ENERGY MANAGEMENT CENTRE - KERALA

Department of Power Government of Kerala

ENERGY EFFICIENCY IN ALL WALKS OF LIFE

FROM LAMPS TO BOILERS

WEBINAR SERIES BY ENERGY MANAGEMENT INSTITUTE, EMC

From 5th June 2020 (World Environment Day) To 22th March 2021 (World Water Day)















DOWN

സെക്രട്ടേറിയറ്റ് തിരുവനന്തപുരം–695 001



പിണറായി വിജയൻ മുഖ്യമന്ത്രി

മെയ് 25, 2020.

നം.412/പ്രസ്/സി.എം.ഒ/2020.

സന്ദേശം

ഊർജ്ജ കാര്യക്ഷമത സംബന്ധിച്ച് ജനങ്ങളിൽ അവബോധം സൃഷ്ടിക്കുന്നതി നായി എനർജി മാനേജ്മെന്റ് സെന്റർ നടത്തിവരുന്ന പരിപാടികൾ ശ്രദ്ധേയമാ ണ്.



Sri. Pinarayi Vijayan Hon. Chief Minister of Kerala കോവിഡ് മഹാമാരി സൃഷ്ടിച്ച പുതിയ സാഹചര്യത്തിൽ ജനങ്ങൾ ഒത്തുകൂ ടുന്ന ബോധവൽക്കരണ പരിശീലന പരിപാടികൾ സംഘടിപ്പിക്കുക അസാധ്യമാ ണ്. അതിനെ മറികടക്കുന്നതിനായി വെബിനാർ രൂപത്തിൽ ഓൺലൈൻ പരിശീ ലന പരിപാടികൾ സംഘടിപ്പിക്കാൻ എനർജി മാനേജ്മെന്റ് സെന്റർ തീരുമാനി ച്ചത് ഉചിതമായി.

ഊർജ്ജസംരക്ഷണ രംഗത്തെ പുത്തൻ സാങ്കേതികവിദ്യകൾ പ്രയോഗിക്കുവാൻ സമസ്ത മേഖലകളിലുള്ളവരെയും പ്രാപ്തരാക്കുവാൻ സഹായിക്കുന്നവിധ ത്തിലാകും പരിശീലന പരിപാടികൾ എന്ന് കരുതുന്നു. ഈ സംരംഭത്തിന് എല്ലാ ഭാവുകങ്ങളും നേരുന്നു.

Com

പിണറായി വിജയൻ



Govt. of Kerala





Energy Efficiency from Design Stage

Energy efficiency in REBUILD KERALA

On World Environment Day 5th June 2020 10.30am - 12.00pm Energy Management Institute, EMC-Kerala

Resource Persons

Introduction remarks - Dr. R. Harikumar, Director (i/c), EMC Kerala Design for Energy Efficiency - Dr. J. Nagesh Kumar, Former Director, NPC



For enquiries: Mr. Rajeev K R, ET-B, +91 8547990950

തിരുവനന്തപുരം



എാ. എാ. മണി വൈദ്യുതി വകുഷുമന്ത്രി കേരള സർക്കാർ

തീയതി.....



Sri. M. M. Mani Hon. Minister of Electricity Govt. of Kerala

കോവിഡ്-19 ലോകമാകെ ഗുരുതരമായ പ്രത്യാഘാതമാണ് സൃഷ്ടിച്ചിട്ടുള്ളത്. കേരളത്തേയും ഇത് സാരമായ രീതിയിൽ ബാധിച്ചു. സാമൂഹ്യജീവിതത്തിൽ പല പുതിയ ചിട്ടകളും രീതികളും കൂടിയേതീരൂ എന്ന അവസ്ഥ ഉണ്ടായിട്ടുണ്ട്. ശാരീരിക അകലം പാലിക്കുന്നതടക്കം രോഗവ്യാപനം തടയുന്നതിന് കൃത്യമായ നടപടികൾ ഉറപ്പുവരുത്തിമാ ത്രമേ മുന്നോട്ടപോകാൻ

കഴിയുകയുള്ളൂ. ഊർജ്ജ രംഗത്തും വളരെയധികം മാറ്റങ്ങൾ ഇതുമൂലം ആവശ്യമായിരിക്കുകയാണ്.

പൊതുജനങ്ങൾ ഒത്തുകൂടുന്നതരത്തിൽ യോഗങ്ങളും, പരിശീലന ബോധവൽക്കരണ പരിപാടികളും നടത്തുവാൻ കഴിയാ ത്ത സാഹചര്യത്തിൽ എനർജി മാനേജ്മെന്റ് സെന്റർ അതിന്റെ പരിശീലന ബോധവൽക്കരണ പരിപാടികൾ ഓൺലൈനായി വെബിനാർ രൂപത്തിൽ നടത്തുവാനാണ് തീരുമാനി ച്ചിട്ടുള്ളത്. ഇത് ദീർഘവീക്ഷണത്തോടുകൂടിയുള്ള തീരുമാനമാണ്. ആസൂത്രണം ചെയ്തിട്ടുള്ള വെബിനാർ പരമ്പരയിൽ ഊർജ്ജത്തിന്റെ, കാര്യക്ഷമമായ ഉപയോഗം മുൻനിർ ത്തിയുള്ള അവതരണങ്ങളും ഫലപ്രദമായ ചർച്ചകളും നടക്കുമെന്ന് പ്രതീക്ഷിക്കുകയാണ്.

നൂതനമാർഗ്ഗങ്ങൾ അവലംബിച്ചുകൊണ്ട് തങ്ങളുടെ പ്രവർത്തനങ്ങൾ മുന്നോട്ടുകോണ്ടുപോകാൻ തീരുമാനിച്ച എനർജി മാനേജ്മെന്റ് സെന്ററിനെ അഭിനന്ദിക്കുന്നു. പരിപാടിക്ക് എല്ലാവിധ ആശംസകളും നേരുന്നു.

- എം. എം. മണി

ഓഫീസ് : ആറാം നില, അനക്സ്-2 ഗവൺമെന്റ് സെക്രട്ടേറിയറ്റ്, തിരുവനന്തപുരം-695 001 ഫോൺ-ഓഫീസ് : 0471-2335866, 2333160 ഫാക്സ് : 0471-2327669 വസതി : 0471-2334144, 0471-2334133 മൊബൈൽ : 9447695500 ഇ-മെയിൽ : min.pwr@kerala.gov.in





Shri. E. P. Jayarajan Hon. Minister for Industries Sports and Youth Affairs



Sessions handled by experts in energy sector

Key Takeaways

Energy efficiency from design stage Energy efficiency practices to be carried out in an enterprise Energy efficiency consideration for procurement Selection of process and equipment







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(भारत सरकार, विद्युत मंत्रालय) BUREAU OF ENERGY EFFICIENCY (Government of India, Ministry of Power)

ऊर्जा दक्षत

Message



Sri. Abhay Bakre Director General Bureau of Energy Efficiency

अभय बाकरे, आईआरएसईई

ABHAY BAKRE, IRSEE

महानिदे शक

Director General

Energy is an essential input to the socio-economic growth and development. The efficient use of energy resource and its conservation can make a tremendous impact on energy conservation in our country. Energy Management Centre - Kerala, State Designated Agency of Bureau of Energy Efficiency emphasize, more than ever the need for reduction in energy intensity and enhancing energy efficiency. The efficient use of energy resources and their conservation assumes tremendous significance and are essential for curtailment of wasteful consumption nourishing sustainable development. Energy Conservation activities for Kerala State and the effectiveness of EMC's work has been recognised by the Government of India on several occasions.

This year, the world is facing an unprecedented COVID-19 pandemic which has indeed brought some never seen before challenges in our daily life. In this short span of time, considering the social distancing to combat this pandemic, EMC has come up with a new online platform to conduct webinars on various energy related sessions from June 5th - the World Environment Day. I am sure that with these measures EMC will enable dissemination of energy conservation knowhow to the target audience adequately.

I wish this new initiative of EMC a great success.

Abhay Bakre · 28.5.20 (Abhay Bakre)

स्वहित एवं राष्ट्रहित में ऊर्जा बचाएँ Save Energy for Benefit of Self and Nation

चौथा तल, सेवा भवन, आर.के.पुरम, नई दिल्ली–110 066/4th Floor, Sewa Bhawan, R.K. Puram, New Delhi-110 066 टेली/Tel.: 91 (11) 26178316 (सीधा/Direct) 26766700, फैक्स/Fax: 91 (11) 26178328 ई-मेल/E-mail : dg-bee@nic.in, abhay.bakre@nic.in, वेबसाईट/Website : www.beeindia.gov.in



Monthly batches on second week of each month



Shri. G. Sudhakaran Hon. Minister for Public Works Department and Registration

WEBINAR ON

ECBC Compliance Check through Energy Simulation

Sessions handled by ECBC experts

Key Takeaways

Awareness on ECBC and KSECBC Rules 2017 ECBC compliance approaches ECBC compliance checking using simulation software









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Dr. B. Ashok IAS Secretary to the Govt. Department of Power, Govt. of Kerala

Message

Energy is the basic necessity of our life and we can't imagine a world that is running out of energy. Energy Management Centre - Kerala (EMC) has always worked as the torch bearer of Energy Conservation activities for Kerala state and the effectiveness of EMC's work has been recognised by the Government of India on several occasions.

The ongoing COVID 19 pandemic situation has brought some never seen before challenges in our day-to-day affairs. I am very happy to know that EMC has geared up to this challenge in a short period and has come up with this novel option of utilizing the online platform to conduct a series of webinars meeting the social distancing norms. This will keep the chain of knowledge dissemination without break.

Keeping abreast with the latest technology is the best way to move forward in a situation like this so that the policy makers, practising engineers and general public can come up with the right decisions at the right time. I am sure that it will benefit people from all walks of life.

I wish the venture success and all the very best wishes to the Director, EMC and staff driving it.

- Dr. B. Ashok IAS Secretary Department of Power Government of Kerala



Monthly batches on 4th Thursday of each month 10.30 am - 12.00 pm



Adv. V. S. Sunilkumar Hon. Minister for Agriculture

WEBINAR ON

Energy Efficiency in Agriculture and Homesteads

Sessions handled by experts in energy & agriculture sectors

Key Takeaways

Energy efficiency in agricultural sector Energy efficiency parameters of agriculture machinery Energy efficiency improvement strategies









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Page 03 2020 JULY 03	Energy Efficiency through ESCO route in Kerala - Boiler efficiency improvement	Page 05 2020 AUG 01	Benefits of Energy Audits & Case study	Page 09 2020 SEP 04	Energy Efficiency in Boilers
Page 03 2020 JULY 06-14	ECBC compliance check through Energy Simulation Batch - 2	Page 05 2020 AUG 03-11	ECBC compliance check through Energy Simulation Batch - 3	Page 09 2020 SEP 07-16	ECBC compliance check through Energy Simulation Batch - 4
Page 03 2020 JULY 17	Energy Performance Assessment of Chilled Water Systems & Case study	Page 07 2020 AUG 10	Certificate Course on Skill Development for Operators and Technicians	Page 09 2020 SEP 19	Challenges in Energy Efficiency in electrical systems and cost reduction



Energy Management Centre Kerala



Shri. A. K. Saseendran Hon. Minister for Transport



Presentation by Shri. Suresh Kumar M (Petroleum Conservation and Research Association)





To participate Scan the QR code



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Page 09 2020 SEP 21	Go Electric Campaign Series 3 Moving Towards E-Mobility for Public Transportation
Page 11 2020 SEP 22	Water – Energy Nexus
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Page 13 2020 OCT 16	Energy Efficiency through ESCO route in Kerala - Commercial Buildings
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Page 13 2020 NOV 07	Carbon Neutral Concepts & Case Studies
Page 15 2020 NOV 09-17	ECBC compliance check through Energy Simulation Batch - 6
Page 15 2020 NOV 20	Energy Efficiency using Heat Pump
Page 15 2020 NOV 24	IOT and Energy Management
Page 15 2020 NOV 26	Effective and Efficient Utilization of Agro Machinery
Page 15 2020 DEC 01	Energy Efficiency in Healthcare Sector

Page 17 2020 DEC 02	Scope of Energy Efficient Street lights in LSGDs
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Page 17 2020 DEC 18	Energy Efficiency in SME Sector
Page 17 2020 DEC 22	Building Energy Efficiency for Sustainable Tomorrow
Page 17 2020 DEC 28	Water Efficient Irrigation Systems
Page 19 2020 DEC 30	Go Electric Campaign Series 5 Moving Towards E-Mobility – Light Motor Vehicles
Page 19 2021 JAN 02	Green Productivity and Integrated Management System







IoT Technologies in Energy Sector Workshop for Students

Presentation Amit Chadha, Febin K. V. M. & Aravind V. S.

Invites project proposals from students

Key Takeaways

Understanding the concept of IoT Importance of IoT in energy management Idea generation and brainstorming for students







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Page 17 2021 JAN 05-12	ECBC compliance check through Energy Simulation Batch - 8
Page 19 2021 JAN 11	Panel Discussion on 'Elected Representatives and Energy Conservation'
Page 19 2021 JAN 15	Energy Conservation Act - 2001
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Page 21	Power Quality
2021	improvement in
FEB	Electrical power
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FEB	Adaptive reuse of
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FEB	Existing Commercial
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Page 23 2021 MAR 22	Energy Efficient Pumping System







Shri. T. P. Ramakrishnan Hon. Minister for Labour and Excise

Certificate course on

Skill Development for Operators and Technicians

Sessions handled by experts in energy sector

Key Takeaways

Energy Efficient Operational Practices Knowledge enrichment Greener production process Case Studies









Energy Management Centre Kerala Srikrishna Nagar, Sreekaryam

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PROGRAM CALENDER







Adv. K. Raju Hon. Minister for Forests Animal Husbandry, Dairy Development Mlik- Co-operatives and Zoos

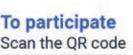
Energy Efficiency in Dairy Sector

Key Takeaways

Best practices in dairy sector Energy audit and case studies









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<	2020 JULY	Energy Efficiency through ESCO route in Kerala – Series 1 Boiler Efficiency improvement, Waste Heat Recovery, Zero Liquid Discharge Dr. M. G. Gharpure
	03 rd	Key Takeaways of Presentation
	FRIDAY	 ESCO financing models Thermal energy optimization Waste heat recovery trends Zero Liquid Discharge method
		ECBC compliance check through Energy Simulation
	2020 JULY	Batch - 2
	OCth 4.4th	Mr. Akshay Kumar Gupta and Mr. Kumar Biplab
/	06th-14th	 Key Takeaways of Presentation Awareness on ECBC and KSECBC Rules 2017
	7 WORKING DAYS	 ECBC compliance approaches ECBC compliance checking using simulation software
	2020 JULY	Energy Performance Assessment of Chilled Water Systems & Case study Er. Paraman Radhakrishnan
	17 th	Key Takeaways of Presentation
_	17th FRIDAY	 Energy efficiency in chilled water plants System optimization and balancing Energy performance assessment of chilled water plants Case studies
	1111	
	2020 JULY	Energy Conservation in Transport Sector Er. Suresh Kumar M
	10th	Key Takeaways of Presentation
	18 th	 Behavioural changes in driving Optimum fuel efficiency of vehicles
	SATURDAY	Factors affecting fuel efficiency
1	2020 JULY	Energy Efficiency In the Built Habitat Keynote Address: Prof. Rajan Rawal, CEPT University, Ahmedabad
	01st	Speakers
	21 st	 Ms. Archana Walia, (Former Director of CLASP's India programme) Shri. Sukumar Devotta, (Former Director of National Environmental Service Service Se
	TUESDAY	Engineering Research Institute and member of UNEP Refrigeration Technical Option)



Prof. C. Raveendranath Hon. Minister for General Education Energy Management Centre Kerala



Energy Conservation Training for "Sastrarangam" Coordinators

Presentation Shri. Sandeep K. (Energy Mangement Centre)

Key Takeaways

Delivering energy efficiency & energy conservation Domestic energy conservation Smart Energy Programme









Energy Management Centre Kerala

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2020 JULY	Energy Efficiency in Agricultural Sector Mr. Ahammed Kabeer
23rd THURSDAY	 Key Takeaways of Presentation Energy - Agriculture nexus Indian scenario of agricultural energy consumption Energy efficiency and conservation strategies in agricultural sector
2020 JULY	IoT technologies in Energy Sector - Workshop for Students Amit Chadha, Febin K. V. M., Aravind V. S.
24 th FRIDAY	Key Takeaways of Presentation Understanding the concept of IoT Importance of IoT in energy management Idea generation and brainstorming section
2020 JULY	Go Electric Campaign Series 1 EV Charging Infrastructure in India Er. N. Mohan
30 th THURSDAY	 Key Takeaways of Presentation EV Charging technologies and infrastructure EV Charging terminologies EV Charging infrastructure Case studies
2020 AUG	Benefits of Energy Audits & Case study Dr. J. Nagesh Kumar Key Takeaways of Presentation
O1st Saturday	 Benchmarking energy performance Energy optimisation Energy audit instruments Energy audit report preparation
2020 AUG	ECBC compliance check through Energy Simulation Batch - 3 Mr. Ankit Bhalla, Mr. Vevaik Mahajan
03rd-11 th 7 working days	Key Takeaways of Presentation Awareness on ECBC and KSECBC Rules 2017 ECBC compliance approaches ECBC compliance checking using simulation software







Smt. K. K. Shailaja Hon. Minister for Health and Social Welfare

Energy Efficiency in Healthcare Sector

Presentation Shri. B. V. Suresh Babu (Energy Auditor)

Key Takeaways

Behavioural change and best practices Energy efficiency for clinical applications Energy Audits for hospitals and case studies









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2	2020 AUG	Certificate Course on Skill Development for Operators and Technicians Sections handled by sectoral experts
	10 th Monday	 Key Takeaways of Presentation Knowledge enhancement Energy efficient operation methodologies Introduction to new technologies
	2020 AUG	Energy Efficiency in Air Compressor Dr. Dharmalingam
	14 th saturday	 Key Takeaways of Presentation Capacity and leakage assessment Factors affecting efficiency Energy saving opportunities
	2020 AUG	Energy efficiency in Dairy sector Er. K. M. Vijayakumar
	17th Monday	Key Takeaways of Presentation Best practices in dairy sector Energy audit and case studies
	2020 AUG	Industrial Electrification Keynote Address: Ms. Stéphane de la Rue du Can, Lawrence Berkeley National Laboratory (LBNL)
	25th TUESDAY	 Speakers 1. Shri. Prosanto Pal (Senior Fellow at Industrial Energy Efficiency Division, TERI) 2. Ms. Charu Lata (Natural Resources Defense Council (NRDC))
	2020 AUG	Energy Efficiency In Post-Harvest Equipment Dr. K. P. Sudheer
	27th THURSDAY	 Key Takeaways of Presentation Different post harvest equipment Energy efficiency parameters of post harvest equipment Effective utilization of post harvest equipment



2nd DEC 2020

Shri. A. C. Moideen Hon. Minister for Local Self Governments

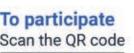


Presentation by Shri. Johnson Daniel (Energy Management Centre)

Key Takeaways

Energy efficient street lighting systems Retrofitting of existing street lights ESCO implementation of street lights Street lights in smart cities/MuDSM







Energy Management Centre Kerala

Srikrishna Nagar, Sreekaryam Thiruvananthapuram- 695017, Kerala, India Tel: +91-471-2594922,2594924

For more information **Ijas M. A.** Mob: +91 9446690452 Email: ijas@keralaenergy.gov.in Toll free number: 1800 425 5256

2020 AUG	Go Electric Campaign Series 2 Moving Towards E-Mobility in Light Motor Ve Mr. Sarath Babu	chicles
28th Friday	Key Takeaways of Presentation EEV in LMV sector Features of Electric Cars Switching to Clean Energy Energy Economics 	
2020 SEPT	Energy Efficiency in Boilers Er. Suresh Kumar	
O4 th Friday	Key Takeaways of Presentation Energy efficient boilers IBR definition Boiler blow down concepts 	 Thermic fluid heaters Energy saving opportunities Case studies
2020 SEPT	ECBC compliance check through Energy Simu Batch - 4 Mr. Syed Moazzam Ali and Mr. Jitendra Kumar	
07th-16th 7 working days	Key Takeaways of Presentation Awareness on ECBC and KSECBC Rul ECBC compliance approaches ECBC compliance checking using simulation 	
2020 SEPT	Challenges in Energy Efficiency in electrical s y Er. T. Sankaranaraynan	ystems and cost reduction
19th saturday	 Key Takeaways of Presentation Energy efficiency improvement in electricl distribution system Power factor improvement 	 Capacitor sizing Assessment of T&D Efficiency Case studies
2020 SEP	Go Electric Campaign Series 3 Moving Towards E-Mobility for Public Transpo Er. Arun Krishna Gelli	ortation
21 st MONDAY	Key Takeaways of Presentation EV Landscape in India Driving factors to E Mobility E-Mobility for public EV Charging stations 	



Management Centre Kerala

Energy

Shri, A, K, Balan Hon, Minister for Welfare of Scheduled Castes, Scheduled Tribes and Backward Classes, Law, Culture and Parliamentary Affairs



WEBINAR ON

Energy Conservation Act-2001

Presentation by Shri. Johnson Daniel (Energy Management Centre)





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2020 SEP	Water –Energy Nexus Keynote Address: Dr. Prakash Rao, Lawrence Berkeley National Laboratory (LBNL)
22nd TUESDAY	 Speakers 1. Dr. Hariharan Chandrashekar (Chairman, Alt. Tech Foundation) 2. Shri. Padu S Padmanabhan (Former Programme Director of (SARI/E) and former Senior Energy Advisor at USAID/India)
2020 SEP	Energy Efficient Agricultural Pump sets Mr. Balasubramoniam
24 th THURSDAY	 Key Takeaways of Presentation Enenergy efficient pump sets in agricultural sector Selection of pump sets for Agricultural purposes Star labelled agricultural pumps
2020 SEP	Energy Conservation Training for "Sastrarangam" Coordinators Er. Sandeep. K
25th FRIDAY	 Key Takeaways of Presentation Delivering energy efficiency & energy conservation Domestic energy conservation Smart Energy Program
2020 OCT	Scope of Small Hydro Power projects Er. G. Anil
01st THURSDAY	Key Takeaways of Presentation Potential for Small Hydro Power Projects Policies and schemes Emerging technologies in Small Hydro Power sector
2020 OCT	ECBC compliance check through Energy Simulation Batch - 5
05th-13th 7 working days	Mr. Arpan Pal and Mrs. Neha Vyas Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software





Dr. T. M. Thomas Isaac Hon. Minister for Finance and Coir

WEBINAR ON

Financing Options for Energy Efficiency Projects

Presentation by Shri. Arun M. R. (Kerala State Financial Corporation)







Energy Management Centre Kerala

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For more information Sarath Krishnan S. Mob: +91 8089695880 Email: sarath@keralaenergy.gov.in Toll free number: 1800 425 5256

-		
2	2020 OCT	Energy Efficiency through ESCO route in Kerala - Series 2 Buildings and Commecial Establishments
-	_	Er. Milind Chittawar
	16 th	Key Takeaways of Presentation
	FRIDAY	 ESCO financing models Building energy efficiency Retrofit solutions EPI reduction and benchmarking
-	1.1.1	
2	020 OCT	Energy Storage for Industrial and Renewable Energy Applications Keynote Address: Dr Brahmanand Mohanty, ADEME
		Key Takeaways of Presentation
	20 th	1. Dr. Rahul Walawalkar (Founder and Executive Director of India Energy Storage Alliance (IESA))
Г	TUESDAY	2. Shri. Murali Arikara (Director of Machani Group)
/	pt-	
2	020 OCT	Energy Efficiency in Integrated Farming Dr. Jacob John
		Key Takeaways of Presentation
	22 nd	Modern farming strategies
	HURSDAY	 Integrated farming and its advantages Energy and water efficiency in integrated farming Methodologies to improve energy efficiency in Integrated farming
		Go Electric Campaign Series 4
2	020 OCT	EV Charging stations – Technologies and Implementation Er. Bidyut Mazumder
		Key Takeaways of Presentation
	30 th	EV Charging protocols and technologies
	FRIDAY	 EV Charging technologies Battery Management
	FRIDAT	Case studies
	1.1.1	
		Carbon Neutral Concepts & Case Studies
	020 NOV	Er. B. V. Suresh Babu
	7 th	Key Takeaways of Presentation
		Energy & carbon dioxide nexus
5	SATURDAY	 Global warming and climate change Case study





Shri. Ramachandran Kadannappally Hon. Minister for Ports Museums, Archaeology and Archives

WEBINAR ON

Sustainable Strategies for Adaptive Reuse of Heritage Buildings

Presentation by Smt. Ashiqua Sulthana (Tropical Greenovation Cluster)

Key Takeaways

Retrofitting of existing equipment with energy efficient Morphological Transformation Energy Efficient Designs of Auditoriums Occupant comfort systems Adaptive reuse of Existing Buildings









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2020 NOV	ECBC compliance check through Energy Simulation Batch - 6
09th_17th working days	 Mr. Nishesh Jain and Mr. Rana Pratap Poddar Key Takeaways of Presentation Awareness on ECBC and KSECBC Rules 2017 ECBC compliance approaches ECBC compliance checking using simulation software
2020 NOV	Energy Efficiency using Heat Pump Er. Bhoovarahan Thirumalai
20th Friday	Key Takeaways of Presentation Energy efficiency through heat pump Usage of heat pump Case studies
2020 NOV	IOT and Energy Management Keynote Address: Dr. Rangan Banerjee, IIT Mumbai
24 th TUESDAY	 Speakers 1. Shri. Aalok A. Deshmukh (GM & Head - Energy Efficiency, Schneider Electric India) 2. Shri. Manish Chakraborty (Founder, Mantrapoynt Inc USA)
2020 NOV	Effective and Efficient Utilization of Agro Machinery Dr. Suresh Kumar P. K.
26 th THURSDAY	 Key Takeaways of Presentation Energy efficiency parameters of tractors and tillers Optimum efficiency and diesel consumption of agro machinery Strategies to reduce energy consumption in agro machinery
2020 DEC	Energy Efficiency in Healthcare Sector Er. B. V. Suresh Babu
O1st TUESDAY	Key Takeaways of Presentation Behavioral changes and best practices Energy efficiency for clinical applications Energy audits for hospitals and case studies





Shri. E. Chandrasekharan Hon. Minister for Revenue and Housing

WEBINAR ON

Energy Conservation in Residential Building Conceptualization

Presentation by Shri. Dinesh Kumar A. N (Energy Management Centre)









Energy Management Centre Kerala Srikrishna Nagar, Sreekaryam

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For more information **Tomson Sebastian** Mob: +91 9744856275 Email: tomson@keralaenergy.gov.in Toll free number: 1800 425 5256

2020 DEC	Scope of Energy Efficient Street lights in LSGDs Er. Johnson Daniel
	Key Takeaways of Presentation
O2nd wednesday	 Energy efficient street lighting system Retrofitting of existing street lights ESCO implementation of street lights Street lights in smart cities / MuDSM
1111	
2020 DEC	Energy Efficiency in Fans & Blowers Er. Suryanarayanan
0 Ath	Key Takeaways of Presentation
04 th	 Energy efficiency in fans and blowers Factors affecting efficiency
FRIDAY	Flow control strategies
	Performance assessment
2020 DEC	ECBC compliance check through Energy Simulation Batch - 7
	ECBC Master trainers & Experts
07 th -15 th	Key Takeaways of Presentation
•••••	Awareness on ECBC and KSECBC Rules 2017
7 WORKING DAYS	 ECBC compliance approaches ECBC compliance checking using simulation software
	Encourse Efficiences in SME Contex
2020 DEC	Energy Efficiency in SME Sector Er. A. Santhosh
40.0	Key Takeaways of Presentation
18 th	Energy efficiency improvement opportunities
FRIDAY	 Case study spice extraction industry Retrofit and upgradation options
1111	
2020 DEC	Building energy efficiency for sustainable tomorrow Keynote Address: Ms. Reshma Singh, LBNL, California
	Speakers
22 nd	1. Shri. Paul Mathew, Lawrence Berkeley National Laboratory (LBNL), California
TUESDAY	 Dr. Brahmanand Mohanty, ADEME, Asian Institute of Technology (AIT), Bangkok
	,





Shri. P. Thilothaman Hon. Minister for Food, Civil Supplies Consumer Affairs and Legal Metrology

WEBINAR ON

Consumer Rights -Standards and Labelling

Presentation by Shri. Subhash Babu B. V. (Energy Management Centre)

Key Takeaways

Star labelled Equipment Benefits of Standards and Labelling Voluntary and mandatory labelling







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		Water Efficient Irrigation Systems
	2020 DEC	Dr. K. K. Sathyan
		bi. K. K. outhyun
		Key Takeaways of Presentation
	28 th	
	20	Water efficiency in agricultural systems
	MONDAY	 Modern irrigation strategies Methodologies to reduce water consumption for agricultural purposes
	WONDAT	· Methodologies to reduce water consumption for agricultural purposes
1	2020 DEC	Go Electric Campaign Series 5 Moving Towards E-Mobility – Light Motor Vehicles
		Mr.Nithin
		Key Takeaways of Presentation
	C th	• FV in LMV sector
	30 th	Features of Electric Cars
	WEDNESDAY	Switching to Clean Energy
	WEDINESDAY	• Energy Economics
	2021 JAN	Green Productivity and Integrated Management System
	2021 JAN	Mr. I. V. Ramesh Kumar
	02 nd	Key Takeaways of Presentation
	UZ	Greener production methodologies
	SATURDAY	Cost reduction in production sector
	SATURDAT	Cleaner production techniques
	2021 IAN	ECBC compliance check through Energy Simulation
	2021 JAN	Batch - 8
	2021 JAN	
		Batch - 8
	2021 JAN 05 th - 12 th	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation
	05 th -12 th	Batch - 8 ECBC Master trainers & Experts
		Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017
	05 th -12 th	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches
	05 th -12 th	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software
	05 th -12 th 7 WORKING DAYS	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches
	05 th -12 th	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software
	05th-12th 7 WORKING DAYS	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software Panel discussion on 'Elected Representatives and Energy Conservation' Speakers
	05th-12th 7 WORKING DAYS	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software Panel discussion on 'Elected Representatives and Energy Conservation'
	05 th -12 th 7 WORKING DAYS	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software Panel discussion on 'Elected Representatives and Energy Conservation' Speakers Dr. M. P. Prameswaran
	05th-12th 7 WORKING DAYS	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software Panel discussion on 'Elected Representatives and Energy Conservation' Speakers Dr. M. P. Prameswaran Prof. V. K. Damodaran
	05th-12th 7 WORKING DAYS	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software Panel discussion on 'Elected Representatives and Energy Conservation' Speakers Dr. M. P. Prameswaran Prof. V. K. Damodaran Prof. (Dr.) R. V. G. Menon
	05th-12th 7 WORKING DAYS 0211 JAN 11th MONDAY	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software Panel discussion on 'Elected Representatives and Energy Conservation' Speakers Dr. M. P. Prameswaran Prof. V. K. Damodaran Prof. (Dr.) R. V. G. Menon
	O5th-12th 7 WORKING DAYS 2021 JAN 11th MONDAY	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation
	05th-12th 7 WORKING DAYS 0211 JAN 11th MONDAY	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software Panel discussion on 'Elected Representatives and Energy Conservation' Speakers Dr. M. P. Prameswaran Prof. V. K. Damodaran Prof. (Dr.) R. V. G. Menon Shri. S. M. Vijayanand Energy Conservation Act - 2001
	O5th-12th 7 WORKING DAYS 2021 JAN 11th MONDAY	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation
	O5th-12th TWORKING DAYS CO21 JAN I1th MONDAY	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software Panel discussion on 'Elected Representatives and Energy Conservation' Speakers Dr. M. P. Prameswaran Prof. V. K. Damodaran Prof. (Dr.) R. V. G. Menon Shri. S. M. Vijayanand
	O5th-12th TWORKING DAYS CO21 JAN I1th MONDAY	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software Panel discussion on 'Elected Representatives and Energy Conservation' Speakers Dr. M. P. Prameswaran Prof. V. K. Damodaran Prof. (Dr.) R. V. G. Menon Shri. S. M. Vijayanand Energy Conservation Act - 2001 Er. Johnson Daniel Key Takeaways of Presentation
	O5th-12th 7 WORKING DAYS 2021 JAN 11th MONDAY	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software Panel discussion on 'Elected Representatives and Energy Conservation' Speakers Dr. M. P. Prameswaran Prof. V. K. Damodaran Prof. (Dr.) R. V. G. Menon Shri. S. M. Vijayanand Energy Conservation Act - 2001 Er. Johnson Daniel Key Takeaways of Presentation • Understanding Energy Conservation Act 2001
	O5th-12th TWORKING DAYS CO21 JAN I1th MONDAY	Batch - 8 ECBC Master trainers & Experts Key Takeaways of Presentation • Awareness on ECBC and KSECBC Rules 2017 • ECBC compliance approaches • ECBC compliance checking using simulation software Panel discussion on 'Elected Representatives and Energy Conservation' Speakers Dr. M. P. Prameswaran Prof. V. K. Damodaran Prof. (Dr.) R. V. G. Menon Shri. S. M. Vijayanand Energy Conservation Act - 2001 Er. Johnson Daniel Key Takeaways of Presentation

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Shri. Kadakampally Surendran Hon. Minister for Co-operation Tourism and Devaswoms

Sustainable Development in Tourism sector

Presentation by: Shri. Jayan P. P. (C-DAC)

Key Takeaways

Energy efficiency in hospitality sector Energy audits in hotels and case studies Fuel switching in House Boats









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Energy Management Centre Kerala



Smt. J. Mercykutty Amma Hon, Minister for Fisherles Harbour Engineering and Cashew Industry

Energy Efficiency in Fisheries Sector

Presentation by: Shri. George Varghese (Energy Auditor)

Key Takeaways

Behavioural change and best practices Energy efficient equipment Energy audits and case studies





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Energy Management Centre Kerala



Shri. K. Krishnankutty Hon. Minister for Water Resources

Energy Efficient Pumping System

Presentation by Shri. B. V. Suresh Babu (Energy Auditor)









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PROFILE OF SPEAKERS FOR THE WEBINAR

Ela Green Buildings & Infrastructure Consultants Pvt. Ltd.



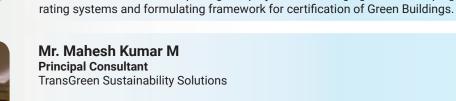
Dr. J. Nagesh Kumar Former Director NPC Chennai

Dr. J. Nagesh Kumar is a Mechanical Engineer with post graduation in Energy Management from NPC. He also holds a Doctorate in Energy Efficiency in the field of Gas Turbines. He had been in the field of Energy Efficiency for almost three decades with National Productivity Council during which he was cultivated to use productivity practices leading to energy efficiency. He is now the Director of Centre for Energy, Environment and Productivity (CEEP). He is one of the authors for the Guide Books on Energy Efficiency for the National Certification Examination for Energy Managers and Energy Auditors.

Samhita M, LEED AP, IGBC AP, ECBC Master Trainer & Expert, Edge Auditor & Expert and USGBC Faculty is the Managing Director of Ela Green Buildings & Infrastructure Consultants, a company founded in March 2009. An architect from Anna University, Samhita's academic qualification also includes a PGPM from Great Lakes Institute of Management, Chennai. Prior to starting Ela, she worked with Ashok Leyland Properties and the CII Green Business Centre, Hyderabad where she was associated with all the prestigious projects of CII ranging from developing of







Mrs. Samhita.M Managing Director

Mahesh Kumar M is Certified Energy Auditor, ECBC Master Trainer, IGBC Accredited Professional, GRIHA Certified Professional and an EDGE Expert and Auditor. He has 18 years' experience in Energy Efficiency, Building Efficiency, Green buildings and Sustainability. Currently working as Principal Consultant at TransGreen Sustainability Solutions. Working stints with ERNST & YOUNG, DSCL ESCO, INTESCO ASIA and Powertech Energy Auditors.





Er. Rajesh Deshpande Director Energetic Consultants (P) Ltd.

He is Certified Energy Auditor and have 25 years of experience working with Energy management Industry and has conducted more than 100 Energy Audits. He is part of Energy Efficiency programmes in Municipal, Pharmaceutical, Chemical, Food, Textile, Hospitality industries. He have provided Energy Efficient HVAC system designs for Low RH control systems in Engineering and pharma sector.

Mr. Mathew Joseph Vice President Apar Technologies Pvt. Ltd.

Mr Mathew is the Head of Artificial Intelligence Labs for CIMB Bank. An Alumnus of the University of Chicago and a keynote speaker, he is known for his thought leadership in the area of Artificial Intelligence and Machine Learning. He is also a mentor for many start-up companies in the Artificial Intelligence domain. He has over 29 years of experience of innovation, software development, Technology Consulting and Project management. Earlier he worked with IBM, Siemens and TCS and is a certified Project Management Professional and a certified Industry Consultant.



Dr. Shaji James P Associate Professor Kerala Agricultural University

Dr. Shaji James P is working in the field of Farm Power, Machinery and Energy in KAU for the last 25 years. He has developed a number of implements and gadgets in agricultural sector. He received the prestigious Jawaharlal Nehru Award of ICAR for the year 2002 for his doctoral research on high rate bioreactor for energy production from cassava starch factory effluent.



Mr. Akshay Kumar Gupta Director Passive Design Consultants

Akshay is an Environmental Engineer/Architect and has a decade of professional work experience as a Green Building Consultant in the UK and India. He is an IGBC Accredited Professional, GRIHA Certified Professional & Evaluator, LEED AP BD+C, BEE Certified ECBC Master Trainer and BEEP Certified Green Building Charette Conductor. He has deep understanding in design and analysis of building envelope, HVAC systems, occupant's behavior and comfort in both indoor/outdoor environments. Being a firm believer in dissemination of knowledge & skills, he has been involved in conducting many professional training workshops across India.



Dr. M.G. Gharpure Director Yajna Fuel Services, Thane, Maharashtra

Dr. M. G. Gharpure is a graduate in Chemical Engineering from VNIT. Nagpur. He obtained both M.Tech and PhD from IIT Bombay. He has professional experience of 30 years. He has an overseas experience for reputed industries in Pakistan, Sri Lanka, Middle East, Tanzania, Kenya, Mali, Togo. Dr. Gharpure represented India for SAARC summit on Energy, and was honoured by Institution of Engineers (India) for "outstanding contribution in energy sector – 2011".



Mr. Kumar Biplab BEE ECBC Master Trainer

Kumar Biplab is an Energy Engineer & Govt. Registered Valuer (Plant & Machinery) with 10+ years of experience in project management liaising and coordinating with clients, vendors & consultants, 9+ years in energy audits, energy simulations, retro-commissioning works, site execution, technical delivery. He has experience of working with advanced technologies, including but not limited to, Combined Heat & Power, District Heating & Cooling, Thermal Energy Storage, Geothermal Heating & Cooling systems.

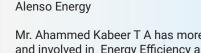


Er. Paraman Radhakrishnan Director

Devki Energy Consultancy Pvt. Ltd., Vadodara, Gujarat, India

He has 34 years' experience in conducting Industrial & Building Energy Audits and Training Programmes on Energy Management. He did consulting assignments on Energy Efficiency and Integrated Energy & Water Audits in India, Kenya, Tanzania, Uganda, Nigeria, Senegal, Indonesia, Thailand, Saudi Arabia, USA, Mexico, Germany, Denmark, Netherlands, Ireland, France, Luxembourg, Czech Republic, Estonia & Italy.





Er. Ahammed Kabeer T A

Chief Technical Officer & Energy Expert

Mr. Ahammed Kabeer T A has more than 21 Years Experience in the field of energy and involved in Energy Efficiency assessment and audit, Electrical audit, GHG audit, ECBC & LEED Assessment, Power Quality Audit, HVAC Audit, Safety audit, Indoor Air quality Audit, EHS Audit, Technical Due diligence audit of commercial buildings, Data centers, Industries and Power plants.





Er. Amit Chadha Head of Digital Services Schneider Electric India Pvt. Ltd.

He heads the Digital Services business at Schneider Electric, primarily focusing on Service transformation through Smart technologies powered by IoT, Artificial intelligence and Cloud based platforms to bring operational efficiency in the facilities. In his 21+ years career, he has held key positions in various organizations driving business initiatives involving Energy Management & Power Quality solutions, Software, automation, consultancy and Advisory Services like ISO 50001.

Er. Febin K. V. M. Business Development & Offer Manager Schneider Electric India Pvt. Ltd.

He holds a Mechanical Engineering degree from Bangalore Institute of Technology, started off his career as an IBMS Project Management specialist and has over 10 years of experience in the field of commercial buildings, the world of building automation, digitization and IoT". He has worked with the top companies in the domain like Honeywell and United Technologies Corporation (UTC).



Er. N Mohan Dy General Manager & Head EV Charging Infrastructure, Energy Efficiency Services Ltd.

He is an experienced professional with over 14 years of experience in the field of policy planning, conceptualization and implementation of energy efficiency programs. He presently heads, Electric Vehicle Charging Infrastructure (EVCI) Department at EESL. He has played a pivotal role in incorporating and developing a digital ecosystem for operational efficiency and performance improvements in the charging infrastructure.



Ar. Ankit Bhalla Dy Manager-Technical GRIHA Council, TERI, New Delhi

Ankit Bhalla graduated from Jamia Millia Islamia, New Delhi in 2011 with a B.Arch degree; he enrolled for a master's program in the field of Energy Efficiency and Sustainability from CEPT University Ahmedabad where he was awarded with the Best student of the Year (2012) and Best Research Awards (2013). He has also received Rising Star award from TERI for his efforts and hard work for green building rating development in 2014.



Mr. Vevaik Mahajan Director UEDC

Vevaik Mahajan is an IGBC AP (Indian Green Building Council Accredited Professional) BEE Certified ECBC Master Trainer. Before founding UEDC, Vevaik worked at various international engineering firms like dbHMS and KJWW where he handled and managed overall India operations and took companies to the successful heights with his unique and innovative ideas and approaches. He offered his clients one-of-its-kind services that helped bridge the gap between international design and local construction realities in India.



Dr. P. Dhamalingam Accredited Energy Auditor EnSave Consultancy and Training Pvt Ltd, Chennai (Former Director NPC, Chennai)

Dr. P. Dharmalingam has over 35 years of Experience in conducting Energy Audits in India and abroad. He has carried out PAT cycle consultancy and detailed Energy Audits for a wide range of Industrial Sectors and Buildings. His professional credentials include being co-author for Indian National Guide book on Energy Efficiency and establishment of CETEE (Centre of Excellence for Training on Energy efficiency).



Mr. Suresh Kumar M Additional Director Petroleum Conservation Research Association (PCRA)

He is having more than 22 years of experience in Oil Industry and is a BEE Certified Energy Auditor.



Dr. K P Sudheer Associate Director Research (Agri. Engineering) Head

Prof.(Dr.) K P Sudheer, obtained his B Tech Agricultural Engineering degree from Kerala Agricultural University (KAU), M Tech Agricultural Processing from Tamilnadu Agricultural University (TNAU), PhD Agricultural Engineering from IARI New Delhi and Post doctorate from KU Leuven Belgium. Prof. Sudheer started his career as scientist in Agro Processing Division, CIAE (ICAR), Bhopal. He is presently working as Associate Director of Research (Agril. Engg) in Kerala Agricultural University.



Mr. Sarath Babu Jr Sales Manager Popular Hyundai

He has 9 years experience in the Automobile industry. He started his career as a Faculty on project operated by Keltron in 2010-11, later moved to Mercedes Benz Kerala dealer Rajasree Motors as Sales Consultant and worked there for 4 years in 2014-18. Then joined he TVS Mahindra as Assistant Manager on Premium Cars for a span of 6 months. Currently he is with Popular Hyundai as Jr Sales Manager for Electric Cars.





Syed Moazzam Ali has twenty years of National & International professional experience in Designing of MEP Services for Residential, Commercial & Industrial Buildings. He is involved in imparting professional Designing training on MEP Building services HVAC, Plumbing, Fire Fighting & Green building Energy Simulation (IES-VE, eQuest, DesignBuilder) to working professionals & young Engineers. He has provided project guidance to Engineering Students & helped to bridge the gap between academics & Professional World.



Mr. Jitendra Vyas Structural Consultant & GRIHA Evaluator President ISHRAE INDORE CHAPTER

Jitendra K.Vyas is a Structural Engineer, Law Degree, M.B.A. (Information Technology)& PG Diploma in Urban Planning & Development. He has been practicing as structural engineer since years and recently working on upcoming field of green buildings and sustainable built environment as energy consultant. He is handling Govt. Health / Institutional Projects, Banks, Public Sector Undertakings, other institutional and Housing Projects. He has been a competent person under Factories Act 1948 for Indore Special Economic Zone (SEZ).



Er. Arun Krishna Gelli Divisional Manager EVEMS, Ashok Leyland Ltd.

He is leading the power electronics team for bringing up innovative solutions in Electric vehicles sub systems such as traction inverters, traction motors, DCDC converters, onboard/off board chargers and electric vehicle controllers. He has prior experience of working with global R&D teams in various organisations such as Siemens and GE, where he has extensively worked on indigenisation of inverters and converters for solar and wind segments.



Mr. Balasubramoniam Sales Manager Aquasub Engineering, Coimbatore

Mr. Balasubramoniam has vast experience in the field of Agricultural equipments manufacturing and installation. He holds bachelors degree and MBA in Agricultural Engineering from Tamil Nadu Agricultural University.



Er. Sandeep K Energy Technologist -C Energy Management Centre

Sandeep K is graduate in electronics and communication and holds MBA in Operations and HR.He has 12 years of experience in energy field and is certified Energy Manager of BEE. He also holds post graduate diploma in embedded systems design.





He was the Head of Small Hydro Power Division at the Energy Management Centre-Kerala since December 1998 and worked in the field of Small/Mini/Micro Hydro Electric Power Projects for various Consultancy assignments and projects of the Centre/ State Govt. In addition, he held the additional responsibility of providing expert services to the Power Department, Govt. of Kerala as a member of the Small Hydro Promotion Cell in connection with the opening up of Small Hydro Electric Schemes.



Mr. Arpan Pal Engineer–Building Physics WSP Consultants India (P) Ltd

Arpan Pal is a Felix Scholar and European Campus of Excellence member, holding double Master's degree in Renewable Energy and Environmental Sciences with focus on environment and energy efficiency projects. He started his career in developing UNFCCC-CDM (Clean Development Mechanism) projects in Uzbekistan and Haiti and later, evolved through education and experience into focusing on sustainable building design.



Ar. Neha Vyas

She works as Senior Architect- Sustainable Design at Smarter Dharma, Bengaluru. Neha has 8 years of experience in Green Building Consultancy and Sustainable Design. She has worked on over fifty Green Building Final Certification projects for LEED, IGBC and GRIHA for commercial, institutional, residential, airport, existing buildings, etc. Her expertise is design to execution of green buildings, green building certification projects, energy modelling and environmental analysis. She holds M.Arch in Sustainable Architecture from Bharathi Vidyapeeth University, Pune and B.Arch from Mumbai University. She is an ECBC Master Trainer, LEED AP(ID+C) and IGBC AP.



Er. Milind Chittawar CEO, See-Tech Solutions (P) Ltd

He is a BEE -Certified Energy Auditor and have more than 27 years of experience working with Energy management Industry and have been undertaking ESCO projects as well. He holds M.Tech Degree in Metallurgy from Vishweshvaraya National Institute of Technology and MBA from IIM Indore. He has won the South Asia Energy Professional Award two times.



Dr. Jacob John Professor & Head Integrated Farming System Research Station

He has been working as an Agronomist in the Kerala Agricultural University since 1999; currently Professor and Head, Integrated Farming System Research Station, Trivandrum, Kerala. His area of specialization is integrated farming/ farming systems, especially in homesteads, and allelopathy. He completed his graduation, post graduation and Doctoral programme in the KAU. He has received 3 International, 4 National and 9 State level awards. He has authored 26 books, 17 book chapters, 3 Technical bulletins and 131 research publications besides several popular scientific articles.



Er. Bidyut Mazumder Sr. Manager Future Grids, Siemens Ltd.

Electrical Engineer with over 13-years of experience in the electrical industry across various functions and locations in India and Germany. Experienced in project management, product lifecycle management, strategy support, business development, solution development and vertical management. Responsible for business development of Future Grid segment in India and ME regions, consisting of Solar PV, Battery Energy Storage Systems, eMobility Heading renewable vertical for Siemens India.



Er. Suresh Babu B. V. Co-Founder & Accredited Energy Auditor Ottotractions

He is an accredited Energy Auditor (AEA-33) of Bureau of Energy Efficiency, Government of India having 20 years of experience in energy engineering. He has completed more than 700 energy audits in various sectors. He is an Energy Auditor by profession and has been appreciated by the Government of Kerala by presenting its prestigious "Kerala State Energy Conservation Award" for his commendable achievements and contributions towards energy conservation and management activities in the State of Kerala.



Mr. Nishesh Jain Director, PSI Energy Pvt. Ltd.

Nishesh Jain is an expert in Green building design and Rating Systems, Building Physics, Daylight and shading, Natural ventilation in buildings, Renewable energy sources, Thermal performance and Building energy modelling, Acoustics and Artificial lighting. He is an ECBC master trainer, software developer in DesignBuilder Software Ltd, GRIHA India Evaluator and trainer. He has been involved in proposal, management & delivery of 30+ Green Building Projects (GRIHA, LEED, IGBC)



Mr. Rana Pratap Poddar Head - Energy Efficiency Projects, Agnikrida, New Delhi & Kolkata

Rana Pratap Poddar, is a performance driven professional with more than 12 years of experience in Green Building Design, Research & Development in Built Environment, Energy Audits, Energy Conservation Programmes and Project Consultancy.Currently associated with Agnikrida, Kolkata as Heading Green Buildings and Energy efficiency projects. Previously associated with PSI energy, New Delhi as Head building energy systems. Previously associated with The Energy and Resources Institute, New Delhi as Research Associate.



Mr. Bhoovarahan Thirumalai Aspiration Energy Pvt Ltd, Chennai

As its founder and CEO, Bhoovarahan alias Bhoo defines the strategic direction for AEPL and drives the team with agility. He is a certified PV designer and a regular speaker in both national and international conventions on renewable energy. He is also a serial entrepreneur and investor. Before founding Aspiration Energy, Bhoo co-founded Aspire Systems, a global IT services provider, and currently serves as one of its Directors on the Board. Prior to founding Aspire Systems, Bhoo played a role in helping Larsen & Toubro establish a successful market presence in plastic injection molding machines.



Dr. Suresh Kumar P. K. Professor Kerala Agricultural University

Former Research Engineer, KAU-KLDA project on Introducing mechanization package for Harvesting & Threshing of Paddy in Kole lands of Kerala. Also works as Assistant Engineer (Agri.) State Department of Agriculture, Kerala. Twenty two years of research and teaching experience in the field of Farm Power Machinery & Energy. He has published several papers in the field of Farm Power Machinery.



Er. Johnson Daniel Head - NMEE & DSM (Energy Efficiency) Division Energy Management Centre

He is a BEE - Certified Energy Auditor (CEA). His professional profile spanning about three decades includes experience in Plant Energy Systems in manufacturing sector and energy efficiency projects and programmes in industrial, commercial and service sectors.



Mr. R.Suryanarayanan Director Gr.II National Productivity Council

B.E. (Mechanical Engineering), Post Graduate Diploma in Energy Management, Post Graduate Certificate in SQC & OR, Customer Relationship Management, Post Graduate Degree in Software Systems.



Er. Santhosh A. BEE Accredited Energy Auditor, Athul Engineering Consultants Pvt Ltd

Mr. Santhosh A has over 30 years of national & International consulting experience in developing and managing energy efficiency projects, conducted over 350 detailed energy audit with techno- commercial feasibility studies, Productivity improvement waste minimization studies, benchmarking studies, identification of KPIs for sectors, developing guidelines & setting up standards for MSME sectors which acts as inputs for policy making by central & state government.



Dr. Sathian K. K. Dean (Agricultural Engineering) Kelappaji College of Agricultural Engineering & Technology, Tavanur

He is an Agricultural engineer with more than 25 years of experience. Currently he is the Dean of Kelappaji College of Agricultural Engineering, Thavanoor. He had done his PhD in Water resources at NIT, Calicut. He had published several scientific papers in the field of Agricultural Engineering and water resource management. He is also apart of various consultancy and implementation activities.



Er. I. V. Ramesh Kumar Chief Executive Maruti Consultants, Hyderabad

I V Ramesh Kumar has over 30 years of experience in the areas of energy efficiency include process and engineering industries, infrastructure projects, railways, national and international buildings, PAT studies. Core competencies are training and consultancy experience in Energy Efficiency Studies, safety audits, due diligence studies and has recognized expertise in this field. Handled consultancy and training projects of World Bank, Asian Development Bank and also international agencies viz. USAID, UNIDO, UNEP, KFW etc.





Er. K. M. Shanavaz Joint Director Kerala State Productivity Council (KSPC)

He is having an experience of over 15 years in Energy Audit, Industrial Engineering, Industrial Safety, Energy Conservation Building Code (ECBC) compliance analysis, carbon footprint study, Electrical power distribution T & D loss analysis (DISCOMS), Software based Building Simulation, PAT M&V Audit etc..

Er. R. Chandru Manager - Product Management & Marketing Larsen & Toubro - Electrical & Automation ESP

He completed Bachelor degree in Electricals & Electronics Engineering from PSG College of Technology, Coimbatore. He has been working in Larsen & Toubro Ltd – Electrical & Automation, since 2009. He has a total 11 years of experience in various fields - Power Quality (Reactive Power & Harmonics), Controlgear and Energy Management Systems. He had presented two technical papers, one in an International conference organized by IEEMA & another in a National level conference organized by CPRI. He also conducted many guest lectures & technical seminars at various forums.



Er. Dinesh Kumar AN Head - ECBC, SHP, S&L (ESS) Division Energy Management Centre

He has technical experience spanning over 23 years, he carried out various energy efficient infrastructure projects, Green Buildings, consulting, Logistic Park development, Environmental Impact mitigation studies and renewable energy integration.



Ar. Ashiqua Sulthana Lead Consultant Tropical Greenovation Cluster (TGC)

Architect specialized in sustainable architecture with six years of experience in design and analysis of climate responsive and energy efficient buildings across India. Exposed to advanced and innovative software tools for climate analysis, energy, day lighting, artificial lighting, thermal comfort analysis, etc.Started her career in Sustainability and Green Buildings from The Energy and Resources Institute (TERI) Western Center and later engaged with facilitation of various green certified projects while working at Passive Design Consultants, New Delhi.



Er. Subhash Babu B.V. Registrar Energy Management Centre

He has 20 years of experience in the fields of energy efficiency and management. He is a Certified Energy Auditor of the Bureau of Energy Efficiency. He has a vast experience of taking awareness classes for the energy conservation enthusiasts all over Kerala.



Er. Jayan. P. P Principal Engineer Power Electronics Group, C-DAC Thiruvananthapuram

He has more than 17 Years Experience in the field of Power Electronics and Power systems. He has been involved in the design, development and implementation of Electric vehicle controls, Energy Efficient Boats, Microgrids technologies, Automotive Power Electronics, Vehicle control unit for ABB, BHEL, CGL, Delta etc.



Er. Naga Venkata Sai Kumar Energy Performance Analyst Integrative Design Solutions

Naga, holds bachelors in Architecture and presently pursuing MS by Research in IT in Building Science - Part time from IIIT-Hyderabad. As Building Performance Analyst in IDSPL, he handles academic and applied research projects related to Building Energy Efficiency and Climate Change. Through his real-time application expertise in IT in Building science, he has been aiding IDSPL to accomplish several national and international technical research projects. Involved in the development of guideline for Energy Conservation Building Code for Nigeria.



Ms. Anindita Talukdar AGM (Strategy and Operations) Neev Energy

She have been working in the area of smart lighting and collaborating with technology partners to enable transformation to future ready technology driven and sustainable cities which are cleaner, better planned cities anchored in an energy efficient ecosystem. Have successfully handled implementation of one of the most prestigious and intelligent lighting project in Odisha. Closely worked on ESCO models for smart street lighting solutions.



Ar. Gaurav Shorey Director PSI Energy Pvt Ltd.

Gaurav Shorey has a bachelor's degree in Architecture (B.Arch. School of Planning and Architecture, New Delhi) with a post-graduate diploma in advanced construction management (D.A.C.M – National Institute for Construction Management and Research, Pune). He has 15 years of experience in the green buildings industry and sustainability related education and awareness. He has worked on over one-hundred green building and energy efficiency projects across India and overseas including IIT's, IISER's, AIIMS's.



Er. Reji Kumar Pillai President - India Smart Grid Forum Chairman – Global Smart Grid Federation

Reji Kumar Pillai is the President of India Smart Grid Forum since its inception in 2011 and is also the Chairman of Global Smart Grid Federation since November 2016. He is an internationally renowned expert with over three decades of experience in the electricity sector in diverse functions covering the entire value chain and across continents. He is spearheading a mission to leverage technology to transform the electric grid in India and light every home at affordable cost through sustainable developmental models.



Er. Jiju K Joint Director/ Scientist 'E' CDAC, Trivandrum

He is presently employed in Power Electronics Group(PEG) of Centre for Development of Advanced Computing (CDAC), Trivandrum. He completed his graduation in Applied Electronics and Instrumentation Engineering from the University of Calicut in the year 2006 and started his career as Research Fellow in the PEG of CDAC, Trivandrum. His areas of interests include Smart Metering and Advanced Metering Infrastructure, Embedded System Design, Power Electronics, Renewable Energy, Biomedical, VLSI Design and Real Time Simulation.

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