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EDITORIAL

INDIA ENERGY WEEK ENERGISING ENERGY INDUSTRY

The India Energy Week (IEW) 2023, by the Ministry of Petroleum and Natural Gas, is scheduled to be held in Bengaluru from 6th to 8th February 2023.

IEW 2023 is the pre-eminent platform for experts in the traditional and non-traditional energy industry from around the world, embodying India's energy ambitions, showcasing it as a global powerhouse for energy transition and a hub that brings together the international energy industry. "As India's largest and allencompassing energy event, India Energy Week brings international energy stakeholders from 100+ countries across the full value chain to Bengaluru. The IEW will be an ideal platform for various stakeholders to deliberate and take decisive steps to navigate ever-evolving energy scenarios," said Union Minister Hardeep Singh Puri while addressing the *Dance to Decarbonise* one-day event in a run up to the IEW 2023.

Bharat Petroleum is a top collaborator of IEW 2023. May the energy exude from the *BPCL Pavillion* set to showcase our history, transformation and the pioneering strides ahead.

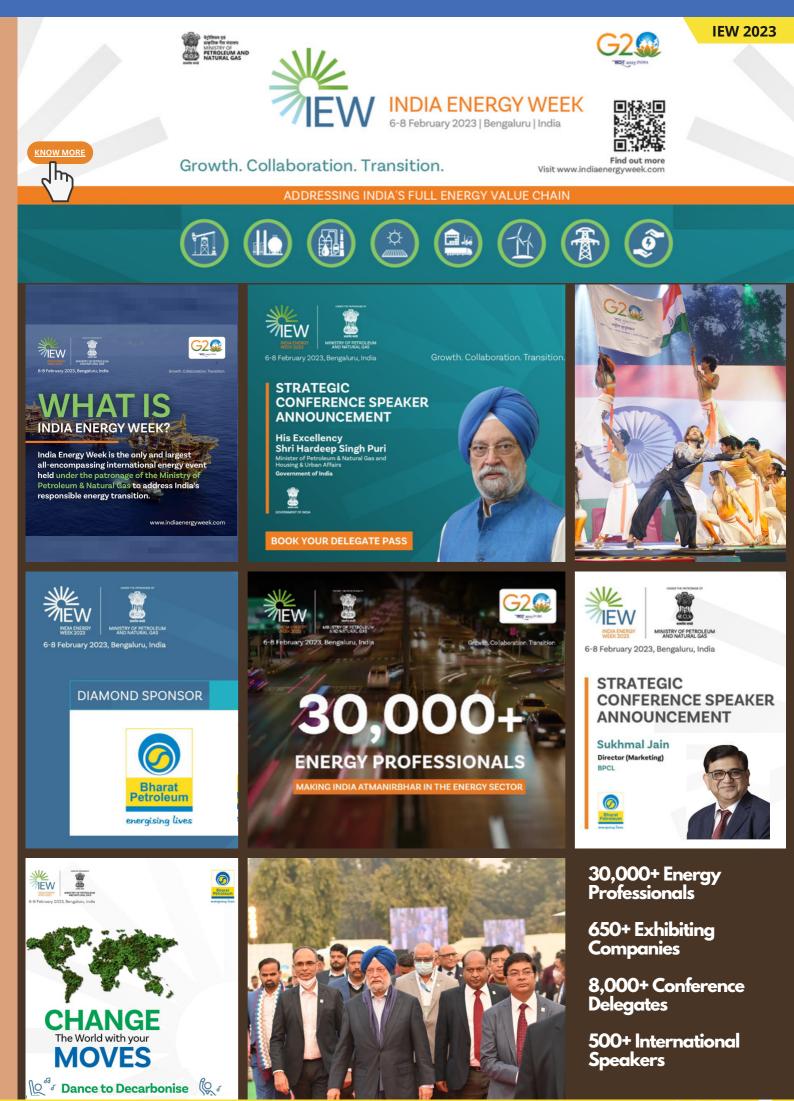
This mission packed edition of *Jwaladhwani* brings you top stories in January which includes the energy saving projects completed at KR, other mega projects, national campaigns and the jubilant Republic Day and BPCL Foundation Day celebrations. Read on with pride!

Warmly, Editor

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Greetings for the Foundation Day!

On this ecstatic occasion of our 47th Foundation Day, I want to begin with a string of words forming an expression that will always have deep relevance in every aspect of life.

"The journey is the reward." – Taoist Saying

True to these timeless words, Bharat Petroleum has been sailing a voyage that has been in consonance with the aspirations of our nation and its most vital requirement – energy in a versatile form. We have been energizing not only the lives of the countrymen but also the country's economic engine, thus contributing immensely to the transformation of India into a modern, vibrant economy that is the envy of the world.

And in this process, we have earned trust, admiration and accolades – nationally as well as internationally. The bestowment of the coveted Maharatna status on us and our sustained presence in the Fortune Global 500 list are testament to our excellence and the pivotal significance of our role in the nation's progress.

When petroleum began reshaping the world, we were among the firsts, in our previous corporate avatar, to bring this energy revolution to the Indian shores, ushering the nation in a new era denoted by widespread use of energy instead of human labour on a progressively rising scale.

Pioneering in aircraft refuelling was a lofty achievement for us. When India's aviation spread its wings in 1911, we geared up to fuel that dream. We fuelled the first international flight of KLM at Indian airports in 1924. We also had the privilege of fuelling the historic flight of JRD Tata in 1932. Kerosene and automobile fuel retailing were our early contributions almost a century ago. Our Mumbai Refinery, established in 1955, turned a swampy patch of land in a nondescript village into a masterpiece of high technology, which, by its example, inspired a legion of industries in the nation, thus acting as a catalyst of growth, while also bolstering India's image as a fast-emerging industrial power. In that same year, we pioneered LPG in India, transforming kitchens and making our Burshane brand a household name.

In the subsequent decades, we have been continuously strengthening our infrastructure and redrawing the boundaries of technology and innovation. Among our recent iconic projects have been the Integrated Refinery Expansion Project and the Propylene Derivative Petrochemicals Project. The former has modernized our Kochi Refinery and transformed it into the largest PSU refinery in India, while the latter marks our foray into niche petrochemicals, to reduce the nation's dependence on imports, while spawning downstream ecosystems.



Proliferating relentlessly across the length and breadth of the country, Bharat Petroleum is catalyzing the nation's growth in no small measure. We are expanding our sprawling network of cross-country pipelines connecting refineries to far-flung consumption centres, enlarging our fleet of storage terminals, depots, fuel stations, LPG import terminals and distribution, and also broadening the envelope of city gas distribution networks, thus touching every sphere of life in myriads of tangible and intangible ways. Through infrastructure augmentation and meticulous planning, today we are self-sufficient in product availability, supply and distribution across the country. Also, all along our journey, we have been setting industry standards in customer service and created a niche in adding value through fuel and non-fuel offerings.

With unflinching focus on the higher purpose of serving the nation, apart from maximizing shareholder value, the flame of excellence that is alive in our heart guides us on our path towards an exciting future. And our inventiveness as well as the insatiable thirst for growth are the elements that will always see us dashing for new horizons and grabbing novel opportunities, while innovating newer and more effective solutions for the society.

Our strategy for future growth takes into cognizance the new realities that are emerging in energy business. In a paradigm shift, energy is turning green and so are we. Walking the path of Energy Transition, in our journey towards clean energy and sustainability, we have put forth our ambitious goal to reach 'Net Zero' in Scope 1 and Scope 2 emissions by the year 2040, in support of the global climate action and the national climate goals.

For sustained growth in the future, we are developing strategic businesses of Gas, Petrochemicals, Renewables, Consumer Retailing, E-mobility and Upstream. Meanwhile, our core business will continue to register emphatic growth rates for the foreseeable future, providing backbone support to these six priority areas.

We recently merged Bharat Gas Resources Limited and Bharat Oman Refineries Limited with Bharat Petroleum to tap new synergies. And to be future-ready, we have unfolded a mega digital transformation, which allows us to be more agile and infuse remarkable efficiencies in our business processes, while enabling us to delight our customers with new digital experiences, in addition to enhancing trust and personalization.

Our glorious journey reminds me of the elating words of Izaak Walton:

"Good company in a journey makes the way seem shorter."

Indeed, our immense success is as much a product of our prowess as it is a result of the cumulative resolute efforts and ingenuity of our people. Without their dedication and coherent energy, our meteoric rise would not have been possible.

I thank everyone in the BPCL family for sculpting this unique edifice that we call Bharat Petroleum. And I express my profound gratitude to all our stakeholders and our extended business family for keeping faith in us and supporting our purpose-driven vision and cherished dreams throughout this journey, turning it into a smooth sojourn.

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I once again wish you a joyous Foundation Day. Thank you.

> Vetsa Ramakrishna Gupta Director (Finance) with additional charge of C&MD and Director (HR)

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With the aim of improving product evacuation from Kochi Refinery, coastal infrastructure facilities is being augmented by Refinery Projects team in collaboration with the Central Refineries Project Organization (CRPO) in three phases at a total cost of Rs.65.8 Crores. The Phase-1 was completed in July 2022 and Phase-2 in December 2022. Phase-3 is scheduled for completion in September 2023.

HIGHLIGHTS

Marking the completion of Phase 2, the newly constructed 20" Pipeline from NJRP (North Jetty Reclamation Pit) to NTBH (North Tanker Berth Head) at Ernakulam was inaugurated jointly by Mr. Ajith Kumar K, Executive Director (Kochi Refinery) and Mr. Ghalsasi R R, Executive Director (CRPO). On the same occasion the first parcel of Naphtha was loaded in tanker MT Maria Glory in the august presence of senior officials from Kochi Refinery and Cochin Port Authority, senior Consultants of M/s Tractebel Engineering Pvt Ltd (PMC) and other stakeholders.

The augmentation project aims in improving the operational efficiency of the existing coastal infrastructure and enhance product movement from Kochi Refinery. As part of this, the existing 20" HTPL line from KR to NJRP, which was previously under Black oil service, was converted to White oil and extended from NJRP to NTB Head by laying 20" pipeline along the trestle and connecting with the NTBH loading arms. Along with the extension at Jetty head, multiple hook ups and pipeline totalling to approx. 450 metres were laid inside the Refinery also for enabling evacuation of MS, Naphtha & Reformate from NTBH through the newly laid 20" line.

The first parcel was designated to Haldia Petrochemical Ltd. Previously Naphtha loading at NTB was mainly carried out thru 12" WO line from KR. With the loading of Naphtha thru new 20" Line, loading rate has improved from 550KL/Hr to 1300 KL/hr.





Kochi Refinery has taken another major step forward in improving the Energy Intensity Index (EII), by commissioning two important projects at different locations in the Sulphur Recovery Units (SRU 3), namely Provision of Plate Type Heat Exchangers and Drive Conversion to Motor for the Cooling Water Pump. Mr. Ajith Kumar K, Executive Director (KR) inaugurated both the projects in the presence of Mr. Chacko M Jose, CGM(Operations), Mr. S. Sriram, CGM (Engg & Advisory Services), Mr.K.Rajasekhar, CGM(AS) and other senior officials on 6 January 2023.

The Plate Heat Exchangers (Project Cost Rs.13 Cr) :

Six nos. plate type exchangers were procured and installed parallel to existing shell and tube heat exchangers to increase the feed preheat. The fouling tendency of plate type exchanger would be lower than the shell and tube exchangers due to lower velocity zones. Feed pre-heat increase of around 15 deg C would be there in both the amine and sour water network. There would be an overall steam consumption reduction of 360 - 480 TPD due to this, leading to a projected savings of Rs.36.3 crores per annum, with a payback period of just 6 months. The EII is also expected to reduce by 1 unit with this initiative.

Drive Conversion to Motor from Turbine for Cooling Water Pump (Project Cost Rs.77 Lakhs) :

This conversion from turbine to motor drive leads to enhanced efficiency & increased savings. The benefit accrued due to steam reduction would be around Rs.4.5 Cr per annum. Both these projects were executed by the Engg & Construction Team at KR under the leadership of Mr.R J Sampath Kumar, GM(E&C) in close co ordination with multiple departments both before & during the IREP Turnaround. The Energy Team at KR- Technolgy Dept are the initiators and owners of both projects.



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OF KOCHI REFINERY BEGINS OPERATION





The Stand-alone Water Supply Scheme (SWSS) substation, the sole fresh water pumping station for Kochi Refinery has undergone a complete revamp and has also been raised to a higher altitude for safe operations. Mr. Ajith Kumar K, Executive Director I/C (Kochi Refinery) inaugurated the revamped SWSS 66kV GIS substation in the presence of Mr. S. Sriram, CGM (E&AS), Mr. K. Rajasekhar, CGM (AS), other senior officials of Kochi Refinery, Licensors, KSEB and Panchayat officials on 25 January 2023.

The SWSS, as the name signifies, is the only water pumping station for Kochi Refinery. Commissioned on 05 July 2001, this pumping station is approximately 20 KMs away from the Refinery and is located near the river Periyar at Edamula, Aluva. The Refinery is totally dependent on this fresh water pumping station for all its raw water requirements. With its proximity to the river, the pumping station has been prone to the impacts of floods and was severely affected in the floods of 2013, 2018 and 2019.

During the 2018 floods, the substation and transformer yard were fully submerged in water up to a height of 1.7mts. It took five days of rigorous work to restore the electrical system in line to restart the pumping operations. Refinery plant operations were also affected partially due to this. Hence a proposal with IRR of 75.75% for revamp of entire SWSS substation and switchyard to an elevated height with GIS facilities was approved with a capital sanction of 16.68 Crores.

The project was executed by the Engg & Construction Department (E&C) of Kochi Refinery in close coordination with the Kerala State Electricity Board (KSEB), local Panchayat and the owner department, P&U-Electrical. This revamp was executed without affecting the normal pumping operations of the SWSS facility.

The job involved construction of new substation above the old substation, shifting of 11kV panels, raising the height (by approx. 2mts.) of 2 nos. 5 MVA power transformers, shifting of capacitor banks, battery chargers, battery banks, DCDB etc. and dismantling of existing switchyard equipment. The procurement and commissioning of major equipment like 110kV GIS, 575kVar Capacitor panel, NIFPS panels etc. were completed within specified timeframe. GIS (Gas Insulated Switchgear) substation is a comparatively new technology which is very compact compared to the conventional air insulated switchyard and requires much lower maintenance. The technological partner for the GIS and KSEB metering bay equipment is M/s Siemens Ltd.





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CELEBRATIONS

CELEBRATIONS AT KOCHI REFINERY

Mr. Ajith Kumar K, Executive Director i/c (Kochi Refinery) unfurled the National Flag on the auspicious occasion of the 74th Republic Day at Kochi Refinery, in the presence of Mr. Chacko M Jose, Executive Director (Operations), members of the Senior Management and other Refinery officials. The CISF contingent and the Refinery security team also participated. ED(KR) unfurled the flag and delivered the Republic Day Address. (Follow the video report at <u>BPCL KR Online</u> on YouTube. Click on news title to watch the video)

At other Refinery office locations and housing colonies the flags were unfurled by members of the Refinery Council. Mr. Sriram S, CGM(E&AS) unfurled the flag at the Marine Drive Complex, Mr. Senthilkumar GR, CGM(Technology) at the Vandipetta Township and Mr. Suresh John, CGM(RPO) at the Shore Tank Farm, Puthuvypeen. Colourful celebrations with dances and skits followed at the Officers Club.



BPCL Marine Drive Complex

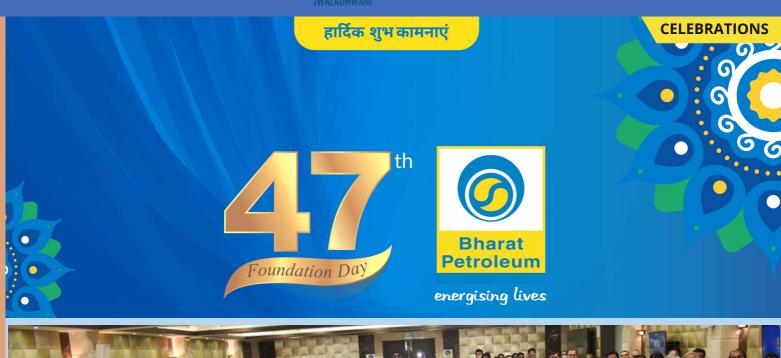


BPCL Vandieptta Township



BPCL Shore Tank Farm, Puthuvypeen

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On the joyous occasion of the 47th Foundation Day of Bharat Petroleum, the celebration at Kochi Refinery was led by Mr. Ajith Kumar K, Executive Director (I/c) . Mr. Ajith Kumar cut the celebration cake along with Executive Director (Operations) Mr. Chacko M Jose in the presence of employees from all departments at the KR auditorium on 24 January 2023.

ED(KR)I/c greeted employees on the special occasion. BPCL C&MD's message was read out by ED(Operations). After a short film on the spectacular journey of BPCL, a spot-quiz was conducted with instant prizes for employees. Refinery offices in Kochi and the housing colonies sparkled in the BPCL corporate blue and yellow lights. The celebration was sweetened with a special meal on the special occasion.











BEST WISHES TO OUR COLLEAGUES SUPERANNUATING THIS MONTH

KUNTAVALLA SUBBARAYUDU

joined the organization in the Manufacturing Department in 1994 and is retiring from QC department this month.



for the month of January - 2023

BINOY P K joined the organization in the Laboratory Department in 1987 and is retiring from CPO (KR) this month.



Hearty Congratulations Near Miss Award Winners



Sunil Kumar T P FCCU Block, MFG- Ref-II



Renny Varghese DCU, MFG, Ref-II



Amit Arora DCU, MFG, Ref-II



Tintu K A PFCCU, MFG, Ref-II





COME WISH KOCHIREFINERS Celebrating their special day in February 2023.

LOG ON TO KR SOCIAL MEDIA TO WISH OUR TEAM MATES DAILY ON FACEBOOK AND TWITTER. CLICK ON CAKE TO VIEW ON <u>YOUTUBE</u>





DISCOVER REFINERY PROGRAMME IS BACK



The Discover Refinery Programme (DRP), is back after more than two years. Mr. Rajashekar K, CGM (Inspection) inaugurated the come-back episode of DRP on 14 January 2023. The first 12 employees, who rushed in their reservations, and their families formed the group of 43 who participated in this first edition. The DRP is a half day family tour of Kochi Refinery along with sessions on the products and services of Bharat Petroleum.

The DRP is scheduled only on Second Saturdays of the month and BPCL employees in Kochi have to reserve seats in advance with the Refinery Public Relations team. DRP was facilitated by resource persons from Refinery Process, HSE and HR; and from Business Units of LPG, Retail and Lubes. The team also visited the LPG Bottling plant

This customised programme is for BPCL employees and family members (spouse, children / grandchildren (above 05 years). parents, children-inlaw and parents-in-law) only. All serving employees of Kochi Refinery and BPCL Business Units in Kochi can avail the facility. The visit will be organised for a team of min 20 and max 40 members only. The programme includes plant visit and presentations.

It is mandatory for the employee to accompany his/her family members. Participating employees have to adjust their work schedules accordingly while planning for the programme and will not be assigned separate time-outs. DRP will be organised only on second Saturday of each month. The first DRP in 2023 was on 14 January 2023 and bookings are open for forthcoming editions.

The DRP reservation form can be downloaded from the DRP Portal on KR Intralink and has to be submitted to PR Dept with Line Manager concurrence by hand or email to z_kr_hradmin@bharatpetroleum.in on or before 3:00pm of the 5th of every month. Participant details will be published on DRP Portal on KR Intralink on 7th of each month. In case of programme cancellation or rescheduling, the information will be announced in the DRP portal and email will be sent to participating members. Likewise, cancellation by participants have to be informed in advance to Public Relations, to extend the opportunity to others. For enquiries please mail to kavithamathew@bharatpetroleum.in.



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AKAM AYUSH MEDICAL CAMPS

Kochi Refinery joined the national campaign of Azadi Ka Amrit Mahotsav Ayush Medical Camps and organised several camps for different target groups during 22-24 January 2023.

A General Medical Camp was conducted at Sree Venkateshwara Seva Samadhi Hall at Mattanchery, Kochi, for urban poor. Patients were examined and supported with treatments in Ayurveda, General Medicine, ENT, Rheumatology, Dental Care and Cancer detection. Lab services were extended and medicines were distributed free-of-cost. The camp was organised in association with NGO partner Sree Sudheendra Medical Mission and Indian Medical Mission, Cochin Chapter on 22 January 2023.

175 Inter-state labourers received support & free medicines at the AKAM Medical Camp through *Mobile Bandhu Clinic*. The hospital on Wheels extended services at BPCL Irumpanam Installation, Ravipuram & Binanipuram.

A Cancer Detection Camp was conducted at Edavanakadu Government Public Health Center in the costal hamlet of Vypeen This PHC is situated near the Shore Tank Farm of Kochi Refinery. 68 local people including fishermen participated in the camp that envisaged early cancer screening and provide further tests and treatment for the diagnosed patients.

At the AKAM Medical Camp organised for urban poor at the Cochin Arts and Science College in Pallikkara, near Kochi Refinery medical support was extended to over 150 people. They were examined for various ailments and medicines were distributed free of cost. In addition to Ayush, General Medicine, ENT and Psychiatry were also extended.



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PARIKSHA PE CHARCHA WITH PM OF INDIA

"One should take up the least interesting or most difficult subjects when the mind is Fresh" - Prime Minister

R. H. B. B. W.

Pariksha Pe Charcha is an annual event since 2018, where the Prime Minister of India interacts with students, teachers and parents from across the country, and shares valuable tips on how to take board and entrance exams in a relaxed and stress free manner. This is part of the larger movement - 'Exam Warriors' - led by PM Narendra Modi, to create a stress-free atmosphere for youngsters. Students of Cochin Refineries School participated in the live-streaming of Pariksha Pe Charcha 2023 on 27 January 2023. Click on news title to know more about the initiative.



A two day training session on Startup Awareness and Leadership Training (SALT) was conducted by the Innovation and Entrepreneurship Development Centre (IEDC) of Bhavans Royal Institute of Management as part of the IPL (Innovators' Premier League) on 12-13 January 2023 at CRS. The 2 day session covered the basics of starting a business from ideation to execution and use of IT tools with emphasis on marketing using social media and web designing. 35 students from Classes IX and XI attended the sessions. The programme was organised by the ATL and Computer Science, Department of CR School.

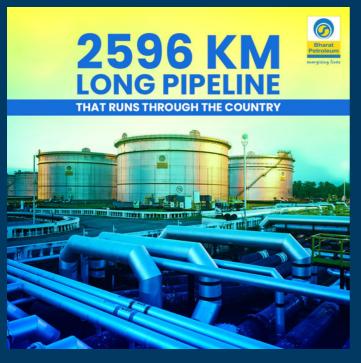
LEARNING WITH THE ARMY

Around 30 Cadets from CR School participated in the NCC Junior CATC Camp Army Wing Organised by 22(K) BN at the Marthoma College for Women at Perumbavoor from December 23-30, 2022. Training involved life in the army, shooting skills and more.



SCHOOL NEWS

CAMPAIGN



Pipelines Nationwide

BPCL has laid the nationwide 2,596 km long multi-product pipeline network for meeting the energy needs of the nation, in a cost effective and environment friendly way.

Click link below for an overview of BPCL Pipelines : <u>https://www.bharatpetroleum.in/our-</u> <u>businesses/pipelines/overview-of-bpcl-pipelines.aspx</u>





Better fuel economy and lower emissions are pretty much good reasons for you to love your diesel-fueled vehicle. But if you are wondering how you could enhance your driving experience then you must keep the maintenance of your diesel vehicle in check. It might puzzle you a bit because diesel vehicles work very differently than petrol cars. To know more, click the link below:

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https://bit.ly/3ZPQF10