Hydel Bullet

A Monthly Publication of the Kerala State Electricity Board Engineers' Association

Padma Shri M. Chandradathan, Director LPSC, Valiamala inaugurating the state level seminar series V at Trivandrum

Kill not the goose that lays golden eggs...

The KSERC has published the draft regulations for the grid connectivity of solar system called the *Kerala State Electricity Regulatory Commission (Grid Interactive Distributed Solar Energy Systems) Regulations, 2014*. This regulation defines the conditions for grid connectivity of the solar energy system (SES). It reiterates the obligation of the licensee to make available the connectivity of its distribution system to the SES of every consumer in its area of supply and specifies certain standard for up-gradation of the distribution system to receive the solar power.

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The state level paper presentation contest on ROLE OF PHASOR MEASUREMENT UNIT (PMU) IN POWER SYSTEMS was jointly organized by IEEE Power & Energy Society Kerala Chapter & KSEB Engineers' Association. Final held on February 14, 2014 at IMG Hall, Trivandrum. Padma Shri M. Chandradathan, Director LPSC, Vallamala, Trivandrum inaugurated the function.

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As per the regulations, the consumers can install SES up to 3 MW and the distribution licensee shall provide the connectivity without any discrimination. Depending upon the capacity of SES, it may be connected to single or three phase LT system or to HT system. But the draft regulations is silent on the voltage level at which the connectivity is to be provided. Electricity Supply Code stipulates that the loads 101- 3000 kVA are connected at 11 kV level. Also, if the load exceeds 1000 kVA, separate HT feeder has to be drawn from the nearest substation. As per regulations, the capital expenditure for such construction of HT lines and up-gradation of the substation equipment has to be borne by the licensee.

According to clause 12 of the draft regulations, the eligible consumer shall have the right to avail open access for wheeling the excess energy generated by the SES installed in one of his premises and to use such excess energy in another premises owned by him within the area of supply of the licensee. For this, the licensee has to construct two lines at appropriate voltage levels, – one to the solar station and other to the consumers' premises. If the consumer changes the point of load requirement additional capital expenditure has to be borne by the licensee. In major cities where the constructions of over head lines are not feasible, the licensee has to shoulder the huge expenses for laying underground cables.

The primary reason for the high distribution losses is the low investment in capital and maintenance works. Although the AT & C losses in KSEB were estimated to around 16%, the loss in the LT distribution lines is still around 25%. The total AT & C losses are decreasing due to the increase in bulk sales at higher voltage levels and not due to the actual reduction of losses in LT side. The regular maintenance and up keep of the system is also to be ensured without limiting O & M expenses. Hence before issuing and finalizing the guidelines for interconnection of solar energy, it is mandatory to standardize the distribution system as per CEA guidelines. The CEA regulations released in September 2013, regarding technical standards for connectivity of the SES system might be framed with the presumption that distribution systems of the licensees across the country are as per CEA guidelines.

Further, the regulation insists that total solar connectivity under a distribution transformer shall not exceed 50% of the transformer capacity and if it exceeds, the licensee has to enhance the capacity within a period of two months. It implies that only five SES of rating 10 kW can connect to a 100 kVA transformer and if another consumer wants to connect an SES, then the licensee has to enhance the transformer capacity. The TNERC has provided only 30% of the capacity of distribution transformer. How the grid connectivity of renewable energy relates with the capacity if DT? Is there any standard exist?

Clause 10 is vague and having no precision on safety precautions. When a number of SES are there in the line and it is nearly supplying the load in the line (in day time it may be possible with a 50% of transformer capacity SES penetration and a poor load factor), switching off utility supply does not mean the line is 'de-energised'. Unintentional islanding of the system may happen and the security burden is bestowed upon the utility as the utility cannot ensure the de-energisation of the line. Power providers have to ensure that their system satisfy the safety and power quality standards. Inverter as per IEEE1457-2003 senses whether the utility service has fallen outside set boundaries of voltage and/or frequency and if so, utility service is interrupted, the inverter will disconnect from the utility until normal conditions resume. No other control is there unless the utility service as well as the inverter becomes smarter. Anti islanding feature available in the present scenario solely depends on this property of inverter. Failure of this feature in any of the inverters may result in a number of complex problems which may adversely affect security of people and equipment. IEEE 1547-2003 provides technical requirements and tests for grid-connected operation. Underwriters Laboratories (UL) has developed UL 1741 to certify inverters, converters, charge controllers, and output controllers for power-producing stand-alone and grid-connected renewable energy systems. The National Electrical Code (NEC), a product of the National Fire Protection Association, deals with electrical equipment and wiring safety. Carry liability insurance protects the power provider in the event of accidents resulting from the operation of their system. Some power providers may also require to indemnify for any potential damage, loss, or injury caused by their system, which can sometimes be expensive.

If a utility experiences sagging voltage under high demand conditions, IEEE 1547 requires that inverters disconnect and leads to the loss of a major portion of generation when it is highly essential. However, since the loads are not automatically disconnected, the utility will see an increase in demand, potentially aggravating the cause of the voltage sag and may lead to the worst case of a black out. Stability problems associated with a sudden loss of such a big portion of generation is a concern. Spinning reserve required to meet the loss of a major portion of SES, is another concern of utility.

Regarding the rates and tariff, the draft regulations ignore the burden that it imposes on the distribution licensee. Introducing net metering in the present tariff structure will increase the percentage of dependency on costly power and it may lead to worsening the financial condition of the utility. The Banking facility entitles the consumers to use the quantum of electricity banked irrespective of the time of use which inflicts additional liability upon the

licensee. Solar generation is only there in day time when the utility is serving the less costly power to its consumer. Clause 15 ensures the undermining of the existing ToD tariff structure and it is detrimental to financial healthiness of utility.

No clause is there to compensate utility for keeping a large capacity in idle, especially; a 50% SES penetration is permitted in the system with all its uncertainties. There is chance of fall in MD in the case of HT consumers and consequently the utility will remain under compensated for the large system capacity creation and up keep. Otherwise a change in the present tariff is inevitable. Though the draft regulations mention about solar energy meter and bidirectional net meters for quantifying the energy flow, it does not prescribe any specification regarding the standards of the meters.

Most of the conditions in the draft regulations are framed without having any domain knowledge and hence detrimental to KSEB. The draft Regulations are incomplete and immature on many aspects and neglect the field realities of the distribution system in our State. There is a long way to go before providing grid connectivity to solar systems. The licensee has to do certain studies and preparation for connecting SES to the distribution system. As per the draft regulation, no compensation or fee is provided to utility for such an exercise or for the alterations to be made in the system. We urge the authorities to consider all aspects of grid connectivity including the financial implications before finalising the draft regulations. This is very essential for the sustenance of a healthy power sector in the State.

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CONGRATULATION

KSEB ഉദ്യോഗസ്ഥർക്കായി സംഘടിപ്പിച്ച സ്പോർട്സ് കൾച്ചറൽ മത്സരങ്ങളിൽ, ലളിതഗാനം ഇനത്തിൽ സംസ്ഥാനതലത്തിൽ ഒന്നാം സ്ഥാനം കരസ്ഥമാക്കിയ **ശ്രീലക്ഷ്മി എൽ.** തിരുവനന്തപുരം APDRP, DAMSD- ൽ അസിസ്റ്റന്റ് എഞ്ചിനീയർ ആണ്. സൗത്ത് സോൺ മത്സരങ്ങളിൽ മലയാളം പദ്യപാരായണത്തിലും ഒന്നാം സ്ഥാനക്കാരിയായിരുന്നു.

National Green Energy Corridor

Er. Kunjunni P.S., AE, APDRP Divison

The Govt of India has launched an ambitious program to launch a national green energy corridor in order to supplement the national grid with renewable energy (RE). The project cost is estimated to be Rs 43000 crores. India is seeking to tap renewable sources of energy to meet a chronic power shortage. With an energy demand-supply gap of 8%, peak shortages at 11-12% and grid access not available to more than 55% of the rural population, maximizing the potential of RE sources is necessary to meet the demand.

The Indian grid system consists of 5 regional grids. viz. Northern grid, North-Eastern grid, Southern grid, Western grid and Eastern grid. Except for southern grid, all the existing grids were interconnected to each other and was known as the NEW grid.But on July 30-31, 2012,due to continous overdrawal of power by some states,the northern grid collapsed leading to failure of the entire NEW grid as a result of which major areas(20 states out of a total of 28 states in India) across the country faced a total blackout for about 6 hours,affecting the life of 700 million people.Since the southern region was not connected to the NEW grid,it escaped from the blackout.On 01.01.2014, the southern grid was also connected to the NEW grid via DC Link forming a single synchronous national grid.So the government is extremely cautious in dealing with the grid and is putting all efforts to strengthen the transmission network to prevent mishaps like total blackout,which is a threat to the national security.

Since the last decade, RE generation across the world is in an upheaval following the improvements in technology of generation of RE and due to increase in awareness of environmental problems due to excess usage of traditional fossil fuel sources. The different sources of RE generation consist of solar, wind, small hydro, biomass and power from urban-industrial waste. A lot of projects and schemes have been started by Central government and State governments to increase the RE capacity,since the existing and proposed projects with conventional energy sources are facing enviornment hurdles and problems of land acquisition.Under the 12th Five Year Plan of GoI(2012-2017),RE capacity addition of 41 GW is planned and during the 13th FYP(2017-2022),31 GW is planned, taking the total capacity addition to 72 GW by 2022.According to CEA estimates, as on 31.01.2014, the total installed capacity of electricity generation in India is 235 GW, out of which 12.55 % consists of RE sources, mainly wind(21 GW) and balance in the form of small hydro (3.7 GW), biomass (3.7 GW), solar (2.1 GW). Presently, we have about 25 GW grid interactive as well as 700 MW off- grid RE generation capacity

Hence, with these large RE capacity additions to the existing national grid, lot of uncertainty may occur due to the variable nature of RE sources. Moreover, there is problem of voltage fluctuations

which necessitates the need to make the existing transmission system as dynamic as possible to handle such sources. So,as per the direction of Ministry of New and Renewable energy Resources, Powergrid Corporation of India Ltd(PGCIL) has come up with a report titled "Green Energy Corridors" to integrate RE sources to the existing transmission infrastructure without any hassles.The objective of the project is to synchronise electricity produced from renewable sources with conventional power stations in the grid.It has identified eight states namely Tamil Nadu, Karnataka, AP, Maharashtra, Gujarat,Rajasthan, Himachal Pradesh and Jammu and Kashmir as the states with potential renewable energy reserves. The planned corridor will be running mainly through these eight states The whole project has been divided into two parts – Inter State Transmission Strengthening (ISTS) and Intrastate Transmission Strengthening (ITS). PGCIL will be developing the ISTS and the concerned state utilities will have to take care of ITS.

Renewable energy is normally connected to the grid at 11 kV,33 kV,66 kV,110 kV and 132 kV and subsequently stepped up to 220 kV,400 kV and higher voltages.Renewable sources like wind and solar are energy resources and not capacity resources i.e they are not available during peak hours or on demand.Wind generation is maximum during monsoon period and on a particular day, maximum power is generated between 11:00 hour and 20:00 hour.In the case of solar, the peak output is available between 12:00 hour and 15:00 hour during a day.For small hydro plants,daily variations are not present,but seasonal variations do exist.During monsoon period, maximum water flow is available for generation.Studies have proved that these sources cannot be utilized to meet the peak demand challenges in Indian grid during 18:00 hour and 22:00 hour due to issues like high ramp rate of load(211 MW/ minute),frequency fluctuations and sharp change in load due to agricultural load changes unless they are connected to the grid.Most of the renewable electricity generated within a state has to be absorbed within that state and grid balancing issues limit addition of more renewable electricity beyond a certain limit. Therefore evacuation from resource rich states to other parts of the country where load centers are located is essential for further growth of renewable power. In the state of Tamil Nadu where wind penetration is around 50 percent in terms of capacity is experiencing such a constraint. Due to lack of sufficient evacuation infrastructure, a significant part of the power generated during the peak wind season goes waste. Moreover the sudden addition or withdrawal of wind power from the grid is already causing difficulties in grid operation. During periods of sudden wind power generation, it becomes uneconomical for the state to accept wind electricity. Further, if wind generation suddenly decreases, the utility either has to shed load or the state has to overdraw. Such a situation demands the development of a mechanism for forecasting and scheduling and also for sharing RE grid integration costs.

In order to prevent voltage fluctuations, POWERGRID proposes reactive compensation in the form of switchable/controlled bus reactors as well as Static Compensator/Static VAR

Compensator as dynamic compensators at strategic locations.

Another problem is that the output of solar and wind RE power varies according to the sun's insolation level and the wind speed/direction respectively, which can affect the grid stability.POWERGRID proposes the following measures for addressing these problems: strong grid interconnections,demand side management(DSM),establishment of Renewable Energy Management Centres(REMC) in each state for forecasting of renewable generation and forecasting of demand,deployment of Phasor Measurement Units(PMU) at suitable locations of the grid,capacity building at respective State Load Dispatch Centres for RE handling and evolution of suitable policy to develop market and pricing mechanism.

CERC has made it mandatory for State utilties to purchase RE in the form of Renewable Purchase Obligations (RPO) according to directions from the concerned SERCs.The quota mandated for each state is variable, according to their RE potential.KSERC according to its RPO Regulations, 2010 has made 3% as KSEB's RPO from 2010-11 with an annual increase of 10% of 3 % every year.The final target is 9% of the total consumption by 2016-17.Those states which are producing more than the RPO quota can sell their RE energy through the proposed Green energy corridor.

Germany, which has expertise in making smart grids that integrate renewable energy into its national grid has offered its assistance as concessional loan.The German financial institution kfW has agreed to provide developmental and technical assistance of 1 billion euro for the project.This is one of the major inititative under the 'Joint Declaration of intent' between Germany and India on Indo-German Development Cooperation regarding the establishment of green energy corridors signed on April 2013.Also under the India-US Energy Dialogue, US has agreed to mobilise around $250 million for clean energy access.European Union will financially and technically help the Centre for Wind Energy Technology(C-WET),Chennai to estimate off-shore wind power potential and to establish wind energy farms.The project will also be supported by World Bank, Asian Development Bank and India's National Electricity Fund.

The Tamil Nadu Transmission Corporation has decided to set up two green energy corridors with German assistance to evacuate RE energy so as to address the concerns of investors in the wind energy sector regarding inadequate evacuation facilities in the state and to cater to the future needs. One corridor will be from Tuticorin to Chennai (700 km) and the other will be from Theni to Salem (400 km). Ar present, the transmission line meant for evacuating power from the Kudankulam Nuclear Power Plant is used to transmit power from windmills to the load centers.

Kerala needs to plan for a green energy corridor so as to make available RE power across the state and also to draw power from the RE rich neighbouring states during times of adversity.

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When You are driven Crazy by the Boss!

Er. G. Chandran Pillai

Helping subordinates is part of a boss's job. The effective boss offers suggestions or the resources that subordinates need to solve problems of the organisation. He is endowed with good technical, people and strategic skills. This is the boss from heaven. Unfortunately many bossesare from hell!

This is due to the fact that bosses are not always promoted because they are good at being the boss. Inside every poor boss is a voice that tells him that he is a poor boss. So, what do poor bosses do? They compensate. They overcome their insecurity by becoming caricatures of what they think a boss should be. If no one has ever trained them in people management or workforce skills, how are they to know? So they make it up. They become arrogant, belligerent, they shout, scream and manipulate. They are selfish and difficult to please. They are the boss who will show you the door.

How do you deal with such a boss when he gets angry? What does it cost you if he wants to have a tantrum? It seldom lasts for more than a few minutes. Let him boil over, erupt and explode. As long as you do not join in, you are safe. Make yourself scarce, until it blows over. Say "*I am sorry you are so cross about this. I am going to leave now and I can come back later when we have a chance to think it through.*"

Do not get tempted to have a brawl. Instead, try to fantasize about saying, "*You rude pig, how do you expect anyone to work with you?*"

Bully bosses who are driven predominantly by arrogance of power like to see their staff sweat. So don't give them the pleasure by never letting them see you sweat. Whatever happens, stay calm. Don't scream back. Do not get into an argument. Why let a walking nightmare ruin your dream job!

Try the 20:1 trick. I know you may doubt. Trust me .It is founded on the very good principles of stress and anger management.

Here it is. Get away from the scene, row, argument or whatever. Take a deep breath, concentrate and count backwards: 20,19,18,17,16,15,14,13,12,11,10,9,8,7,6,5,4,3,2,1.

For some reason counting upwards does n't work. Counting backwards does. It has a calming effect. Have not you noticed a stage hypnotist at work? They always use the backward counting technique to relax their victims.

What next if all else fails?

- Try yoga and meditation

-Appeal to a senior member of the hierarchy to help you

-Consider a position change (transfer)

You and your boss need each other. Mutual dependence makes it essential that you build a strong relationship and learn to work together effectively. Take a sharp-eyed look at yourself and try to find ways that you could become a more supporting collaborator with people above and below you in the chain of command.

Do n't be unhappy. Life is too short.

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A VISIT ON STATUTORY REALITIES FOR INVESTMENT IN TRANSMISSION SECTOR AND COLLECTION OF TRANSMISSION DEVELOPMENT CHARGES

Er. C.P.George
Dy.CE

A well developed and efficiently priced transmission system is crucial for efficient development of the power sector. The transmission system must be developed in time for new generation capacity to come on stream as well as for demand to connect to the system in a timely manner. The transmission system is also the backbone for development of efficient competitive power markets. The rapidly developing transmission system at the inter-state level & intra state has been a key factor in the evolution of power trading in the country since the Electricity Act, 2003 came into effect. More recently, operations of power exchanges & Open access have also been greatly facilitated the increasing depth of the transmission network.

Recently some fundamental questions **on transmission development charges**, the demand raised by the transmission wing of KSEB through distribution, have been raised by consumers/applicants in many Forums. Hence the issues in investment in Transmission Sector have been analyzed according to the provisions in the electricity act, its subordinate regulations and the policy documents.

REGULATORY FRAME

According to Section 2(17) of Electricity Act 2003; "distribution licensee" means a licensee authorized to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply.

According to Section 2(19) of Electricity Act 2003; "distribution system" means the system of wires and associated facilities between the delivery points on the transmission lines or the generating station connection and the point of connection to the installation of the consumers.

According to Section 2(72) of Electricity Act 2003; "transmission lines" means all high pressure cables and overhead lines (not being an essential part of the distribution system of a licensee) transmitting electricity from a generating station to another generating station or a substation, ***together with any step-up and step-down transformers, switch-gear and other works necessary to and used for the control of such cables or overhead lines****, and such buildings or part thereof as may be required to accommodate such transformers, switch-gear and other works;*

According to Section 2(73) of Electricity Act 2003; "transmission licensee" means a licensee authorized to establish or operate transmission lines;

According to Section 39(1) of Electricity Act 2003; The State Government may notify the Board or a Government company as the State Transmission Utility: Provided that the State Transmission Utility shall not engage in the business of trading in electricity.

According to Section 40 of Electricity Act 2003; it shall be ***the duty of***

a transmission licensee to build, maintain and operate an efficient, co-ordinated and economical inter-State transmission system or intra-State transmission system*, as the case may be and to provide non-discriminatory open access to its transmission system for use by- (i) any licensee or generating company on payment of the transmission charges; or (ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission.*

According to Section 42 of Electricity Act 2003; it shall be the duty of a distribution licensee to develop and maintain an efficient, co-ordinated and economical distribution system in his area of supply and to supply electricity in accordance with the provisions contained in this Act.

According to Section 43(1) of Electricity Act 2003; save as otherwise provided in this Act, every distribution licensee, shall, on an application by the owner or occupier of any premises, give supply of electricity to such premises, within one month after receipt of the application requiring such supply.

Provided that where such supply requires extension of distribution mains or commissioning of new sub-stations, the distribution licensee shall supply the electricity to such premises immediately after such extension or commissioning or within such period as may be specified by the Appropriate Commission.

According to Section 43(3) of Electricity Act 2003; if a distribution licensee fails to supply the electricity within the period specified in sub-section (1), he shall be liable to a penalty which may extend to one thousand rupees for each day of default.

According to Section 46 of Electricity Act 2003; the State Commission may, by regulations, authorize a distribution licensee to charge from a person requiring a supply of electricity in pursuance of section 43 any expenses reasonably incurred in providing any electric line or electrical plant used for the purpose of giving that supply.

According to Section 61 of Electricity Act 2003; appropriate Commission shall, subject to the provisions of this Act, specify the terms and conditions for the determination of tariff, and in doing so, shall be guided by the following, namely:-

(a) ***the principles and methodologies specified by the Central Commission for determination of the tariff applicable to*** *generating companies and* ***transmission licensees****;*

(b) the generation, transmission, distribution and supply of electricity are conducted ***on commercial principles****;*

(c) the factors which would encourage competition, efficiency, economical use of the resources, good performance and optimum investments;

(d) ***safeguarding of consumers' interest and at the same time, recovery of the cost of electricity in a reasonable manner****;*

(e) the principles rewarding efficiency in performance;

(f) ***multi year tariff principles****;*

(g) that the tariff progressively reflects the cost of supply of electricity and also, reduces cross-subsidies in the manner specified by the Appropriate Commission;

(h) the promotion of co-generation and generation of electricity from renewable sources of energy;

(i) ***the National Electricity Policy and tariff policy****:*

*According to Section 62 (1) of Electricity Act 2003****; The Appropriate Commission shall determine the tariff in accordance with provisions of this Act for*** *(a) supply of electricity by a generating company to a distribution licensee;* ***(b) transmission of electricity; (c) wheeling of electricity*** *&(d) retail sale of electricity.*

According to Section 67 (1) of Electricity Act 2003; ***a licensee may****, from time to time but subject always to the terms and conditions of his licence, within his area of supply,* ***carry out all necessary works and all other acts necessary for transmission or supply of electricity****.*

According to Para 5.3.2 of National Electricity Policy 2005; The STU is responsible for planning and development of the intrastate transmission system. ***Network expansion should be planned and implemented keeping in view of the anticipated transmission needs that would be incident on the system in the open access regime. STU should undertake network expansion after identifying the requirements in consultation with stakeholders and taking up the execution after due regulatory approvals****.*

According to Para 5.3.5 of National Electricity Policy 2005; The transmission capacity would be planned and built to cater to both the redundancy levels and margins keeping in view international standards and practices. A well planned and strong transmission system will ***ensure not only optimal utilization of transmission capacities but also of generation facilities and would facilitate achieving ultimate objective of cost effective delivery of power.***

According to Para 2.2 of Tariff policy 2006; the Central Electricity Regulatory Commission (CERC) and ***State Electricity Regulatory Commissions (SERCs) shall be guided by the tariff policy in discharging their functions*** *including framing the regulations under section 61 of the Act.*

According to Para 2.3 of Tariff policy 2006; Regulatory Commissions shall ***be guided by the principles and methodologies specified by the Central Commission for determination of tariff applicable to generating companies and transmission licensees.***

According to Para 5.0 of Tariff policy 2006; the general approach to ***transmission tariff should be based on a) Return on Investment, b) Equity Norms, c) Depreciation, d) Cost of Debt, e) Cost of Management of Foreign Exchange Risk, f) Operating Norms, g) Renovation and Modernization & (h) Multi Year Tariff***

According to Para 7.1.4 of Tariff policy 2006; ***STU should undertake network expansion after identifying the requirements in consonance with the National Electricity Plan and in consultation with stakeholders, and taking up the execution after due regulatory approvals.***

According to Para 7.2.2 of Tariff policy 2006; The Appropriate Commission may require necessary studies to be conducted to establish the allowable level of system loss for the network configuration, and the capital expenditure required to augment the

transmission system and reduce system losses. Since additional flows above a level of line loading leads to significantly higher losses, ***STU should ensure upgrading of transmission systems to avoid the situations of overloading****. The Appropriate Commission should permit adequate capital investments in new assets for upgrading the transmission system.*

According to Clause 2(8) 0f CEA (Tech Std. for connectivity of Grid) Regulation, 2007; "Bulk consumer" means a consumer who avails supply at voltage of 33 kV or above.

According to Clause 2(25) 0f CEA (Tech Std. for connectivity of Grid) Regulation, 2007; "Requester" means a person such as a Generating Company including captive generating plant or Transmission Licensee (excluding Central Transmission Utility and State Transmission Utility) or Distribution Licensee or Bulk Consumer, who is seeking connection of his new or expanded electrical plant to the Grid at voltage level 33 kV and above.

According to Clause 2(32) 0f CEA (Tech Std. for connectivity of Grid) Regulation, 2007; "Transmission System" means a network of transmission lines and sub-stations

According to Clause 6(7) (1) 0f CEA (Tech Std. for connectivity of Grid) Regulation, 2007; every connection of a requester's system to the grid shall be covered by a connection agreement between the requester and

(a) Appropriate Transmission Utility in case of connection to Inter-state transmission system or intra state transmission system as the case may be;

(b) Distribution licensee in case of inter-connection to distribution licensee's system; and

(c) Transmission licensee and Appropriate Transmission Utility, in case of inter-connection to a transmission licensee (tri-partite agreement).

According to Clause 2(58) of Kerala State Electricity Grid Code, 2005; "Transmission services agreement" means the agreement between the Transmission Licensee and the ***user*** *for transmission/ wheeling of electrical power through transmission licensee's network to the user;*

According to Clause 2(60) of Kerala State Electricity Grid Code, 2005; "User" means a generating company, State Transmission Utility/Transmission Licensee, Distribution licensee;

According to Clause 7& 8 of the Kerala State Electricity Grid Code, 2005; the STU with the load forecasting data from the distribution licensee, is responsible for preparing the perspective plan for transmission system expansion to meet the future demand in the state. This perspective plan must be in conformity with the national perspective plan prepared by the Central Electricity Authority (CEA) same shall be submitted for approval of the commission.

According to Clause 4 (5) (a) of KSERC Supply Code 2005; the maximum connected load allowed with LT supply voltage of 415 volts is 100 kVA. Beyond 100 kVA connected load, 11kV system of supply is specified and maximum contract demand allowed is 3000 kVA.

According to Clause 6 of KSERC Supply Code 2005; the Licensee shall provide electricity connection to the owner or occupier

of any premises requiring supply as per the timeframe under clause 8 subject to the payment of required fees, charges and security and satisfying the conditions stipulated in the approved 'terms and conditions of supply' of the Licensee by such owner or occupier of the premises.

According to Clause 7(1) of KSERC Supply Code 2005; subject to the conditions under clause 8, the Commission authorizes the Licensee under Section 46 of the Act, to recover from the owner or occupier of any premises requiring supply the expenses reasonably incurred by the Licensee for providing any electric line or electrical plant required specifically for the purpose of giving such supply. (Provided that the ***Licensee shall not be entitled to recover such expenditure if such expenditure is under the scheme approved by the Commission or otherwise charged in the Annual Revenue Requirements of the Licensee)****.*

According to Clause 8(3)(b) & (c) of KSERC Supply Code 2005; the Licensee may require the applicant to pay the cost estimate worked out within a period of one month or such extended period as the Licensee may allow at the request of the applicant and complete the work within the time frame specified by the Honorable KSERC.

Factual Evaluation

1.Section 40 of Electricity Act 2003 read with Para 5.3.2 & 5.3.5 of National Electricity Policy, Para 7.1.4 & 7.2.2 of Tariff policy and Clause 7 & 8 of KSERC Kerala State Electricity Grid Code 2005 mandates that a State Transmission Utility (STU) shall build, maintain and operate an efficient, co-ordinated and economical inter-State transmission system or intra-State transmission system, as the case may be; should undertake network expansion after identifying the requirements in consultation with stakeholders and due regulatory approvals. Again it is the duty of every transmission licensee to provide non-discriminatory open access to its transmission system for use by- (i) any licensee or generating company on payment of the transmission charges; or (ii) any consumer as and when such open access is provided by the State Commission under sub-section (2) of section 42, on payment of the transmission charges and a surcharge thereon, as may be specified by the State Commission. Thus every capital expenditure (CAPEX) plan in the transmission sector needs to be submitted to the Honorable KSERC for approval. Additional capital expenditure incurred during the period and the variations need to be submitted for truing up exercise along with the tariff petition filed for the next tariff period to account the variation in the capital expenditure.

2. Section 61 & 62(1) of the Electricity Act 2003 read with Para 2.2, 2.3 & 5 of Tariff policy mandates that the transmission charges or transmission tariff should be based on the principles and methodologies specified by the Central Commission and accordingly; a) Return on Investment, b) Equity Norms, c) Depreciation, d) Cost of Debt, e) Cost of Management of Foreign Exchange Risk, f) Operating Norms, g) Renovation and Modernization & (h) Multi Year Tariff etc. Thus the investment by the transmission should be included in the ARR submitted for tariff application to the Honorable KSERC and if not it must be included in the truing up exercise. The tariff order issued by the Commission must have been considered and accounted

for these capital investments. Hence any transmission development charges from a distribution licensee or a consumer of the distribution licensee is not envisaged in the Electricity Act 2003 or in the tariff policy. Kindly note that the Central Transmission Utility (Power Grid Corporation of India) is doing all its investment throughout India based on the capital investment plan approved by the Honorable CERC and realizing the cost of investment through the transmission tariff. No amount had been collected by PGCIL from KSEB towards their direct investment cost for transmission system development.

3. Clause 2(8), 2(25), 2(32) and 6(7)(1) of CEA (Tech Std. for connectivity of Grid) Regulation, 2007 read with Clause 2(58) & 2(60) of Kerala State Electricity Grid Code, 2005 states that direct connectivity with transmission system is envisaged only for Generating Company including captive generating plant or Transmission Licensee (excluding Central Transmission Utility and State Transmission Utility) or Distribution Licensee or Bulk Consumer. Hence direct connectivity of a consumer of a distribution licensee below 33 kV is not feasible and not envisaged in the relevant statutes and licensee do not have any regulatory support to charge the transmission development charges from such consumers.

4. Section 46 of Electricity Act 2003 authorize a **distribution licensee** to charge any expenses reasonably incurred in providing any electric line or electrical plant used for the purpose of giving that supply. No such authorization is available for a transmission licensee. Instead Section 61 & 62(1) of the Electricity Act 2003 read with Para 2.2, 2.3 & 5.0 of Tariff policy made it clear that the transmission tariff shall be decided by the cost of investment, its operation and maintenance. Hence the scope for charging a distribution consumer with transmission development charge do not exists based on the prevailing statues and may lead to duplication of the investment costs unless it is a direct connectivity as per Kerala State Electricity Regulatory Commission (Connectivity and Intra-state Open Access) Regulation, 2013. In order to make the spirit of the tariff mechanism clearer, let this Forum quote from **Para 5.4** of the SCHEME FOR OPERATIONALIZATION OF POWER SYSTEM DEVELOPMENT FUND issued by the Ministry of Power, GOI, dated 10/01/2014. "*The entity shall then file a petition with the Appropriate Commission for regulatory approval of the scheme for funding from PSDF. Regulatory approval is required as implementation of the scheme will have implications on tariff, which is in the domain of the Appropriate Commissions.* ***Appropriate Commission will ensure that no tariff is claimed for the portion of the scheme funded from PSDF"***. Thus realisation of investment cost in transmission system development should be through transmission tariff and investment made through PSDF grant or any other mechanism cannot be accounted for the tariff realisation.

5. Supply code is prepared by the State commission as per the authorization in Section 50, Part VI (Distribution of Electricity) in the Electricity Act 2003 and same read with National Electricity Policy

2005, Tariff Policy 2006, KSERC Supply Code 2005 and other relevant subordinate regulation clearly confirms that the supply code is meant for regulating the activities of the distribution licensee only. The transmission activities are regulated by Part V (Transmission of Electricity) in the Electricity Act 2003, National Electricity Policy 2005, Tariff Policy 2006 and its relevant subordinate regulations including CERC (Indian Electricity Grid Code) Regulation, 2010; CERC (Grant of Connectivity, Long-term Access and Medium-term Open Access in inter-State Transmission and related matters) Regulations, 2010; CERC (Open Access in inter-State Transmission) Regulations, 2008; CEA Grid Standard regulation, 2010; CEA Grid Connectivity Regulation 2007; KSERC (Kerala State Electricity Grid Coode) regulation, 2005; KSERC (Intra state Open Access) regulation etc. Hence supply code does not have any relevance in the investment plan of a transmission licensee and same cannot be passed to a distribution licensee or his consumer. Even as per Clause 7(1) of the Supply Code, 2005; the Licensee shall not be entitled to recover such expenditure if such expenditure is under the scheme approved by the Commission or otherwise charged in the Annual Revenue Requirements of the Licensee. As per the prevailing statues, the transmission investment must have the approval of the appropriate Commission and must be reflected in the relevant ARR. Thus there shall be duplication in realization of the capital investment cost if the amount is collected from the consumer of the distribution Licensee.

KSEB Realities

KSEB is not operating with separate ARR for Transmission and a hydro Tariff as envisaged in the Tariff Policy is yet to become a reality. We are operating with a single ARR for all three wings (how..?!!) and all our transmission investment cost must have been accounted in the ARR or in the subsequent truing up exercises. So far we have not made any systematic plan to renovate and modernize our transmission system to the tune of Grid complexity requirement for present complex scenario as envisaged in the Electricity Act 2003 and its subordinate regulations.

To begin with we need to have real time accounting of energy handled by the State Transmission Utility (STU). Capital investment for Installation of GPS synchronized interfacing meters at interfacing points between generating stations and STU, between CTU & STU for interstate feeders under CTU, between STU & STU for interstate feeders between states and between STU & distribution interfacing points should be the primary concern for proper energy accounting and auditing, which is also a mandatory requirement as per Energy Conservation Act 2001. We need to get the GPS synchronized interfacing meters installed at all interfacing points as envisaged in the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 for any meaningful accounting and auditing of the energy handled by the transmission as well as generation and distribution. At present, the CTU (PGCIL) is doing this exercise for all the interstate feeders in the country and

the State Transmission Licensee (STU) need to do the same exercise for the State. This is basic functional requirement for the three business units, Generation, Transmission and Distribution wings and is a statutory responsibility of the STU. The net result and advantage is the actual accounting of transmission losses and correct identification of investment requirements to improve the Transmission system performance and efficiancy. This is the primary requirement for implementation of state level POC mechanism for sharing of transmission charges and sharing of transmission losses in tune with the CERC methodologies which is mandatory as per Electricity Act 2003 & Tariff Policy. The present mechanism of assessing transmission loss with load flow study is a farce and need to be corrected with the actual loss based on meter records as in the POC mechanism of CERC (Sharing of Inter State Transmission Charges and Losses) Regulations, 2010 implemented by NLDC as the Implementing Agency.

At present, the frequency of Grid Disturbances in the Kerala System is alarmingly high and the reliability of our transmission system during the rainy season asks for a rethink in our grounding system and maintenance philosophy. We need heavy investment to upgrade our transmission system to the tune of "N-1" & "N-1-1" requirement as envisaged in the section of the Para 6 - Reliability criteria, in the CEA TRANSMISSION PLANNING CRITERIA, 2013 to avoid localised blackouts. Again we have a mandatory requirement for upgrading our transmission protection system, as envisaged in the Central Electricity Authority (Grid Standards) Regulations 2010 which is a basic requirement for reliability of supply in the state. Grid visibility and protection coordination is another area for urgent investment in communication through Fibre Optic cable network and wireless network. The communication system of the transmission licensee shall comply with Central Electricity Authority (Technical Standards for Connectivity to the Grid) Regulations, 2007 and our transmission system needs to be upgraded accordingly.

Another area that requires in-depth system study and systematic investment is the area of reactive management. **According to Clause 2 Part-IV of Schedule in CEA connectivity regulation 2007; the power factor of the distribution system and bulk consumer shall not be less than 0.95 where as the present normative requirement by KSERC is 0.9 only**. With energy billing in kWH and normative requirement of 0.9 power factor made mandatory only for industrial and agricultural consumers, the reactive requirement in the system is leading to low voltages beyond the range specified by CEA Grid Standard at various load centres. This issue is very much visible 24x7, round the year in the northern part of the state where we have scarcity of generating stations and is visible during the off peak hours during the summer months in the Travancore area when the

hydro generating stations in the Idukki and Pathanamthitta district are synchronised for peak loads only. (Kindly note that the transformer-tap can be utilised for controlling the flow of reactive power but need reactive power sources like capacitor banks to meet the actual requirement.) Thus the reactive requirement is according to quantum of load in the system, available generating sources in the locality and region, seasons, load variations, consumer behaviours etc and the reactive management system need to be planned, devised and invested accordingly. **Actually low voltage is an issue which is to be resolved through proper transmission-distribution network design and reactive management only and hence nothing to do with the active power in the system**.

As such the renovation and modernisation of our outdated transmission system has been delayed to the level of serious system consequences and a comprehensive systematic investment plan for the transmission system in tune with the CEA Standards is the basic requirement for maintaining the transmission system with efficiency and reliability.

In addition to the above we need investment for meeting the ever expanding consumer requirements. This expansion requirement should be planned by the transmission according to the substation wise load requirement input from the distribution licensee and prepare the investment plan in tune with the spirit of National Electric Policy and Tariff Policy & get it approved by the KSERC for investment. According to Electricity act 2003 read with National Electricity Policy and Tariff Policy, the mechanism for the retrieval of the transmission investment cost is through transmission tariff approved by the SERC through the ARR submitted. As such, the urgent requirement is the systematic investment plan in transmission sector in its total perspective and operating the transmission function through separate ARR to make the state transmission system reliable and efficient.

According to Section 166 (4 & 5) of Electricity Act 2003; The State Government shall constitute a Coordination Forum consisting of the Chairperson of the State Commission and Members thereof, representatives of the generating companies, transmission licensee and distribution licensees engaged in generation, transmission and distribution of electricity in the State at state level for smooth and coordinated development of the power system in the State and District level committees to coordinate and review the extension of electrification in each district; to review the quality of power supply and consumer satisfaction; and to promote energy efficiency and its conservation. Constitution such Forums with relevant members and active intervention of such Forums in the core issues are the need of the hour for the better future of the State Power Sector.

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ഉപഭോക്തൃസംസ്ക്കാരം

Er. രാജൻ വി.

ഭൂമിയിൽ ജീവനുണ്ടായകാലം മുതൽ ഉപഭോഗവും തുടങ്ങി. ആദ്യകാലങ്ങളിൽ മുനുഷ്യൻ പൊതുവെ ആഹാരത്തിനും വസ്ത്രത്തിനും വേണ്ടിയാണ് ശ്രമിച്ചിരുന്നത്. അന്ന് പ്രധാനമായും കായ്കനികളും മരവുരിയുമൊക്കെ ഈ ആവശ്യത്തിന് പ്ര യോജനപ്പെടുത്തിയിരുന്നു. കാലം മാറിയപ്പോൾ ആവശ്യങ്ങൾ മാറുകയും കൂടുകയും ചെയ്തു. അതിനനുസരിച്ച് ഉപഭോഗവും വർദ്ധിച്ചു. ഇരുപതാംനൂറ്റാണ്ടിന്റെ അവസാനമായപ്പോൾ ഉപഭോഗം ഏതാണ്ട് അതിന്റെ പാരമ്യത്തിൽ എത്തി. ആ കാല ഘട്ടം വരെ വിഭവങ്ങളുടെ ഉപഭോഗമെന്നു വെച്ചാൽ വികസിത രാജ്യങ്ങളുടെ കുത്തക ആയിരുന്നു. അതേ സമയം ഇരുപതാം നൂറ്റാണ്ടിന്റെ രണ്ടാം പാദത്തിന്റെ ആരംഭം മുതലുണ്ടായ ലോക രാഷ്ട്രീയ – സാമ്പത്തിക മാറ്റങ്ങളുടെ ഫലമായി ഒട്ടനവധി രാജ്യങ്ങളിലെ ഉപഭോഗത്തിൽ കാര്യമായ ഉയർച്ച ഉണ്ടായി. 1990 കളിലെ ആഗോളവൽക്കരണ പ്രക്രിയ ഈ വളർച്ചയ്ക്ക് ഒരു രാസത്വരകമായി മാറുകയും ചെയ്തു. അതിനനുസരിച്ച് വികസ്വര രാജ്യമായ ഇന്ത്യയിലും പല മാറ്റങ്ങളും ഉണ്ടായി; വിശേഷിച്ചും ഉപഭോഗത്തിന്റെ കാര്യത്തിൽ. ഇന്നിപ്പോൾ ലോകത്തുള്ള എല്ലാ ഉൽപ്പന്നങ്ങളും നമ്മുടെ കമ്പോളത്തിലും ലഭ്യമാണ്. ചില ആഡംബര വസ്തുക്കൾ, കാറ്, മൊബൈൽ, ബൈക്ക്, ഇലക്ട്രോണിക് ഉൽപ്പന്നങ്ങൾ തുടങ്ങിയവ പല വിദേശ കമ്പനികളും ആദ്യം ഇറക്കുന്നത് നമ്മുടെ രാജ്യത്താണ്. അടുത്തകാലംവരെ നമ്മുടെ രാഷ്ട്രീയക്കാർ, സാംസ്കാരിക നായകർ, ബുജികൾ എന്നിവരൊക്കെ എപ്പോഴും പറയുന്ന ഒരു ആപ്തവാക്യമായിരുന്നു, ലോക ജനസംഖ്യയുടെ പത്തുശതമാനം വരുന്ന വികസിത രാജ്യങ്ങളാണ് (വിശേഷിച്ചും അമേരിക്ക) ലോക വിഭവങ്ങളുടെ 90% ഉപയോഗപ്പെടുത്തുന്നത്, ബാക്കി 10% മാത്രമാണ് 90% ജനത്തിന് പ്രയോജനപ്പെടുന്നത്. ഇതിപ്പോൾ സാധാരണ കേൾക്കാറില്ല, ഉപഭോഗത്തിന്റെ കാര്യത്തിൽ നമ്മളും ഇപ്പോൾ ഒട്ടും മോശമല്ലല്ലോ.

ഇതുപോലൊരു സൂക്തം വേറെയും ഉണ്ടായിരുന്നു. 'ഞാൻ കാര്യങ്ങൾ പഠിക്കുന്നു, ചിന്തിക്കുന്നു, അതുകൊണ്ട് ഞാനുണ്ട്'. ഇതിനെ നമ്മൾ നമ്മുടേതായ രീതിയിൽ അമേരിക്കയെ ചിത്രീകരിക്കാനായി പരിഷ്ക്കരിച്ചിരുന്നു. 'ഞാൻ ഒരു ഉപഭോക്താവാണ് . അതുകൊണ്ട് ഞാനുണ്ട്'. ചുരുക്കത്തിൽ ഉപഭോക്തൃ തത്വമാണ് നമുക്ക് അസ്തിത്വം നല്കുന്നത്. ഈ പറച്ചിലിന് ഇന്ന് നമ്മുടെ ഇടയിലും പ്രസക്തിയില്ലേയെന്നു ചിന്തിക്കേണ്ടിയിരിക്കുന്നു. നമ്മളും മുന്തിയ വീടും കാറും മറ്റു ഗൃഹോപകരണങ്ങളും വസ്ത്രങ്ങളും സ്വായത്തമാക്കുമ്പോൾ നമ്മുടെ അഹംഭാവത്തിന് ഒരു സംതൃപ്തി ലഭിക്കുന്നില്ലെയെന്നു ശാന്തമായി ആലോചിക്കണം. പല വിലകൂടിയ സാധനങ്ങളും വാങ്ങുമ്പോൾ അതിന്റെ ഉപയോഗമൂല്യത്തിനല്ല നമ്മൾ പ്രാധാന്യം നല്കുന്നത്, അതിന്റെ ഉടമസ്ഥനെന്നുള്ള ഖ്യാതിയാണ് ലക്ഷ്യം. അതുകൊണ്ടുതന്നെ നമ്മൾ ഉപയോഗിക്കാത്ത ധാരാളം വസ്തുക്കൾ മുറികളിൽ സ്ഥലം മുടക്കികളായി കിടക്കുന്നുണ്ട്. വസ്ത്രങ്ങളുടെയും ചെരുപ്പുകളുടെയും കാര്യം പറയാതിരിക്കുകയാണ് ഭേദം. ഒരു ഉൽപ്പന്നത്തിന്റെയും മുഴുവൻ പ്രയോജന കാലാവധിയും നമ്മൾ പൊതുവെ പ്രയോജനപ്പെടുത്താറില്ല, അതിനകം വേറൊന്നു വാങ്ങിക്കഴിഞ്ഞിരിക്കും.

ആഹാരത്തിന്റെ അതിലഭ്യത നമ്മുടെ സമൂഹത്തിൽ ഉണ്ടാക്കുന്ന പ്രശ്നങ്ങൾ അറിയാൻ പാഴൂർപ്പടിവരെ പോകേണ്ട ഒരാവശ്യവുമില്ല. അതിനനുസരിച്ച് നമ്മുടെ രോഗങ്ങളും വർദ്ധിച്ചു. ഇല്ലാത്ത അസുഖത്തിനാണ് നമ്മൾ ഇപ്പോൾ കൂടുതലും ചികിത്സ തേടുന്നത്. 65 വയസ്സിനുമുകളിൽ പ്രായമുള്ളവർ പലരും ഇന്നനുഭവിക്കുന്ന രോഗങ്ങൾ അവർ ഏതാണ്ട് 40 വയസ്സു മുതൽ കഴിക്കുന്ന മരുന്നുകളുടെ പാർശ്വഫലങ്ങളാണ്. അതിൽ നമുക്ക് പ്രത്യേകിച്ച് പരാതിയൊന്നുമില്ല എന്നുള്ളതും ശ്രദ്ധിക്കണം.

കഴിഞ്ഞ മാസത്തെ ലേഖനത്തിൽ പറഞ്ഞതുപോലെ വാചക കാപട്യങ്ങൾ കൊണ്ട് ദീർഘകാല ഗുണങ്ങളൊന്നും ഒരു സമൂഹത്തിലും ഇന്നുവരെ ഉണ്ടായിട്ടില്ല. ഉറക്കെ കൂടുതൽ സംസാരിക്കുന്നവർക്ക് ശ്രദ്ധ കിട്ടുന്നത് കലികാല വൈഭവം, കാര്യം പറയുന്നവരെ ആരും ശ്രദ്ധിക്കുന്നില്ല, മാദ്ധ്യമങ്ങൾ ചില കാര്യങ്ങളിൽ (മുല്ലപെരിയാർ) എന്തെല്ലാം പുകിലുകളാണ് കാണിക്കുന്നത്. നമ്മുടെ രാഷ്ട്രീയക്കാരുടെയും സ്വഭാവമതാണ്. അതേ നമ്മൾ അർഹിക്കുന്നുമുള്ളൂ. എല്ലാം ശരിയായ രീതിയിൽ കാണുമെന്ന് അവകാശപ്പെടുന്ന മാദ്ധ്യമങ്ങളും അതുതന്നെ ചെയ്തോലോ ? അതുകൊണ്ട് ലോകത്ത് വിഭവങ്ങൾ കുറയുന്നു, ജനസംഖ്യ കൂടുകയും ചെയ്യുന്നുയെന്നുള്ള യാഥാർത്ഥ്യം പ്രബുദ്ധ സമൂഹമെന്നു അവകാശപ്പെടുന്ന നമ്മളെങ്കിലും മനസ്സിലാക്കുക. ജനസംഖ്യാ നിയന്ത്രണം ഇപ്പോഴും മത - രാഷ്ട്രീയ കെട്ടുപാടുകളിൽ കുരുങ്ങി കിടക്കുകയാണ്. ഇവിടത്തെ കാര്യം തന്നെയെടുത്താൽ മണലിനും തടിക്കും ഇന്ന് പൊന്നിന്റെ വിലയല്ലേ, ആവശ്യം കൂടി, ലഭ്യത കുറഞ്ഞു. പ്രകൃതി വിഭവങ്ങൾ കുറഞ്ഞ് വരുന്നു, ആവശ്യങ്ങൾ കൂടുന്നു. പല ആഫ്രിക്കൻ രാജ്യങ്ങളിലും അനുഭവപ്പെടുന്ന ദാരിദ്ര്യം നമ്മൾ ചാനലുകളിൽ കാണുന്നില്ലെ. ആ സഹജീവികൾക്ക് വേണ്ടിയെങ്കിലും നമ്മൾ അല്പം മിതവ്യയം ശീലിക്കുന്നതു നല്ലതല്ലെയെന്നു ചിന്തിക്കുക. നമ്മൾ ചവറും മാലിന്യവുമാക്കി കളയുന്ന സാധനങ്ങൾ ദാരിദ്ര്യം അനുഭവിക്കുന്നവർക്കു ലഭ്യമാക്കിയാൽ തന്നെ അവർക്ക് വലിയ ആശ്വാസമാകും .

കമ്പോളത്തിന്റെ നിയമമനുസരിച്ച് ഉപഭോക്താവിന് ചെലവാക്കാനുള്ള പണത്തിനനുസരിച്ചാണ് ആവശ്യങ്ങൾ വരുന്നത്. അപ്പോൾ കാശുള്ള സമൂഹത്തിൽ ഉപഭോഗം കൂടും. ഇവിടെ ഗവൺമെന്റ് തന്നെ ഉപഭോഗം പ്രേരിപ്പിക്കുകയാണ്. അതാണല്ലോ ഇടതു-വലതു വ്യത്യാസമില്ല വ്യാപാര മേളകൾ. അതിൽ പങ്കെടുക്കുന്നവർക്ക് കിലോക്കണക്കിനാണ് സ്വർണ്ണം സമ്മാനമായി നൽകുന്നത്. ഈ സമയത്തും നമ്മളെല്ലാപേരെയും ഉൾക്കൊള്ളുന്ന വികസനത്തെക്കുറിച്ച് പിറുപിറുക്കുകയും ചെയ്യും. ആ പ്രതിഭാസമാണ് ഇന്ന് സമൂഹത്തിൽ കാണുന്നത്. അതിന്റെ വലിയ ഉദാഹരണമാണ് മൂന്നുകോടി ജനങ്ങളുള്ള നമ്മുടെ സംസ്ഥാനത്ത് അതിൽ കൂടുതൽ മൊബൈൽ ഉപഭോക്താക്കളുണ്ട്, വാഹനങ്ങളുടെ എണ്ണവും മോശമല്ല. ദാരിദ്ര്യത്തിൽ കഴിഞ്ഞപ്പോൾ നമ്മളും പല ന്യായങ്ങളും പറഞ്ഞു. വികസിത രാജ്യങ്ങളെ കുറ്റപ്പെടുത്തിയിരുന്നു. ഇന്നിപ്പോൾ നമ്മളും ആ നിലയിൽ ആയപ്പോൾ പ്രത്യേകിച്ചൊന്നും പറയുന്നില്ല, ആകപ്പാടെ പറയുന്നത് ശമ്പളവും പെൻഷനും എപ്പോഴും കൂട്ടികൊണ്ടിരിക്കണമെന്നാണ്. എല്ലാപേരെയും ഉൾക്കൊള്ളുന്ന വികസനമെന്ന് വെറുതെ വീൺവാക്ക് പറഞ്ഞാൽപ്പോര അതിനുവേണ്ടി പ്രവൃത്തിക്കുകയും വേണം. അപ്പോഴെ അതിന് അർത്ഥമുണ്ടാകൂ.

ധ്രുവ സംഗമം

Er. ഇ.എം. നസീർ, ചിറയിൻകീഴ്

പരസ്പര ബന്ധമില്ലാത്ത കാര്യങ്ങളെ ഏകോപിച്ച് അവതരിപ്പിക്കുന്നത് നാം നിത്യേന കണ്ടുവരുന്നു. അവയിലെ കൗതുകം കാണുന്നില്ല. ചില ഉദാഹരണങ്ങളിതാ.

1. ഇന്ത്യൻ നിർമ്മിത വിദേശ മദ്യം : (ഇന്ത്യയിൽ നിർമ്മിക്കുന്ന മദ്യം ഒരിക്കലും വിദേശമദ്യമാകില്ല. അലോപ്പതി മരുന്നിനെ ഇന്ത്യൻ നിർമ്മിത വിദേശ ഔഷധം എന്നു പറയാറില്ലല്ലോ).
2. പേപ്പർ വാഴയില : (നാം പരസ്യത്തിലൂടെ ശ്രദ്ധിക്കുന്ന ഒരു ഉൽപ്പന്നമാണ് – പേപ്പറും വാഴയിലയും ഒന്നല്ല).
3. അലുമിനിയത്തിന്റെ ഇരുമ്പുചട്ടി : (ഗ്രാമങ്ങളിലെ വീട്ടമ്മമാരുടെ ഭാഷയാണ്. അലുമിനിയവും ഇരുമ്പും രണ്ടു വസ്തുക്കളാണ്.)
4. അലുമിനിയത്തിന്റെ ചെമ്പ് : (ഗ്രാമ ഭാഷയാണ്. സദ്യക്കും മറ്റും വലിയ അളവിൽ പാചകം ചെയ്യുന്നതിന് വലിയ ചെമ്പു പാത്രങ്ങൾ ഉപയോഗിച്ചിരുന്നിടത്ത് അലുമിനിയം കൊണ്ടുള്ള പാത്രങ്ങൾ വന്നപ്പോൾ ഉണ്ടായ പേര്).
5. പ്ലാസ്റ്റിക് ചിരട്ട : (റബ്ബർ ടാപ്പിംഗിന് ചിരട്ടക്കു പകരമുപയോഗിക്കുന്ന ചിരട്ടയുടെ രൂപത്തിലുള്ള പ്ലാസ്റ്റിക് പാത്രം. രണ്ടും വ്യത്യസ്ത വസ്തുക്കൾ).
6. സ്റ്റീൽ ഗ്ലാസ് : (കണ്ണാടി കൊണ്ടുണ്ടാക്കിയ പ്രത്യേക രൂപത്തിലുലള പാനീയം കുടിക്കാനുള്ള പാത്രമാണ് ഗ്ലാസ്. സ്റ്റീൽ കൊണ്ടുണ്ടാക്കിയ പാനപാത്രത്തിനെ ഗ്ലാസ് എന്നുപറയാനാകില്ല. മണ്ണുകൊണ്ടുണ്ടാക്കിയവയെ മൺപാത്രം, മൺകലം എന്നൊക്കെയേ പറയാനാകൂ. മൺഗ്ലാസ് എന്ന് പറയാനാകുമോ ? പ്ലാസ്റ്റിക് ഗ്ലാസ്സിനും ഇതേ പ്രശ്നമുണ്ട്).
7. പ്ലാസ്റ്റിക് കയർ : (രണ്ടും രണ്ടു വസ്തുക്കൾ. ചകിരിനാരുകൊണ്ടു മാത്രമുണ്ടാക്കുന്ന വസ്തുവാണ് കയർ)
8. നൈറ്റി : (നിശാവസ്ത്രമാണ് നൈറ്റി എന്ന് പാശ്ചാത്യ ഭാഷയിൽ അറിയപ്പെടുന്നത്. പക്ഷേ, അത് പകലുപയോഗിക്കുന്ന വസ്ത്രമായി മാറിക്കഴിഞ്ഞു.
9. അന്യായം : (ന്യായമല്ലാത്ത കാര്യത്തിനെതിരെ നീതിക്കുവേണ്ടി കോടതിയിൽ ഫയൽ ചെയ്യുന്നത് അന്യായം)!
10. അടിവരയിട്ടു പറഞ്ഞു : (എഴുതുന്നതിനെയല്ലാതെ പറയുന്നതിനെ അടിവരയിടാനാകില്ല.)
11. വിലവർദ്ധന ഇരുട്ടടിയായി : (മാധ്യമങ്ങളുടെ ഈ പ്രയോഗത്തിന് വസ്തുതാപരമായി ഒരു ബന്ധവുമില്ല.)
12. മണ്ടത്തരം പറയുന്നതിൽ മിടുക്കൻ : (മണ്ടൻ മിടുക്കനാവുന്നു).
13. പഠിപ്പിക്കാൻ കാലൻ : (കാലൻ എന്നാൽ അന്തകൻ. ഉന്നത നിലവാരമുള്ള അദ്ധ്യാപകനെ പുകഴ്ത്തിയുള്ള പ്രയോഗമാണ് അദ്ധ്യാപനത്തിന്റെ അന്തകനാക്കുന്നത്).
14. Railway Level Crossing is manned by woman സ്ത്രീ ചെയ്യുന്ന ജോലിയെ പുരുഷൻ ചെയ്യുന്ന ജോലിയാക്കി മാറ്റിയിരിക്കുന്നു)

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Electrification of BPL Family Houses by Kasaragod Unit

KSEBEA, Kasaragod unit takes pleasure in informing you about the completion of electrical wiring of 14 houses of BPL families at Linganadukka under Electrical Section Paivalika, as part of our Association's Social Activity. Hon'ble Minister of Agriculture Mr.K.P.Mohanan has consented to grace the inaugural function of electrification of these houses on 01.03.2014, Saturday (**at 8am**) at Linganadukka Colony, Kasaragod.

On behalf of KSEB EA Kasaragod Unit, we would like to invite all the office bearers and members of Engineers Association to be present on the occasion and make it a big success.

Praseetha K.
Secretary

Nagaraja Bhatt K.
Chairman

(KSEBEA, Kasaragod Unit.)

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15. തണ്ടപ്പേര് : (ഭൂമിയുടെ വിലയാധാരം രജിസ്റ്റർ ചെയ്ത ശേഷം വില്ലേജ് ഓഫീസിൽ പോക്കുവരവു ചെയ്യിക്കുമ്പോൾ ഒരു നമ്പർ അനുവദിച്ചുതരും. ഈ നമ്പർ പേരിലാണറിയപ്പെടുന്നത് .....തണ്ടപ്പേരിൽ.
16. ഇല്ലാത്തത് ഉണ്ടോ ? : (എന്തും വാങ്ങാൻ കിട്ടുന്ന കടയിൽ ചെന്നിട്ട് ഇവിടെ കിട്ടാത്തതായിട്ട് എന്തുണ്ട് എന്ന് ചോദിക്കുന്നതിലെ വിരോധാഭാസം ചിന്തിച്ചു നോക്കുക. അതിലുമുണ്ട് വിരോധാഭാസം. ചിന്തിച്ചിട്ട് എവിടെ നോക്കാൻ? എന്തു നോക്കാൻ ?)
17. പ്രസംഗം കലക്കി : (കലക്കം എന്നാൽ കുഴപ്പം, ബഹളം, അലങ്കോലം, ഇളക്കം എന്നൊക്കെയാണ്. യോഗം കലക്കിയെന്നാൽ അലങ്കോലമാക്കിയെന്നർത്ഥം. നേതാവിന്റെ പ്രസംഗം ഗംഭീരമാക്കിയെന്നുദ്ദേശിച്ച് കലക്കിയെന്നു പറയുന്നത് ഭാഷാപരമായി തെറ്റാണ്.)

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Seminar Series - V

Role of Phasor Measurement Unit in Power System

College level Paper Presentation Contest (Jan 2014)

Paper presentation contest on the "Role of Phasor Measurement Units in Power Systems" was conducted at 26 Engineering colleges in Kerala during January 2014 jointly with IEEE SBs or Dept. EEE where a student branch is not functioning. The winners at the College level qualifies for the District level competitions.

List of Winners

1. College of Engineering Trikaripur, Cheemeni.

I Prize – Prasoon Chandran Mavila & Rajeev A.

II Prize – Nipin KK & Vivek P K

2. Govt. College of Engineering Kannur

I Prize – Mijaz Mukundan

II Prize – Abhijith U P

3. MEA Engineering College, Perinthalmanna.

I Prize – Akhthar C.

II Prize – Shameem Roshan V.P.

4. NSS College of Engineering, Palakkad

I Prize – Sundar R

II Prize – Ajay Vishnu

5. Jyothi Engg. College, Cheruthuruthy

I Prize – Anagha Philip & Jishnu R.

II Prize – Helna Joseph & Smiya Johnson Puthiri

6. Govt. Engineering College, Thrissur

I Prize – Aswathy D Nair

II Prize – Divya Nair

7. Sahrdaya College of Engineering, Kodakara

I Prize – Swathy Raveendran

II Prize – Chelsy Joy

8. Toc H Institute of Science & Technology, Ernakulam.

I Prize – S Sidharth

II Prize – Geethu M T

9. Mar Athanasius College of Engineering, Kothamangalam

I Prize – Sreenath Sukumaran

II Prize – Akhil S

10. KMEA Engineering College, Aluva

I Prize – Ragesh

II Prize – Younus T M & Thahasil K A

11. Adi Sankara College of Engineering and Technology

I Prize – Arathy Krishna

II Prize – Rini Paul & Revu SUkumaran

12. Amal Jyothi College of Engineering, Kanjirapally

I Prize – Bijo Reji

II Prize – Daniel T. Varghese

13. St. Jospeh's College of Engineering & Technology, Palai

I Prize – Deepa Francis

II Prize – Tintu Varghese

14. St. Gits College of Engineering, Pathamuttom

I Prize – Rinku Mary George

II Prize – Deepu E. Koshy

15. College of Engineering, Kidangoor

I Prize – Shema Meru Ninan & Ruby Nageem

II Prize – Varun Nair & Matson Mathew

16. College of Engineering, Munnar

I Prize – Browin Thomas & Sanju John

II Prize – Anandu Madhu & Sruthi Sundar

17. Musaliar College of Engineering & Technology, PATHANAMTHITTA

I Prize – Akshay D. Pal

II Prize – Fousiya Salim

18. Mount Zion College of Engineering

I Prize – Rahul k mohanan & Sanjeev krishnan

II Prize – Betsy & Vrinda

19. MES Institute of Technology & Management, Chathannoor

I Prize – Varun Krishnan R.

II Prize – Pradeep John

20. TKM College of Engineering, Kollam

I Prize – Gayathri Ajith

II Prize – Darshana J Raghunath

21. HEERA COLLEGE OF ENGINEERING

I Prize – Haseena M & Sreejitha T

II Prize – Sanu K.M. & Vishnu Divakar

22. Sarabhai Institute of Science & Technology, Vellanad

I Prize – Manu S Nair & Vivek E

II Prize – Nidhun Raj K R

23. Mohandas College of Engineering and Technology, Nedumangad

I Prize – Geethu Mohandas

II Prize – Aswathy K.M.

24. College of Engineering, Trivandrum

I Prize – Amal Balachandran

II Prize – Sharon Sebastian

25. TKM Institute of Technology, Karuvelil, Kollam

I Prize – Anjana S (S6 EEE)

II Prize – Vineeth V.L and Upasana Satheesan (ECE)

26. SHM Engineering College, Kadakkal

I Prize – KANNAN P S S8 Electrical

II Prize – JUSTIN LUKOSE

FAREWELL

Er. Pushpangadan T. N., Assistant Executive Engineer retired from KSEB service on 30-11-2013 Er. Pushpangadan was an active member of the KSEB Engineers' Association .

KSEB Engineers' Association wishes him an active , prosperous and peaceful retired life.

District Level Paper Presentation Contest - 2014

THIRUVANANTHAPURAM

Trivandrum unit conducted the seminar series -5 district level on 28.01.2014 at Engineers House ,Trivandrum.There were 10 teams from 7 engineering colleges for the programme.The winners of the seminar presentations are as follows.

1. *Sreejitha T and Hazeena, Heera College of Engineering.*
2. *Ashwin S, and Prasad Simon, Bartonhill College of Engineering.*

5th District Level Seminar Series held on 28-01-2014 at Engineers' House, Thiurvananthapuram

Er. M. Jayaraj, Director, Anert inaugurating the District Level Seminar Series at Engineers' House, Thiurvananthapuram

KOLLAM

Engineer's Association Kollam Unit has conducted the District Level Seminar Series presentation on 31.01.2014 at TKM College of Engineering,Kollam. The program was inaugurated by Dr.T.M.Amarunnishad,Principal, TKM College of Engineering . The following teams emerged winners.

1. *Anjana. S, TKM Institute Of Technology,Karuvelil, Kollam*
2. *Vineeth. V. L & Upasana Satheesan, TKM Institute of Technology, Karuvelil, Kollam.*

ALAPPUZHA and PATHANAMTITTA

KSEB Engineers Association Alappuzha unit and Pathnamthitta unit in association with Electrical Engineering Association and IEEE students Chapter,College of Engineering Chengannoor,Kerala Chapter organized seminar competition on "ROLE OF PHASOR MEASUREMENT UNIT (PMU) IN POWERSYSTEM" as part of the Special Seminar Series-V- 2014 on 28 Jan 2014. Dr. V.P. Jyothiraj, Principal, College of Engineering, Chengannoor inaugurated the seminar contest. Er. James M. David , Chairman, Pathnamithitta District presided over the inaugural function. Er.B. Raghu, Chief Engineer (Rtd.) spoke on the relevance of the subject. Er. George Mathew, Chairman, Alappuzha unit welcomed the gathering, Er. Krishna Kumar M, Secretary, Alappuzha unit expressed vote of thanks and Prof. Sreeja. P., Head of the Department, Electrical Engineering, and College of Engineering felicitated the event. The seminar was well attended by more than sixty students, faculty members etc.

District level seminar seriers held at College of Engineering, Chengannoor the Seminar Series was inaugurated by Er. James M. David Deputy Chief Engineer, Electrical Circle, Pathanamthitta

The valedictory function was inaugurated by Er. Suresh, Executive Engineer, Chengannoor, The judging panel , Prof. V.M.G Paniker, Professor Emeritus, Er.Raghu B, Chief Engineer (Rtd.), Er. Gangadhara Kurup, Dy. Chief Engineer

(Rtd.) and Special officer, CAPE,Punnappra gave their feedback and suggestions to the students and. Er. K.J.Abdul Vahid, Treasurer,Alappuzha unit welcomed the gathering, Er. Shaji Thomas, Secretary, Pathnamthitta district expressed vote of thanks. Prof. C.V. Anilkumar, IEEE Student Counsilor, Er. Abdul Samad, Seminar Coordinator felicitated the event. The prizes were distributed by the Principal Dr. V.P.Jyothiraj and participation certificates were distributed by Er. Rajesh, GB member.

10 teams participated in the seminar contest .The seminar concluded by 4.30 pm. The prize winners are,

Kayani Venugopal and Asif Abdullah, College of Engineering, Chengannoor
Akshay D Pal and Fousiya Salim, Musaliar College of Engineering, Pathanamthitta.

The valedictory function was inaugurated by Er. Suresh, Executive Engineer, Chengannoor,

KOTTAYAM

The 5th Seminar Series of Kottayam Unit was conducted at Govt. R.I.T. Engg. College, Pampady, Kottayam on 24th January 2014. The Seminar Series was inaugurated by Dr K.P. Indiradevi, Principal of R.I.T., Pampady. Prof. Vijayakumari, HOD of EEE Dept. also was present. The competition started at 11 am. A total of 6 teams from various colleges were present. Er. Anil M, EE, Er. Suresh Chand,EE, Er. ThomasKutty Dy.CE(Rtd) were the Judges and Er. E.K. Radhakrishnan,EE was the moderator of the Competition. The competition came to an end by 2PM. The certificates and cash prize for the winners were distributed by Prof. Vijayakumari, HOD of EEE Dept. Associate Professor Johnson Mathew of EEE dept. played a key role in conducting the competition at R.I.T., Pampady. The IEEE co-ordinator of the college Asst. Professor Joseph K.D. was also present. The winners are

1. *B. Varun Nair & Matson Mathew, College of Engg., Kidangoor.*
2. *Keerthi Kurian & Pooja Omanakuttan, Mangalam Engg. College, Ettumannoor*
3. *Ajmal Unais & Sherin John, R.I.T , Pampady .*

The Seminar Series at Kottayam was inaugurated by Dr K.P. Indiradevi, Principal of R.I.T., Pampady.

The certificates and cash prize for the winners were distributed by Prof. Vijayakumari, HOD of EEE Dept. R.I.T., Pampady

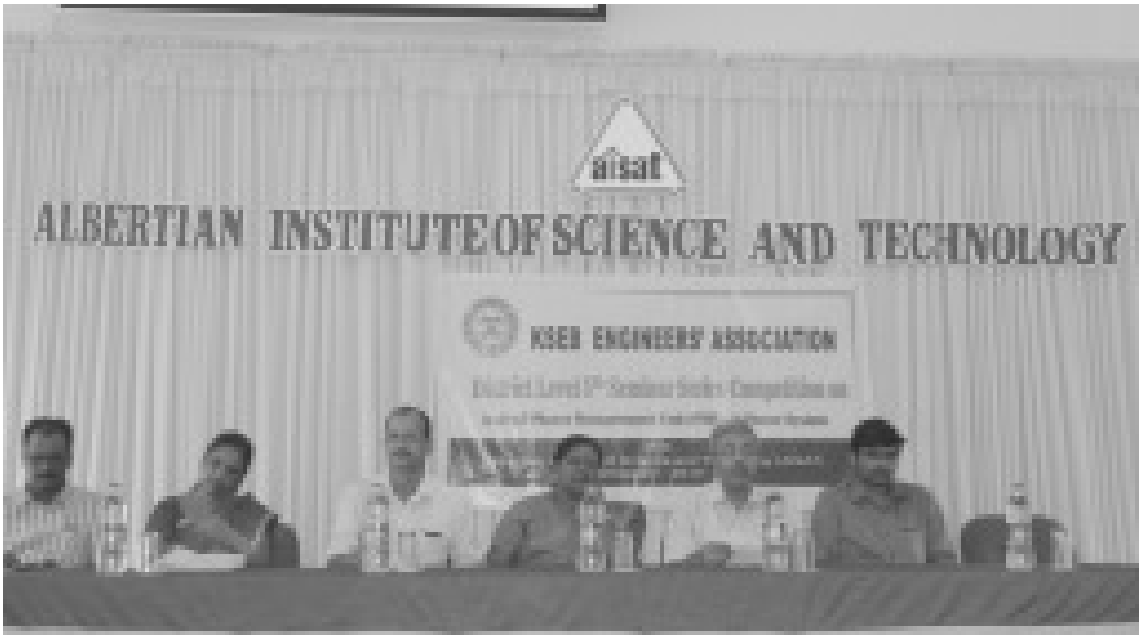
ERNAKULAM

The district level seminar series was conducted at AISAT, Kalamassery on 25.01.14.The seminar series was inaugurated by Dr. K E George, Principal, AISAT, Kalamassery and Er. Gayathri Nair, Chief Engineer (System Operation) delivered the key note address. 14 students from 7 Engineering colleges participated in the competition. The winners of the seminar presentations are as follows.

1. *Aarathy Krishna. R, Adi Shankara Institute of Engineering and Technology*

2. *S Sidharrth and Geethu M T , Toc H Institute Of Science And Technology and Juby Jose and Roshny Mary B, Sree Narayana Gurukulam College of Engineering And Technology ,Kadayiruppu, Kolenchery*
   (shared the second prize).

The District Level Seminar Series was conducted at AISAT, Kalamassery on 25.01.14.The Seminar Series was inaugurated by Dr. K. E. George, Principal, AISAT, Kalamassery and Er. Gayathri Nair, Chief Engineer (System Operation) delivered the key note address.



THRISSUR

Thrissur unit conducted the seminar series -5 district level on 31.01.2014 at Vidya Institute of Engg and Technology,Thrissur. There were 7 teams from 5 engg colleges for the programme. The winners of the seminar presentations are as follows.

1. Jishu R and Anagha Philip, Jyothi College of Engineering.

2. Swathi Ravindran and Abymol jose, Sahrdaya College of Engineering and Technology

PALAKKAD

KSEBEA Palakkad Unit conducted The Fifth Seminar Series on 29.01.2014 at Prime College of Engineering,Palakkad. Er.Radhakrishnan, Dy.CE, Electrical Circle, Palakkad welomed the gathering.The function was inaugurated by Dr. Prof Sivasubramaniyam, Principal, Prime College of Engg,Palakkad. Presidential Address by Er.Parameswaran ,Dy.CE.Electrical Circle Shoranur(Chairman ,Palakkad Unit).Felicitation by Er,Sudhakaran, Rtd EE and Vote of thanks by Er. Jayaraj,Secretary,Palakkad unit.
A total of 3 teams participated in the competition.

Winners are:
1.Ajay Vishnu and Sundar R, NSS College of Engineering,Palakkad
2.Saranya V G and Shalima Shukkur, Prime College of Engineering, Palakkad.

KOZHIKODE

Kozhikode Unit conducted the Seminar Series -5 District Level on 22.01.2014 at Govt Engineering College, West Hill, Kozhikode.There were 10 participants for the programme.The winners of the seminar presentations are as follows.

1st : Joel Paul, and Aakash Krishnan, college of Engineering ,Vadakara.

2nd : Gaurav Khare ,NIT, Kozhikode and Chippy George.M, Calicut university institute of Engg.& Technology.

Seminar Series -5 District Level on 22.01.2014
at Govt. Engineering College, West Hill, Kozhikode.

KANNUR

The Kannur Unit seminar series competition was conducted on 24th January 2014. A total of 9 teams from 5 colleges of Kannur and Wayanad District participated. The following teams emerged winners

1. *Mr. Mijaz Mukundan, S6 EEE, Govt. College of Engineering, Kannur.*
2. *Ms. Saranya P.K, S8 EEE & Ms. Sabna P.K, S6 EEE,*
   Vimal Jyothi Engineering College, Chemperi, Kannur.

KASARAGODE

Engineers' Association Kasaragod Unit has conducted the District Level Seminar Series presentation on 20.01.2014 at Sadguru Swami Nithyananda Institute of Technology (S.S.N.I.T)Kanhangad. The program was inaugurated by Dr. Rajesh Pai, Principal of S.S.N.I. Two teams have participated in the seminar competition and details are given below.

1. *Prasoon Chandran Mavila and Rajeev A., College of Engg., Trikaripur .*
2. *Nipin K.K. and Vivek P.K., College of Engg. , Trikaripur.*

STATE LEVEL CONTEST

The state level paper presentation contest on ROLE OF PHASOR MEASUREMENT UNIT (PMU) IN POWER SYSTEMS was jointly organized by IEEE Power & Energy Society Kerala Chapter & KSEB Engineers Association. Winners of the District level competitions qualified for the finals held on Feb 14th at IMG Hall, Trivandrum.Padma Shri M Chandradathan, Director LPSC, Valiamala, Trivandrum was the Chief Guest. KSEB Engineers Association President Er Mohammed Shereef presided over the inaugural function. PES Kerala Chapter Chair, Prof Muhammed Kasim & CEEBA president, Er. G S Ajikumar felicitated on the occasion and were present during the entire program.20 teams participated in the contest. T A & participation certificates were given to all contestants. Cash Prize & certificates were distributed to winners after the final competition.

STATE LEVEL WINNERS

1. **First Prize** (Rs 10,000/- + Certificate) - Ms. Juby Jose & Ms. Roshny Mary, Sree Narayana Gurukulam College of Engineering, Kadayirippu, Kolencherry.
2. **Second Prize** (Rs. 5,000/- + Certificate) - Ms. Anjana S, TKM Institute of Technology, Karuvelil.
3. **Third Prize** (Rs. 3,000/- + Certificate) - Ms. Hazeena & Ms. Sreejitha T, Heera College of Engineering, Trivandrum.
4. **Best Innovative Idea** (Rs 5,000/ + Certificate) - Mr. Mijaz Mukundan, Govt Engineering College, Kannur.
5. **Best Communication Skill** (Rs 5,000/- + Certificate) Mr. Akash Krishnan & Mr. Joel Paul, College of Engineering, Vadakara

Congratulations to the winners.

കവിത

പ്രതിഫലം

പുഷ്പാംഗദൻ തച്ചയത്ത്

ഈമെയിലെത്തീ വീണ്ടും ഉടനെ മടങ്ങുവാൻ
ഇടിവാളേറ്റപോലെൻ ആത്മാവു പിടയുന്നു.
അമ്മതൻ വേർപാടിനാൽ അമേരിക്കയിൽ നിന്നും
വന്നതാണെന്നു ഞാനും ദിവസങ്ങളേറെയായ് !
അന്ത്യകർമ്മങ്ങൾ തീർന്നു ബന്ധുക്കളും പിരിഞ്ഞു
ഭവനത്തിങ്കലിപ്പോളച്ഛനും ഞാനും മാത്രം !

നിത്യവുമെത്തുമോരോ പരിചിതർ ചോദിക്കു –
മാച്ചോദ്യം, നടുക്കുന്നു ! അച്ഛനെക്കൊണ്ടുപോമോ ?
ഇവിടെയേതെങ്കിലും വൃദ്ധസദനത്തിങ്കൽ
ചേർത്തിട്ടു പൊയ്ക്കൂടയോ ? അല്ലെങ്കിലെന്തുചെയ്യും ?
എന്തുചെയ്യും ഞാനെന്നാച്ചോദ്യമൊരാഘാതമായ്
തകർത്തീടുന്നുള്ളവും കുഴങ്ങീടുന്നു ഞാനും.

സർക്കാർ സർവ്വീസിൽ നിന്നും വിരമിച്ചു പോന്നിട്ടേ –
റെ നാളായിക്കൂട്ടിന്നായമ്മയുണ്ടായിരുന്നു.
എത്രയും വാചാലനായ്ക്കാണുവാറുള്ളോരെന്റെ
യച്ഛനിന്നിപ്പോത്തീരെയുരിയാട്ടമില്ലാതായ്.

പിറ്റേന്നാൾ പ്രഭാതത്തിലച്ഛൻ വിളക്കുന്നെന്നെ
മകനേയൊരു കാര്യം പറഞ്ഞീടട്ടയോ ഞാൻ.
ഒരു വൃദ്ധസദനത്തിലെന്നുടെ ശിഷ്ടകാലം
കഴിക്കാനേർപ്പാടാക്കീ നാളെയങ്ങെത്തീടണം.

ഇറങ്ങുവാൻ നേരമായി അച്ഛനെന്നോടായോതി
“അമ്മതൻ രാമായണം എടുത്തീടണം കുട്ടീ,
ഞങ്ങൾ തൻ നടുവിലായി നീയിരിക്കുന്നൊരാ–
ചിത്രവും കൂടി, എനിക്കെപ്പൊഴും കൂടെവേണം”

അടുക്കിപ്പിടിച്ചു ഞാൻ അമ്മതൻ രാമായണം
കൈകാലനങ്ങുന്നില്ലെന്നുടലും വിയർക്കുന്നു
കണ്ണുമൂടുന്നിരുളാൽ നെഞ്ചിനെന്തതിഭാരം
മരവിച്ചുനിന്നുപോയ് പ്രതിമകണക്കെ ഞാൻ!
എന്നുമാശ്വാസമോതിത്തഴുകാറുള്ള കൈകൾ
വന്നെന്റെ മെയ്യുചുറ്റിപ്പിടിച്ചു നടത്തിച്ചു.

“ഇതെന്റെ അഭിലാഷം ഖേദിക്കവേണ്ടാ കുട്ടാ
ശങ്കിച്ചു നില്ക്കേണ്ട നീ സമയം കളയേണ്ട”
“അച്ഛന്റെ അഭിലാഷം” ഞാനായിരുന്നുവല്ലോ !
എൻമകൻ പഠിക്കണം വളരേണം ഡോക്ടറായ്
ഗ്രാമീണജനതക്കൊരാശ്വാസമായീടണം.
അച്ഛനുമമ്മയ്ക്കുമാ സംതൃപ്തി ലഭിക്കണം.

ഡോക്ടറെന്നുള്ള സ്വപ്നം സഫലമായി പക്ഷേ !
മോഹങ്ങൾ വളർന്നപ്പോൾ സ്റ്റേറ്റ്സിലേക്കായി ഉന്നം.
സമ്മതം ലഭിച്ചു കുട്ടന്റെ ഇഷ്ടം പോലെ
ആഗോള പ്രശസ്തനാം ഡോക്ടറായ് ധനികനായ്
പ്രശസ്തീ, ധനം, ഒഴിച്ചെല്ലാമേ വിസ്മരിച്ചു
ആ തിരക്കിന്റെയൊരു ഭാഗമായ്ത്തീർന്നു ഞാനും !

സദനം അടുത്തായെൻ ഹൃദയം പിടയ്ക്കുന്നു
ത്യജിക്കാൻ കഴിയുമോയിവിടെയെന്നച്ഛനെ
എൻ വഴികാട്ടിയെപ്പെരുവഴിയിൽ വെടിയുവാൻ
ആകില്ലിന്നെനിക്കെന്നാത്മാവു മന്ത്രിക്കുന്നു.

ഹൃദയ വ്യഥയിലാപ്പൈതലായ് മാറീ വീണ്ടും
അച്ഛന്റെ കൈപിടിച്ചാ സ്കൂളിലേയ്ക്കുള്ള പോക്കും
അച്ഛന്റെ മെയ്യിൽക്കാലും അമ്മതൻ നെഞ്ചിൽക്കയ്യും
വച്ചുറങ്ങാറുള്ളൊരാക്കാലവും തെളിയുന്നു.

പഠിക്കാനേറെ നേരം കൂട്ടിന്നിരിക്കുമച്ഛൻ
കുട്ടന്റെ സംശയങ്ങൾ തീർത്തു നൽകീടുന്നതും
ഓരോരോ വിജയങ്ങളേറെയാഘോഷിക്കുമ്പോ-
ളമ്മയെപ്പോഴുമൊരു പ്രാർത്ഥനയിലും തീർക്കും.

വാഹനം നിന്നുവല്ലോ മന്ദിരത്തിന്റെ മുന്നിൽ
ഇറങ്ങാൻ തുടങ്ങുന്നരാക്കൈയെൻ നെഞ്ചിൽ ചേർത്തു
ഉറക്കെപ്പറഞ്ഞു ഞാൻ “തിരിച്ചുവിടു വണ്ടീ !
ഞാനിനിപ്പോകുന്നില്ലെന്നച്ഛനെയുപേക്ഷിച്ച്”
മിഴിച്ചുനോക്കുന്നൊരാ താതന്റെ നയനങ്ങൾ
നിറഞ്ഞോ തുളുമ്പിയോ സ്തംഭിച്ചുപോയോ പാവം !

അച്ഛന്റെയിച്ഛപോലെയമ്മതൻ പേരിൽത്തന്നെ
അത്യാധുനികമായിട്ടാതുരാലയമൊന്നു
തീർക്കാം ഡോക്ടറാക്കിയ നാടിനെൻ പ്രതിഫലം !
‘തിരിച്ചറിഞ്ഞിന്നു ഞാൻ മറന്ന കർത്തവ്യവും
അനുഭവിച്ചറിഞ്ഞൂ, ശാന്തിയും സംതൃപ്തിയും !

❖

10 things you should know about the Reliance KG-D6 gas deal

1) What is KG D6 basin?

Krishna Godavari (KG) Basin is spread across 50,000 sq km in the Krishna River and Godavari river basins near the coast of Andhra Pradesh. The site Dhirubhai-6 (D6) is where Reliance Industries discovered the biggest gas reserves in India. In government records, the 7,645 sqkm block is known as KG-DWN-98/1. The KG basin is considered to be the largest natural gas basin in India.

2) How did Reliance Industries get into KG basin?

Government of India opened up hydrocarbon exploration and production (E&P) in the country to private and foreign players in 1991. Small and medium sized blocks were opened up in this round which was followed up by giving out bigger blocks in 1999 as per the New

Exploration and Licensing Policy (NELP). Through NELP, Reliance bagged the rights to explore the D6 block.

3) Did government have a role after the block was handed over?

Since all mining resources belong to the people of India, government monitors the exploration and production of these. In the case of oil and gas sector, government enters into contractual relationship with the private player through a Production Sharing Contract (PSC). The PSC lays out roles and responsibilities of all parties, specifies the detailed procedures to be followed at different stages of exploration, development and production. It also specifies the cost recovery and profit sharing in the contract. Directorate General of Hydrocarbon (DGH)

monitors the PSC. A PSC was signed between the government of India (GOI) and undivided Reliance Industries and its minority partner Niko Resources (10 per cent stake) for exploration and production of oil and gas.

4) What happened to KG D6 when the Reliance group split?

Even before production could start from the KG D6 wells, Reliance group was split vertically between the two brothers, with the gas business of Reliance Industries remaining with Mukesh Ambani, the elder brother. The brothers fought over this huge reserve of gas even though it was not theirs in the first place. The very first line of a production sharing contract clearly says that "By virtue of article 297 of the Constitution of India, Petroleum is a natural state in the territorial waters and the continental shelf of India is vested with the Union of India".

The brothers while splitting their father's empire split the gas reserves too. A family pact between the two brothers, which was never made public till the issue blew out of proportion, was at the core of the dispute. Anil Ambani owned RNRL (Reliance Natural Resources Ltd) citing the agreement by the brothers in 2005, claimed it had rights to gas from Reliance KG basin for 17 years at $2.34 per mmBtu (million British thermal unit).The Supreme Court finally settled the matter by saying that 'the government owns the gas till it reaches its ultimate

consumer and parties must restrict their negotiation within the conditions of the government policy'.

Here the role of the government needs to be highlighted. None of the ministries involved in the process, including the oil ministry which Moily now represents, raised the point that the

gas reserves belonged to the country and was not a property of the Ambani family. Even the

Prime Minister, ManMohan Singh meekly requested the brothers to settle their differences in the interests of the country.

But how did the Ambani brothers arrive at this magic figure of $2.34 per mmBtu when there was no benchmark. In fact ONGC was supplying gas to the government at half the rate.

5) How did Anil Ambani arrive at the price of $2.34 per mmBtu for KG basin gas?

In June 2004, National Thermal Power Corporation (NTPC) invited bids for supply of gas for its 2600 MW power plant in Kawas and Gandhar. Reliance Industries, hopeful of starting production of gas by the time NTPC's power plant is ready bid for the project and was

awarded it as the lowest 'techno-commercial' bidder. A Letter of Intent (LOI) was issued to Reliance Industries to supply 132 trillion units of gas per annum to NTPC for 17 years at a price of $2.34 per mmBtu. Anil Ambani used this as a basis for asking gas for his power plant.

6) Why is the NTPC-Reliance dispute all about?

Reliance Industries refused to sign the contract for supply of gas. Jairam Ramesh, the Minister of Power in a written reply to a question in Lok Sabha in 2009 said that "After issuance of LOI, RIL did not come forward to sign the Gas Sale and Purchase Agreement and sought major changes in the draft GSPA.In spite of all the efforts (by NTPC) RIL did not sign the GSPA agreed during the bidding process."

NTPC dragged Reliance to Bombay High Court on December 20, 2005 but unfortunately the case that has dragged on. The case after nine years is still sub judice. Here again the government's disinterest in protecting the interests of its own PSU has been a matter of much debate.

While NTPC was fighting the case with Reliance in the Bombay High Court, the government referred the matter to an Empowered Group of Ministers (EGoM) in 2007 headed by none other than the current President Pranab Mukherjee, who was then the finance minister.

EGoM approved a rate hike of $4.2 per mmBtu of gas. This decision was taken without a single unit of gas coming out of the KG basin.

Reliance grabbed at this opportunity and said that it could not supply gas at a price lower than the mandated price set by the government.

7) How did Pranab Mukherjee arrive at the price of $4.2 mmBtu for gas?

The price was arrived by Reliance through its 'price discovery mechanism'. As per a Reliance crafter formula, user companies were asked to quote a price which gave them a choice of arriving at a value between $4.54 and $4.75 per mmBtu. Reliance initially forwarded a figure of $4.59 which was later brought down to $4.3, but Pranab Mukherjee claimed victory by announcing a figure of $4.2 per mmBtu.

The brazenness of the entire exercise by the government can be seen from the fact that the objections raised by the Principal Advisor, Power and Energy to the government of India, Surya P Sethi along with the then cabinet secretary were ignored by the government. Surya

questions the recommendation saying that nowhere is the cost of production more than $1.43.

8) Is it exploration or exploitation?

A CAG report released in 2011 (initiated in 2007 but delayed due to non-co-operation) on Performance Audit of Hydrocarbon PSCs castigated the oil ministry along with Reliance to retain its entire KG-D6 block in contravention of the

PSC. As per the PSC, Reliance should have relinquished 25 per cent of the total area outside the discoveries in 2004 and 2005, but the entire area was declared as a discovery area (after initial objections) and the company was allowed to retain it. Without drilling adequate wells, Reliance kept on claiming that there was potential for petroleum. In CAG's words this was done to confuse potential/prospectivity with actual discovery of hydrocarbons. The move allowed Reliance to keep the entire area to itself without following the norms laid under the PSC.

In a recent report CAG has said that Reliance moved directly from discovery to commercial production, skipping the intermediate appraisal programme step required as under PSC. CAG asks, without an appraisal programme how did the government and DGH ascertain the amount of gas in the well? And if they did not know how much gas was there in the well, what is the logic and basis of blaming Reliance of hoarding gas. Further, as pointed out by CAG, how did DGH assure itself of reliability of the development plan, production rate andproduction costs without the appraisal report?

9) Why more investments are bad?

CAG pointed out that as per the PSC, more investments, especially in initial stages would mean more profit for the operator and less for the government. This structure gives inadequate incentive for operators to reduce capital expenditure and provides them with substantial incentives to 'front-end' capital expenditure. Share of government profit varies from 85 per cent in a low investment scenario to 5 per cent in a high investment scenario. This explains the case of exaggerated investment made against Reliance Industries.

Incidentally, as pointed out by V Ranganathan of IIM Bangalore in his article in Economic Times, the case of exaggerated investment was first pointed out by Anil Ambani, where he pointed out that investment as per Reliance's plan is increasing four times but production is expected to only double. Reliance revised its production estimates from 40 mmscmd (million metric standard cubic metres per day) to 80 mmscmd while increasing its investment from $2.4 billion to $8.8 billion.

10) How was the new pricing formula arrived at?

Former RBI governor C Rangarajan came out with a formula which has been followed nowhere in the world, which has resulted in Reliance (and other players too) getting a price on import parity basis. Surya Sethi, former Principal Adviser, Power and Energy, Government of India does not mince words when he asks the Prime Minister in an open letter not to burden the nation with Rangarajan Committee's madness that only benefit a select few.

Conclusion

Sethi's open letter to the Prime Minister sums up the entire issue when he points out that the CAG's findings reveal how crony capitalism benefited RIL. The pre-qualification norms were diluted to ensure RIL qualified, the claimed size of gas discoveries, the field development plans and the investment outlays proposed escaped rigorous due diligence says Sethi. Above all, the company's commitments under the PSC on gas output were not enforced.

The entire episode stinks of anything but natural gas. While Moily may claim that system was followed, there is enough evidence out there that says otherwise.

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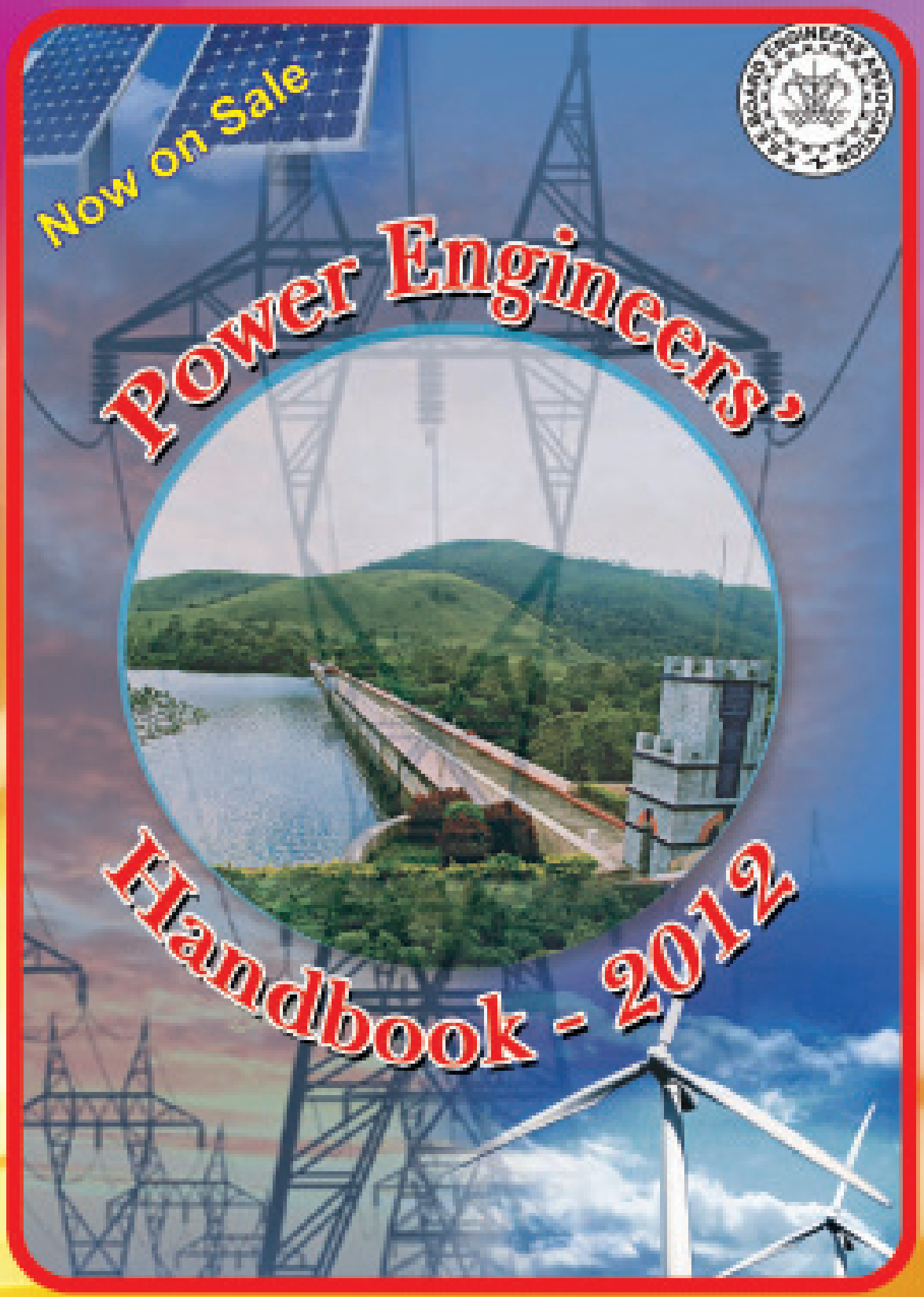
[Courtesy - Business Standard Article send by Er. Ramesh Babu V.,Chief Engineer (Rtd.)]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