



TCE**xpression**

TATA CONSULTING ENGINEERS LIMITED

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walking the
value talk



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A note from the Editor

Tata Consulting Engineers' DNA is its strong value systems and the spirit of innovation. The TCE core values mean everything to the organization. At the heart of TCE is also the spirit of innovation. We cherish our values and celebrate our spirit of innovation in this edition of TCEExpression.

We would love to hear from you. Do send us your thoughts and ideas to TCEexpression@tce.co.in

Mallika Sriraman

Reflections

The current financial year has begun with change. Changes on the political front lead to changes in all other fronts. With change there is renewed hope. We at TCE have also adopted some changes to build a new, stronger and globally competitive TCE. Through several new initiatives, through several business cycles, we found one constant – The TCE core Values. These fundamentals have helped us stay resilient and helped us sustain. As we infuse youth into the organization with young engineers joining us each year, we wish to keep readdressing the TCE values. Most of us at TCE unconsciously adopt the values as it is part of the organisation's culture. However, it is time to be conscious of it at all times. This issue of TCEExpression, talks about what the TCE values mean to us. Adopting these values in letter and spirit by itself will help to steer us on the path of our mission. Our values are a set of overarching pillars that has held up our credentials and sustained us in the business. It is time to revisit, understand and practice these consciously. Let's walk the value talk!

Sincerely yours,

J P Haran
Managing Director
Tata Consulting Engineers



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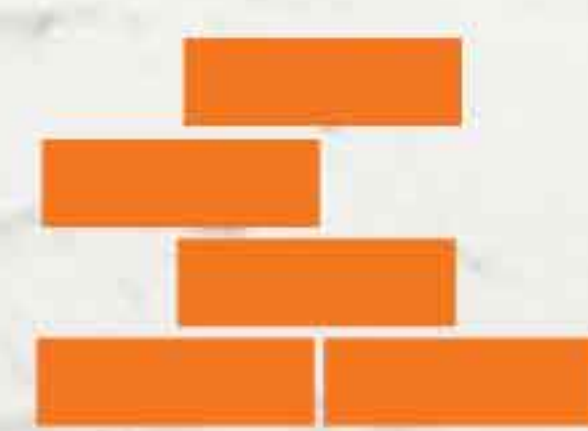
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Bricks that hold up the wall

It is Monday morning and the first contact with work begins with the company mail and intranet. At Tata Consulting Engineers, the intranet opens with the company's vision, mission and values. At TCE, and in most companies, all are familiar with the company values. However, do employees consciously experience these values?

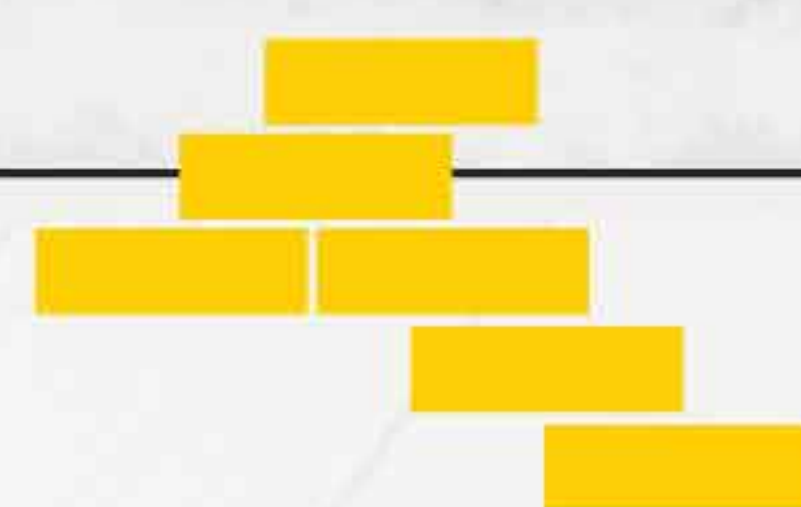
A company's values are in effect the rules of engagement that set the context to how we conduct ourselves and the organisation presents itself in all our activities and our dealings. Values are the very DNA of an organisation.



Responsibility to society



Organisation & individual growth



Values are vital to the conduct of business

Companies that follow good value systems and have people who practice the values are healthy and fit – that is, they can sustain in the business through business cycles and crisis. Whenever at the crossroads in critical business decision making, the ultimate test - will this decision fall within the periphery of the values of my organisation – is sure to be the right one, in the long term. In a time of extreme crisis, the best course of action will be to revisit the values and go by its tenets. Values when experienced and practised holistically, infuses health into the organisation. Thus, values guide and outline the behaviour that is expected of employees such that it resonates with the culture of the organisation.

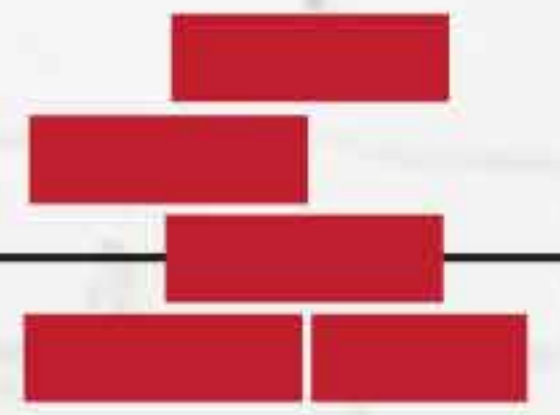
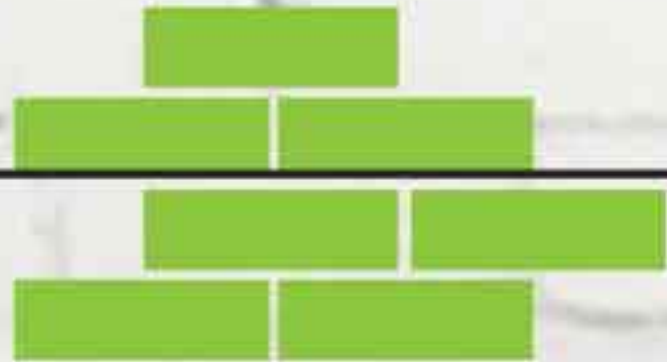
Value education - A continuous process

Today's corporate environment is a melting pot of cultures. The same values may mean different things to different people. Re-orienting employees with the company's value systems helps articulate them clearly and drive its relevance.



The first step to steer the organization towards scaling new heights is to take a look at the values. Living the corporate values in letter and spirit, I believe, addresses all the ingredients required for success. If we have done complete justice to our values and continue to abide by them, the majority of the battle is won.

Mr J P Haran, Managing Director,
Tata Consulting Engineers Ltd.



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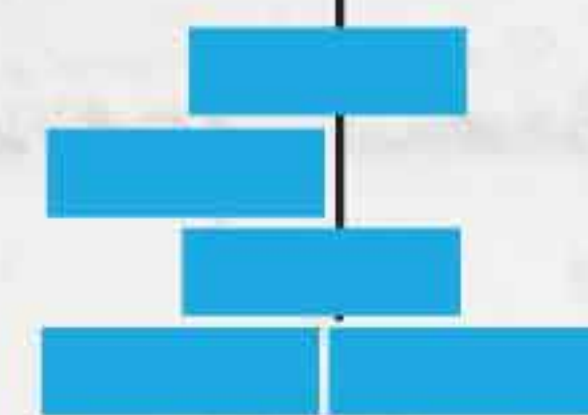
**Technical
excellence
with
professional
ethics**



**Employee
dignity &
Self respect**



**Customer
satisfaction
and loyalty**



Values are like the bricks that hold up the foundation of an organisation. If the bricks are flawed and are not placed right, the edifice crumbles.

Whenever at the crossroads, the ultimate test - will this decision fall within the periphery of the values of my organisation - is sure to be the right one, in the long term.

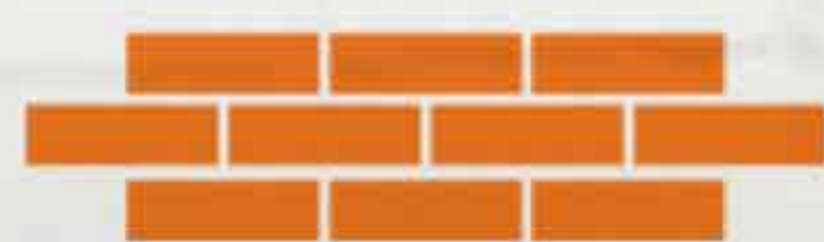
TCE VALUES

Customer satisfaction and loyalty



- Understand **customer** needs.
- Deliver on **promises**.

Organisational & individual growth



- Leverage talent to **create self worth**
- Provide equal **opportunities**

Responsibility to society



- Being conscious of the **impact on the environment** when we provide solutions to customers.
- **Build skills** in the community to help with their sustenance

Technical excellence with professional ethics



- **Innovation,**
- **Quality**
- Timeliness of **deliverables.**

Employee dignity & Self respect



- Provide **learning** opportunities
- Tap knowledge
- **Reward talent**
- Ensure **diversity** in age, gender & geography.

Values in thought, deed and spirit

TCE as an organisation is over fifty years old with a diverse mix of employees - those from within the organisation, young engineers who join each year and skilled lateral entrants. Within such an environment it is important to build a connect to the TCE value systems. This is best done by shaping the organisation's culture around the value systems.

At TCE, the Tata Group ethos is ingrained. The value systems are so much part of the everyday decisions that there is a connect in day to day activities, albeit unconsciously. It is now time to connect consciously to the values and perceive how it has become integral to our business life.

The most powerful way to communicate the values is to experience them first hand - in the decisions we make and the actions we take. The more we can connect our everyday decisions to our values, the more we will reinforce them and shape our culture. Once the values are ingrained in the organisation's culture, then the values reflect in thought, deed and spirit, consciously.



JAMSETJI TATA

175

YEARS

Walking the Value Talk – the letter & spirit

An organisation's value systems have to be ostensibly seen and felt for effectiveness. Branding and glossy print collateral highlight the letter but walking the value talk imbibes them in thought and action. The letter and action together drive home the spirit.

TCEexpressions revisited some key instances in the recent months that demonstrated our alignment to some of our values.

Customer satisfaction is achieved by understanding customer requirements and customer loyalty comes by providing business value and benefits to these requirements. The expression of this value is best felt in what the customers have to say about TCE.

When a customer's challenge was meeting a compliance requirement in a very short span, TCE's team of engineers came up with an innovative idea that not only kept project costs low but also ensured project commissioning at the right time. Displaying the value of **technical excellence and professional ethics**, the Power Business unit's team used their technology prowess to deliver on promises by providing an innovative solution. This solution saved the customer top dollars in capital expenditure and commissioned the plant in time to full compliance to regulatory norms.

We have been working together for some of the projects.... TCE doesn't see problems as a job but something as an engineering solution. TCE has a culture of bringing something new that nobody would demand. Hope to associate more with this company so they can bring value to us in future projects.

Mr. M Siddiqui, Group Director,
Vedanata Group

Employee dignity & self respect is more than respect to the individual. It encompasses self worth and the need to create value. To commemorate the 175th anniversary of the founder, the Group launched 'Tata Engage', a group wide volunteering program. About 330 employees volunteered for community work across the organisation. TCEndeavour's CSR activities provide volunteering opportunities for employees. About 330 employees in six locations participated in different programs to benefit the community. The activities were specially focussed on women and children. The volunteering exercise enhanced the self worth of every individual who participated. While volunteering activities continue under the TCEndeavour umbrella, the Tata Engage program was a life changing experience for TCE employees.

TATA
engage
be the change



Responsibility to society | Organisational & individual growth | Technical excellence with professional ethics |

Environment Awareness – Science Exhibition, Chennai



Distributing gifts at the Orphanage - Bangalore



Spending time at Old age home for women



Distributing gifts and books at Calcutta Orphanage - Kolkatta



Environment Awareness & Poster Competition



"During this week all the volunteers from TCE came together for a social cause. Our experience was most touching and inspiring."
Saraswathi. G - Bangalore



Remedial classes conducted for underprivileged children with Angel Express, Mumbai



Employee dignity & Self respect | Customer satisfaction and loyalty | Responsibility to society | Organisational &

TATA
engage
be the change



Entertaining terminally ill patients at a hospital- Bangalore



Mentoring, programs for girls in rural colleges - PUNE



Environment Awareness for school children- Pune



Working with school children along with Tata Projects & Blood donation, Founder's Day celebration - Delhi NCR



Responsibility to society goes beyond corporate social responsibility. It involves providing responsible solutions to our customers so that it is cost efficient and environmentally sustainable. It implies using core skills to benefit our stakeholders. Responsibility to society also involves empowering people in the community who are less fortunate. TCE completed the pilot program for students from ITI institutes to provide training in CAD applications in Chennai & Bangalore. TCE extended the program to the Pune location. About 20 boys and girls, most of them from marginalised communities underwent the training. This program will increase the employability of these students when they graduate from the ITI institutes.



COEP

The EAGLE program for marginalised students in the College of Engineering Pune(COEP) was completed with a batch of 40 EAGLETS who are ready to take on the corporate world. The program entailed honing the skills of students from rural background to enhance their employability.



Employee dignity & Self respect | Customer satisfaction and loyalty | Responsibility to society | Organisational &



Tata Consulting Engineers has several individual development programs like the Leadership Acceleration Programs (LAP), that helps develop inhouse talent to leadership roles. Several other job enhancement programs are also conducted to prepare individuals to compete in an international environment.

Organisational and individual growth got a new impetus in 2014 marked with the renewed thrust on gender diversity. TCE senior management comprising Mr J P Haran, MD, Mr Amit Sharma, ED & COO, Mr Savarkar, VP, HR met with some women employees from across the businesses to understand issues and concerns. Structured action plans to ensure sustained participation of women in the business is on the anvil.

In the final analysis, values are like the bricks that hold up the foundation of an organisation. If the bricks are flawed and are not placed right, the edifice crumbles. Practising the values by itself brings about progress for an organisation and its people. Business excellence starts with values.



What the TCE values mean to me



The values have given me direction and I incorporate these in my personal life and work place through tangible actions.

Nikeeta Ray,
Jamshedpur



TCE Values represent the TCE Culture. They guide me to excel in my profession thereby contribute in TCE's growth.

Kavitha Mudgal,
Mumbai



The TCE values mean adopting professional ethics, maintaining high value of customer satisfaction and loyalty and long-term customer relationships.

Maria Nancy Rani,
Chennai



TCE Values mean willingness to take on challenging roles and tasks and see them through by providing creative and innovative solutions; being accountable for commitments, results and quality to customers, stakeholders and partners,

Ashish Kumar Verma,Delhi
NCR region



Excellence coming from righteousness from within.

V.Priya, Chennai



The TCE values mean reliability & responsiveness to client; sustainability & stability for growth (for self and the organization).

Karthik G, Chennai

T - Trust
C - Commitment
E - Empowerment
This is how i define my place of Worship - TCE

Rashmi L, Bangalore

As a TCEite I feel proud that we are moving fast to fulfill our vision of "being internationally respected" by achieving the state of the art technical excellence while maintaining ethical approach, dignity of employees and responsibility towards society.

Dr Sukany Chakraborti, Kolkata

TCE values are the moral fiber which binds the organization.

Dr Jyoti Prabha, Mumbai



Howard Rheingold, a digital community expert, in a TED Talk said, "We can see the very beginnings of a new story beginning to emerge. It's a narrative spread across a number of different disciplines, in which cooperation, collective action and complex interdependencies play a more important role." In present times, this idea need not apply to social media or online communities only. It is very much true for the world of engineering consultancy. Tata Consulting Engineers, while in the process of transforming itself is creating a history of sorts by pursuing a collaborative model of business. This collaborative model was built on past successes and reaching out to seek new opportunities- A B2B service delivered through many partnerships bears fruit for TCE.

Building the Korean Connect

TCE's approach to some formidable international markets, was to partner EPC contractors and take a consortium led approach to deliver projects across the world. Between 2008 to 2011, TCE was working on the UMPP Mundra project. During regular visits to Korea by TCE engineers for meetings with Doosan it was learnt that many Korean EPC contractors were pursuing international EPC contracts in the power sector. Many Korean EPC contractors did not have in house power plant engineering capability and were outsourcing engineering work to American, European and Korean engineering firms. TCE seized this window of opportunity and launched an aggressive marketing pitch to pursue EPC contractors starting in 2012. This was substantiated by TCE's success in large scale power projects like Mundra UMPP that won several Indian and international awards for engineering innovation and project management.

Through late 2012 and early 2013 there were several high level and working level meetings with companies such as

The Korean Connect

Co-operation, collective action and complex interdependencies play a very important role in present times.





Daewoo, Daelim, Samsung Engineering, Samsung C&T, GS , SK, Posco, Hyundai Engineering, Hyundai Construction and Doosan. Many of the above companies sent their representatives to visit TCE for audit and verification of our processes, resources and engineering documents generated on typical projects, the IT set up, working models, etc.

“TCE's key marketing USP in the Korean region was 'Western efficiency and oriental flexibility'. After more than a year of marketing effort, we have currently established relationships with five of the ten companies we pursued,” says Mr S Vidyanand, Power Business Unit.

Building trust and confidence

A team led by Mr Prasad Menon, Chairman, TCE and Mr J P Haran, MD, TCE met with key customers in Seoul. Subsequent to meetings with several customers in Korea, Mr J P Haran, Managing Director, TCE said, “Our special thrust is to the TCE

core value of customer focus. Demonstrating the highest level of commitment to customer, the Chairman, Mr Menon and I met leading customers in Korea. During these meetings, customers' requirements and priorities were heeded to and high level assurances given for continued commitment to their interest. This was indeed a fruitful exercise. Since these visits, customers have been increasingly coordinating with TCE for opportunities. A contingent from Doosan visited TCE offices in India to explore the possibility of working with TCE for Indian projects. I believe that such high level interactions will help reinforce our commitment to customers and establish a good amount of customer recall for TCE.”

Living up to commitments

Adherence to schedule, quality and value engineering are key expectations of Korean EPC companies; engineering drives the entire project life cycle and is vital to the success of the project. The extent of detail engineering to be performed is significantly more than normal practice as Korean EPCs strongly believe in the philosophy that once construction drawings are released to site, there should be trouble free construction & commissioning at site without any turn back to the engineering team. A major breakthrough for TCE came with Daelim's 1000MW Ultra super critical Power plant in Malaysia. This is a fast-track project and is scheduled for completion in 45 months. TCE is privileged to be the first Indian consultant to work in core process engineering and C&I engineering for a 1000 MW unit class.

Another major breakthrough was achieved by winning full scope engineering services contract from EPC

contractor GS-Daelim, a JV for a 1400 MW Kais CCPP project in Algeria. About 15 Korean engineers from the JV are stationed in Bangalore delivery center working with the TCE team of over 50 engineers.

"Optimal designs within the purview of their contract and commitment to schedules bring value to EPC contractors. With over 50 years pedigree in power plant engineering, we want to ensure customer delight by demonstrating high standards of engineering and professionalism. Adding with it a little flexibility, will go a long way in building a strong brand for TCE in the Korean market" opines Mr Mohan Murthy Head, Power Business Unit, Tata Consulting Engineers.

On the left of the table: Mr. Young Cook Kang, Executive Vice President, Sales and Marketing, Plant Business division, Daelim Industrial Co., Ltd, Mr. Inchan Han, Executive Vice President, Engineering, Plant Business division, Daelim Industrial Co., Ltd & Mr HAH.

On the right of the table: Mr S. Vidyanand, Power Business Unit, TCE, Mr J P Haran, MD, TCE & Mr Prasad Menon, Chairman, TCE.





Going the extra mile: The team of French translators working with the engineering teams to provide the deliverables in two languages - English & French.



Understanding cultures

A collaborative way of working starts with team building. It was important to get all team members – Koreans and Indians - on the same road and work towards the same goals. A workshop was organized by TCE for the teams from TCE and Daelim in Bangalore . The theme of the workshop was “One Team, One Goal”. Mr Savarkar, VP, HR at TCE conducted interactive, cultural orientation sessions to create awareness about Indian and Korean cultures and also helped establish mutual respect. This also served as an ice-breaker and an introduction to the Korean and Indian way of working.

"Our special thrust is to the TCE core value of Customer Satisfaction & Loyalty. During these meetings, customers' requirements and priorities were heeded to and high level assurances given for continued commitment to their interest.

- J P Haran, MD, TCE.



During the visit of Daewoo E&C team to Bangalore on 29th March 2014.

Mr.Jong Ho, Lee - Executive Vice President (6th from left), Mr.Ho Young, Choi - Vice President (4th from left)and ,Mr Jong In , Woo - General (3rd from left) with Mohan Murthy and S.Vidyanand.

Mr Hah (TCE representative in Korea), Mr R Raghavan (TCE), Mr Vidyanand (TCE), Mr Mohan Murthy(TCE), Mr. Ha - Gyoong Chang, Samsung C & T, Mr. Chonghan Chung, Bonggwon Park, Sun Kim, (Samsung C & T)



Success in the current engagements with the Korean firms is expected to lead to repeat businesses, with the possibility of expanding cooperation to other business units like Chemical, Infrastructure sectors and Construction Management services.

Collaboration is indeed key to business success. TCE works on an onsite-offsite model to deliver value to clients.

With a combination of core engineering and IT-enabled platforms and collaboration with multiple partners, it is a win-win situation for the end customers and partners. The Korean connect that Tata Consulting Engineers has established, is a model that will serve well to open doors to more such opportunities.

GS-Daelim JV and TCE team at the cultural workshop in Bangalore.



TECH SPEAK - OFFICIAL BLOG OF TCE



TCE Buzz

Welcome to Tech Speak - The official blog of Tata Consulting Engineers Limited

Tech Speak – the TCE blog is launched on the website

As a first step to foray into the digital media engagement platform, Tata Consulting Engineers introduced Tech Speak, TCE's blog. The vast technical knowledge within TCE finds expression here. Engineers at TCE go the extra mile to provide solutions that take a new approach to technical issues. The initial approach is to tap this tacit knowledge and showcase it while drawing other technocrats to engage with TCE on this platform. The blog will help highlight TCE's technological capabilities and provide expression to TCE's technical expertise. Creating conversations around the blog topics will increase footfall on the website. The next phase in the digital media engagement will be on other social media platforms.

Business Brief

Coke Oven Battery # 11 Inaugurated by Mr Mistry, Chairman, Tata Sons

The Coke Oven Battery # 11 was commissioned and the plant was inaugurated by Mr Cyrus Mistry, Chairman, Tata Sons Ltd at Tata Steel, Jamshedpur on 28 Aril 2014. Tata Consulting Engineers provided consultancy and site supervision services. The Coke Oven Project, Battery #11 at TATA Steel Limited, Jamshedpur works, is part of the 3 MTPA expansions of capacity 0.7 MTPA gross coke by setting up 5 m tall stamp charged batteries, consisting of two blocks of 44 ovens each.



The TCE team with Mr Cyrus Mistry, Chairman Tata Sons Ltd.

The plant was commissioned as per schedule and as per environmental standards. The key environmental measures include:

- Land based pushing & charging emission control system.
- Sulphur recovery from coke oven gas (Claus Plant).
- Advanced wet quenching system to suppress quenching emission.
- High pressure water jet oven door cleaning system.
- Automatic crude coke oven gas flaring system.
- Improved Heating system to reduce NOx and Sox.

Congratulations to the Coke Oven team in the Steel Metals & Mining Business Unit and the efforts of the Construction services team for yet another successful commissioning of a project of such a large scale.



Mr Cyrus Mistry, Chairman Tata Sons Ltd presents a memento to Mr J P Haran, MD, Tata Consulting Engineers



Mr. Vikram Bapat (First from left) signing the MOU with the SAU consortium.

TCE lead consortium for South Asian University Greenfield campus

The Consortium of TCE (lead), URS Scott Wilson India Pvt Ltd (Consortium partner) and URS Infrastructure and Environment UK Ltd (Consortium partner) signed a memorandum for the development of a Greenfield campus for South Asian University (SAU) at Maidan Garthim New Delhi. SAU is a body under UN Charter formed by SAARC Countries. The campus is piped for a GRIHA 4 star rating and proposes to be a Zero Energy Campus.

Executive Felt leadership program on safety

A two days Executive Felt Leadership Program on Safety & Health Excellence was organized by TQMS at Taj President Hotel Mumbai on 10th & 11th February 2011. The program was designed to build capability in the senior and mid management levels of Tata companies in the areas of Safety Leadership, Felt Leadership, Safety Observations amongst other skills. The program was also aimed to get better understanding and build a strategy to implement six safety standards in five infra companies of Tata Group viz TRIL, Voltas, Tata Housing, Tata Projects Limited and Tata Consulting Engineers Limited. These standards have been rolled out by TQMS recently. A two days workshop on Training of Trainers' was held on 12th & 13th February 2014. Senior officials and Safety officers from TCE attended the program. Post the workshop, the safety standards at TCE were revisited and a program has been chalked out to identify and fill the gaps in order to implement the six safety standards.



10th CII - Exim Bank Conclave on India - Africa Project Partnership

TCE participated in the 10th CII-Exim Bank Conclave on India-Africa Project Partnership as a part of the Tata Group held in New Delhi (9-11 March 2014). The theme for the conclave was Developing Initiatives and Enhancing Relations. Lesotho was the partner country and Republic of Congo the focus country. Business delegations from 45 countries including 32 Ministers from Africa were present. The atmosphere was charged with 500+ African and 600+ Indian delegates engrossed for business deals worth US\$ 84 billion.



(Left to right): Mr Prabhakar, Mr Dave and Mr. Anand at the conclave

Project Patchwork

Combined cycle power plants in Algeria

A 1450 MW combined cycle power plant in Mostaghanem, and a 1163.44 MW plan in Naama, both in Algeria is proposed. Samsung Construction & Trading Corporation, South Korea has appointed TCE for detailed engineering services. Project activities commenced in March 2014.

Mostaghanem:

The Mostaghanem CCGT Power Plant consists of two (2) combined cycle power block [2 x (2+2+1)]. The Plant configuration of each combined cycle unit consists of two (2) Gas turbines and generators (GTGs), two (2) Heat recovery steam generators (HRSGs), one (1) Steam turbine and generator (STG), and associated Balance of Plant (BOP) equipment. The conventional sea water cooling (once through) has been envisaged in this project.

Naama:

The Naama CCGT Power Plant consists of two (2) combined cycle power block [2 x (2+2+1)]. The Plant configuration of each combined cycle unit consists of two (2) Gas turbines and generators (GTGs), two (2) Heat recovery steam generators (HRSGs), one (1) Steam turbine and generator (STG), and associated Balance of Plant (BOP) equipment. Air cooled condenser (ACC) has been envisaged in this project.



2x660 MW Super Critical Coal based Thermal Power Project at Suratgarh, Rajasthan.

Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL), Jaipur, Rajasthan has appointed TCE for 2 x 660 MW super critical coal-based thermal power project located at Prabat Nagar, Suratgarh, Sri Ganganagar district, Rajasthan. TCE Scope of Work includes Preparation of Detailed Project Report, Pre-Contract award engineering Services, Post EPC Contract award engineering services covering review of contractor's engineering documents, review of procurement documents, review of quality assurance, Interface Engineering as required and Construction management services. The project is scheduled to be commissioned in 42 months (Unit#7)

330 MW Shrinagar Hydro Electric Project, Uttarakhand

Tata Consulting Engineers Ltd. (TCE) is providing Owner's Engineering Services, Assistance in Commissioning for 330 MW Shrinagar Hydro Electric Project at Shrinagar in Tehri/ Pauri Garhwal District of Uttarakhand. The project is being implemented by M/s Alaknanda Hydro Power Company Limited, Secuderabad, Andhra Pradesh. Main Project components consist of 248.0 m long and 66.0 m high Concrete gravity Dam, 8 Nos. of 14.0 m wide spillway opening with hydraulic hoist operated radial gates. The Power house consists of 4 units of 82.5 MW machines with vertical Francis Turbine. The Project is at final stage of Commissioning and unit 1 will be commissioned by June 2014 while other units will be commissioned at later stage.



4.36 MW Nyagak-III Hydro Power Plant, Uganda

Tata Consulting Engineers Ltd. (TCE) is providing pre-bid engineering services to Hydromax Limited, an Independent Power Producer in Uganda, for Nyagak-III Hydroelectric Project on the Nyagak River in north-eastern Uganda. Bid for the project was invited by Uganda Electricity Generation Company Limited (UEGCL) of the Ugandan Government. TCE's scopes of services involve preparation and submission of relevant documents as stipulated in the Request for Proposal provided by UEGCL, for technical and financial bids, and include, inter alia, optimization of project layout, components, and plant capacity; provision of broad design and drawings and bill of quantities; description of geological conditions, infrastructure, environmental protection measures, power evacuation plan, construction programme, operation and maintenance plan, staffing and contracting schedule, and environmental, safety and quality management systems; estimating hard cost of the project, phasing of expenditure, and working out completed cost and tariff. This project is the third assignment that TCE is working on for Hydromax, the other two being 9 MW Buseruka and 4.8 MW Waki Hydroelectric Projects.



Dr. M. Goswami (left) of TCE, Delhi-NCR with the project proponent on a bridge on the Nyagak River in Uganda



South Asian University(SAU) Campus

The SAU has been allotted approx. 100 acres of land for phase I in Maidan Garhi, adjoining to the campus of Indira Gandhi National Open University (IGNOU) and Asola Wild Life Sanctuary.

The campus site plan envisages the complete Development of the University's academic buildings, PG student hostels and faculty housing. This also includes support facilities such as utility buildings, sports facilities, shopping and amenities. The campus will accommodate 12 faculties, other administrative & ancillary buildings, hostels, residences respectively for 5000 students & 500 faculties and about 300 regular employees. The project will have to follow the well established construction practices and norms of the CPWD which satisfy the tenets of "accountability", "transparency" and "equity" in the construction management of project.

Total Built-up area of the project is approx. 55, 000, 00 lakh sqft. The project has been designed as a Green line project and fulfilling the guidelines of GRIHA Large Development (LD) 5 star rating.

JK TYRES- PLANT EXPANSION, CHENNAI

JK Tyres & Industries limited in Chennai proposes capacity expansion of its passenger car radial tyres and truck-bus radial tyres. TCE has been appointed to provide engineering consultation services for utility systems of the plant. The challenge here is to design the system considering the hook up/tapping from a live, running plant.

OIL INDIA LIMITED – SECONDARY TANK FARM (STF)

TCE has been awarded the assignment of basic engineering, construction management and supervision services for Secondary Tank Farm (STF) facility for 50000 KLs Crude Oil. The facility is located in Madhuban, near Duliajan, Assam. The scope includes dehydration of wet crude and pumping out dry crude oil from STF (to NHK CTF), treatment of separated formation water, pumping out of clarified / treated formation water from STF (for further safe disposal/reservoir injection). The plant is expected to be commissioned by March 2017.



MANALI PETROCHEMICALS LIMITED – PROPYLENE OXIDE PLANT

TCE has been appointed to provide residual basic engineering and detailed engineering services for converting the existing Epichlorohydrin plant (at TPL) space to setup Propylene oxide manufacturing facility. The plant consists of Reactor Section, Recycle Gas Washing, Compression, Purge Gas Recovery Section, Saponification Section, PO Distillation Section, PO Stripping Section, Vent Gas Washing Section, DCP Decanting Section, Milk of Lime Section and other Auxiliary Units. The Plant is expected to be commissioned by Nov 2015.

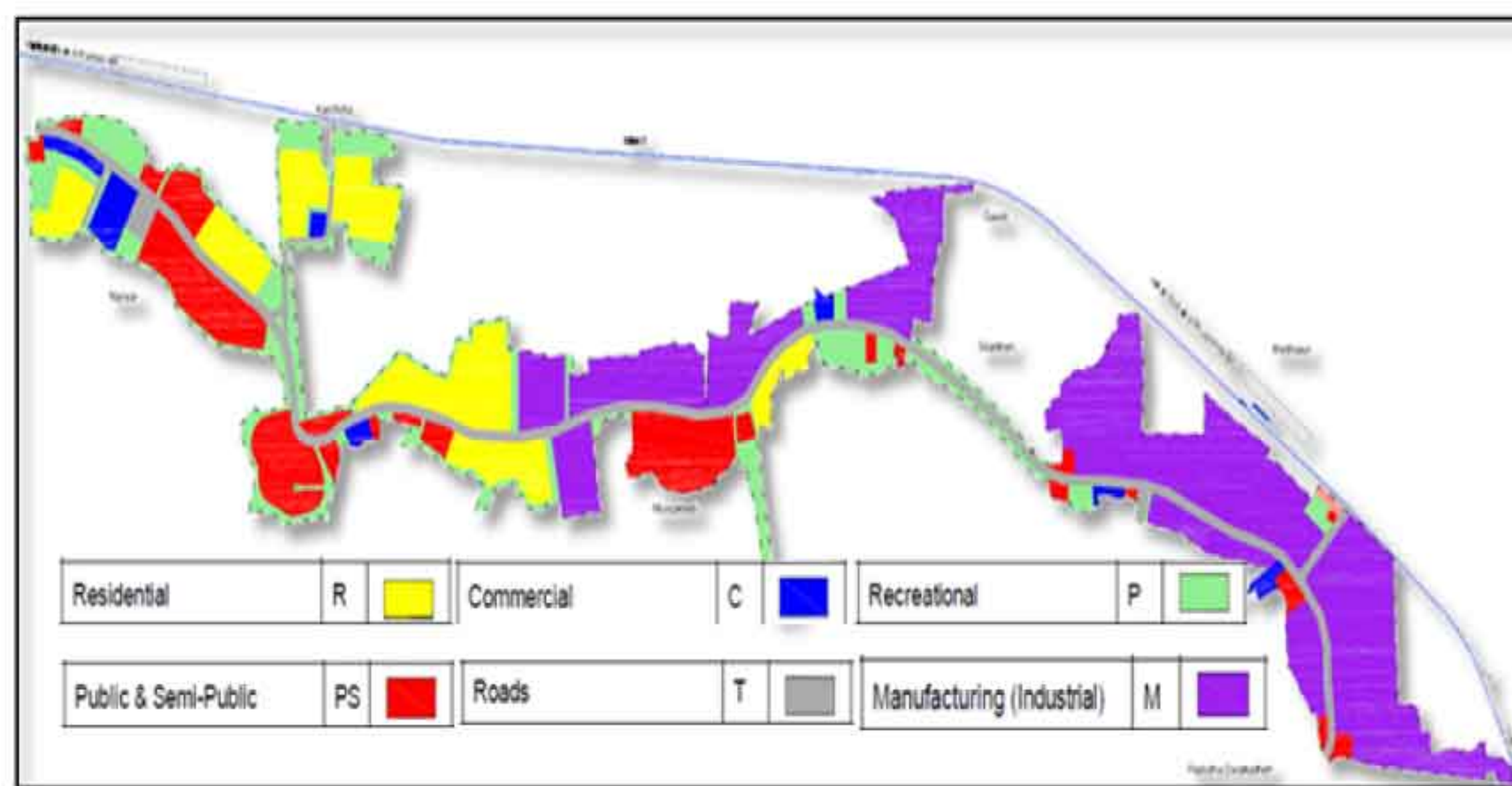


HYDROGEOLOGICAL STUDIES FOR HILLY TERRAINS OF SOUTH BIHAR

Tata Consulting Engineers has recently completed a pilot scale study “Hydrogeological studies for groundwater development and management strategies in one block each in Kaimur (Adhaura) and Nawada (Meskor) districts, Bihar” for the the Bihar Technical Assistance Support Team (BTAST) as a part of the Sector Wide Approach to Strengthening Health (SWASTH) program, an effort of Government of Bihar to improve health outcomes (funded by the Department for International Development (DFID), UK). The objective of the study was to Tata Consulting Engineers has recently completed a pilot scale study “Hydrogeological studies for groundwater development and management strategies in one block each in

Kaimur (Adhaura) and Nawada (Meskor) districts, Bihar” for the the Bihar Technical Assistance Support Team (BTAST) as a part of the Sector Wide Approach to Strengthening Health (SWASTH) program, an effort of Government of Bihar to improve health outcomes (funded by the Department for International Development (DFID), UK). The objective of the study was to develop a systematic approach and execution methodology to establish safe drinking water supply system as well as surface and groundwater management and security planning for blocks or villages in the water stressed hilly areas of south Bihar. The geology team of TCE completed the project in association with School of Water Resource Engineering (SWRE), Jadavpur University, Kolkata using various

field, laboratory and desktop studies like: Geological investigation, Geophysical investigation, Hydrogeological investigation, Ground Water Modeling, Water quality tests and apart from analysis of secondary data. TCE presented the recommendations of the study, including the 20-25 years groundwater management and security planning, potable water supply, low cost treatment and aquifer recharge schemes and systematic pre work requirement for avoiding well failure study to the Government of Bihar officials along with all stake holders.



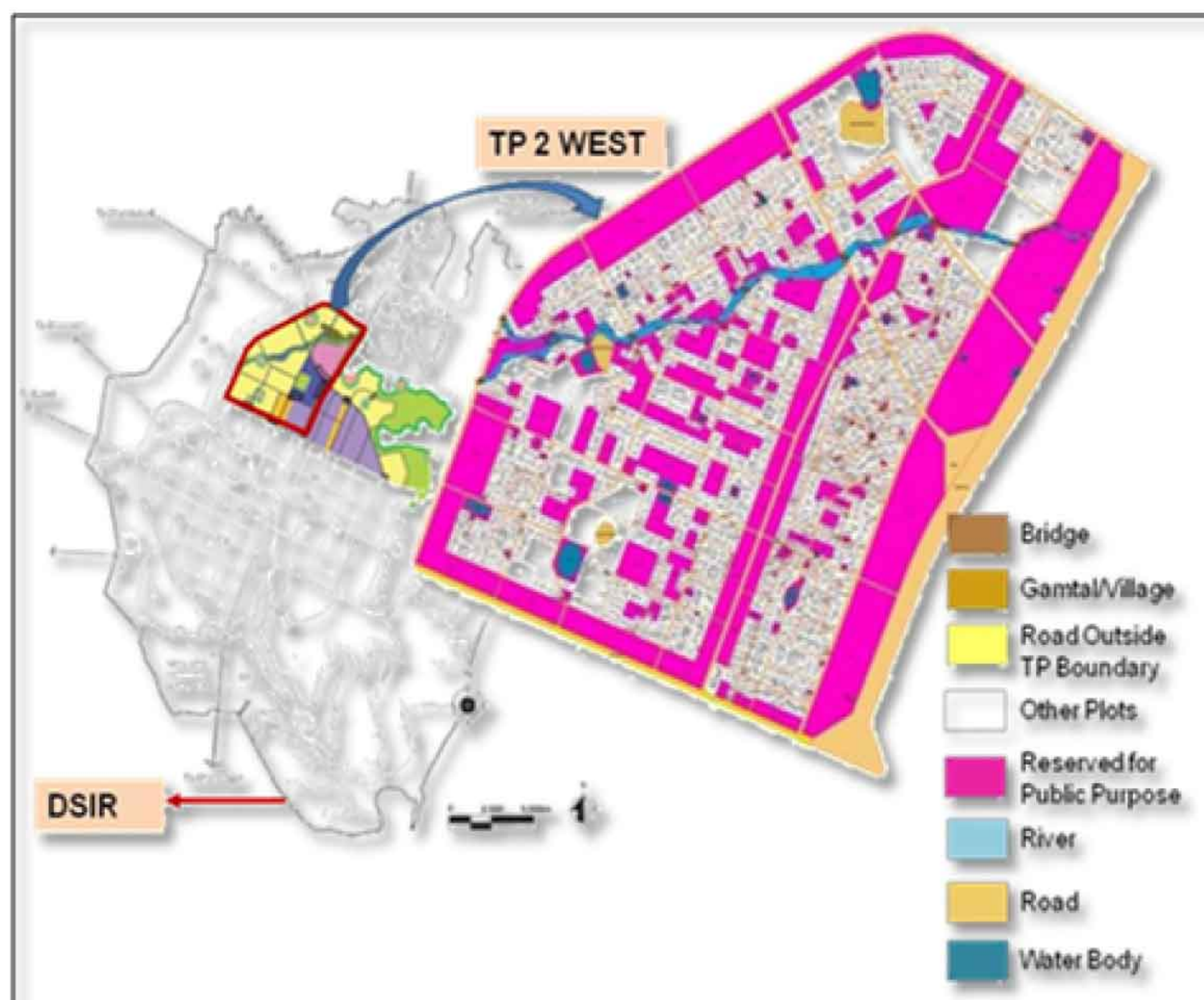
Three prestigious projects for Delhi Mumbai Industrial Corridor (DMIC) Development of Vikram Udyogpuri, an Integrated Industrial Township, Near Ujjain

Vikram Udyogpuri is a green city project housing non-polluting/ manufacturing industries and knowledge concept of work-life balance. TCE is appointed as design consultant for the project with a total development related entities, and is based on live-work-play-learn area

of 443.79 hectares. This is an early bird project to initiate the integrated industrial development and essential infrastructure services in the region.

'ABCD' Building, Roads and Services/ Utilities Of Town Planning Scheme 2 (West) At Dholera Special Investment Region

The Dholera Special Investment Region is located within the Saurashtra peninsula, bordering the Gulf of Khambhat, Gujrat having development area of 43 Sq. Km. TCE in consortium with Atkins will provide preliminary design of roads, utilities & ABCD building within Town Planning Scheme 2 (West). The total built-up area for ABCD building is approximately 14,000 Sq.m. GIS based 3D model development for the Preliminary utility design is an important component of this project.



Development of Trunk Infrastructure for Integrated Industrial Township under Dadri-Noida-Ghaziabad Investment Region of DMIC

The proposed Dadri project is located near Noida, Uttar Pradesh having development area of 315 hectares. DMICDC appointed TCE as a consultant for this project. The scope involves master planning and preliminary design engineering & tendering for internal infrastructure of the industrial township.



Advisory Services for Social and Environment Impact Assessment to Zuma Energy Nigeria Ltd

Tata Consulting Engineers (TCE) has been appointed by Zuma Energy Nigeria Ltd. to provide advisory services for Environmental and Social Impact Assessment for an oil based and another coal based Power Plant, associated mines and the transmission line for the projects. Technical team from TCE travelled to the project locations and the report with techno-feasible solutions were provided.

TCE GETTING MULTI-DIMENSIONAL

TCE worked for the first time on 3D REVIT platform for Integrated Design Consultancy (IDC) for upcoming real estate project at Greater Borivali for ANA REALTY. TCE’s scope of work includes Design Management, Architectural Services, Structural Services and MEP, Fire, IBM (Integrated Building Management) Services, Procurement Services etc., and overall co-ordination.





22 Million Safe Man-hours achieved during the execution of the TCS, Gitanjalipark, Rajarhat, Kolkata.

TCS GITANJALI IT SEZ FIRST BUILDING HANDLED OVER

TCE is the Project management Consultant for the TCS Gitanjali Park, IT SEZ at Rajarhat, Kolkatta. The scope of work also includes Review of Structural Drawings and Procurement Services. This is a Greenfield project, with capacity of about 16,971 seats. Project is registered for Gold Rating under IGBC NC 2007 - Version 1. Currently more than 50% Of the Physical work for the project is completed and one building with 1444 seats was handed over. TCE was appreciated for its high safety records in the management of this project.

- Compiled by

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Clean Technologies

- Mission Possible

The path to development is paved with a continuous need for power to fuel growth. The good news is that both governments and industries are conscious of this and are aligned to address this issue – the governments with stringent regulations and the industry responding with clean technologies.

Coal-fired thermal plants have seen some environmental concerns. The flip side is that coal-fired plants are also the bedrock for innovation in clean technologies and producing cheaper power. Tata Consulting Engineers (TCE) has flashed the spark of innovation yet again to bring sustainable solutions to its customers, especially in coal-fired thermal power plants.



What is FGD

Flue Gas Desulphurization (FGD) is a clean technology system that separates the sulphur dioxide from the exhaust flue gas of coal-fired thermal power plants. Typically, these systems require sea water or chemicals to absorb the sulphur dioxide. Thus FGDs help reduce the SOX emissions to almost 90 to 95% from the flue gas exhaust and maintain the specified Ground level concentration of SOx within the norms stipulated by various national ambient air emissions standards. The extent of regulation for inclusion of FGD systems in fossil-fired power plants varies in different countries across the world.

Inland plants typically use chemicals (limestone or other chemicals) to absorb sulphur dioxide where as coastal-based power plants are best benefitted by FGD systems that use sea water, as sea water's inherent natural property is conducive to absorption of sulphur dioxide. However, such sea water based FGDs require significant amount of sea water and that calls for large water intake system.

A flash of insight

When it is the question of retrofitting FGD systems to a completed thermal power plant, the challenges loom large. This was the



(Left to right): Mr Kundar Kumar, Mr H B Shishir, Mr Surendra Naidu, Mr M Sankarnayan, Mr AK Chaudhary, Ms Greeshma V

trigger on hand for the Tata Consulting Engineers' team to put on the innovation hat. TCE's team had a serious challenge that called for a breakthrough solution. The hurdles had many angles to it - the topography of the plant site, the existing design that will have to be completely modified to accommodate the FGD systems requirements, the additional energy requirement - were only the tip of the problems. The TCE team comprised of Mr A K Chaudhary, Mr Surendra Naidu, Mr Sankarasubramanian S, Ms Greeshma V, Mrs Getzy L Catherine, and many more inhouse minds and

experts mentored by Mr Anjan Bhattacharya, Mr D Ananthachar, Mr D Padmanabha, Mr O K Muthappa. They put their heads together to create an innovative solution for retrofitting a sea water based FGD system, at minimal time and optimal cost benefit. They had knowledge and providing cutting edge technology to customers was their goal. Bingo, at the end of twenty-four months, FGD system was retrofitted and the plant was ready to go on stream completely compliant to environment norms. Project Mission Impossible FGD was made possible.

The story of retrofitting of the FGD system

The option of going by the conventional method of fitting FGD systems was trashed at the very onset by the team. The reason being that the time available (24 months) and phenomenal cost escalation that retrofitting a conventional FGD would bring about was a challenge not acceptable. The option of using a chemical based FGD was also not pertinent because the process required a large area for storage facilities, the economic advantage of using seawater was lost and most of all the waste water management was not optimal.

The easy way out was fitting-in a conventional FGD system. The working team was not ready to go with this option as they were committed to completing this within 24 months and avoid cost escalations to the project. They knew there was a cost effective solution hidden right within the problem and with persistence they would surely nail the solution.

Key to the success of innovation is collective effort of all stakeholders. This particular work group set an example of team work. Our FGD team thought out of the box, brainstormed, shouldered responsibilities, took calculated risks, faced challenges and delivered the best solution to its valued customer. At the end of the day, it was collective effort to create cutting edge solutions. We are proud to have been able to live up to the values of TCE.

- A K Chaudhary, Project Manager:

They returned to the design engineering stage and started the process of elimination. Through the thought process, one constant focus was maintained – the solution had to be environment friendly cost efficient. After several deliberations, the flash of innovation struck.

The process recommended was a first of its kind with no past references. Brilliant! The solution was on hand, now it was time to sell the big idea to all the stakeholders. No idea is worth its ingenuity unless it is bought completely. This was the non-technical hurdle that the team crossed. The new process had implications on other





Mr Prasad Menon, Chairman TCE (extreme right) with the TCE team

inherent systems. All stakeholders agreed this was a novel idea but this process had no precedents and that posed a risk to them. The customer also needed to be convinced on the feasibility of this solution. The team overcame various hurdles and finally the innovative idea was accepted and implemented. The successful operation of the plant is by itself a standing testimony of success of the innovative process.

The story of retrofitting FGD systems had a very happy ending with many sequels to it. The team was overjoyed at the end of it all. The idea of retrofitting the FGD with a unique process, brought about huge benefits to the customer-

- Capex due to implementation of new process
- Savings in opex
- Full compliance to environmental regulations and standards Returned 85 % of treated water safely without harming our natural marine ecosystem
- Reduction in CO2 emissions and energy savings

Tata Consulting Engineers has hit upon an innovative process (economical and environmentally friendly) in FGD systems that can be effectively applied to Greenfield and Brownfield and existing sea water based power plants.

Application has been filed for patent for the innovative process that has been implemented. With regulatory compliance mechanisms getting more stringent, it is expected that FGD systems would soon be mandated for coal/oil - fired thermal power plants.

TCE is known for providing solutions that are a first of its kind in various industry sectors and prestigious assignment. This one goes to the sustainability of fossil-based power generation.

Tata Consulting Engineers has hit upon an innovative process (economical and environmentally friendly) in FGD systems that can be effectively applied to Greenfield and Brownfield and existing sea water based power plants.



Recognition at the Tata Innovista 2014 for TCE

The annual Tata Innovista is the Tata Group's recognition program to encourage innovation in process and design by the Tata Group companies located in India and across globe. Tata Consulting Engineers was awarded the Tata Innovista 2014 award in the category 'Promising Innovation – Core Process', for projects that are innovative and successfully operating. In the promising innovation category alone, 1,010 entries were received and 43 core process innovations reached the final round (350 entries across categories) of Tata Innovista 2014. TCE qualified from amongst the finalists from India and across globe in this category.



Mr Mistry (2nd from left) and Mr. Amit Sharma, ED & COO, TCE (extreme right), with the team at the award function.

TCE Triumphs

Scaling new heights – Trek to Dzongri

Team- "Ardent Rover"- organises Treks during winter every year to the peaks of the Himalayas braving the harsh winter. This year the team from TCE comprising Abhijit Banik, Abhijit Das, Jayram Naikar, Krishanu Choudhury, Lohit Gupta, Nadeem Kamal, Shuvranshu Rout, Surajit Debnath & Suman Dutta planned the trek in the Spring, during 14th March 2014 to 23rd March 2014 to scale the Dzongri top.





During six days trek, the team experienced erratic weather and had to change plans accordingly. On the third (consecutive) attempt from Dzongri to Dzongri Top they made it to Mt. Kanchenjunga along with some other prestigious peaks. As a bonus, they trekked to Thangsing (8 km from Dzongri) and some members even managed to go to Lamuney (4 km from Thangsing) towards the foot of Mt Kanchanjunga and then back to Yuksam via Phedang and Tsokha.

It was a magnificent experience for the team as planned, every single day a different team member led the contingent." We hope that this experience will help those leaders in near future to overcome critical situations and make them confident. Throughout the trek we spread awareness of issues of water conservation and bird conservation, and even distributed notebooks and stationery to local school children. This gave us an additional enjoyment & satisfaction", was the unanimous opinion of all the team members.

TCE lauded for safety record



Tata Consulting Engineers was awarded the HSE appreciation certificate for achieving 22 million safe man hours with LTI free incidents at the TCS-Gitanjali Park project at Rajarhat, Kolkatta. On an average five thousand

workers have been working at this site in two shifts and about 50 contractors are doing various types of jobs for the past two years. Congratulations to the entire HSE team and project team at TCE.

TCEndeavour

CAD Training for ITI students in Pune

The successful completion of the CAD training program in Bangalore and Chennai for marginalized students from the ITI helped to build employability of students. The program was extended to Pune where 20 boys and girls, primarily from the marginalized communities received training in CAD applications. This training improves their employment prospects at the campus placements organized by the technical institutes. The program will be extended to more locations across TCE.



ITI STUDENTS DURING
CAD TRAINING
WITH INSTRUCTOR



ITI students from Pune receive
training in CAD applications



Dancing to the tune of a good cause

Auxilium 2014, a fund-raiser event conducted by Bright India Charitable Trust during the first week of February 2014 in Chennai. V.Priya, Assistant Manager, Civil, TCE, Chennai performed dance recital for the event. The proceeds of the event will be used by the trust for the care of special children – food, shelter, education and medical expenses.



Asha School

Asha School, a school for special children put up a spectacular show at the Tata Sangam 2014, an annual Group sports and cultural event held in Bangalore. The school is patronised by the TCE, Bangalore.

Construction Trade Competency Program in Jamshedpur

Tata Consulting Engineers joined other group companies to sponsor candidates from socially marginalized SC/ST youth. Two candidates Jyoti Bag and Preeti Kalindi were sponsored for this programme at the JUITI (Jusco Utilities & Industrial Training Institute) to enhance the employability of economically and socially marginalized youth. Candidates were part of the "Construction Trade Competency Programme" organised by Construction Industry Development Council and under the auspices of Ministry of labour, Govt. of India for its new scheme "Training / Testing & certification of workers in informal sector" conducted at JUITI, Jamshedpur.



i-val-U CONTEST

Capture the TCE Values on Camera !

Whazzat ?

The TCE values are very important to us.

It is the  of our work life

This contest is open to all TCE employees.
You have to depict each of the five TCE values in a photograph.

Hozzat ?

Look around and capture interesting scenes and imagery that will depict each of our values.

The values are colour coded.
So you can get creative!

Click high resolution pictures on your camera or mobile

For the details/expansion of each TCE value, refer to the TCExpression cover story "Bricks that hold up the wall".



So move it,
and go
click click click...
with the values buzzing in your head !



Here comes the fine print -

- Your pictures must be high resolution, clear digital images of at least 2 mb each in .jpg format
- Each entry must depict a set of 5 TCE values, ie. one picture per value. One entry = set of 5 photographs, one for each value. Entries that do not cover all the five values will not be considered.
- Entries are restricted to 1 set of 5 value photographs per employee.
- The pictures must be your original photograph. Stock images and other online digital images will not be considered.
- Your entries must be uploaded on the TCE intranet site. <http://rhythm.tce.co.in/interaction/ivalucontest>
- Save your image as: ValueName-EmpCode.jpeg Eg: Customer-106126.jpg, techxcel-106126, orggrowth-106126.jpg, respons-106126.jpg, empdig-106126.jpeg
- If you need help get in touch with the location editors (names are given in the inside cover of TCExpression).
- For help with uploading your photographs, please contact location IT.



Bombay House, the Tata Group headquarters, is India's first existing heritage building to go GREEN

Bombay House, has become India's first existing heritage building to get the prestigious GOLD green rating by the Indian Green Building Council (IGBC) of CII, under their IGBC Green Existing Buildings (Operations & Maintenance) rating system. Built in 1923, Bombay House has been given this rating for implementing measurable strategies and solutions in five categories of IGBC's Existing Building rating system.

Ecofirst Services Limited, a subsidiary of Tata Consulting Engineers Limited provided engineering consultancy for achieving the IGBC green rating.

ecofirst
sustainable by design

A TATA Enterprise

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TCE Corporate Communications

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