Safety Efficiency Compliance Quality Reliability [®] secqr[®] is

already used to monitor over 500 unique electrical health parameters. In diagnoses conducted across 60,000+ electrical locations in 250+ facilities, secqr[®] identified electrical faults in 12,000+ locations

Key Features of secqr®:

• Mobile App: Conduct inspections and audits seamlessly with our user-friendly mobile application.

• Dashboard: Access real-time data and analytics to monitor the health of your electrical systems.

• Analytics Engine: Gain actionable insights from detailed analysis of your electrical network performance.

• Automated Reports: Generate comprehensive reports quickly, reducing on-field execution time by 50%.

We invite you to partner with us and experience the transformative power of secqr[®]. Together, we can set new standards in electrical safety and efficiency.

As our goal is to transform the way clients manage their Electrical Networks, we provide services that follow the complete lifecycle of an Electrical Network, right from the greenfield stage where we carry out Power System Design viability checks, Equipment installation testing, Equipment Functionality, Performance and Efficiency tests, Integrated System Tests, etc.

In the Brownfield/operational stages, we strive to solve problems related to the Reliability and Safety of existing Electrical Networks, through various Electrical Network Health Analysis tests related to Earthing, Electrical Network Capacity and Loading, Ground Potential and Leakage Current Assessments, Exploratory/ Compliance specific Power Quality Audits, Power System Studies, Electrical Safety Audits

and Risk Assessment. We also solve specific issues related to the aforementioned parameters that are there in the Electrical Network, by finding the root causes of these issues, and their impacts, and provide actionable recommendations to reduce equipment damage, interruptions, and downtime, thereby reducing existing and potential Losses and Risk generated by an unoptimized Electrical Network, Economical or otherwise.

To learn more about how secqr[®] can benefit your organization and to schedule a demo, please contact us at 7208501716 / mkt@efficienergi.com or visit our website at https://efficienergi.in/. Let's embark on this journey towards electrical excellence together.






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Highlights of Economic Survey 2023-24

Following are the highlights of the Economic Survey 2023-24 tabled in Parliament by Finance Minister Nirmala Sitharaman on Monday. The Survey is authored by Chief Economic Advisor V Anantha Nageswaran and his team.

- Projects economic growth at 6.5-7% in FY25 versus 8.2% in 2023-24
- Unprecedented third popular mandate of Modi government signals political, policy continuity
- Domestic growth drivers supported economic growth in FY24 despite uncertain global economic performance
- Indian economy on a strong wicket and stable footing, demonstrating resilience in the face of geopolitical challenges
- To sustain post-pandemic recovery, there has to be heavy lifting on the domestic front
- Reaching agreements on key global issues like trade, investment and climate, has become extraordinarily difficult
- Short-term inflation outlook benign, but India faces persistent deficit in pulses and consequent price pressures
- Expectations of normal monsoon, and moderating global prices of imports give credence to benign inflation projections by RBI
- Hardships caused by higher food prices for poor and low-income consumers can be handled through direct benefit transfers or coupons for specified purchases valid for appropriate durations
- Suggests ways to explore whether India's inflation targeting framework should target the inflation rate excluding food items
- Escalation in geopolitical conflicts and its impact may influence RBI's monetary policy stance: Eco Survey.
- Outlook for India's financial sector appears bright, says Economic Survey
- As financial sector undergoes critical transformation, it must brace for likely vulnerabilities originating globally or locally
- Economic Survey 2023-24 says healthier corporate and bank balance sheets will further strengthen private investment

- India's policy adeptly steered through challenges, ensuring price stability despite global uncertainties
- Tax compliance gains, expenditure restraint, and digitisation help India achieve fine balance in govt's fiscal management: Survey
- Capital markets becoming prominent in India's growth story; market resilient to global geopolitical, economic shocks
- Al casts a huge pall of uncertainty over the impact on workers across all skill levels
- Increased FDI inflows from China can help India enhance participation in global supply chain, boost exports
- As much as 54% of disease burden due to unhealthy diets; need transition towards balanced, diverse diet
- Remittances to India to grow at 3.7% to \$124 billion in 2024, 4% in 2025 to reach \$129 billion.



RERC sets tariff for 1,000 MW SOLAR PROJECTS

The Rajasthan Electricity Regulatory Commission (RERC) has sanctioned Rajasthan Urja Vikas & IT Service (RUVITL) to procure 1,000 MW of solar power from seven different developers.

RUVITL signed power purchase agreements with the chosen developers between February and March 2024 for a duration of 25 years. The decision, designed to meet the state's renewable energy purchase obligations and daytime power demand, upheld the competitive bidding process and approved tariffs ranging from Rs 2.61 per kWh to Rs 2.62 per kWh. The approval of this procurement is anticipated to raise the attainment of the other renewable purchase obligation category from 26.35 per cent to 27.77 per cent.

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पंचायत राज संस्थांमध्ये विविध विकासात्मक कामे व विकास कामांसाठी लागणाऱ्या सेवा तथा वस्तूंची खरेदी यासाठी ई-निविदा कार्यप्रणालीचा अवलंब

पंचायत राज संस्थांमध्ये विविध विकासात्मक कामे व विकास कामांसाठी लागणाऱ्या सेवा तथा वस्तूंची खरेदी यासाठी ई-निविदा कार्यप्रणालीचा अवलंब करणे संदर्भ क्रमांक १ येथील शासन निर्णयान्वये बंधनकारक करण्यात आले आहे. ई-निविदा प्रणाली अंतर्गत सुधारित कार्यपद्धती व निविदा सूचनेचा कालावधी संदर्भ क्रमांक २ व ३ येथील शासन निर्णयान्वये विहित करण्यात आला आहे. पंचायत राज संस्थांतर्गत रस्त्यांची कामे व पुलाच्या दुरूस्तीची कामे, महाराष्ट्र ग्रामीण रस्ते विकास संस्था अंतर्गत प्रधानमंत्री व मुख्यमंत्री ग्राम सडक योजनेमधील कामे, जिल्हा परिषद स्वीय निधी, तीर्थक्षेत्र, २५१५ मुलभुत सुविधा तसेच अन्य लोकहिताची विविध विकास कामे त्वरेने मार्गी लागण्याच्या दृष्टीने तसेच पावसाळा सुरु होण्यास एक महिन्याचा कालावधी शिल्लक असल्याने ग्राम विकास विभागाच्या उक्त संदर्भाधीन दिनांक २३ सप्टेंबर, २०१३ च्या शासन निर्णयातील परिच्छेद-४ (२) व दिनांक २६ जुलै, २०१६ च्या शासन निर्णयातील परिच्छेद १ मध्ये सदर निविदा बोलाविण्यासाठी निर्धारित केलेला कालावधी, उपरोक्त वाचा मधील अनुक्रमांक १९ येथील दिनांक १८ जून, २०२४ रोजीच्या आदेशान्वये, कामांच्या निविदेच्या किंमतीनुसार, अल्प कालावधी निश्चित करून दिनांक ३० जून, २०२४ पर्यंत मंजुरी देण्यात आलेली आहे. सार्वजनिक बांधकाम विभागाने संदर्भिय क्र. २० येथील शासन निर्णयानुसार सन २०२३ – २४ मध्ये ज्या ठिकाणी महानगरपालिका/नगरपालिका, नगरपंचायत, ग्रामपंचायत, जिल्हा परिषद / लोकसभा निवडणूका होणार असल्याने सन २०२३ २४ मधील विविध लेखाशिर्षांतर्गत मंजूर कामांच्या निविदा प्रक्रिया बाकी असल्याचे लक्षात घेऊन ई निविदा प्रसिद्ध करण्याचा कालावधी निश्चित केला आहे. हि बाब विचारात घेता ग्राम विकास विभागासाठी ई निविदा प्रसिद्ध कालावधी निश्चित करण्याची बाब विचाराधीन होती.

त्यास अनुसरून उपरोक्त वाचा मधील अनुक्रमांक १९ येथील दिनांक १८ जून, २०२४ रोजीच्या परिपत्रकातील, ई निविदा प्रणाली अंतर्गत अल्प कालावधीची ई निविदा सूचना प्रसिध्द करण्याचा कालावधी दिनांक ३० सप्टेंबर, २०२४ पर्यंत खालीलप्रमाणे राहिल.

अ.क्र.		निविदा सूचना क्रमांक व कालावधी				
	कामाच्या निविदेची किंमत	प्रथम	द्वितीय तृती			
9	रू.१.५ कोटी पेक्षा कमी	८ दिवस	४ दिवस	३ दिवस		
2	रू. १.५ कोटी ते २५ कोटी	८ दिवस	४ दिवस	३ दिवस		
3	रू.२५ कोटी ते १०० कोटी	१५ दिवस	७ दिवस	३ दिवस		
8	रु.१०० कोटी पेक्षा जास्त	२१ दिवस	११ दिवस	३ दिवस		

सदर आदेश सर्व मुख्य कार्यकारी अधिकारी, जिल्हा परिषद यांनी त्यांच्या अधिनस्त सर्व खाते प्रमुख तसेच लोकप्रतिनिधींनी सुचविलेल्या ग्रामीण मुलभूत सुविधा पुरविणे (२५१५ १२३८) या अंतर्गतची कामे ज्या ठिकाणी सार्वजनिक बांधकाम मंडळ यांच्या अधिनस्त यंत्रणा कार्यरत असेल अशा यंत्रणांच्या निदर्शनास आणून उपरोल्लेखित कामे मुदतीत पुर्ण होतील याची दक्षता घ्यावी. दिनांक ०१ ऑगस्ट, २०२४ पासून वरील सवलत आपोआप रद होऊन, संदर्भीय शासन निर्णय दिनांक २३ सप्टेंबर, २०१३ व दिनांक २६ जुलै, २०१६ मधील या संदर्भातील तरतूदी पुनःश्च लागू होतील. सदर शासन आदेश महाराष्ट्र शासनाच्या www.maharashtra.gov.in या संकेतस्थळावर उपलब्ध करण्यात आला असून त्याचा संकेताक २०२४०७०९१७३८४३३८२० असा आहे. हा आदेश डिजीटल स्वाक्षरीने साक्षांकित करून काढण्यात येत आहे. महाराष्ट्राचे राज्यपाल यांच्या आदेशानुसार व नावाने.

> प्रशांत पाटील उप सचिव, महाराष्ट्र शासन

किर्लोस्कर म्हणजेच जनरेटर

मी टांझानियात असताना दरारोज संध्याकाळी व्यायामाला, कारियाकू भागातील जिममध्ये जायचो. त्या जिममध्ये सुदानीज, लेबनिज, केनियन दूतावासातील कर्मचारीवर्ग व्यायामाला यायचा. सगळ्या आफ्रिकेत कायमच वीजपुरवठा अनियमित असतो. त्यामुळे एकदा का वीजूमावशी गेली की, जनरेटर सुरू करायला लागायचा आणि मग रुसलेली वीजूमावशी परत यायची...! नेहमीप्रमाणे त्या दिवशी वीज अचानक गेली आणि सगळे सुदानीज ''किर्लोस्कर, किर्लोस्कर'' म्हणायला लागले...! मला दोन मिनिटे काहीच समजेना, 'किर्लोस्कर...?' मी माझ्या सुदानीज मित्राला विचारले, ''तुम्हाला किर्लोस्कर कसे माहीत..?'' तो म्हणाला की, ''आमच्या इथे वीज गेली की किर्लोस्कर लावतात.'' मी त्याला म्हणालो, ''तुला जनरेटर म्हणायचे आहे का..?'' तो म्हणाला, ''जनरेटर म्हणजे काय..?'' मी म्हणालो, ''तुम्हाला डीझेल किंवा पेट्रोलवर चालणारे इंजिन म्हणायचे आहे का, ज्यामुळे वीज परत येते..?'' तो म्हणाला, ''त्यालाच किर्लोस्कर म्हणतात...!'' मी शंतनुराव किर्लोस्करांना उभ्यानेच साष्टांग नमस्कार घातला...! वनस्पती तुपाला, ''डालडा'' म्हणतात, हा चमत्कार ऐकला होता. पण जनरेटरला ''किर्लोस्कर'' म्हणतात, हा चमत्कार दाटून आला आणि मी व्यायामाला लागलो...!

२४ एप्रिल शंतनुराव किर्लोस्कर यांचा स्मृती दिन !! त्यांना विनम्र अभिवादन...!

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धुळे-नंदुरबार विभागाचा सेमिनार



२८ जून रोजी MCCIA च्या वतीने GEM, MSME या विषयावर दुपारी ४ ते ७ वा पर्यंत धुळे-नंदुरबार विभागाने प्रशिक्षण व चर्चा आणि माहितीचा सेमिनार घेतला कार्यक्रम उत्तम प्रकारे यशस्वी रित्या पार पडला. कार्यक्रमासाठी GEM च्या मार्फत श्री.हरीश पाल व डिजिटल लोन अप्लिकेशन तर MCCIA च्या वतीने प्रतिनिधी ऐश्वर्य सोनगीरकर हे आले होते. कार्यक्रमास विभागातून ७४ सभासद हजर होते वास्तविक पावसामुळे भागातून लोक येऊ शकले नाहीत तसे ९५ लोकांनी नोंदणी केली होती. हा कार्यक्रम होणेसाठी श्री.अनिरुद्ध ब्रह्मे सो संचालक MCCIA यांचे फार मोठे सहकार्य झाले आणि हा कार्यक्रम देणे साठी आपले इकॅम मुंबई संचालक श्री. शिंदेकर यांनी मोलाची भूमिका पार पाडली. या सर्वांचे धन्यवाद





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दिनांक.१३.०६.२०२४ रोजी नगर येथे मराठा चेंबर ऑफ कॉमर्स अँड इंडस्ट्रीज या नामांकित संस्थेकडून श्री अनिरुद्ध ब्रम्हा सर यांच्या प्रयत्नाने श्री मानस जोशी सर पुणे आणि त्यांची संपुर्ण टिम यांचे नगर विभातील संघटनेच्या सर्व सभासदासाठी GST या विषयावर चर्चा सत्र आयोजित करण्यात आले होते. कार्यक्रमाचे

चंबर ऑफ अनिरुद्ध ब्रम्हा त्यांची संपुर्ण ाठी GST या . कार्यक्रमाचे राज्य) तिसाद



पदाधिकारी यांनी हा कार्यक्रम पार पाडण्यासाठी खूप मेहनत घेतली. २७/०६/२०२४ रोजी नगर रिजनला जी एम पोर्टल याविषयावर

अध्यक्ष स्थान श्री उमेश रेखे (उपाध्यक्ष महाराष्ट्र राज्य) यांनी स्वीकारले. कार्यक्रमास खूप चांगला प्रतिसाद मिळाला. नगर विभागाचे अध्यक्ष व सर्व संचालक मिळून साधारण ७० ते ८० सभासदांनी यामध्ये सक्रिय सहभाग नोंदवला. हा सर्व कार्यक्रम इकॅम महासमितीचे संचालक श्री नरेंद्र शिंदेकर यांच्या विशेष प्रयत्नातून संप्पन्न झाला. तसेच नगर विभागाचे सचिव श्री अर्जुन ससे, संघटनेचे मार्गदर्शक माननीय श्री मनोहरजी शहाणे साहेब व सर्व

घेतला कार्यक्रम उत्तम प्रकारे यशस्वी रित्या पार पडला.

कार्यक्रमासाठी GEM च्या मार्फत श्री.रविंद्र कुमार हे दिल्लीहून आले होते तर MCCIA च्या वतीने प्रतिनिधी गुंजन भोज्वान, इरा कुलकर्णी मॅम आणि CA संजना या आले होते. कार्यक्रमास विभागातून ३५ सभासद हजर होते वास्तविक पावसामुळे भागातून लोक येऊ शकले नाहीत तसे ५०लोकांनी नोंदणी केली होती. हा कार्यक्रम होणेसाठी श्री.अनिरुद्ध ब्रह्मे सो संचालक MCCIA यांचे फार मोठे सहकार्य झाले आणि हा कार्यक्रम देणे साठी आपले इकॅम मुंबई संचालक श्री. शिंदेकर यांनी मोलाची भूमिका पार पाडली.



पश्चिम महाराष्ट्र विभागाचा सेमिनार

२८ जून रोजी MCCIA च्या वतीने GEM, MSME आणि GST या विषयावर सकाळी ११ ते ३ वा पर्यंत पश्चिम महाराष्ट्र विभागाने प्रशिक्षण व चर्चा आणि माहितीचा सेमिनार



PUNE REGION ORGANISED A Seminar on solar power generation

On 29 June 2024, Our Association organized a seminar for members with Kalpa Power, a leading company working in Solar Power Generation.

The topics discussed, as follows:

What is new in solar Power Generation, What are the policies, What are the opportunities for business growth for members.

या सर्वांचे धन्यवाद.

महावितरण जळगाव झोनचे मुख्य अभियंता श्री मुलानी साहेब यांचा सत्कार

ईकॅम जळगाव रीजन तर्फे महावितरण जळगाव झोनचे नूतन मुख्य अभियंता आय. ए. मुलानी साहेब हे रुजू झाल्यामुळे त्यांचा पुष्पगुच्छ व शुभेछा देवून सत्कार करण्यात आला त्यावेळी सोबत जळगाव ईकॅम रीजन चे उपस्थीत ठेकेदार व कार्यकारिणी सदस्यां उपस्थीत होते.



I lluminating Landscapes: K-lite's High-Quality Architectural Luminaires

"Established in 1977, K-lite is renowned for its extensive range of high-quality architectural luminaires and poles that cater to diverse applications and design preferences."

Since its inception, K-lite through it manufacturing units in focusses on the production of sustainable and efficient LED luminaires. K-lite's products meet stringent quality standards while embodying elegant aesthetics.

K-lite's landscape products are designed to withstand various environmental challenges such as wind, water, direct sunlight, rain, and dust. Each outdoor luminaire boasts high IP (ingress protection) and IK ratings, ensuring robustness and durability suitable for outdoor and landscape applications.

The Range offered by K-lite is comprehensive and versatile. It includes Linear Wall Washers, Up-Down Lighters, LED Strips/Neon Flex, Promenade Lighting, Bollards, Underwater Lighting, Post Top Luminaires, Bulkheads, Pathfinders, IP67 Linear Profiles, Polar Lighting, and a newly introduced series of Facade Lighting. K-lite's commitment to innovation and quality, shines through in every product, blending functional efficiency with aesthetic appeal. Each luminaire in the landscape range is meticulously crafted to enhance outdoor spaces, offering not only illumination but also enhancing the visual appeal of architectural environments. Whether illuminating pathways, accentuating building facades, or creating ambiance in public spaces, K-lite's luminaires deliver reliability and elegance, making them the preferred choice for architects, landscape designers, and developers aiming to transform outdoor spaces with lighting solutions that integrates form and function seamlessly.

K-LITE INDUSTRIES PRIVATE LIMITED

D-10, Ambattur Industrial Estate, Chennai - 600 058. T : 26257710, 48591800, 48581950.

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Cedar Interconnect Suspended Down





Product features

Cedar Linear Series is highly innovative product suitable for various indoor applications. CedarLinearInterconnect sets a clean visual architectural environment in the indoor space. The extruded aluminum profile counters a precise in line appearance that complements open space design plans and complex indoor architectures. With simple elegance and adaptability, it suits to most interior design applications.

Specifications

- Linear is available in 4ft & 8ft in interconnect & down version. Also available in 3ft & 2ft.
- Options are available with wattages 18W to 56W with best in class Lumen per watt-more light for less cost.
- Ano dized aluminum extrusion body with excellent mechanical strength & durability.
- Plastic-extrusion diffuser is made of special Polycarbonate material with high transmission index, delivering superior light output.
- Luminaire provides a high level of architectural flexibility with interconnection the luminaires, to meet architects needs to match.
- Uniform, high quality light, with good color rendering capabilities reveals true color of your surrounding space.
- CCT options available in 5700K & 4000K.
- Rated life of L70 @ >50000 hours ensures uninterrupted long service life.
- In-built electrical protections like over voltage, short circuit, over load, mis wiring, surge protection of min 2kV internal with electrical class I rating for additional safety precautions.
- Can be provided with DALI Ballast.
- In built constant current driver is provided in the luminaire housing or driver can be provided externally to place driver remotely also.

Installation & Maintenance

- Suitable for Surface mounting on direct RCC ceiling.
- Universal suspension system with quick on site adjustment up to 2000 MM.
- Easy interconnect with 3-directional fixing with Align Screws and gives more rigidity.
- Easy driver replacement with side End cap opening.

Applications

Compliance

- Office Lighting
- Airport Terminals
- Museums
- Shopping Malls
- IP 20
 Class I
- S



Family Description	Family Gode	Wattage	œ	UPW	Length	Section	Diver	Body Color	Version
	ш	36	57=5700K	00=	24M= 2400MM	SA-DN= Standaione Down	N⊨Std	WHEWhite	
		48	40=4000K				A=Analog	BK=Black	
WOP		56	2.3				D-DAU	GR=Grey	vo
		18	57=5700K	00=	12M= 1200VM				
		24	40=4000K						
		28							

PLOT A-30, PHASE - II, ZONE-B, MEPZ, CHENNAH045 | Tel:+91-4422625567 | www.venturelighting.com | www.venturelighting.in | marketing@vlindia.com

Published By Campaian

Providing Net meters for Rooftop solar installations by MSEDCL

MERC has notified MERC (Grid Interactive Rooftop Renewable Energy Generating Systems) Regulations, 2019 and accordingly guidelines issued for installation of Renewable Energy Generating System on Rooftop or any mounting structure by existing consumers of MSEDCL in their premises (ref.2).

The PM Surya Ghar Muft Bijli Yojana launched by Govt of India on 13.02.2024 with target of installing rooftop solar on 1 crore households to generate their own electricity in which electricity up to 300 units free, where subsidy given up to Rs.78,000/- for consumers up 3 KW residential consumers and Rs 18,000/KW for Group housing societies common purpose up to 500 KW. For MSEDCL to expedite progress of rooftop solar installation. This will reduce delay incurred in testing of Solar Net Meters and also reduces financial burden of Solar Net Meters to solar rooftop consumers.

Accordingly, all field officers are instructed to provide Solar Net meters allotted by MSEDCL for rooftop solar installations. Any delay in this matter will be viewed seriously.

This instructions to be followed scrupulously. Enel: As above

> (D. R. Aundhekar) Chief Engineer (SPD)

MSEDCL, target is of 20 lakhs households rooftop installation.

Presently, Solar Net Meter is purchased by consumer and further testing is done. This Solar Net Meter testing delays scheme progress. MoP in the letter under ref. (3) has stated to **Provide Solar** Net meters for Rooftop solar installations by MSEDCL. Competent Authority accorded approval to provide Solar Net Meters for rooftop solar installations by





Aim to make India core in global energy revolution: Ola Electric



In March 2021, Ola Electric founder Bhavish Aggarwal was seen surveying an empty 500-acre land surrounded by shoe factories, temples, bakery shops, coconut trees and dusty roads in Pochampalli town of Krishnagiri district, Tamil Nadu.

Many excavators and workers were busy at the construction site to build the Ola Future factory for electric vehicles.

Among them was Aggarwal, who like other workers was wearing safety boots, a hard hat, a reflective vest and sunglasses.

Playing the Punjabi hip-hop song Satisfya, Aggarwal was testing a black prototype of Ola's electric scooter. A lot has changed since then.

The Ola Future factory has become the largest integrated and automated electric two-wheeler manufacturing plant in India.

The facility, built in eight months, achieved an installed capacity of one million units per year by October last year.

"There's a lot of opportunity to build the future of energy here in India.

"There are companies like Tesla which are doing a lot in the Western world.

"But the world can't achieve its sustainable aspiration without India building a sustainable future as the country is about 20 per cent of the world population," said Aggarwal.

He added, "Our vision at Ola Electric is to make India a core part of the global energy revolution.

"There is an opportunity for the whole industry. The solutions that need to be built for India are relevant for the Global South.

"Very few people buy luxury cars in this region.

"The opportunity is to accelerate the electric transition in India and become global leaders in this space."

At a time when global players, including American electric vehicle giant Tesla, are potentially seeking local partners to establish operations in India, Aggarwal welcomed them and said this is going to help the Indian EV ecosystem.

He said, "The more global companies come and make in India, it is better for them and the country," said Aggarwal.

He said, "At an industry level, India should attract investments, cutting-edge technology and talent.

"Leading global products should be made in the country, for India and the world."

It takes over three hours of driving and more than 130 km from tech hub Bengaluru to reach the womenonly Future factory in Krishnagiri.

Ola Electric Mobility manufactures EVs and core EV components such as battery packs, motors, and vehicle frames at the Future factory.

It is being expanded to become the largest twowheeler factory in the world with an annual production capacity of 10 million units.

Inside, senior executive Jose Pinheiro, a former General Motors veteran, gave a tour of the hangar-like building, which reverberates with grinding metallic sounds as robots work alongside humans.

The Future factory is a fully automated plant.

The facility is built on Industry 4.0 principles. Soft Bank-backed Ola said it uses proprietary artificial intelligence (AI) for optimal performance.

Published By Campaian

One can see many robots moving autonomously, carrying loads from one location to another on the factory floor.

There are also robots working on key manufacturing process lines like painting and welding, as well as battery and motor assembly.

Artificial intelligence (AI)-driven quality management systems ensure dimensional accuracy and detect visual defects, used in battery manufacturing and weld lines.

Scaling up Gigafactory

A few kilometres away from the Future factory is Ola's newly-set up Gigafactory.

It is the first of its kind for Li-ion cell manufacturing in India, with an initial capacity of 5 gigawatt hours (GWh).

It will be further scaled up in phases to 100 GWh at full capacity, according to the sources.

The facility is operational and is being expanded.

The firm plans to power its EVs with its lithium-ion battery cells by early next year.

This would help reduce reliance on imports and lower electric vehicle production costs, according to industry experts.

India's EV makers currently depend on lithium-ion battery cells from countries such as South Korea, China, Japan, and Taiwan.

"We have begun trial production. Globally, only a few

countries have gigafactories, and within them, only a few companies have this level of advanced cell technology.

"Our focus is on doing all the steps required to build a good-quality cell.

"We have been able to set up a world-class laboratory and develop our intellectual property," said Aggarwal.

He added, "In terms of timeline, early next year is when you can expect to see our cells in our products.

"We are well on our way and are in the final stages of the process."

Aggarwal said the firm has already invested about \$100 million for phase-1 of the gigafactory expansion.

Last year in February, Ola signed a memorandum of understanding (MoU) with the Tamil Nadu government committing investments of Rs 7,614 crore for manufacturing EVs and lithium cells gigafactory in the state.

About 115 km away from the Futurefactory is Ola's battery innovation centre (BIC) in Electronic City, Bengaluru. It is equipped with 'unique and cutting-edge' laboratory equipment to cover all aspects of cell-related research and development (R&D).

The BIC focuses on developing cell and battery technology and manufacturing processes for the forthcoming cell manufacturing at the Ola Gigafactory.





The Potential of Smart Grid Innovation

The rising use of technology in our daily lives, along with factors like urbanisation and population expansion, are creating an unprecedented demand for electricity around the world. There is an urgent need for a more intelligent and sustainable method of managing the flow of electricity, since our energy systems are finding it increasingly difficult to meet this growing demand. This is where the technology of the smart grid is useful...

An enhanced electrical network known as a 'smart grid' combines modern information and communication technology with conventional power systems. It completely transforms how we generate, distribute, and use power, allowing for a more dependable and efficient grid that can handle rising demand and encourage the incorporation of renewable energy sources.

Important Elements and Features

Advanced Metering Infrastructure (AMI): The core component of a smart grid is its smart metres. They facilitate the exchange of data in both directions between utilities and customers, giving real-time information on consumption. Accurate billing, demand response initiatives, and more effective energy management are made possible by this kind of data.

Distribution Automation: To automate and monitor the distribution process, smart grids make use of sensors, remote control devices, and communication networks. This reduces the frequency of power outages, enhances problem detection and restoration, and guarantees that customers will always receive electricity.

Integration of Renewable Energy: As renewable energy sources become more widespread, smart grids are essential for controlling their unpredictability. Smart grids optimise the integration of intermittent sources, such as solar and wind, into the current system through sophisticated control algorithms.

Demand Response: Demand response programmes, which encourage customers to modify their electricity consumption in response to real-time price signals, are made possible by smart grids. As a result, there are financial and environmental savings as well as a reduction in peak demand and overall energy consumption due to the more effective use of electricity.

The Advantages of Smart Grids

Improved Grid Reliability: Smart grids provide for selfhealing capabilities, fast fault detection, and real-time monitoring. They can minimise downtime and lessen the effects of outages by automatically rerouting electricity, isolating problematic areas, and restoring power more effectively. **Cost Savings and Energy Efficiency:** Smart grids give users up-to-date information on how much energy they use, enabling them to cut waste and make wise decisions. Demand response programmes lower peak demand and increase energy efficiency by providing incentives for using electricity during off-peak hours. Both consumers and utilities save money as a result of this.

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Renewable Energy Integration: Variable renewable energy sources can be efficiently integrated into the system thanks to smart grid technology. They optimise generation and minimise curtailment by balancing the intermittent nature of renewables with the demand for power through sophisticated control mechanisms and real-time monitoring.

Environmental Benefits: Smart grids play a major role in lowering greenhouse gas emissions and halting climate change by encouraging energy conservation and making it easier to integrate renewable energy sources. They open the door to a more sustainable and clean energy future.

Innovation-Driven Transformation of Energy Systems

Future prospects for the transformation of energy systems are quite promising, and smart grid technology is one of the main technologies facilitating this transition.

Through the integration of renewable energy sources and the application of cutting-edge computing and communication capabilities, smart grid technology makes it possible to optimise energy generation and transmission. With the use of this technology, supply and demand for power may be managed effectively, resulting in a stable and sustainable energy system.

We can lessen our reliance on fossil fuels and transition to a greener, more sustainable energy future by utilising smart grid technology. Moreover, smart grid technology presents chances for lower costs and higher energy efficiency.

Smart grid technology can help consumers make more informed energy decisions by identifying inefficient regions and tracking and analysing energy usage in realtime. Through the speedier detection and reaction to power outages made possible by this technology, grid dependability and resilience are also improved.

Furthermore, the integration of distributed energy resources into the current power system, including rooftop solar panels and tiny wind turbines, could be facilitated by smart grid technologies. This integration can encourage the use of renewable energy sources and boost the grid's overall capacity and reliability.

We can dramatically improve the sustainability, efficiency, and resilience of our energy systems by putting smart grid technology into practice.

Smart grid technology presents a possible way forward for energy system transformation by combining cutting-edge communication and computing tools with renewable energy sources. It facilitates the incorporation of renewable energy sources, enhances grid resilience and dependability, and permits the optimisation of energy generation and transmission.

By integrating renewable energy sources, enhancing grid dependability, and optimising energy generation and transmission, the smart grid system has the potential to completely transform our energy systems.

The Potential of Smart Grid Technology

The potential of smart grid technology to transform energy systems and accelerate the shift to a more efficient and sustainable future is what makes it so promising.

Smart grid technology enables the optimisation of energy generation and transmission through the integration of sophisticated communication and computing capabilities. This optimisation can encourage the incorporation of renewable energy sources, such solar and wind power, and lessen reliance on fossil fuels. Through real-time monitoring and analysis of energy usage, smart grid technologies may pinpoint inefficient regions and assist consumers in making more informed energy decisions.

Furthermore, the use of smart grid technologies improves the resilience and dependability of the system.

Smart grid technology contributes to a more dependable and robust energy supply by making it possible to identify and react to power outages more quickly. Furthermore, smart grid technology enables the integration of dispersed energy resources into the current power infrastructure, such as tiny wind turbines and rooftop solar panels. This integration encourages the use of renewable energy sources while also boosting the grid's overall capacity and reliability.

Smart Grids: Revolutionising Power Distribution Power distribution could be completely changed by smart grid technology, which turns energy systems into





more efficient and sustainable networks.

Smart grids facilitate the optimisation of energy generation and transmission through the utilisation of sophisticated communication and computing systems. This optimisation makes it possible to incorporate renewable energy sources, lessens dependency on fossil fuels, and encourages the use of a more sustainable mix of energy sources. Additionally, smart grids may pinpoint inefficient areas and empower customers to make more informed energy decisions by providing real-time monitoring and analysis of energy usage.

Furthermore, by detecting and responding to power failures more quickly, smart grids improve the resilience and reliability of the grid. Smart grids are able to reduce the impact of power outages and provide a more dependable and resilient energy supply by actively controlling and rerouting power flows. Moreover, distributed energy resources like tiny wind turbines and rooftop solar panels can be integrated with smart grids.

Smart Grids: The Secret to Efficient Energy Use

The groundbreaking technology known as smart grids has the capacity to completely change how we generate, distribute, and use energy. In essence, they are an improved version of the conventional energy grid that incorporates digital communication technology to allow utilities to interact with customers and provide customers greater control over how much energy they use.

The capacity of smart grids to increase energy efficiency is one of its main advantages. Because traditional energy grids are frequently inefficient, consumers pay more for lost energy. Conversely, smart grids may optimise energy distribution and consumption, which lowers total energy costs and minimises energy waste.

This is made possible by smart grids' many essential features. Among the most crucial characteristics is the capacity to collect and evaluate real-time energy consumption data. Utilities may more precisely estimate demand and modify energy production by using this data to spot patterns and trends in energy consumption. This lessens energy waste and prevents overproduction.

Furthermore, the integration of renewable energy sources like solar and wind power into the grid is made possible by smart grids. This promotes a more environmentally friendly and sustainable energy system by lowering greenhouse gas emissions and dependence on fossil fuels.

Moreover, demand response programs which encourage customers to move their energy consumption to off-peak hours when energy is more affordable and plentiful are made possible by smart grids. This can eventually result in decreased total energy prices for consumers and less stress on the system during peak hours.

Obstacles and Prospects for the Future

There are difficulties in putting smart grid technologies into practice. Among the challenges are the upfront costs associated with implementing sophisticated infrastructure, protecting data security and privacy, and resolving interoperability problems.

Nonetheless, in order to overcome these obstacles and promote the global adoption of smart grids, governments, utilities, and technology companies are working together.

The potential for smart grids is enormous. Energy storage, smart appliances, and electric cars will all be integrated as technology develops, improving our energy systems' sustainability and efficiency. Furthermore, improvements in Machine Learning (ML) and Artificial Intelligence (AI) will make it possible for systems to selfheal, predict maintenance, and manage grids more intelligently.

Conclusion

In order to modernise our energy infrastructure, improve grid dependability, encourage energy conservation, and hasten the incorporation of renewable energy sources, smart grid technology presents an inventive and revolutionary answer. Through the utilisation of automation and information technology, smart grids open the door to a more environmentally friendly and sustainable energy future.

Smart grids provide a way to move towards a more eco-friendly, dependable, and efficient energy system as the world deals with the problems of an expanding population and rising energy consumption.



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(Haldia) Limited}. He has around two decades of management experience in entire value chain of Power Sector. He holds vast experience in power distribution companies dealing with competition issues, tariff determination, licensing and other techno-commercial matters. He has also written two books, namely – 1) The Power of Positive Thinking and 2) Customer Engagement Strategies in Retail Electricity Market.

Electric Cycles : Just Rs. 90,000 Crore Can Empower 300 Million Indians!

The government is building all-weather roads in villages in order to provide better connectivity to villagers.

Unfortunately, connectivity does not automatically lead to mobility.

Mobility means the ability to use existing infrastructure to go wherever one needs to go, at a time of one's choosing – no waiting, with minimal effort and at an affordable cost.

Just as Vande Bharat coaches provide connectivity, but do not provide mobility to people who cannot afford to pay the fares, roads by themselves mean nothing to people who have no convenient means of using them.

This brings us to the question—how do people actually use these village roads?

Affluent villagers ride two-wheelers, tractors, or even cars. Poor villagers wait (and pay) for a bus or a shared auto, or simply walk.

In between, there is a big chunk of people who use bicycles.

India has about 300mn (million) bicycles, and about 10mn new bicycles are sold every year. Given that we have 940mn people between the ages of 14 and 60, one in every three adult male and female Indians rides a bicycle. Since some bicycles have more than one user, the

total number of cyclists in India would probably be close to 400mn.

The 'all-weather' roads do make life easier for cyclists, but only slightly so, because they still have to pedal the cycle, albeit on a smoother surface.

If our village roads, and the lanes and bi-lanes of our cities and towns, are to provide more mobility to our cyclists, we need to find a way to 'empower' them.

Before I explain, let's pause a bit to think about

how an average cyclist uses his/ her bicycle.

If you have observed cyclists on our roads, be it in



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cities, small towns or villages, you would have noticed three things:

- The vast majority of bicycles are of the traditional type, a design which has remained virtually unchanged for more than 70 years. You will find very few bicycles of a 'modern' design, featuring a lean-forward stance, multiple gears, caliper brakes and so on.

- Cyclists do not ride fast. They move at a leisurely pace, slightly faster than walking speed.

- Many cycles carry much more than just the rider. Often, there is an additional person on the rear carrier or on the upper bar in front of the rider, or a load is carried – goods of every description are transported by bicycle.

Another point to note – an average cyclist seldom does a round trip exceeding 15km, because it is quite difficult to cycle for longer distances on a heavy, singlespeed cycle, especially in the usually hot Indian climate.

So, how do we 'empower' our cyclists?

Simple – give them a 'power assist', i.e. add a battery-powered electric motor to the cycle.

Before you say '*bah*', consider this:

- The power needed from the motor is actually very small, about 50-70 watts, because the cycle need not go faster than about 10kmph (kilometres per hour). In fact, a powerful motor, on an old design bicycle with rudimentary brakes, can be quite dangerous.

- The range of the powered cycle need not exceed 15km. If a rider routinely needs to ride longer distances, (s)he just needs to fit an additional battery pack, or recharge the battery mid-trip.

- The battery pack can be recharged at home, using a small charger connected to a standard 5amp wall outlet, just like a mobile phone.

The battery-motor duo will add very little weight to the bicycle, not more than 5kg, but will greatly assist the pedal power of the rider. It will make it much easier to carry an extra load, ride a long distance, or climb a slope. Of course, the bicycle will remain essentially the same, and the cyclist can simply pedal if any malfunction occurs.

Bicycle conversion kits are available in plenty, but they have three shortcomings:

- High cost, in excess of Rs6,000.

- High power – 300-watt motor and correspondingly large battery.

- Sophisticated electronics – speedometer, and battery level indicator.

What is needed is a simple kit featuring:

- A standard and basic, design which will enable any bicycle mechanic to easily fit it on any bicycle.

- A small motor rated at about 75watt, powered by a battery with 150-200 watt-hour capacity. These specifications will be ample for a 15km range at speeds up to 10kmph-12kmph.

- No electronics – just a simple on-off switch operated by the thumb. The motor will work as long as the switch is kept pressed.

It should be possible to design a simple 'universal' kit priced at Rs3,000, provided GST (goods and services tax) is waived. Any IIT can produce a practical design, along with a detailed plan for mass manufacture. Small and medium enterprise (SME) factories can manufacture the kits, thereby generating employment.

Why do all this?

You have probably guessed what I am going to suggest next.

Yes, you got it - a free electric conversion kit for every bicycle.

Bicycle kits for 300mn at Rs3,000 each—just Rs90,000 crore. Spread it over five years, and it comes to just Rs18,000 a year, a drop in the ocean for our Rs50 lakh crore Budget.

Look at it from another angle. Rs3,000 is equivalent to 400 units of free electricity, just two months of free power which many states are giving already, every month. Importantly, this will be a one-time expense, not a repeat expense like free electricity.

And look what it fetches you.

The ubiquitous bicycle, rejuvenated as an electric avatar, will cost about Rs1.5 a day to run. It will benefit more than a third of our adult population by providing mobility, saving time and effort and enabling people to travel longer distances, maybe for a better job or more trade. It will also set them free from the vagaries (and expense) of public transport – all at a very affordable cost.

A great freebie, don't you think?

Politicians may please note another big plus – it could fetch lots of votes!



Why Adani Solar Sought Visas For Chinese

The Adani Group's solar manufacturing business is learnt to have sought the Union government's approval to bring close to 30 engineers from China.

These engineers could help build a robust and indigenous supply chain of solar equipment for the infrastructure-to-mining conglomerate.

The company, in its submissions, has mentioned eight foreign partners -- all from China -- which are original equipment manufacturers (OEMs) and supply chain vendors.

The company has imported Chinese equipment worth Rs 591 crore (Rs 5.91 billion) in the financial year 2021-2022 and Rs 180 crore (Rs 1.8 billion) in 2022-2023.

The factory is being set up in Kutch, Gujarat, at an investment of Rs 25,114 crore (Rs 251.14 billion), according to the company's communication with the government.

MSTL is also a winner under the Centre's production



<image><image>





linked incentive (PLI) scheme.

Under the PLI scheme, it will set up 4 Gw of solar module manufacturing. Its ingot, wafer, and cell (components of solar module/panel) manufacturing is non-PLI.

In its submission to the ministry of new and renewable energy (MNRE), the nodal ministry for solar PLI, seeking approval for foreign vendors and executives, the company has referred to its solar business as part of the Make in India initiative.

The eight Chinese vendors listed by Adani Solar are engaged in manufacturing of silicone cells, photoelectric equipment, wafer making, semiconductor and similar equipment required for setting up solar equipment supply chain.

The engineers from these firms would help Adani set up product units, ramp up production in existing units and train the Indian staff. The duration of their stay in India ranges from six months to one year.

In seeking visa approvals for engineers from China, the company has reasoned that India lacks the expertise to set up such a solar facility.

'The solar manufacturing project is being set up and executed for the first time in India and we don't have experts for the same. Therefore, we need experts for plant setup, installing, testing and commissioning,' said the submission by Adani Solar.

It has, however, said that the company guarantees that these executives would be employed for a brief period, will train Indian staff and leave before the stipulated period.

MNRE has also endorsed Adani's request to the ministry of external affairs.

'OM dated 14.02.2024, this ministry has forwarded details of 15 Chinese nationals w.r.t MSTL's project under

PLI scheme, along with other prescribed documents, for further necessary action,' said a letter dated March 2024 to the ministry of external affairs.

Now MSTL, beneficiary under PLI scheme of high efficiency solar PV modules has forwarded the details of 13 additional Chinese nationals, in the format as prescribed, with a request for facilitation of business visa for these persons who are required for manufacturing project by MSTL, under the PLI scheme,' the letter added.

The Galwan clash in 2020 was a turning point in India-China relations, adversely impacting business ties as well. Since then, they have imposed visa and travel restrictions on the people of the two countries.

Almost all solar PLI winners including Reliance Industries have listed supply chain partners and service providers from China, with some of them mentioning more than 50 Chinese vendors.



ACME Solar files DRHP with SEBI

ACME Solar has submitted its draft red herring prospectus (DRHP) to the Securities and Exchange Board of India (SEBI) for an initial public offering (IPO) valued at Rs 30 billion, with each share priced at Rs 2.

The planned IPO includes a fresh issue of shares worth up to Rs 20 billion and an offer for sale totaling up to Rs 10 billion. The company might also consider a pre-IPO placement of up to Rs 4 billion, which would decrease the size of the fresh issue. ACME Solar intends to allocate Rs 15 billion from the net proceeds to repay or prepay certain outstanding borrowings of its subsidiaries, with the remaining funds designated for general corporate purposes.

KPI Green secures Rs 6.86 billion loan for Kutch solar project

KPI Green Energy Limited has secured a final sanction letter for credit facilities amounting to Rs 6.86 billion for the development of a 200 MW AC (240 MW DC) solar photovoltaic power project in Khavda, Kutch district, Gujarat.

Further, the company had earlier raised Rs 3 billion through a qualified institutional placement, of which Rs 2.25 billion has been used to partially fund the project. The financial assistance will play a crucial role in developing the project, with the goal of completing it within the stipulated timeframe.

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असोसिएशन ऑफ

महाराष्ट्र



अक्षय ऊर्जा – सृष्टीची निरंतर देणगी

आपल्या दैनंदिन जीवनासाठी ऊर्जा अत्यंत महत्त्वाची आहे. परंतु, जीवाश्म इंधनांवरील अवलंबित्व वाढत असल्याने पर्यावरणासाठी मोठे धोके निर्माण झाले आहेत. इथेच अक्षय ऊर्जेची भूमिका अत्यंत महत्त्वाची ठरते!

> <u>https://www.mahadiscom.in/renewable-energy-portals-</u> mr/इथे भेट देऊ शकतात.

> अक्षय ऊर्जा वापरण्यासाठी घरांवर सोलर पॅनेल बसवून आपल्या वीज गरजेची पूर्तता करणे. LED बल्ब, एनर्जी स्टार रेटिंग असलेली उपकरणे वापरून ऊर्जा बचत करणे. सार्वजनिक वाहतूक किंवा सायकल वापरून

""Renewable" हा शब्द बहुतेकदा नूतनीकरणीय ऊर्जा स्त्रोतांसंदर्भात वापरला जातो, जसे की सौर ऊर्जा, पवन ऊर्जा, जलविद्युत ऊर्जा, बायोमास आणि भूऔण्णिक ऊर्जा. हे स्त्रोत नैसर्गिक प्रक्रियांमधून सततपणे भरले जातात आणि त्यांचा वापर केला तरीही ते संपत नाहीत.

अक्षय ऊर्जा ही नैसर्गिक स्रोतांकडून मिळणारी अशी ऊर्जा आहे जी

सतत नवीनीकरण करून घेतली जाते. सूर्यप्रकाश, वारा, पाणी, भूगर्भातील उष्णता, सागरी लाट आणि जैविक इंधन हे अक्षय ऊर्जेचे प्रमुख स्रोत आहेत. या ऊर्जा स्रोतांचा कधीच अंत होत नाही, त्यामुळे आपण आपल्या गरजा भागवण्यासाठी त्यांचा वापर करू शकतो. जणू का सृष्टी आपल्याला निरंतर देणगी देत राहते!

अक्षय ऊर्जेचे फायदे :

पर्यावरणस्नेही – अक्षय ऊर्जा वापरल्याने हानिकारक उत्सर्जन होत नाहीत, त्यामुळे हवामान बदलाव रोखण्यात आणि पर्यावरणाचे रक्षण करण्यात मोठी मदत होते.

अनंत स्रोत – अक्षय ऊर्जा स्रोत कधीच संपत नाहीत. सूर्यप्रकाश, वारा, पाणी हे नेहमीच अस्तित्वात राहणार आहेत, त्यामुळे इंधनाच्या संकटापासून आपण मुक्त होऊ शकतो.

स्थिर मूल्य – जीवाश्म इंधनांची किंमत सतत चढ–उतार करत असतात, तर अक्षय ऊर्जेच्या प्रकल्पांची प्रारंभिक खर्च जास्त असली तरी लांबच्या धावेत त्यांची किंमत स्थिर राहते आणि किफायतशीर ठरते.

ऊर्जेची सुरक्षितता –अक्षय ऊर्जा स्रोत देशांतर्गत असतात, त्यामुळे इंधनाच्या आयातीवरील अवलंबित्व कमी होते. यामुळे ऊर्जा सुरक्षितता वाढते.

ग्रामीण भागांचा विकास – अक्षय ऊर्जा प्रकल्प ग्रामीण भागातही ऊर्जेची उपलब्धता वाढवू शकतात आणि त्यांचा विकासाला चालना देऊ शकतात.

महाराष्ट्र सरकार नवीनीकरणयोग्य ऊर्जेच्या वापरावर भर देत असून अनेक महत्त्वाकांक्षी प्रकल्प राबवित आहे. राज्यात सोलर ऊर्जा क्षमता वाढवण्यावर, जलविद्युत प्रकल्पांच्या नवीनीकरणावर आणि बायोगॅस प्रकल्पांच्या प्रोत्साहनावर लक्ष्य केंद्रित आहे. अक्षय ऊर्जेबद्दल नवीन योजना जाणून घेण्यासाठी तम्ही महाराष्ट्राचे





वाहनांचा वापर कमी करणे. अक्षय ऊर्जा क्षेत्रातील उत्पादने वापरणे किंवा गुंतवणूक करणे.

अक्षय ऊर्जा हा आपल्या भविष्यासाठी एक चांगला पर्याय आहे. पर्यावरणाचे रक्षण, ऊर्जा सुरक्षितता आणि ग्रामीण विकास यासाठी ती अत्यंत महत्वाची आहे. चला तर मग, अक्षय ऊर्जेचा स्वीकार करून आपण एक स्वच्छ आणि प्रकाशमय भविष्य घडवून आणूया!

अक्षय ऊर्जा संसाधने म्हणजे असे ऊर्जा स्त्रोत जे नैसर्गिकरित्या पुन्हा निर्माण होतात आणि कधीही संपत नाहीत. या ऊर्जा स्त्रोतांचा वापर केल्याने पर्यावरणाला हानी पोहोचत नाही आणि ते शाश्वत ऊर्जा पुरवतात.

अक्षय ऊर्जा स्त्रोतांची काही उदाहरणे -

सौर ऊर्जा – सूर्यापासून मिळणारी ऊर्जा. सौर पॅनलद्वारे सूर्यप्रकाश विजेत रूपांतरित केले जाते.

• पवन ऊर्जा – वाऱ्यापासून मिळणारी ऊर्जा. पवनचक्कीद्वारे वाऱ्याचा वेग विजेत रूपांतरित केले जाते.

जल ऊर्जा- पाण्यापासून मिळणारी ऊर्जा. जलविद्युत प्रकल्पातून पाण्याच्या प्रवाहातून विजेची निर्मिती केली जाते.

• जैव ऊर्जा - वनस्पती आणि प्राणी यांपासून मिळणारी ऊर्जा. बायोगॅस, बायोडीझेल, आणि लाकूड यांचा ऊर्जेसाठी उपयोग केला जातो.

भू-औष्णिक ऊर्जा - पृथ्वीच्या आतून मिळणारी ऊर्जा. भू-औष्णिक ऊर्जा वीजनिर्मिती आणि थेट तापमान नियंत्रणासाठी वापरली जाते.

अक्षय ऊर्जा स्त्रोतांचे फायदे 🧕

• शाश्वत – हे ऊर्जा स्त्रोत कधीही संपत नाहीत आणि ते पुन्हा पुन्हा निर्माण होतात.

पर्यावरणपूरक – हे ऊर्जा स्त्रोत प्रदूषण निर्माण करत नाहीत आणि हवामान बदलास हातभार लावत नाहीत.

 स्वावलंबन – अक्षय ऊर्जा स्त्रोतांचा वापर करून देश ऊर्जा स्वावलंबी बनू शकतो.

रोजगार निर्मिती - अक्षय ऊर्जा क्षेत्रात मोठ्या प्रमाणात रोजगार निर्मिती होते.

अक्षय ऊर्जा स्त्रोतांच्या वापरातील आव्हाने -

• खर्चिक - अक्षय ऊर्जा स्त्रोतांवर आधारित तंत्रज्ञानाचा प्रारंभिक खर्च जास्त असतो.

 अस्थिरता – काही अक्षय ऊर्जा स्त्रोत, जसे की सौर आणि पवन ऊर्जा, हवामानावर अवलंबून असतात आणि त्यामुळे ते अस्थिर असू शकतात.

• साठवणुकीची समस्या – अक्षय ऊर्जा स्त्रोतांद्वारे निर्माण केलेली ऊर्जा साठवणे हे एक मोठे आव्हान आहे.

भारतात अक्षय ऊर्जा स्त्रोतांची प्रचंड क्षमता आहे. भारत सरकार अक्षय ऊर्जा क्षेत्राच्या विकासासाठी अनेक योजना राबवत आहे. २०३० पर्यंत ४०% ऊर्जा क्षमता अक्षय ऊर्जा स्त्रोतांकडून मिळवण्याचा भारत सरकारचा लक्ष्य आहे. अक्षय ऊर्जा स्त्रोतांचा वापर करून आपण पर्यावरणाचे रक्षण करू शकतो, ऊर्जा सुरक्षा सुनिश्चित करू शकतो आणि शाश्वत भविष्य निर्माण करू शकतो.

अक्षय ऊर्जा दिवस दरवर्षी २० ऑगस्ट रोजी साजरा केला जातो. हा दिवस नवीकरणीय ऊर्जा स्त्रोतांच्या महत्त्वाबद्दल जागरूकता वाढवण्यासाठी आणि त्यांचा वापर करण्यासाठी लोकांना प्रोत्साहन देण्यासाठी समर्पित आहे. नवीकरणीय ऊर्जा म्हणजे अशी ऊर्जा जी नैसर्गिकरित्या पुन्हा निर्माण होते आणि कधीही संपत नाही. यामध्ये सौर ऊर्जा, पवन ऊर्जा, जल ऊर्जा, जैव ऊर्जा आणि भू-औष्णिक ऊर्जा यांचा समावेश आहे.

अक्षय ऊर्जा स्त्रोत फायदे आणि तोटे –

सौर ऊर्जा –

फायदे – प्रचंड प्रमाणात ऊर्जा उपलब्ध आहे. तंत्रज्ञान तुलनेने स्वस्त आणि सोपं आहे. घरासाठी आणि मोठ्या प्रकल्पांसाठी वापरता येतं. प्रदूषण मुक्त ऊर्जा.

तोटे – ऊर्जा उत्पादन दिवसाच्या वेळेवर आणि हवामानावर अवलंबून आहे. ऊर्जा साठवणुकीसाठी बॅटरीची आवश्यकता आहे. मोठ्या प्रमाणात सौर पॅनलसाठी जागेची आवश्यकता आहे.

पवन ऊर्जा –

फायदे – प्रचंड प्रमाणात ऊर्जा उपलब्ध आहे. प्रदूषण मुक्त ऊर्जा. तंत्रज्ञान तुलनेने विकसित आहे.

तोटे – ऊर्जा उत्पादन वाऱ्याच्या वेगावर अवलंबून आहे. पवनचक्कीसाठी मोठ्या जागेची आवश्यकता आहे. पक्षी आणि वटवाघूळांसाठी धोकादायक ठरू शकते.

जलविद्युत ऊर्जा –

फायदे – विश्वासार्ह आणि स्थिर ऊर्जा स्त्रोत. प्रदूषण मुक्त ऊर्जा. तंत्रज्ञान विकसित आणि सिद्ध आहे.

तोटे – बांधकाम खर्चिक आहे. नद्यांवर बंधारे बांधणं पर्यावरणावर नकारात्मक परिणाम करते. पाणीटंचाईच्या काळात ऊर्जा उत्पादन कमी होतं.

जैव ऊर्जा -

फायदे – नूतनीकरणक्षम आणि स्थानिक स्त्रोतांकडून ऊर्जा मिळते. शेती कचऱ्याचा उपयोग होतो. प्रदूषण कमी करते.

तोटे – ऊर्जा उत्पादन क्षमता कमी आहे. मोठ्या प्रमाणात जमिनीची आवश्यकता आहे. वायू प्रदुषण होऊ शकतं.

भू-औष्णिक ऊर्जा -

फायदे - २४/७ ऊर्जा उपलब्ध आहे. प्रदूषण मुक्त ऊर्जा. तंत्रज्ञान विकसित आणि सिद्ध आहे.

तोटे – भू–औष्णिक ऊर्जा सर्व ठिकाणी उपलब्ध नाही. बांधकाम खर्चिक आहे. हायड्रोजन सल्फाइड साख्या विषारी वायूंचे उत्सर्जन होऊ शकते.

वरील माहितीवरून असे दिसून येते की प्रत्येक अक्षय ऊर्जा स्त्रोताचे स्वतःचे फायदे आणि तोटे आहेत. कोणता स्त्रोत सर्वोत्तम आहे हे विशिष्ट गरजा आणि परिस्थितीवर अवलंबून आहे. उदाहरणार्थ, जर तुम्हाला घरासाठी ऊर्जा हवी असेल तर सौर ऊर्जा हा चांगला पर्याय आहे. जर तुम्हाला मोठ्या प्रमाणात ऊर्जा हवी असेल तर पवन ऊर्जा किंवा जलविद्युत ऊर्जा चांगला पर्याय आहे.

टीप – हे लक्षात घेणं गरजेचं आहे की अक्षय ऊर्जा स्त्रोत अजूनही विकसित होत आहेत आणि तंत्रज्ञान अधिक कार्यक्षम आणि स्वस्त होत आहे. भविष्यात, नवीन आणि अधिक चांगले अक्षय ऊर्जा स्त्रोत विकसित होण्याची शक्यता आहे.

न संपणाऱ्या ऊर्जा स्त्रोतांना अक्षय ऊर्जा स्त्रोत असे म्हणतात. हे ऊर्जा स्त्रोत नैसर्गिकरित्या पुन्हा तयार होतात आणि कधीही संपणार नाहीत. सौर ऊर्जा, पवन ऊर्जा, जलविद्युत ऊर्जा, जैव ऊर्जा आणि भू–औष्णिक ऊर्जा हे काही अक्षय ऊर्जा स्त्रोतांचे उदाहरण आहेत.

न संपणाऱ्या ऊर्जा स्त्रोतांचे फायदे :

ते पर्यावरणासाठी चांगले आहेत कारण ते प्रदूषण करत नाहीत. ते पारंपारिक ऊर्जा स्त्रोतांपेक्षा अधिक स्वस्त आहेत, जसे की कोळसा आणि तेल. ते ऊर्जा सुरक्षा वाढवू शकतात कारण ते आयातित इंधनावरील अवलंबित्व कमी करतात.

न संपणाऱ्या ऊर्जा स्त्रोतांचे तोटे :

काही अक्षय ऊर्जा स्त्रोत, जसे की सौर ऊर्जा आणि पवन ऊर्जा,

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हवामानावर अवलंबून असतात आणि नेहमीच उपलब्ध नसतात. इतर अक्षय ऊर्जा स्त्रोतांसाठी, जसे की जलविद्युत ऊर्जा, मोठ्या प्रकल्पांची आवश्यकता असते जी नैसर्गिक अधिवास आणि जलमार्गांवर नकारात्मक परिणाम करू शकतात. खर्चिक – अक्षय ऊर्जा स्त्रोतांमध्ये प्रारंभिक गंतवणूक खर्चिक असू शकते.

न संपणारे ऊर्जा स्त्रोत हे पारंपारिक ऊर्जा स्त्रोतांपेक्षा अधिक चांगले पर्याय आहेत. ते पर्यावरणासाठी चांगले आहेत, ते अधिक स्वस्त आहेत आणि ते ऊर्जा सुरक्षा वाढवू शकतात. तथापि, अक्षय ऊर्जा स्त्रोतांच्या विकासासाठी काही आव्हाने आहेत, जसे की हवामानावर अवलंबित्व आणि मोठ्या प्रकल्पांची आवश्यकता.

पर्यावरणासाठी सर्वोत्तम ऊर्जा स्त्रोत अक्षय ऊर्जा स्त्रोत आहे. हे ऊर्जा स्त्रोत नैसर्गिकरित्या पुनर्भरण होत असतात आणि कधीही संपणार नाहीत. ते प्रदूषण करत नाहीत आणि हवामान बदलास हातभार लावत नाहीत. ते नूतनीकरणक्षम आहेत. अक्षय ऊर्जा स्त्रोत कधीही संपणार नाहीत. ते नैसर्गिकरित्या पुनर्भरण केले जातात, म्हणून आपण त्यांचा वापर पिढ्यानपिढ्या करू शकतो. अक्षय ऊर्जा स्त्रोतांचा वापर करून, आपण आपले पर्यावरण संरक्षित करण्यास आणि अधिक शाश्वत भविष्य निर्माण करण्यास मदत करू शकतो.

सौर ऊर्जा – प्रारंभिक गुंतवणूक खर्च थोडी जास्त असली तरीही, सौर पॅनेल दीर्घकाळ टिकतात आणि वीज बिलांवर बचत करू शकतात. सूर्यप्रकाश मोफत आहे, म्हणून सौर ऊर्जा चालन करण्यासाठी चालू खर्च कमी आहेत.

https://speechmarathi.com/wind-energy-information-marathipavan-urja-mahiti/ – मोठ्या प्रमाणावर पवन ऊर्जा संस्थापना कमी किफायतशीर असू शकतात, परंतु घरांसाठी छोट्या पवन टर्बाइन देखील तुलनेने किफायतशीर असू शकतात.

जलविद्युत ऊर्जा – मोठ्या जलविद्युत धरणांची प्रारंभिक गुंतवणूक खर्च खूप जास्त असू शकते, परंतु ते चालन करण्यासाठी खर्च कमी आहेत आणि दीर्घकाळ टिकतात. जलविद्युत ऊर्जा विश्वासार्ह आणि नूतनीकरणक्षम आहे.

इतर ऊर्जा स्त्रोतांच्या तुलनेत नूतनीकरणक्षम ऊर्जा स्त्रोत किफायतशीर असण्याची काही कारणे –

कमी चालू खर्च – नूतनीकरणक्षम ऊर्जा स्त्रोत चालन करण्यासाठी नैसर्गिक संसाधने, जसे की सूर्यप्रकाश, वारा आणि पाणी वापरतात, जे मोफत आहेत.

सरकारी सहाय्य – अनेक सरकारांनी नूतनीकरणक्षम ऊर्जा वापरास प्रोत्साहित करण्यासाठी कर सवलत आणि अनुदान देऊ करतात. हे नूतनीकरणक्षम ऊर्जा स्त्रोत अधिक किफायतशीर बनवू शकते.

दीर्घकालीन बचत – नूतनीकरणक्षम ऊर्जा तंत्रज्ञान दीर्घकाळ टिकते आणि वीज बिलांवर दीर्घकालीन बचत करू शकते.

नूतनीकरणक्षम ऊर्जा स्त्रोत सर्वात किफायतशीर ऊर्जा स्त्रोत असू शकतात, परंतु खर्च अनेक घटकांवर अवलंबून असतो.

तुमच्या विशिष्ट परिस्थितीनुसार सर्वात किफायतशीर ऊर्जा स्त्रोत निश्चित करण्यासाठी, विविध पर्यायांचे संशोधन करणे आणि तुलना करणे महत्त्वाचे आहे. अपारंपारिक ऊर्जा स्रोतांना प्राधान्य दिले जाते कारण ते पर्यावरणासाठी चांगले आहेत आणि ते टिकून राहू शकतात. भविष्यातील ऊर्जा गरजा पूर्ण करण्यासाठी अपारंपारिक ऊर्जा स्त्रोतांचा विकास आणि वापर वाढवणे आवश्यक आहे.



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