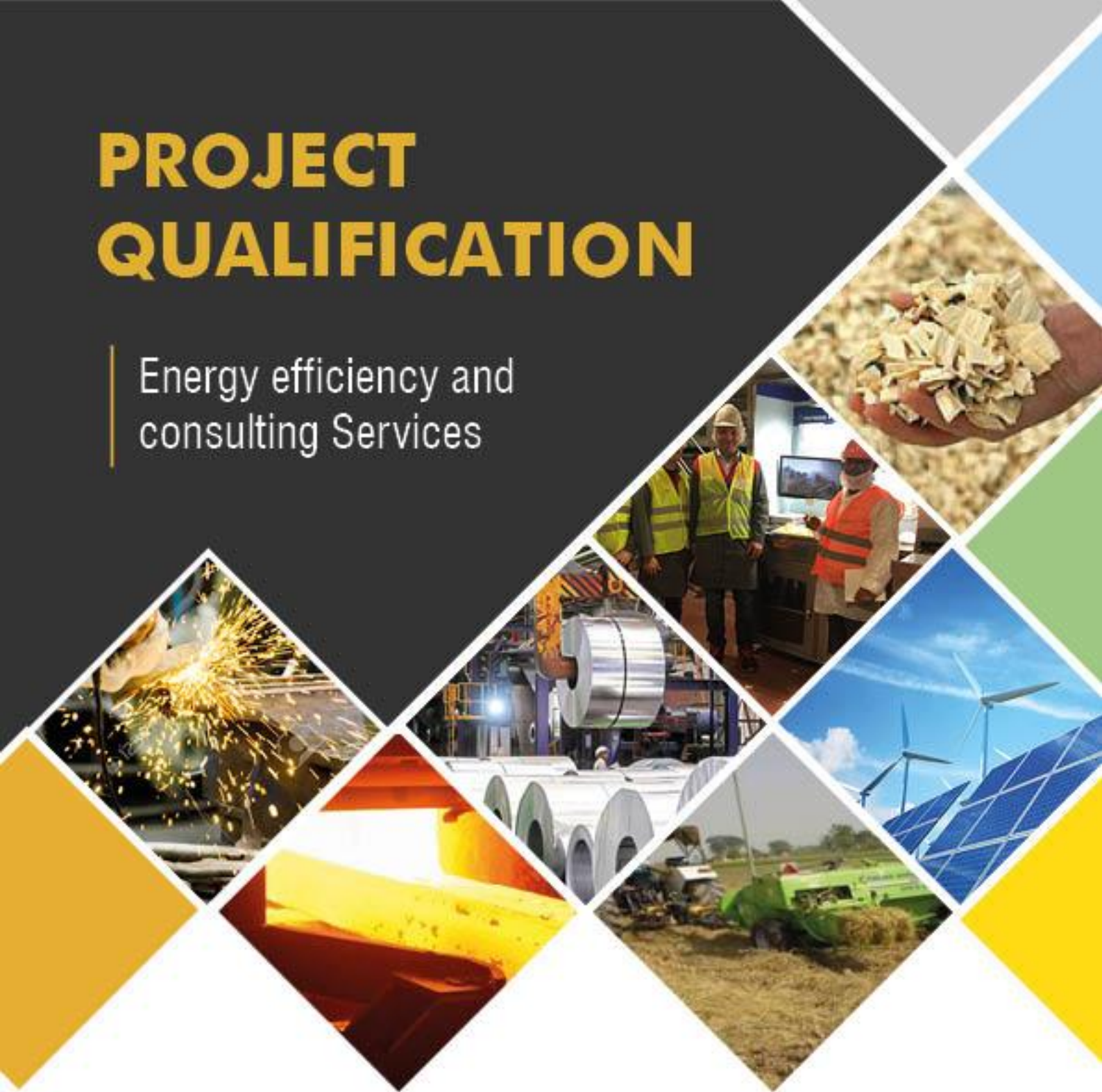


# PROJECT QUALIFICATION

Energy efficiency and  
consulting Services



## **DESL**

**Development Environenergy Services Limited**

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# INTRODUCTION

Development Environenergy Services Ltd. (DESL) (An ISO 9001 : 2015 certified company) is a 100% subsidiary of Paris based Veolia Environnement Ingénierie Conseil (VEIC), a member of the French MNC, Veolia, one of the world’s largest environment and energy services business groups. Making a modest start in 1999 as a business division of the Indian manufacturing conglomerate DCM Shriram Consolidated Ltd., DESL was acquired by the French group in 2009 and is now recognized globally as a delivery focused premier consulting organization.

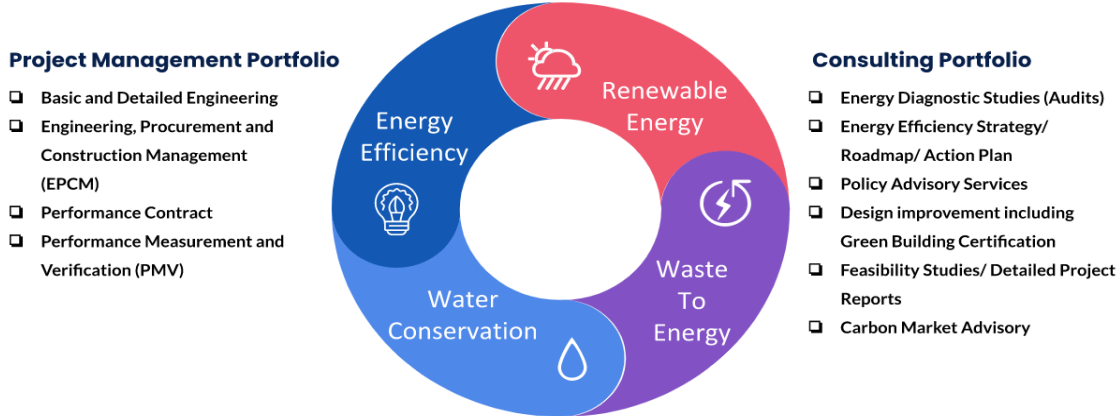
Since its inception, DESL has continuously re-invented itself as a differentiated service provider with introduction of new technology and business processes, and development of sustainable market for energy efficiency, renewable energy and waste-to-energy project development services in India and across the globe. The company provides consulting and engineering services for development of new as well as assessment and upgrading of existing energy efficiency and renewable projects.

## SERVICE OFFERINGS & SOLUTION OPTIONS



The focus of service offerings by DESL has always been two folds: i) reducing the cost of energy in operation of industrial and commercial facilities; and ii) contributing to the global goal of conservation of precious resources and reduction of carbon footprint of the business operations for its clients. DESL adopts a multi-project approach, where the individual customer defines the scope and structure of the services. Beginning with relatively simple projects, the scope and complexity of the services are expanded to multi-tier product packages considering the comfort level of the client.

A flexible business process designed on ‘solution approach’ provides modular options and choice to the customers. This approach helps the customers in appropriately matching in-house resources with DESL’s resources for optimal project development cost as well as for achieving desired performance and time targets.



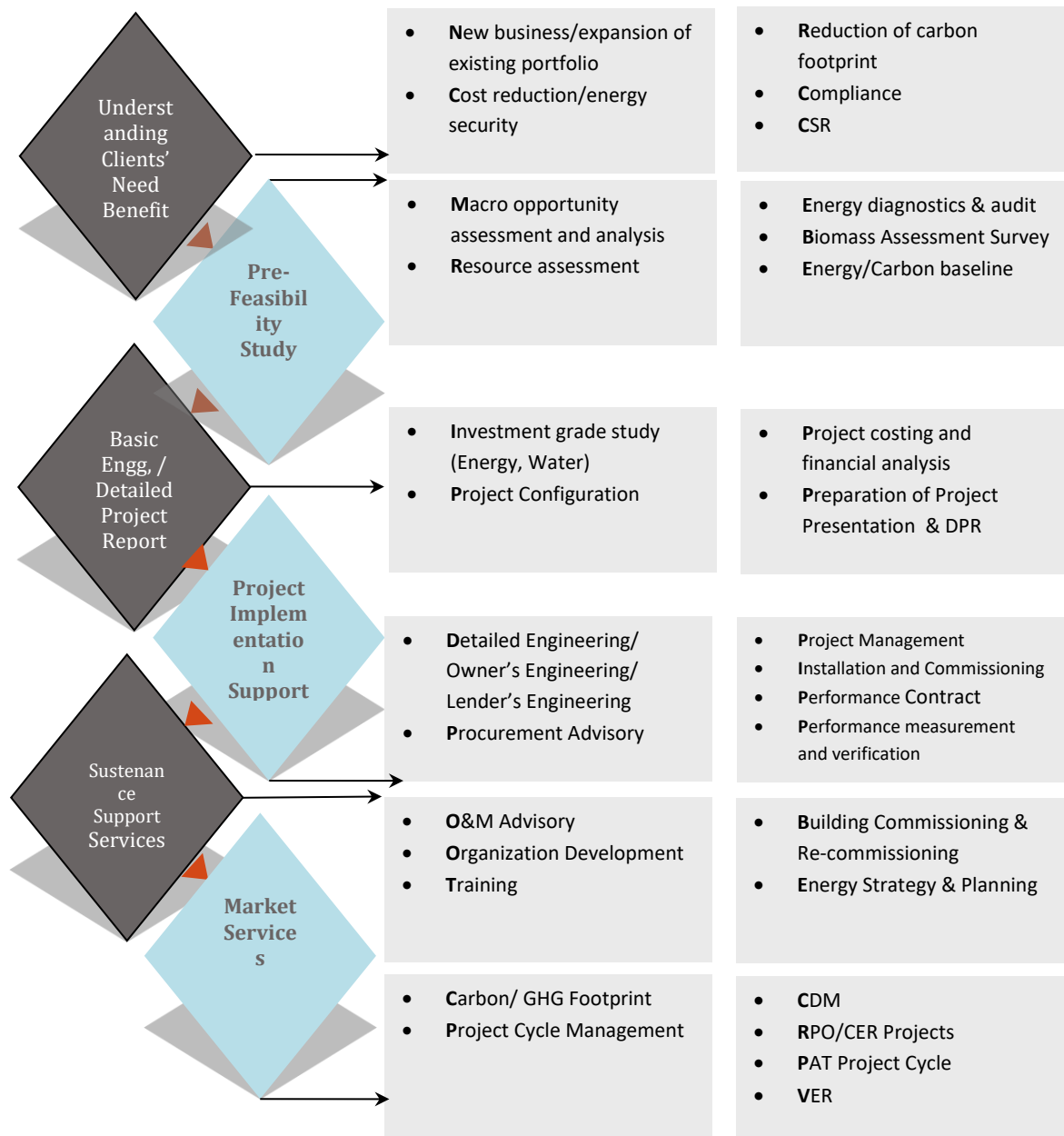
*Figure 1: DESL’s Service portfolio*

**SERVICE MODULES**



Expanding on the theme of the service portfolio, DESL’s delivery process allows enough flexibility to its clients in choosing complete or modular services, as per their needs.

The service modules and delivery processes are described below.



*Figure 2: DESL’s Business Process*

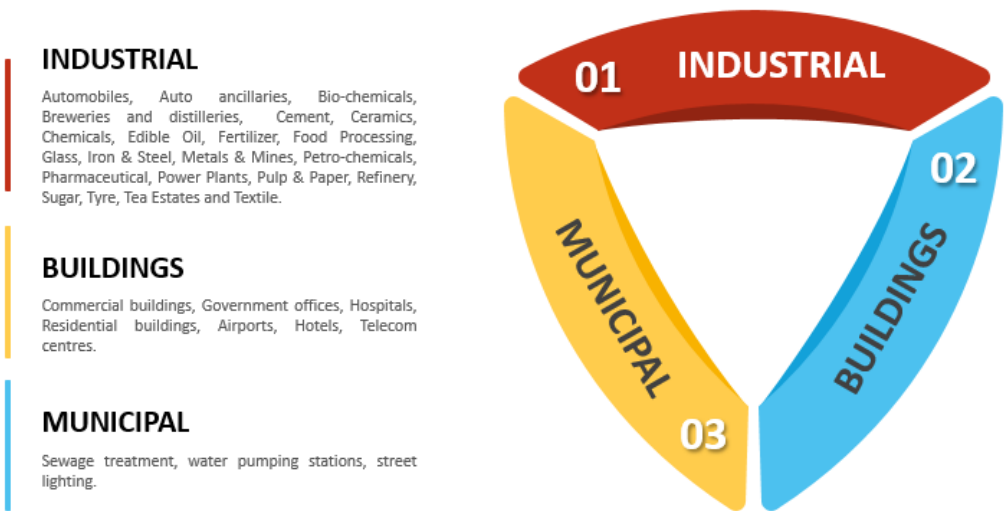
**AREA OF SERVICES**



**Energy Efficiency**

DESL has pioneered the development of ESCO performance contract system in India, and established itself as a reputed player in this segment. The methodologies for carrying out energy audits have been continuously upgraded to support implementation of energy efficiency improvement projects in different sectors in India and across the globe.

The key sectors where services have been provided include:



The spectrum of technologies covered include the following:



*Figure 3: DESL's Technology Matrix*

Since its inception, DESL has delivered 4 shared savings and 32 guaranteed savings performance contract projects leading to savings of about INR 1,200 million worth of energy annually for its clients. Additionally, over 3,000 energy audits have been performed to assist clients undertake such energy savings implementation measures directly. These assignments are estimated to have led to savings equivalent to about 300 MW of energy generation.

## Green Building

DESL is recognized in the market for pioneering the concept of design stage intervention for energy efficient buildings. DESL also provides Building Commissioning services; particularly for facilities seeking LEED certification. DESL has the credit of providing Commissioning services for the 1st LEED Platinum rated commercial green building in India. As 3<sup>rd</sup> party commissioning agency, DESL enabled ONGC in earning Platinum Rating for its Deendayal Upadhyaya Urja Bhawan- Green Building in New Delhi. It is one of the largest buildings with Platinum rating outside the United States.

## Renewable Energy - Biomass

### → Renewable Energy

DESL is actively involved in providing consulting as well as engineering services for development of renewable energy systems, including biomass, waste-to-energy, solar and small hydro projects.

DESL has contributed to development of over 850 MW of power projects based on different renewable energy resources globally. Development of biomass energy systems comprises a major share of DESL's renewable energy portfolio.

### → Biomass Energy

DESL provides end-to-end solutions for establishment of biomass based power generation and co-generation plants, for captive and grid synchronized operations.

The range of services offered include:

- **Project Development and Feasibility Studies:** DESL has successfully carried out viability assessment studies for a number of biomass energy projects that include biomass resource assessment studies, price projection, estimation of landed cost at factory site, optimal selection of plant generation capacity considering long-term sustainability, efficient and reliable plant configuration, integration and tie-in with existing process in case of captive and co-generation plants, realistic project costing, and preparing detailed project reports.
- **Project Engineering:** DESL's service offerings include basic engineering, procurement support services including preparation of (EPC) tender documents, technical evaluation; detailed engineering, installation & commissioning and project management.

DESL has carried out a number of pioneering development works in the field of biomass energy. Some of the significant achievements include:

- ↳ Development and deployment of innovative methodology for resource assessment of agro-residues for the Ministry of New & Renewable Energy, Government of India; Rajasthan Renewable Energy Corporation and DfID, UK High Commission, India
- ↳ Commissioning of 12 MW straw fired power plant at Patiala, Punjab, 1<sup>st</sup> of its kind in the world
- ↳ Re-commissioning of 10 MW paddy straw fired Jhalkheri power plant in Punjab
- ↳ Successful development of 8 MW mustard residue fired power plant (2nd such project in India)
- ↳ Development of the highest rated bagasse cogeneration plant (4x30 MW rated at 105 bar pressure, 540°C temperature) in India
- ↳ Development of world's largest single site co-generation plant (105 MW in Sudan)

### → SOLAR ENERGY

- ↳ DESL's experience in solar energy includes feasibility studies for solar photovoltaic (PV) based power generation and for the application of solar thermal technologies for industrial process heating applications
- ↳ DESL has been involved in development of over 400,000 LPD of solar water heating projects for industrial application in electroplating, pharmaceutical, chemical and automotive component industries

### → WIND ENERGY

- ↳ DESL has carried out technical evaluation studies to assess feasibility of investment in wind energy based power generation as a supply side energy cost reduction option for industries in India

### → HYDRO POWER

- ↳ DESL has carried out a number of feasibility studies for development of small hydro power plants in India and overseas



## Waste To Energy

DESL offers project preparation and engineering consulting services for waste-to-energy projects. DESL has also been recognised for its significant contribution in waste management sector. It has the distinctive qualification of consulting for the two most successfully operating waste-to-energy project in India:

- ↳ 16 MW power plant of M/s Jindal Urban Infrastructure Ltd., Okhla, New Delhi. This is the first power project in India operating successfully on a specifically designed hybrid technology
- ↳ 12 MW RDF based power plant at Ghazipur, New Delhi, implemented by M/s IL&FS

DESL was also involved in following waste to energy projects:

- ↳ Preparation of Feasibility study for establishment of a waste to energy power plant in Nairobi City County, Kenya

- ↳ Transaction Advisor for the Structuring and Execution for an Integrated Solid Waste Management PPP Project in Jamaica
- ↳ Preparation of detailed project report (DPR) as well as project management consultancy for 550 t/d MSW processing capacity of waste-to energy project at Sonapat, Haryana
- ↳ Preparation of a Detailed Feasibility Report (DFR) for Indian Oil Corporation Ltd (IOCL) for setting up a 200 TPD integrated waste-to-fuel plant at Varanasi, UP
- ↳ Preparation of detailed project reports of more than 20 WtE projects in India

DESL has also been recognised for its significant contribution in waste management sector. It received the '**Distinguished Innovation & Research in Solid Waste** award at the 5<sup>th</sup> National Conference and Awards on Waste to Wealth -2017. It also won the award for '**Distinguished Innovation & Research in Waste Management**' at the 4<sup>th</sup> National Conference and Awards on Waste to Wealth -2016.

## OTHER SERVICES



### TRIGENERATION

DESL is engaged in providing consulting services for natural gas based tri-generation projects, deemed as the most efficient integrated supply and demand management solution to meet electricity, heating and cooling requirements of buildings/industrial facilities.

A 330-kW project, conceptualized and engineered by DESL, is already operational. Feasibility studies have been carried out for a large building complex in Gujarat and for a commercial business district in New Delhi.

#### → Rural Energy

DESL has worked on both consulting and implementation of small scale rural distributed generation projects for power as well as cooking energy needs in India and Asia. Under a technical assistance project, DESL implemented one 200 kW integrated gasification and grid interfaced power generation plant as a rural energy project in China.

#### → Water Conservation

DESL provides integrated cleaner production consulting services including conservation and recycling of water through innovative solutions. DESL has designed and engineered projects for treatment of sewage water for utilisation in cooling processes.

### → Regulatory and Policy Studies

A number of policy and regulatory studies have been carried out for various Government and Electricity Regulatory Commissions to facilitate development of renewable energy systems in India, Pakistan, China and South Africa.

### → Research & Development

With a view to develop innovative ideas, DESL carries out research in the domains of technology, service delivery models and business processes.

A number of significant results in the areas of energy efficiency and renewable energy have been achieved as a result of DESL's in-house research & development activities.

### → Carbon Market Related Services

DESL is also involved in providing advisory and implementation related services for development of market-based projects related to energy efficiency and renewable energy including CDM, VCS, REC and EScert.

## ORGANIZATIONAL INFORMATION

### OWNERSHIP AND ORGANIZATION

DESL is a 100% subsidiary of Veolia Environnement Ingenerie Conseil (VEIC), member of the French MNC, Veolia.

Veolia is a global leader in optimised resource management. With over 220,000 employees worldwide, the Group designs and provides water, waste and energy management solutions that contribute to the sustainable development of communities and industries. Through its three (3) complementary business activities, Veolia helps to develop access to resources, preserve available resources, and to replenish them. In 2022, the Veolia group provided 111 million inhabitants with drinking water and 97 million with sanitation, produced 44 terawatt hours and recovered 61 million tonnes of waste. Veolia (listed on Paris Euronext: VIE) recorded consolidated revenue of €42.88 billion in 2022. [www.veolia.com](http://www.veolia.com).

### RESOURCE BASE

DESL is one of the largest 'Energy Services Company' in India with over 30 full time engineering professionals operating from a state-of-the-art facility at Delhi NCR and has regional presence in Ahmedabad, Kolkata, Chennai and Bangalore. A knowledge management system comprising software



packages, data formats and documented project experiences have been developed in-house. All portable instruments needed for an 'Energy Diagnostic Study' are available in-house.

## AFFILIATIONS

DESL is empanelled with international and national organizations including the World Bank, Asian Development Bank, DFID- UK, Bureau of Energy Efficiency, Ministry of New & Renewable Energy, and a number of Banks & Financial Institutions including Power Finance Corporation Ltd, PTC Financial Services, and ICICI Bank.

## DESL IN THE GLOBAL MARKET

DESL has established itself as a reputed player in the global consulting market in the area of energy efficiency and renewable energy. DESL has already executed projects in a large number of countries including Algeria, Bahrain, Belize, Bangladesh, Ecuador, Egypt, France, Gambia, Ghana Indonesia, Italy, Ivory Coast, Jamaica, Jordan, Kenya, Malawi, Mexico, Mongolia, Nepal, Nigeria, Pakistan, People's Republic of China, Philippines, Russia, Rwanda, Saudi Arabia, Singapore, Spain, South Africa, South Korea, Sri Lanka, Sudan, Sultanate of Oman, Tajikistan, Thailand, Turkey, UAE, United States and Vietnam.

DESL's contribution in these international projects has been in a variety of domains including policy and regulatory, project development and due diligence, project implementation and revamping of non-performing projects.

## AWARDS AND RECOGNITION

DESL has been duly recognized for its excellent services provided in the field of energy efficiency, renewable energy and waste-to-energy domain from time to time in the form of awards & accolades. Some of the latest awards conferred upon DESL include:

- ★ "IEI Industry Excellence Award" under engineering services & consultancy for demonstrating highest order of business excellence conferred by the Institution of Engineers of India (IEI) for the years: 2016, 2017, 2018, 2021, 2022 and 2023
- ★ Mr. R. Rajmohan, CEO, DESL felicitated with "AEE Chapter Award For Energy Professional Development of the Year-2018" by AEE Kolkata, India
- ★ "Distinguished Innovation & Research in Solid Waste" at the 'Waste Management Excellence Awards-2017, organized by ASSOCHAM India. The award was presented by Mr. YS Chowdary, Honourable Minister of State for Science and Technology & Earth Sciences, GoI during the 5th National Conference and Awards on 'Waste to Wealth' in New Delhi on March 30, 2017
- ★ "Skoch Order of Merit" at the Skoch Smart Technology Award 2016 for qualifying amongst top 100 projects in India for 'Providing project development support for enhancement of energy efficiency

## PROJECT QUALIFICATIONS

### *Energy Efficiency & Consulting Services*






- ★ “Udyog Rattan Award” and “Excellence Award” conferred to Mr. R. Rajmohan, CEO, DESL by the Institute of Economic Studies, India
- ★ “Certificate of Merit for Best Energy Auditor” to Mr. R Rajmohan, CEO, DESL at the National Energy Conservation Award 2016 by BEE, Ministry of Power, Gol
- ★ “Distinguished Innovation & Research” in waste management, at the 4th National conference and awards on ‘waste to wealth’, organized by ASSOCHAM in association with Ministry of Urban Development (Gol); Ministry of New & Renewable Energy (Gol); and Department of Science & Technology, Ministry of Science & Technology (Gol)
- ★ “Parivartan Sustainability Leadership Award-2012” for catalyzing energy efficiency services in India awarded to Dr. GC Datta Roy, Advisor & Founder CEO, DESL
- ★ PCRA, Ministry of Petroleum and Natural Gas, Government of India declared DESL as the best energy services company for four years (2001-02 & 2002-03, 2003-04 & 2005-06)

## PROJECT QUALIFICATIONS

### SERVICE OFFERINGS

DESL is actively involved in carrying out energy conservation audit and energy consulting assignments across various industries and sectors in India and abroad, including the cement manufacturing industry. The services offered by DESL range from undertaking energy assessment studies including feasibility studies and energy audits to identification of energy conservation projects, providing technical assistance to the units in implementation of identified projects, and assistance in measurement and verification, post implementation.

### PROJECT QUALIFICATIONS: ENERGY EFFICIENCY - INDUSTRY






Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
1.	Energy Efficiency Services Limited (EESL) India 2023-24		Carrying out monitoring & verification (M&V) survey in the UT of Puducherry to check the effectiveness of the implemented DELP Schem.
2.	Apar Industries Limited Rabale, India 2023		Detailed energy audit at manufacturing unit of specialty oil to support the energy management initiatives of Apar Industries.
3.	Graphite India Limited India 2023		Detailed energy audit at Carbon and Graphite products manufacturing unit at Satpur, Maharashtra with an objective to optimise the manufacturing cost to become more competitive in the market as well as meet the sustainable goals of the company.
4.	Apar Industries Limited Khatalwada, India 2023		Detailed energy audit at manufacturing unit of high quality conductors at Khatalwada, Maharashtra to support the energy management initiatives of Apar Industries.
5.	Indian Oil Corporation Ltd. (IOCL) Panipat, India 2023		M&V audit under PAT cycle 6 at Panipat refinery as per BEE guidelines involving verification of data, verification of methodology, calculation procedures, formulae for computation of SEC, and preparation of DPR.

**PROJECT QUALIFICATIONS**  
**Energy Efficiency & Consulting Services**

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
6.	Graphite India Limited India 2023	 Graphite India Limited	Detailed energy audit at Carbon and Graphite products manufacturing unit in Durgapur. The objective is to optimise the manufacturing cost to become more competitive in the market as well as meet the sustainable goals of the company.
7.	Pran Group (FM Noordin & Co. Pte. Ltd.) Bangladesh 2023		Detailed energy audit of the manufacturing units of the Pran Group at Habiganj Industrial Park (HIP) in Bangladesh with an objective to identify energy conservation measures including options such as installation of new energy efficient equipment, retrofits in existing equipment, and/or recommendations related to good practices in utilities and process.
8.	Apar Industries Limited India 2022	 Tomorrow's solutions today	Detailed energy audit at manufacturing unit of high quality conductors at Rakholi, Silvassa to support the energy management initiatives of Apar Industries.
9.	Bureau of Energy Efficiency (BEE) India 2022		Consultancy services for baseline data collection and process verification audit for petrochemical manufacturing units under PAT Scheme. The objective of the study is to widen the PAT scheme by adding more Designated Consumers (DCs) in already existing Petrochemical sector in subsequent phases.
10.	Energy Efficiency Services Limited (EESL) India 2022		Identification of innovative EE technologies in designated consumers under PAT scheme. The overall objective of this program is to demonstrate emerging/innovative energy-efficient technologies in the identified PAT sectors and to create a self-sustaining mechanism for their upscaling
11.	European Union through VEIC Belize 2022		Pre-feasibility study on renewable energy sources Belize: Co-generation and waste to energy infrastructure
12.	Prysmian Group France, Italy, Spain 2022		Consultancy services to help Prysmian Group in carbon footprint reduction and improvement of energy efficiency at their sites in France, Italy and Spain.
13.	Bureau of Energy Efficiency (BEE) India 2022		Consultancy services for energy mapping exercise of 11 thermal power plants under the PAT scheme with an objective to identify the energy gaps and diagnose the deficiencies in heat rate cycle of thermal power plant through thermodynamic modelling.

**PROJECT QUALIFICATIONS**  
**Energy Efficiency & Consulting Services**

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
14.	Haldia Petrochemicals Ltd. 2022		Consultancy services for M&V audit under PAT scheme at the HPL complex. The scope of the assignment includes review of the target and implementation plan, and assistance for carrying out PAT M&V audit.
15.	Bolton Group Ecuador 2022		Carbon audit of a food processing unit in Ecuador with an objective to bring down carbon emission in the various processing activities.
16.	Bureau of Energy Efficiency (BEE) India 2021-22		Feasibility study of industries and other establishment for inclusion in PAT Scheme. The sectors under study include refractories, heavy engineering manufacturing/ heavy industry (forging and foundry).
17.	Bolton Group France, Italy, Spain 2021		Carbon audit of food processing units at two locations in Italy with an aim to reduce carbon emission in the various processing activities.
18.	Philip Morris International Russia 2021		Zero carbon tech feasibility study at a cigarette manufacturing facility at Izhora in Russia. The primary objective is to reduce carbon emission in entire production value chain.
19.	Energy Efficiency Services Limited (EESL) India 2021		<i>Energy Audit of IOCL's bottling plant at Tikri Kalan, New Delhi. The objective of the study is identification of potential areas of improvement and energy conservation measures (ECMs); assessment of the energy monitoring and accounting system; and feasibility of captive power generation options through solar PV / Tri-generation systems.</i>
20.	Bureau of Energy Efficiency (BEE) Odisha and Jharkhand, India 2021		<i>Potential Assessment Study of Designated Consumers of Aluminium Sector under PAT Scheme. The objective of the study includes evaluation of the energy performance (gate-to-gate concept and section-wise) and complete technology assessment including techno-economic assessment of alumina refinery, aluminium smelter and integrated alumina refinery and fabrication plants in PAT scheme in aluminium sector.</i>
21.	Energy Efficiency Services Limited (EESL) 2020-21		<i>Detailed energy audit at Caparo Industries (Tubes division), Dewas, Madhya Pradesh. The main objective of the study included:</i> <ul style="list-style-type: none"> <li><i>Performance analysis of old motors of the plant and replacement under the EESL scheme of motor replacement</i></li> </ul>











Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
			<ul style="list-style-type: none"> <li>Assessment of electrical energy consumption of various systems and equipment</li> <li>Thermal efficiency in annealing furnace</li> <li>Exploration of installing solar PV rooftop system</li> </ul>
22.	Institute for Sustainable Communities (ISC) 2020-21		Performance assessment of motors at an industrial unit at Bhiwadi to establish the energy savings due to installation of IE3 motors.
23.	Alliance for an Energy Efficient Economy (AEEE) West Bengal India 2020		<p>Detailed Energy Audit at 3 cold storage in Hooghly, West Bengal for identification of opportunities for EE improvement.</p> <ul style="list-style-type: none"> <li>Heat load study of the building envelope of the cold storage building</li> <li>Running efficiency estimation and possible savings in Ammonia compressors</li> <li>Assessment of CW pumps, ceiling fans, lighting systems, cooling towers, etc.</li> <li>Estimation of possible solar power generation from roof-top</li> <li>Analysis of temperatures at various cold rooms, potato quality maintained, etc.</li> <li>Preparation of energy audit report with recommendations</li> </ul>
24.	The Coca-Cola Bottling Company of Ghana Ltd. (TCCBCGL) through Veolia Ghana Ltd. Ghana 2020		Project Development Agreement (the "PDA") in Connection with the Implementation of an Efficiency Savings Plan on TCCBCGL's Bottling Plant at Accra
25.	The Coca-Cola Bottling Company of Ghana Ltd. (TCCBCGL) through Veolia Ghana Ltd. Ghana 2020		<p>Energy efficiency assessment at Coca Cola's bottling plant at Accra, Ghana with the following objectives:</p> <ul style="list-style-type: none"> <li>To analyze the actual monitoring system</li> <li>To analyze historical data in order to understand consumption patterns and possible inefficiencies</li> <li>To analyze efficiency in all electrical, pumping, cooling and boiling systems</li> </ul>
26.	Haldia Petrochemicals Ltd. (HPL) 2019		Mandatory energy audit at the integrated offsite plants in HPL's complex to reduce the specific energy consumption over a period of next three years by identifying and developing energy saving schemes.

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
27.	Rashtriyaspat Nigam Limited, (Visakhapatnam Steel Plant) 2019		Mandatory energy audit at Visakhapatnam Steel Plant as per Energy Conservation Act for improving the energy efficiency of the plant, identification of losses, and identification of high priority areas for improvement in energy consumption.
28.	Asian Paints Ltd. Haryana, India 2019		Detailed energy audit study of the complete electrical / thermal energies at paint manufacturing plant located at Rohtak, Haryana to identify areas for energy saving, both without and with investment.
29.	Arvind Limited (Ankur Division) Ahmedabad, Gujarat 2019		M&V audit to verify data of energy conservation measures (ENCONs), production, fuel consumption and raw material for assessment year 2018-19 as per the BEE guidelines.
30.	Arvind Limited (Wovens Division) Gandhinagar, Gujarat 2019		M&V audit to verify data of energy conservation measures (ENCONs), production, fuel consumption and raw material for assessment year 2018-19 as per the BEE guidelines.
31.	JK Paper Ltd. Tapi, Gujarat 2019		M&V audit under PAT cycle 2 as per BEE guidelines involving verification of data, verification of methodology, calculation procedures, formulae for computation of SEC, and preparation of DPR at Unit CPM, Gujarat.
32.	ITC Limited Bhadrachalam, 2019		M&V audit under PAT cycle 2 in a paper mill as per BEE guidelines involving verification of data, verification of methodology, calculation procedures, formulae for computation of SEC, and preparation of DPR.
33.	Nayara Energy Limited Jamnagar, Gujarat 2019		M&V audit under PAT cycle 2 in Refinery as per BEE guidelines involving verification of data, verification of methodology, calculation procedures, formulae for computation of SEC, and preparation of DPR.
34.	Tata Steel Ltd. India 2018		Mandatory Energy Audit at ferro alloy plant, Bamnibal under PAT scheme. The primary objective of the assignment: <ul style="list-style-type: none"> <li>To identify areas for energy saving, both without and with investment</li> <li>To compare values for energy consumption as against the production levels</li> <li>Identify potential areas for energy savings</li> <li>To prioritize distinct areas identified for energy savings</li> </ul>

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
35.	Veolia Middle East (VME) Turkey 2018		Preliminary energy audit of two facilities of PepsiCo at Turkey. The objective of the assignment involved identification of opportunities for energy cost reduction in utilities; assessment of the O&M costs; macro techno-economic feasibility assessment; and preparation of a budgetary offer for detailed study
36.	SRF Limited, Malanpur- Madhya Pradesh Gummidipoondi and Manali, Tamil Nadu 2018		Energy Audit of SRF's -Technical textile divisions located at Malanpur, Gummidipoondi and Manali.
37.	Tata Steel Ltd, Jamshedpur, 2018		Mandatory energy audit of steel plant at Jamshedpur and CRM Bara in accordance with the Energy Conservation Act 2001, Energy conservation (Energy consumption norms and standard for designated consumer.
38.	Energy Efficiency Services Limited (EESL), New Delhi		Preparation of 'Market Assessment Study' report on market potentials for Trigeneration Technology applications within the Indian building and industrial sector
39.	Institute for Sustainable Communities		Development of high quality course content and trainee manual on 'Energy Efficiency and Carbon Reduction'
40.	Haldia Petrochemicals Ltd. 2017-18		Detailed energy audit at CPP of Haldia Petrochemicals to reduce the specific energy consumption for steam and power generation over a period of next 3 years.
41.	India SME Technology Service Limited (ISTSL), Gujarat 2017-18		Conducting six awareness programmes in MSME clusters in Gujarat state country targeting increasing awareness of energy efficiency in the MSME units.
42.	Energy Efficiency Services Limited (EESL), Tamil Nadu		Walk through audit at various Railway stations of Indian Railways across Pan India for Packet-11 (Southern Railway, Chennai)
43.	North Eastern Railway, Izatnagar, Bareilly, Uttar Pradesh 2017		Energy audit of the Mechanical Workshop, Izatnagar, Bareilly to assess the current energy consumption in various processes and identification of energy conservation opportunities.



Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
44.	S&P Threads (P) Ltd. Faridabad, Haryana 2017		<p>Carrying out energy audit at the manufacturing plant to identify energy efficiency opportunities. The scope of work involved:</p> <ul style="list-style-type: none"> <li>• Performance assessment of Plant Equipment/ Utilities that included transformer operation/loading and loss estimation, LT distribution system, input power quality; Measurement of electrical parameters like voltage, current, PF, KW, Harmonics for all running motors at operating load conditions, etc</li> <li>• Performance Assessment of Thermal Utilities like boilers, steam distribution system, energy monitoring &amp; accounting system</li> <li>• Selection of recommendations for each section studied and report preparation</li> </ul>
45.	Munjal Kiriu Industries Pvt Ltd. Manesar, Haryana 2017		<p>Detailed energy audit study at a ferrous casting parts manufacturing plant at Manesar. The scope of work involved:</p> <ul style="list-style-type: none"> <li>• Assessment of accurate account of energy use on the site</li> <li>• Detailed on-site investigation including measurement and energy monitoring</li> <li>• Identification of opportunities to reduce energy use and/or operating cost of the plant</li> <li>• Study of production and utility equipment</li> </ul>
46.	Petroleum Conservation Research Association (PCRA), Mangalore, Karnataka 2017		<p>Providing assistance to PCRA in carrying out energy audit at Mangalore refinery. The scope of work involves:</p> <ul style="list-style-type: none"> <li>• Evaluation of boiler efficiency (CPP)</li> <li>• Performance testing of condensate pre heater (CHP) air pre heater (APH)</li> <li>• Study of captive power plant</li> <li>• Study of the entire electrical, water, lighting and HVAC system</li> <li>• Preparation of energy audit report with recommendations</li> </ul>
47.	Radico NV Distilleries Mah. Ltd. Aurangabad, Maharashtra 2017		<p>Performance of energy audit activities for the boiler efficiency improvement with at least a gain of 2% and to identify opportunities to reduce energy use and/or the cost of operating the plant utilities at Aurangabad.</p>


Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
48.	National Aluminium Company Limited (NALCO), Odisha 2016	 <p>नालको  <b>NALCO</b>  National Aluminium Company Limited</p>	<p>Technical support to NALCO in achieving target and meeting PAT compliance under PAT Cycle-2.</p> <p>The objective of the assignment is to provide technical support to Alumina Refinery for achieving the PAT Target and meeting PAT compliance under PAT Cycle-2. The scope of work includes Baseline Study, evaluation of target for PAT Cycle-2 &amp; Energy Efficiency Road Map; Facilitation in Data Management and Road Map to achieve the Target; Monitoring and verification of identified Energy Conservation Opportunities; Facilitation in Reporting of PAT Achievement to BEE; and Capacity Building of In-House staff for PAT Compliance Requirement</p>
49.	Kuantum Papers Ltd, Punjab 2016	 <p>  <b>Kuantum Papers Ltd</b></p>	<p>The objective of the assignment is to assist KPL in achieving the set target and managing the whole process of submissions required under the PAT scheme, cycle 2. The scope of work includes review of energy consumption and production; study of process of entire plant; review of gate-to-gate concept; review of baseline audit report of PAT-1; preparation of data for FY 2015-16, PAT-2 on quarterly basis &amp; review of energy consumption &amp; production; identification of major energy intensive equipment; identification of various normalization factors in the plant, etc.</p>
50.	HPCL-Mittal Energy Limited (HMEL), Bathinda, Punjab 2016	 <p>  <b>HMEL</b></p>	<p>Diagnostic Study of the Captive power plant at HMEL Bathinda refinery site. The scope of work includes Historical data collection and analysis; Performance evaluation; Project configuration; Techno economic analysis; Vendor interactions, etc.</p>
51.	India SME Technology Service Limited (ISTSL) 2016	 <p>  <b>ISTSL</b></p>	<p>Detailed Energy Audit and Preparation of Detailed Project Report &amp; Implementation Support at M/s Hariom Precision Alloys Pvt Ltd, Alwar</p>
52.	Micro Turners-1 Pvt. Ltd., Rohtak 2016	 <p>  <b>MARUTI</b></p>	<p>Detailed energy audit at Micro Turners-1 Pvt. Ltd., Rohtak. Performance evaluation of electricity supply &amp; distribution network, air compressors, DG sets, cooling towers, HVAC systems, pumps and lighting systems. Primary objective of the assignment was to provide suggestions on more energy conservation measures which the plant could implement and reap benefits of continual EE enhancement.</p>

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
53.	Ahresty India Pvt. Ltd. Bawal, Haryana 2016		Detailed energy audit at automotive manufacturing unit of Ahresty India Pvt. Ltd. The scope of work included energy audit of electricity supply & distribution network, air compressors, DG sets, cooling towers, HVAC systems, pumps, air pre-heater, furnace & ovens, and lighting systems. Post audit, preparation of detailed energy audit report with suitable suggestions for making possible energy savings in the unit.
54.	Guru Nanak Auto Industries Ltd, Punjab 2015		Detailed energy audit at Guru Nanak Auto Industries Ltd, Punjab. Performance evaluation of motors, air compressors, DG sets, cooling towers, pumps, lightings systems, etc and identification of energy savings opportunities
55.	Krishna Grupo Antolin Ltd, Gurgaon 2015		Detailed examination of the existing energy use at Krishna Grupo Antolin Ltd, Manesar. Performance evaluation of processes / equipments and identification of performance improvement opportunities.
56.	Sanden Vikas India Pvt Ltd, Faridabad 2015		Detailed energy audit at Sanden Vikas India Pvt Ltd, Faridabad. Examination of existing energy use of the facility, Measurement & analysis of demand & power factor, and identification of opportunities for energy cost reduction
57.	Steel Authority of India Ltd Rourkela, Orissa 2015		M&V audit at Rourkela Steel Plant under PAT scheme. Verification and certification under the scheme based on energy conservation rules.
58.	Akrimota Thermal Power Station (ATPS) Gujarat 2015		M&V audit at thermal power plant (ATPS) situated at Nani Chher, Kutch in Gujarat under PAT scheme. Verification and certification under the scheme based on energy conservation rules.
59.	TANGEDCO Tamil Nadu 2015		Mandatory energy audit under PAT scheme at Valuthur Gas Turbine Power Station (VGTPS). Energy audit covering all major Plant & Machinery including auxiliaries and utilities and working out most suitable option for energy savings.
60.	Olam Agro India Ltd. Maharashtra 2015		Study on boiler operating efficiency, bagasse balance and heat & mass balance of co-generation power plant at sugar mill (Hemarus Industries Ltd)

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
61.	Steel Authority of India Ltd IISCO (Burnpur), 2015		M&V audit for verification and certification under PAT Scheme. Technical review of manufacturing processes and energy consumption patterns; system variability and its impact on energy consumption; verification of data; evaluation of energy conservation measures
62.	Kalyani Tehcnoforge Ltd, Manesar 2015		Detailed energy audit in a sheet metal machining unit in Manesar, Gurgaon. Study of processes/equipments for energy conservation and preparation of energy plan.
63.	Kalpataru Power Transmission Ltd. Rajasthan 2015		Detailed study on Biomass fuel loss study at two biomass power plants located at Khatoli and Padampur in Rajatshan. Study of the fuel loss in the entire cycle chain-- Loss study right from procurement to storage, transportation, wind-age age loss, sampling error, loss due to rainfall. Reconciliation of quantity of fuel as mass and quality as heat content (GCV) at each and every stage & the impact on overall plant performance
64.	Kuantum Papers Ltd. Punjab 2015		M&V under PAT Scheme. Scope of work included technical review of manufacturing processes, verification of data, evaluation of energy conservation measures & each activity undertaken by the designated consumer.
65.	Arihant Spinning Mills, Punjab 2015		M&V under PAT Scheme. Scope of work included monitoring & verification of energy conservation norms and standards as per the PAT rules of BEE.
66.	Gujarat State Electricity Corporation Ltd (KLTPS), Gujarat 2015		M&V under PAT Scheme (Kutch Thermal Power Station). M&V of performance achieved during 2014-15 in line with BEE-PAT rules.
67.	Gujarat State Electricity Corporation Ltd (SLTPS), Gujarat 2015		M&V under PAT Scheme (Sikka Thermal Power Station). Verification and check verification of performance achieved in assessment year 2014-15.
68.	Shree Rama Newsprint Ltd. Gujarat 2015		Mandatory energy audit under PAT Scheme. Technical review of manufacturing process, verification of data, evaluation of all energy conservation measures, achievement in line with BEE-PAT rules.

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Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
69.	Mayur Industries Ltd. Haryana 2015		Detailed energy audit of existing energy use, measurement & analysis of demand & power factor, performance evaluation of motors, suggestion for reducing network loss & improving monitoring system.
70.	Delhi Milk Scheme, Delhi 2015		Review of energy consumption & production data, identification of major energy consuming processes, evaluation of savings potential, & preparation of future energy conservation plans.
71.	Steel Authority of India Ltd. Durgapur, WB 2015		M&V audit at Durgapur steel plant under PAT scheme. Verification and certification under the scheme based on energy conservation rules.
72.	Maharashtra State Power Generation Co Ltd. Maharashtra 2015		Measurement & verification activities at gas turbine power station Uran under PAT scheme.
73.	SMC Power Generation Ltd. Orissa 2015		Detailed M&V audit under PAT scheme. Technical review of manufacturing process, energy consumption pattern, assessment of data, energy conservation achievements, etc.
74.	Auro Spinning Mills, Himachal Pradesh 2015		Mandatory energy audit under PAT scheme. Plant familiarization and review of past energy performance, performance assessment of plant equipment/utilities, performance assessment of thermal utilities.
75.	Arisht Spinning Mills Himachal Pradesh 2015		Mandatory energy audit under PAT scheme. Review of past energy performance, assessment of plant equipment/utilities, performance assessment of thermal utilities.
76.	Petroleum Conservation Research Association (PCRA), India 2015		Study on Improving Energy Efficiency in Fertilizer Sector in India. Detailed analysis of the potential to save energy in fertilizer sector and the major challenges to achieve the same
77.	SIDBI Ludhiana 2015		Project Development Support for Enhancement of Energy Efficiency investment at Ludhiana Cluster. Identification of scope and potential for improvement in energy efficiency, cleaner production and lean manufacturing.
78.	SRF Industries (Thailand) Ltd. Thailand 2015		Detailed energy audit covering all major energy consuming areas—both thermal and electrical at SRF Industries.

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
79.	Olam Agro India Ltd. MP 2015		Review of the current electrical load of the plant against findings of earlier audits, implementation of energy conservation projects, diagnostic & assessment study for reduction in electrical load, identification of energy saving projects.
80.	Bureau of Energy Efficiency Jalandhar, Punjab 2015		Detailed energy audit in selected units of Jalandhar MSME cluster. Development of cluster specific best operating practices, energy audit services and carrying out dissemination programs under GEF-UNIDO-BEE project.
81.	Bureau of Energy Efficiency Khurja, UP 2015		Detailed energy audit at 6 units in of the Khurja MSME cluster. Measurement & monitoring of process parameters, development of cluster specific best operating practices, and carrying out dissemination programs under GEF-UNIDO-BEE project.
82.	Bureau of Energy Efficiency Thangadh, Gujarat 2015		Detailed energy audit at 6 units in of the Thangadh MSME cluster. Measurement & monitoring of process parameters, development of cluster specific best operating practices, and carrying out dissemination programs under GEF-UNIDO-BEE project.
83.	Dalmia Sugar UP 2015		Comprehensive energy and water audit of the entire sugar manufacturing operation at Jawaharpur, UP.
84.	Chadha Papers Ltd. Uttar Pradesh 2015		Complete audit, steam, power & water. Measurement & analysis of demand & power factor, suggestions to reduce demand & improve the power factor, performance evaluation of motors, study & examination of use of electrical energy, cost balance with breakup.
85.	Radico NV Distilleries Maharashtra Ltd. Aurangabad 2014-15		Detailed energy audit of Aurangabad plant. Identification of energy saving projects and preparation of cost benefit analysis of identified projects.
86.	IPCL Vadodara 2014		Energy audit & optimisation study for the compressed air network.
87.	Arvind Mills Ltd. Santaj 2014		Comprehensive energy audit of integrated textile manufacturing facility and captive co-gen power plant.
88.	Pioneer Distilleries Maharashtra 2014		Walk through audit of energy and water system and preparation of management plan for system improvement.

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**Energy Efficiency & Consulting Services**

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
89.	Climate Works Foundation USA 2014		Comprehensive energy audit of the utility systems in different manufacturing facilities with a view to assist EESL in configuring an ESCO performance contract project for implementation in the Jamshedpur facility of Tata Steel.
90.	Climate Works Foundation USA 2014		Comprehensive energy audit of the thermal utility systems at Arvind Ltd and configuration of a co-gen project for implementation by EESL under performance contract.
91.	UNDP New Delhi 2014		Energy assessment study, identification of replicable & scalable projects and technical assistance to 50 scrap based steel rerolling mills in different clusters all over India.
92.	Kuantum Papers Punjab 2013 & 2014		Comprehensive energy audit, establishment of systems & processes for implementation of projects under PAT scheme & providing consultancy services for managing PAT compliance.
93.	Radico Khaitan Distilleries Maharashtra 2013		Comprehensive energy and water audit of the distillery plant at Aurangabad, Maharashtra.
94.	Asian Paints, five plants in Eastern India 2013		Energy audit followed by development of energy demand forecasting model linked to demand forecast for paints in different categories.
95.	Transpek Silox Industry Ltd Gujarat 2013		Detailed study and chilling plants, network study of cooling water system with necessary actual measurements.
96.	Styrolution ABS Gujarat 2013		Operational energy performance assessment study and preparation of recommendations on 'no-investment' energy savings opportunities.
97.	Transpek-Silos Industries Vadodara 2013		Chiller system energy audit in the Chemical manufacturing facility at Atladra.
98.	Kansai Nerolac Paints Ltd Pan India 2013		Energy audit, development of energy forecasting model for various manufacturing facilities pan India.
99.	Gujarat Gas Surat 2013		Energy audit of 15 CNG compressor stations.
100.	VVF Maharashtra 2012		Detailed energy audit of the Oleo-chemical manufacturing facility at Raigad, Maharashtra.






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**Energy Efficiency & Consulting Services**

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
101.	Styrolution ABS Gujarat 2012		Energy audit as per requirement of mandatory audit in the ABS plastic manufacturing plant.
102.	IFC Cairo, Egypt 2012		Cleaner production assessment study in three paper mills in Jordan and Egypt of Nokul group of Jordan.
103.	SIDBI/World Bank New Delhi 2012		Walk through audit of 400, investment grade energy audit of 250 and providing implementation support to 200 units in different segments in the MSME clusters at Faridabad & Tirunelveli.
104.	Kansai Nerolac Paints Jaipur 2012		Energy audit followed by development of energy demand forecasting model linked to demand forecast for paints in different categories.
105.	Ester Industries Uttarakhand 2012		Investment grade energy audit of both utility and process energy systems, identification & basic engineering of waste heat recovery projects and technical assistance for project implementation.
106.	Welspun India Gujarat 2012		Energy audit as per requirement of mandatory audit.
107.	Asian Paints, two plants in MP 2012		Energy audit followed by development of energy demand forecasting model linked to demand forecast for paints in different categories.
108.	Olam Agro India Madhya Pradesh 2011		Improving the performance of the captive power plant for meeting additional power and steam for marginal expansion of sugar mill capacity.
109.	Olam Agro India Madhya Pradesh 2011		RLA Study of boiler.
110.	Olam Agro India Bangalore 2011		Energy audit of coffee processing facility.
111.	Asian Paints six plants at different locations 2011		Energy audit followed by development of energy demand forecasting model linked to demand forecast for paints in different categories
112.	Reliance Industries Vadodara 2011		Energy audit as per requirement of mandatory audit in the petro-chemical plant.
113.	IFC New Delhi 2010		Cleaner production assessment study in three food processing facilities of Pran group of Bangladesh.



Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
114.	JPAL South Asia Chennai 2010		Detailed energy audit as per J-PAL process followed by technical assistance to over 50 MSME units in the Chemicals, Textiles, Dye & Intermediaries and Ceramic industries in various clusters in the Gujarat State.
115.	Welspun India Gujarat 2010		Energy audit as per requirement of mandatory audit.
116.	Asian Paints Chennai 2010		Energy audit followed by development of energy demand forecasting model linked to demand forecast for paints in different categories.
117.	Ineos ABS, Gujarat 2010		Energy audit as per requirement of mandatory audit in the ABS plastic manufacturing plant.
118.	Reliance Industries Vadodara 2010		Detailed audit of water pumping and compressed air system in the petro-chemical plant.
119.	Adani Gas, Gujarat 2010		Energy audit of CNG compressor stations.
120.	Cheminova India Gujarat 2010		Energy audit as per requirement of mandatory audit in the Agro-chemical manufacturing plant at Panoli.
121.	Sudarshan Chemical Industries Gujarat 2010		Energy audit as per requirement of mandatory audit in the Colour-chemical manufacturing plant at Panoli
122.	UP sugar Uttar Pradesh 2010		Energy audit of the co-gen plant.
123.	ABC Paper Punjab 2010		Production and energy optimisation study for reducing the specific energy consumption.
124.	Global Energy Karnataka 2010		Reliability improvement of 5 MW biomass IPP power plant.
125.	SSPBL Uttar Pradesh 2010		Comprehensive energy audit of paper mills.
126.	Maral Overseas Madhya Pradesh 2009		Performance study of 10 MW Cogen plant boiler, turbine study, auxiliaries and utility performance evaluation
127.	Gillanders Arbuthnot Punjab 2009		Boiler efficiency tests and performance assessment of cooling towers.
128.	RSSWM Rajasthan 2008		Energy performance assessment study and technical assistance for project implementation in the 41 MW co-gen plant

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Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
			and regulatory study for export of power under open access.
129.	RSSWM Rajasthan 2008		Recovery of process condensates from the textile processing units for improving energy and water performance of the co-gen power plant.
130.	Global Energy Karnataka 2008		A quick assessment of the performance of a 5-MW TG set was carried out and recommendations on way forward to improve the performance of the set were provided.
131.	Radico Khaitan Uttar Pradesh 2008		Energy performance evaluation of the co-gen plant and optimisation study.
132.	Glober energy Karnataka 2008		RLA study of boiler and energy audit of auxiliary systems.
133.	Redico khaitan - 2nd phase Uttar Pradesh 2008		M&V of project implemented post audit.
134.	International Finance Corporation New Delhi 2008		Cleaner production assessment study in the West Coast paper Mills including assessment of opportunity for reduction of energy and water consumptions.
135.	United Provinces Sugar Uttar Pradesh 2007		Systematic energy audit of power plant, major equipment (> 50 hp), steam and vapour distribution system and performance evaluation of process efficiency.
136.	Haldia Petrochemicals West Bengal 2007		Comprehensive energy audit of the electrical and thermal systems.
137.	Auro Textiles Himachal Pradesh 2007		Energy audit of the utility systems for six textile mills operating in close vicinity and identification of cost reduction opportunity through integration.
138.	Jubilant Organosys Maharashtra 2007		Comprehensive energy audit and assessment of potential for waste-to-energy opportunities (waste heat recovery and utilisation of solid wastes).
139.	Continental Carbon Uttar Pradesh 2007		Comprehensive energy audit of the utility system.

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
140.	Indraprastha Power Generation Co New Delhi 2006		Comprehensive energy audit of the 250 MW thermal power plant including efficiency tests of boilers & TG sets and auxiliaries.
141.	MP Power Generation Corporation Madhya Pradesh 2006		Comprehensive energy audit of all the 9 units of the thermal power plant including efficiency tests of boilers & TG sets and auxiliaries.
142.	Nectar Lifesciences Punjab 2006		Systematic Energy Audit of the entire plant to identify the Energy cost reduction measures.
143.	Regent Drugs Uttar Pradesh 2006		Energy audit and feasibility study for development of captive power plant for reduction of energy cost.
144.	Jubilant Organosys Uttar Pradesh 2006		Thermograph of the entire steam and chilled water distribution network and identification of insulation improvement measures.
145.	Naraingarh Sugar Mills Himachal Pradesh 2006		Comprehensive power, steam and water audit including efficiency test for boilers and TG sets, evaporators, heaters etc and performance evaluation of the cooling water systems.
146.	Pearl Engineering Polymers Pune 2006		Study for overall reduction of energy cost covering the following areas: Fuel substitution for the thermic fluid heating system considering various fuel options like indigenous coal, imported coal and biomass.
147.	Indian Oil Corporation Haryana 2005		Areas covered under the audit included Steam generation, Process Furnaces, Steam Turbine, Steam Distribution, Gas Turbine, Condensate Recovery, Pumps, Cooling Tower, AC, Compressed air system, Fans and blowers, Compressors, Lighting, Electrical system, Electrical motors.
148.	LH Sugar Uttarakhand 2005		Energy and water audit of the entire sugar manufacturing process and feasibility study for development of an incidental co-gen project for exporting power to the grid during season.
149.	UNIDO Austria 2005		Cleaner production assessment study for a paper cluster in the state of Uttar Pradesh including assessment of potentials for energy and water conservation.
150.	Solaris Bio Chem Gujarat 2005		Comprehensive energy audit of process and utility energy systems.







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Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
151.	Shriram Cement Works Rajasthan 2005		Energy audit of the entire cement manufacturing facility, development of energy indices for various sections and preparation of master plan for achieving benchmark performance.
152.	S M Milkose Madhya Pradesh 2004		Optimisation study for the thermal energy system.
153.	Satnam Overseas Haryana 2004		Audit of the electrical and steam generation system for the 37 t/h parboiling rice mill.
154.	LT Overseas Haryana 2004	L.T. Overseas Ltd.	Identification of opportunity for reduction of power and water consumption and polisher operation optimisation study.
155.	Samcor Glass Uttar Pradesh 2004		Energy audit of glass melting furnace operations, DG set operations and electrical supply and distribution system.
156.	Eveready Industries India Assam 2004		Comprehensive electrical and thermal system energy audit in a tea manufacturing facility. Feasibility study for development of a mini CHP project.
157.	Kailash Papers Uttar Pradesh 2004		Investment grade energy audit for the utility system of the paper mills.
158.	SRF Rajasthan 2004		Comprehensive energy and water audit of the fluoro-chemical manufacturing facility at Tapucra, Rajasthan.
159.	Jubilant Organosys Uttar Pradesh 2004		Hydraulic study and preparation of a master plan on energy optimisation considering present and future requirement of water.
160.	Jubilant Organosys Uttar Pradesh 2003		Identifying areas of opportunity for energy and water savings and recommendation of low cost action plan to bring down total energy cost.
161.	Param Dairy Uttar Pradesh 2003		Energy audit of the refrigeration facility.
162.	KR Pulp & Papers Uttar Pradesh 2003		Energy and water audit of the paper mill, establishing the power and steam consumption and configuration of a co-generation project.
163.	Century Pulp & Paper Uttarakhand 2003		Energy audit of the co-gen plant and reliability improvement study for the electrical system.
164.	Chandigarh Distillers & Bottlers 2003		Implementation assistance for energy efficiency projects- basic engineering, procurement assistance, installation



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			supervisory and performance measurement and verification.
165.	DSCL Sugars Uttar Pradesh 2003		Power quality audit at the two sugar manufacturing facilities located at Ajbapur & Rupapur respectively.
166.	Chandigarh Distillers & Bottlers 2003		Evaluation of energy efficiency of major electrical energy consuming equipments and identification of improvement projects.
167.	AK Spintex Rajasthan 2003		Energy audit of the boilers and thermic fluid heating systems.
168.	Mansurpur Sugar Mills Uttar Pradesh 2002		Comprehensive energy audit of sugar manufacturing facility and captive co-gen power plant.
169.	Hindustan Paper Corporation Kolkata 2002		Setting energy consumption reduction target against benchmark and carrying out comprehensive energy and water audit in its operating paper mills at Naogang & Cachar.
170.	Delton Cables 2001		Energy audit including analysis of fuel management system for the cable manufacturing process and captive DG power plant.
171.	Hindalco Uttar Pradesh 2001		Energy audit of the captive co-generation project and identification of short, medium and long-term performance improvement opportunities.
172.	Magnum Power Generation Ltd 2001		Audit of metering systems and reconciling the differences between the clients and utilities metering system.
173.	Indo Rama Synthetics Ltd. Nagpur 2001		Comprehensive energy audit of the power and thermal system and power quality studies.
174.	Renusagar Power Uttar Pradesh 2001		Comprehensive audit of the 8*60 MW power units, constraint analysis and preparation of techno-economic feasibility report for reduction of auxiliary power consumptions.
175.	Ajbapur Sugar Uttar Pradesh 2001		Detailed energy audit of cogeneration system to improve the overall heat rate by improving thermal efficiency and auxiliary power consumption.
176.	Swatantra Bharat Mills Rajasthan 2001		Comprehensive energy audit of the utility & process energy system including ambient temperature and humidity control systems.
177.	Somani Pilkington Haryana 2001		Detailed energy study of a wall and floor tile manufacturing unit including kilns, spray dryers, ball mills, DG sets, transformers, lighting system, fans and compressors.

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Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
178.	Southern Engineering Exposure, California, USA 2001		Development of tip-sheets and menu driven quick energy assessment study for small shops and business establishment in the city of Clovis.
179.	Southern Engineering Exposure, California, USA 2001		Identification of "No investment, Low investment and high investment energy efficiency improvement opportunities", Bill dis-aggregation, bill forecasting on "Business as usual" and "Energy saved" scenarios.
180.	West Coast Paper Mills 2000		Detailed energy and water audit of the paper manufacturing plant and the captive power plant including efficiency tests for boilers and water pumping system and equipments.
181.	Amrit Banaspati 2000		Detailed energy audit of a vegetable oil manufacturing facility including electrical & thermal systems.
182.	Dhampur Sugar, Raujagaon 1999		Energy efficiency test of boilers and development of sankey diagram of losses with recommendations on improvement measures.
183.	Amrit Paper, Sailakhurd 1999		Energy audit of boilers and water pumping systems.
184.	Kanoi Paper 1999		Comprehensive energy audit of paper manufacturing facility.

 **PROJECT QUALIFICATIONS: BUILDINGS**

Sl. No.	CLIENT, YEAR		BRIEF DESCRIPTION OF SERVICES PROVIDED
1.	Hilti India Private Limited India 2022		Consulting services for carrying out decarbonisation and energy audit services for stores and service centers in India.
2.	Energy Efficiency Services Limited (EESL) 2021		Detailed Energy Audit at CIL Complex (Coal Bhawan) at Kolkata. The assignment included study of all major energy consuming equipment like chillers of centralized AC system, primary chilled water pumps, secondary chilled water pumps, sample study of AHUs, existing solar PV plants, scope of additional solar power generation, and LT distribution panels.

Sl. No.	CLIENT, YEAR		BRIEF DESCRIPTION OF SERVICES PROVIDED
3.	Norman Manley International Airport (NMIA) through SEURECA Paris Kingston, Jamaica 2020		Consultancy services for airport utilities study (Baseline & Optimization) for the Norman Manley International Airport (NMIA). The focus of this project is to analyze operational and design characteristics of major utilities areas in the airport, like water, energy, indoor air quality and waste. The project intends to provide enough information about the current situation to develop strategic future plan for the next 20 to 25 years for establishing management and monitoring systems to be undertaken to ensure efficiency and sustainability of the operations and infrastructure.
4.	Veolia South Korea Goyang, South Korea 2020		Energy audit of St. Mary's Hospital at Seoul, South Korea. The scope includes detailed energy audit of the hospital that consists of 6 buildings. The primary objective of the assignment is to identify energy saving opportunities and potential, quantifying the achievable reduction in CO <sub>2</sub> emission.
5.	Veolia South Korea Goyang, South Korea 2019		Performance study of existing chiller system along with dynamic ice storage system installed at Dongguk University Ilsan Medical Centre, Goyang. The scope included detailed energy audit, identifying energy saving opportunities and potential, quantifying the achievable reduction in CO <sub>2</sub> emission and estimating the payback period.
6.	Veolia South Korea Goyang, South Korea 2019		Walk through assessment of entire chiller system at the Dongguk University Ilsan Medical Centre to identify energy saving potential.
7.	Enova Facilities Management Services LLC, Saudi Arabia 2019		Energy Audit/ASHRAE Level 2&3 On Site & Energy Audit/ASHRAE Level 2&3-Analysis. The primary objective of the audit is to identify energy conservation measures/ EPIAs of 4 outlets of IKEA in the Kingdom of Saudi Arabia.
8.	Enova Facilities Management Services LLC, Oman & Bahrain 2018		Energy Audit/ASHRAE Level 2&3 On Site & Energy Audit/ASHRAE Level 2&3-Analysis. The primary objective of the audit is to identify energy conservation measures/ EPIAs of 4 buildings in the two countries.
9.	Millennium Development Authority (MiDA) Ghana 2018		Demonstration audits in the selected public sector institutions/buildings to reduce electricity consumption through investment in energy efficiency and renewable energy retrofits.

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Sl. No.	CLIENT, YEAR		BRIEF DESCRIPTION OF SERVICES PROVIDED
10.	Enova Facilities Management Services LLC, UAE 2018		Energy audit ASHRAE level -2 in 8 commercial buildings in UAE; 6 buildings located at Abu Dhabi and 2 located at Al Ain.
11.	Energy Efficiency Services Limited (EESL) New Delhi 2017		Energy audit at the office of Ministry of New & Renewable Energy (MNRE) located in Block 14 of CGO Complex, New Delhi. The assignment involved audit of about 90 rooms in the block that included conference rooms, waiting rooms, lobby, canteen, minister's chamber and chambers of officials spread across 3 storeys.
12.	Veolia India Ltd. New Delhi, 2016		Audit work at Accor Hotel (820 Rooms Combined, Same Building) Aerocity New Delhi with Energy Efficiency as Theme. Scope of work included Historical data collection and analysis; Performance evaluation of various equipment & systems; Project configuration; Techno-economic analysis.
13.	Surat Municipal Corporation Surat, Gujarat, India 2016		Energy audits of over 40 facilities owned and operated by the client including 7 public buildings. The scope of the energy audit included on-site mapping and measurement, identifying energy saving opportunities, provide detailed specifications of equipment required, provide a list of probable vendors, cost benefit analysis.
14.	Ministry of Land Housing and Urban Development, Government of Kenya, Nairobi Metropolitan Region 2015-16		Energy audit of studies covering 6 health care and 5 public buildings, identified as priority projects in 5 counties in the Nairobi Metropolitan Region. Prepare draft & final engineering designs and prepare engineer's estimate for the agreed works. Prepare bidding documents per the World Bank guidelines
15.	LANXESS India Pvt. Ltd. Gujarat 2014		Certified performance testing to assess the performance of fire hydrant pumps in the facility.
16.	Radico Khaitan Ltd New Delhi 2014		Energy audit of 3 buildings, each of 3 floors; with a total connected load of 226 kW including 100 kW air-conditioning. The energy audit resulted in recommendations for improving performance of AC, fan, lighting, water heating; which when implemented would enable energy savings by 19%.







**PROJECT QUALIFICATIONS**  
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Sl. No.	CLIENT, YEAR		BRIEF DESCRIPTION OF SERVICES PROVIDED
17.	MAF-Dalkia, Dubai 2013		Comprehensive energy and water audit of the Dubai international airport consisting of multiple facilities including passenger & cargo terminals, concourses, utility stations, sub-stations and office buildings with annual energy spend of about \$90mn.
18.	GIZ, Delhi 2013		Feasibility study for developing a gas based Trigenation project for the FICCI headquarters, Federation house in Delhi.
19.	Styrolution ABS, Gujarat 2012		Comprehensive energy audit of the Corporate head quarters at Nandesari.
20.	Delhi International Airport Authority 2011		Performance assessment of low side of HVAC installation comprising air and water side of retail tenants against the designed condition and identification of improvement opportunities.
21.	Towerbase Services New Delhi 2011		Lighting and HVAC study for reduction of energy consumption and preparation of audit compliance report as per requirement of NDMC, New Delhi.
22.	Skygourmet Catering Mumbai 2010		Study of electrical supply, distribution and major consumption points, HVAC system including cold rooms, split & unitary air conditioning systems and AHUs; steam and hot water systems including water treatment plant.
23.	GTZ New Delhi 2010		Comprehensive study of a large Government building including building envelope, lighting and HVAC system and techno-economic feasibility study of energy conservation through efficiency improvement and solar PV project.
24.	Novotel Group of Hotels 2010		Energy audit and optimisation study for reduction of energy consumption in electrical and thermal systems without compromising guest comforts.
25.	GTZ Rajasthan 2010		Preliminary energy audit and feasibility study for a solar PV system for Milk chilling.
26.	Arbutus Computers Pune 2010		Preliminary Energy Audit for 3 buildings including HVAC, Pumping and lighting and feasibility study for solar PV project.






**PROJECT QUALIFICATIONS**  
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Sl. No.	CLIENT, YEAR		BRIEF DESCRIPTION OF SERVICES PROVIDED
27.	BEE New Delhi 2010		Preliminary Energy Audit for a residential complex and feasibility study for a solar PV system to reduce grid power consumption.
28.	GTZ New Delhi 2010		Energy audit and feasibility study for development of a rooftop solar PV project for reduction of power consumption in a Government building.
29.	PTC India New Delhi 2009		Comprehensive energy audit of five hospitals in Delhi, establishment of energy baseline and preparation of projects for implementation under performance contract.
30.	Gujarat State Petroleum Gujarat 2009		Comprehensive energy audit of the Corporate head quarters.
31.	PVR Ltd. (Cinemas), Delhi 2007		Conduct efficiency test of major energy consuming equipments and recommendation for replacing inefficient equipments with projected benefits in a number of Cinema Houses of the group.
32.	Tata Teleservices Mumbai 2007		Pilot energy audit on TTSL tele-communication control stations including the HVAC system and DG sets.
33.	EIH New Delhi 2007		Comprehensive energy audit of 17 luxury hotels pan India and preparation of an energy cost reduction master plan in harmony with comfort and aesthetics standards of the Oberoi group of hotels.
34.	GTZ New Delhi 2006		Case study to demonstrate the technical feasibility of supply and demand side intervention through ESCO model for reduction of energy cost in commercial buildings.
35.	Central Public Works Department, Delhi 2006		Comprehensive energy audit including analysis of building envelopes and identification of civil, mechanical and electrical energy savings projects in several Government buildings for implementation under ESCO performance contracts.
36.	Paryavaran Bhavan New Delhi 2006		Detailed energy audit and preparation of project reports for implementation of energy consumption reduction projects.
37.	Bharti Cellular Haryana 2004		Audit of temperature and humidity profiles and energy consumption and development of projects for improving facility performance with lower energy consumption.

**PROJECT QUALIFICATIONS**  
*Energy Efficiency & Consulting Services*

Sl. No.	CLIENT, YEAR		BRIEF DESCRIPTION OF SERVICES PROVIDED
38.	PWD, Govt of NCT of Delhi 2003		Identification of energy cost reduction opportunities in lighting and air conditioning, basic engineering and establishment of energy consumption baselines in three major energy consuming buildings.
39.	Bureau of Energy Efficiency New Delhi 2002		Detailed energy audit and preparation of project reports for implementation of energy consumption reduction projects in 12 Government offices and hospitals in Delhi.
40.	Sir Ganga Ram Hospital New Delhi 2001		Feasibility study for recovery of waste heat from the air-conditioning systems for preheating of water for the boilers.
41.	India International Center New Delhi 2000		Detailed Energy Audit of an institutional building and development of energy cost reduction projects. Technical assistance for implementation of lighting & air-conditioning retrofit projects.

 **PROJECT QUALIFICATIONS: MUNICIPAL**







Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
1.	NAWEC through Seureca Veolia Gambia 2021-22		Assessment of energy efficiency, load management and renewable energy options at Greater Banjul Area (GBA) for NAWEC.
2.	VA Tech Wabag Ltd. Agra, India 2021		Energy audit of 7 STP and 28 pumping stations at Agra in the state of Uttar Pradesh to identify energy saving opportunities.
3.	Energy Efficiency Services Ltd. (EESL) Ahmedabad, Gujarat 2018		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage Systems in the City of Ahmedabad in the State of Gujarat.
4.	Energy Efficiency Services Ltd. (EESL) Cluster-2, West Bengal 2018		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage System in the cities of Cluster -2 (Chandan Nagar, Panihati, Santipur & Titagarh) in the state of West Bengal.
5.	Energy Efficiency Services Ltd. (EESL) Cluster-1, West Bengal 2018		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage System in the cities of Cluster -1 (Serampore, Baranagar, Uluberia, Maheshtala, Hugli-Chinsurah & Naihati) in the state of West Bengal.

**PROJECT QUALIFICATIONS**  
**Energy Efficiency & Consulting Services**


Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
6.	Energy Efficiency Services Ltd. (EESL) Patan, Gujarat 2018		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage Systems in the City of Patan in the State of Gujarat
7.	Energy Efficiency Services Ltd. (EESL) Cluster 1, Madhya Pradesh 2018		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage Systems in the City of Cluster-1 (Neemach, Mandsaur, Pitampur, Khargone & Khandwa) in the State of Madhya Pradesh
8.	Energy Efficiency Services Ltd. (EESL) Barasat, West Bengal 2018		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage System in the city of Barasat in the state of West Bengal
9.	Energy Efficiency Services Ltd. (EESL) Haridwar, Uttarakhand 2018		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage System in the city of Haridwar in the state of Uttarakhand
10.	Energy Efficiency Services Ltd. (EESL) Mysore, Karnataka 2018		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage System in the city of Mysore in the state of Karnataka
11.	Energy Efficiency Services Ltd. (EESL) Sikar, Rajasthan 2017		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage System in the city of Sikar in the state of Rajasthan
12.	Energy Efficiency Services Limited (EESL) Shimoga, Karnataka 2017		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage System in the city of Shimoga in the state of Karnataka
13.	Energy Efficiency Services Ltd. (EESL) Chittaurgarh, Rajasthan 2017		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage System in the city of Chittaurgarh in the state of Rajasthan
14.	Energy Efficiency Services Limited (EESL) Guwahati, Assam 2017		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage System in the city of Guwahati in the state of Assam
15.	Energy Efficiency Services Limited (EESL) Moga, Punjab 2017		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage System in the city of Moga in the state of Punjab
16.	Energy Efficiency Services Limited (EESL) Madhyamgram, West Bengal 2017		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works & Sewerage System in the city of Madhyamgram in the state of West Bengal


**PROJECT QUALIFICATIONS**  
**Energy Efficiency & Consulting Services**

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
	2017		
17.	Energy Efficiency Services Limited (EESL) Anand, Gujarat 2017		Energy auditing services and preparation of investment grade energy audit (IGEA) report for public water works and sewerage systems in the city of Anand in Gujarat. The study covers: 80 pumps at 47 sites operated by Anand Municipal Corporation
18.	Energy Efficiency Services Limited (EESL) Morena, Madhya Pradesh 2017		Energy auditing services and preparation of investment grade energy audit (IGEA) report for public water works and sewerage systems in the city of Morena in Madhya Pradesh. The study covers: 230 pumps at 115 sites operated by Morena Municipal Corporation
19.	Energy Efficiency Services Limited (EESL) Sundernagar, Himachal Pradesh 2017		Energy auditing services and preparation of investment grade energy audit (IGEA) report for public water works and sewerage systems in the city of Sundernagar in Himachal Pradesh. The study covers: 728 pumps at 300 sites operated by Sundernagar Municipal Corporation
20.	Consultancy Services for Energy Audit of pumping system, Seureca-Veolia, Mexico		Energy audit of water pumping systems in the city of Aguascalientes in Mexico to identify ways of reducing operation cost through implementation of energy efficiency measures.
21.	Energy Efficiency Services Limited (EESL) Jalandhar, Punjab 2017		Energy auditing services and preparation of investment grade energy audit (IGEA) report for public water works and sewerage systems in the city of Jalandhar in Punjab. The study covers: 513 pumps at 507 sites operated by Jalandhar Municipal Corporation
22.	Energy Efficiency Services Limited (EESL) Ujjain, Madhya Pradesh 2017		Energy auditing services and preparation of investment grade energy audit (IGEA) report for public water works and sewerage systems in the city of Ujjain in Madhya Pradesh. The study covers: 69 pumps at 20 sites operated by Ujjain Municipal Corporation
23.	Energy Efficiency Services Limited (EESL) Vadodara, Gujarat 2017		Energy auditing services and preparation of investment grade energy audit (IGEA) report for public water works and sewerage systems in the city of Vadodara in Gujarat. The study covers: 390 pumps at 99 sites operated by Vadodara Municipal Corporation
24.	Energy Efficiency Services Limited (EESL) Uttar Pradesh		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works and Sewerage Systems in 8 cities in the State of Uttar Pradesh. The cities include Allahabad,





Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
	2017		Ayodhya, Farrukhabad, Ghaziabad, Kanpur, Lakhimpur, Saharanpur and Shahjahanpur
25.	Energy Efficiency Services Limited (EESL) Ambikapur, Chhattisgarh 2017		Preparation of Investment Grade Energy Audit (IGEA) Report for Public Water Works and Sewerage Systems in the city of Ambikapur, Chhattisgarh.
26.	United Nations Development Programme (UNDP) 2016		Investment grade energy audit in water pumping systems in Imphal and Ranchi water pumping systems
27.	Surat Municipal Corporation Gujarat 2016		Study of Energy Conservation Possibilities & Energy Auditing @ Hydraulic & Drainage Department Plants/Pumping Stations and Other facilities of Surat Municipal Corporation
28.	Public Authority for Electricity & Water, Sultanate of Oman 2015-16		Consultant for optimization of energy consumption for Public Authority for Electricity and Water, across various locations.
29.	Gujarat Industrial Development Corporation, Vapi, Gujarat 2007		Energy Audit of Water Supply & Sewerage Pumping Station at Vapi
30.	Gujarat Industrial Development Corporation, Sarigam, Gujarat 2007		Energy Audit of Water Supply & Sewerage Pumping Station at Sarigam Ind. Estate







## PROJECT QUALIFICATIONS: WATER AUDIT

Sl. No.	CLIENT, YEAR		BRIEF DESCRIPTION OF SERVICES PROVIDED
1.	North Eastern Railway, Gonda, India 2018		Water audit of the diesel loco shed at Gonda in Uttar Pradesh to assess the water usage, identify water loss, explore opportunities for reduction in water consumption and increase water re-use/recycling.

Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
2.	North Eastern Railway, Izatnagar, India 2018		Water audit at diesel loco shed, Izatnagar, Bareilly, Uttar Pradesh to assess the water usage, identification of water loss, explore opportunities to reduce water consumption and increase water re-use/recycling.

## PROJECT QULIFICATIONS: ENERGY EFFICIENCY – ENERGY CONSULTING

Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
1.	SIDBI India 2023-24		Consulting services for developing Monitoring & Evaluation (M&E) framework along with imparting training to the stakeholders for Integrated Result Management Framework (IRMF).
2.	The World Bank Group / IFC Pakistan 2023		Resource efficiency and decarbonization assessment for Gul Ahmed Textile Mills Limited. The scope includes in-depth resource efficiency assessment of the textile mill and renewable energy pre-feasibility study to determine the optimal mix of RE technologies and a hybrid solution including storage options.
3.	The World Bank Group / IFC Philippines 2023		GHG emissions reduction audits of coal-fired power plants. The objective of the assignment is to carry out energy efficiency assessment and GHG calculations of interested RCBC-financed coal-fired power plants with poor GHG emissions profiles and/or using sub-critical technology.
4.	The World Bank Group / IFC Philippines 2023		GHG emissions reduction audits of coal-fired power plants. The objective of the assignment is to carry out energy efficiency assessment and GHG calculations of interested RCBC-financed coal-fired power plants with poor GHG emissions profiles and/or using sub-critical technology.
5.	AFD Ghana 2022		Verification consultant (VC) for monitoring and evaluation of the funding provided by AFD under the SUNREF project in Ghana by: <ul style="list-style-type: none"> <li>• Checking and confirming that sub-projects have been completed in accordance with the relevant investment plans</li> <li>• Auditing the projects and capitalizing the results of the program, depending on the timing of the project</li> </ul>

Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
6.	The World Bank Group / IFC India 2022		Consultancy services for low carbon initiative at DCM’s Hariawan sugar mill with cogeneration power plant and Hariawan distillery. The objective of the assignment is to improve resource efficiency (energy, water) and explore potentials for converting waste to resource and facilitate development of a low-carbon roadmap and GHG target setting (towards ‘Net Zero’) for DCM group.
7.	The World Bank Group / IFC Bangladesh 2022		Combined energy efficiency and productivity assessment in the textile sector in Bangladesh. The objective of this assignment is to conduct combined energy efficiency and productivity assessments by using a tool developed by the client in twenty (20) dry processing factories, i.e. focus on cut-sew-finish operations.
8.	United Nations Industrial Development Organization India 2022		Scaling up and expanding of project activities in the foundry cluster in India. The aim is to improve the productivity and competitiveness of MSME units as well as to bring down carbon emissions in the Faridabad foundry cluster.
9.	United Nations Industrial Development Organization India 2022		Scaling up and expanding of project activities in the hand tools cluster in India. The aim is to improve the productivity and competitiveness of MSME units as well as to bring down carbon emissions in the Faridabad foundry cluster in the Ludhiana hand tools cluster.
10.	United Nations Industrial Development Organization 2022		Gap assessment on EESL MSME revolving fund under the project- Promoting market transformation for energy efficiency in MSMEs in India. The objective of the project involved evaluation of the previous experiences in India in incentivizing EE implementation in MSMEs through financial support, review of the draft EMRF model and seeking stakeholder feedback on various aspects of the EMRF design, based on which recommendations to be made for making the EMRF sustainable in the long term.
11.	New Venture Fund (NVF) India 2021-22		Facilitating the funds flow for a climate resilient MSME industry sector. The objective of the project involved: i) feasibility study, ii) environmental and social assessment; and iii) gender assessment studies to support MSME sector in India for their GHG mitigation and adaptation needs.
12.	The World Bank Group / IFC India 2021-22		Energy audit of fisheries value chain processes in selected fisheries value chains and provide recommendations leveraging learnings from national and international practices towards making them more energy efficient.



Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
13.	GIZ India 2021-22		Energy efficiency potential in the Indian cooling sector. The primary objective behind this study is to provide input and recommendations on how KfW and GIZ can contribute most effectively in tapping the energy efficiency potential in the Indian cooling sector. The assignment also aims to support identification of relevant stakeholders and implementation mechanisms for deepening Indo-German development cooperation on energy efficiency.
14.	International Copper Association India 2021		Conducting Market Assessment on Industrial Energy Efficiency in Pumps and Pumping System in Industrial Sector in India
15.	The World Bank Group / IFC Turkey 2021		Consulting services for identification and implementation of PaCT (Partnership for Cleaner Textiles) assessments for designated global brand's suppliers and mills in Turkey. The assignment includes following activities: <ul style="list-style-type: none"> <li>• Water efficiency assessments for designated suppliers in the country, including assessment of opportunities for water use</li> <li>• Energy efficiency assessments for designated suppliers</li> <li>• Renewable energy assessments for designated suppliers</li> <li>• Knowledge management, capacity building and awareness raising activities</li> </ul>
16.	United Nations Development Programme (UNDP) India 2020		Preparation of Detailed Project Report (DPR) for a Renewable Energy Knowledge Park in Manipur. The scope of work broadly includes two main tasks: <ul style="list-style-type: none"> <li>• Development of a DPR</li> <li>• Development of a tender for engagement of a project management consultant (PMC)</li> </ul>
17.	United Nations Industrial Development Organization India 2019		Scaling up & expanding of project activities in MSME clusters of foundry sector in India. The aim is to improve the productivity and competitiveness of MSME units as well as to bring down carbon emissions.
18.	United Nations Industrial Development Organization India 2019		Development of a cluster level/unit level cloud-based data analytics tool to maintain energy usage data base and develop benchmarking system. This data will help as an analysis tool for assessing the energy performance of the enterprises and also comparing their performance with respect to the optimal usage of an enterprise in the sector periodically.

Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
19.	United Nations Industrial Development Organization India 2019		Scaling up & expanding of project activities in MSME clusters of hand tools and brass sectors in India. The aim is to improve the productivity and competitiveness of MSME units as well as to bring down carbon emissions.
20.	The World Bank (IFC) Pakistan, India, Bangladesh 2019		Textile supplier multi country resource efficiency assessments supporting IFC partnership agreements with Global Brands. The overall goal is to enhance the long-term competitiveness and sustainability of the textile wet processing sector, by supporting factories in Pakistan, India and Sri Lanka to undertake in-depth cleaner production assessments.
21.	Shakti Sustainable Energy Foundation India 2019		Consulting for creating a de-carbonization roadmap document for industrial process heat demand in India for 2050. The context is to identify blue sky technologies, necessary R&D/policy levers required to mainstream these technologies in an effort to develop a pathway for reducing global warming due to industrial process heat demand.
22.	SIDBI India 2019		Consulting services for ESCO Projects Pipeline Generation – PRSF (Industrial Sector). The objective is to contribute to achieving the objective of the PRSF project in developing the energy efficiency and ESCO market in India.
23.	SIDBI India 2019		Opportunities for Scaling up FEEMP Initiatives through ZED Scheme of MoMSME- A Pilot study for implementation of Resource Efficiency & Cleaner Production (RECP) concept to through ZED scheme in MSME units in Faridabad region and to conduct a diagnostic study on RECP interventions and application of ZED scheme MSMEs in Rajasthan state under WB GEF Project
24.	Millennium Development Authority (MiDA) Ghana 2019		<p>Consultancy services for setting up the training centers with following objectives:</p> <ul style="list-style-type: none"> <li>• To assess the baseline of sustainable energy services capabilities in the current market.</li> <li>• To better understand the current gaps in the sustainable energy services market in Ghana</li> <li>• To provide capacity building and training support for energy auditing to energy management professionals</li> <li>• To ensure that a core of qualified and certified professionals are available in the Ghanaian market who can assist public and private institutions, and industrial and commercial customers, in implementing cost effective energy savings measures.</li> </ul>

Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
25.	Millennium Development Authority (MiDA) Ghana 2018		Consultancy services for the provision of energy efficiency pre-tertiary school curriculum. The assignment aims to develop energy efficiency and energy conservation curriculum updates for incorporation into GES pre-tertiary education curriculum for thirty (30) randomly selected pilot schools in consultation with the Curriculum Division (National Council for Curriculum and Assessment of the Ministry of Education, Internal Compact Team (ICT) and participating District Education Offices of GES
26.	Energy Efficiency Services Ltd. (EESL) India 2018		Demand Aggregation of IE-3 motors under National Motor Replacement Program in some of the MSME clusters. Creation of an enabling environment to stimulate supply for High Efficiency Motors (HEMs) adhering to minimum IE-3 standard through awareness creation, capacity building of manufacturers and developing success cases for convincing decision makers.
27.	Bureau of Energy Efficiency (BEE) India 2018		Development of multimedia tutorials on energy efficient technologies for MSME sector. These multimedia tutorials are intended to be as good as an instructor in communicating energy conservation measures and demonstrating adopted procedures/technologies.
28.	The World Bank (IFC) Bangladesh 2018-22		Promoting In-Depth Cleaner Production in the Washing/Dyeing/Finishing Sector in Bangladesh (International Firm). The assignment is under the second phase of the PaCT program, where the services of DESL for conducting In-depth Cleaner Production (CP) assessments at textile wet processing units in Bangladesh.
29.	The World Bank (IFC) Pakistan, India, Mexico & South Africa 2018		Textile supplier multi country resource efficiency assessments supporting IFC partnership agreements with Global Brands. The overall goal of this assignment is to enhance the long-term competitiveness and sustainability of the textile wet processing sector, by supporting factories to undertake in-depth cleaner production assessments.
30.	Energy Efficiency Services Limited (EESL) (Surat, Ankleshwar, Jorhat and Howrah), India, 2018		Project Management Consultant (PMC) for implementation of energy efficiency measures in MSME clusters and to create and sustain a revolving fund mechanism to ensure replication of energy efficiency measures in the sector.

**PROJECT QUALIFICATIONS**  
**Energy Efficiency & Consulting Services**












Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
31.	United Nations Industrial Development Organization (UNIDO) 2018		Updating the feasibility study for setting up a biomass based CHP plant at KDC Boards Ltd., Pakistan
32.	The World Bank (IFC) Sri Lanka, 2018		Energy & Water Assessments + PaCT Advantage for Manufacturing Units of MAS Fabrics (P) Limited.
33.	Bureau of Energy Efficiency, (BEE) Gujarat, 2018		Carrying out cluster level activities in ceramic sector (Morbi cluster) under GEF-UNIDO-BEE project. The objective of the projects is to reduce energy usage per unit of product, improve the productivity and competitiveness of units, and reduce overall carbon emissions
34.	Energy Efficiency Services Limited (EESL), India 2017		Market Assessment Study for Trigeneration Technology in commercial, industrial and building sectors in India
35.	Daraju Industries Ltd Nigeria 2018		Engineering and project development services for a waste heat utilisation project in their FMCG plant
36.	The World Bank, Himachal Pradesh 2017-18		Detailed energy and water audit of the Shimla water supply system from the water sources to the main reservoir to identify, assess and recommend opportunities for improving energy efficiency and reducing NRW
37.	SIDBI Gujarat 2017-18		Project Development Activities in Cluster- IV (CSAF-9) under the World Bank-Global Environment Facility (GEF) funded 'Programmatic Framework Project for Energy Efficiency' in India in Morbi and Rajkot MSME clusters in Gujarat.
38.	SIDBI Gujarat 2017-18		Project Development Activities in Cluster- I (CSAF-6) under the World Bank-Global Environment Facility (GEF) funded 'Programmatic Framework Project for Energy Efficiency' in India in Surat, Ahmedabad, Vapi and Valsad MSME clusters.
39.	e.Gen Consultants Ltd Sri Lanka 2016		Consultancy services for "Green Power Development and Energy Efficiency Improvement Investment Program (Tranche 1)" in Sri Lanka. The scope of work included preparation of project cost table and a financing plan for investment components, including proposed ADB lending and appropriate counterpart fund for local currency &

Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
			expenditures; financial evaluation for the proposed investment components over the construction & operating periods; identification of risks to program’s revenues and costs; relevant sensitivity analysis; risk mitigation; and Designing of the program’s fund flow and disbursement mechanism.
40.	The World Bank Group/IFC 2016		Assessment of technical and financially viable captive energy options for supply of uninterrupted electricity from solar/hybrid sources to the existing facility of Bunny Pvt. Ltd. and a new setup outside Lahore possibly comprising frozen bakery unit, juice and pulp extraction plant, controlled atmospheric storage (CAS) for fruits, bakery and snack food products unit.
41.	The World Bank Group/IFC 2016		Consultancy services for identifying cost reduction opportunities through technically and financially viable interventions and optimization of existing energy use and energy generating operations at a paper product manufacturing plant in Pakistan.
42.	UNIDO, Pakistan 2016		Policy advisory services and recommendations for promoting biomass gasification technology (BGT) in Pakistan under the project- ‘Policy advisory services in Biomass gasification technology’.
43.	Shakti Sustainable Energy Foundation, New Delhi 2015		Development of Whitepaper on Energy Services Companies (ESCOs) in India. An overview of ESCO market in India, Roadmap for ESCO market transformation, and stakeholder consultation & national workshop.
44.	Ministry of Land Housing & Metro Development, Kenya 2015		Preparation of feasibility study, design and bidding documents for energy audit in five counties in the Nairobi Metropolitan Region.
45.	Asian Development Bank (ADB), China 2015	 ASIAN DEVELOPMENT BANK	Consultancy services for promoting energy efficiency financing in Shaanxi and other provinces in China under the project- ‘Shaanxi Scaled-up Financing for Accelerated Energy Efficiency’.
46.	The World Bank Bangladesh 2015		Identification of various options and investment plan to reduce water, energy and chemical consumption in the textile processing and improvement in ETP and WTP. Assessment of current usage of water, energy and chemicals and waste water discharge in factory, identifying saving opportunities .

Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
47.	Ministry of Natural Resources and Energy, Government of Republic of Malawi 2015		Preliminary bagasse to power co-generation assessment (Inception phase), collection of available data on capacity on bagasse to power co-generation in Malawi. Conducting power co-gen resource assessments in existing sugar processing industries. Recommending solutions for continued power co-generation when sugar processing is off season, assessing cost effective possibilities of bagasse to power. Recommending suitable technologies on harvesting, transportation, storage, efficient boilers and control systems.
48.	The World Bank/IFC Turkey 2014		Development of a five-year energy efficiency action plan for the Government of Punjab State, Pakistan.
49.	ADB Manila 2014	 ASIAN DEVELOPMENT BANK	Development of knowledge paper and market assessment report for high energy efficiency technology for waste-to-energy project for China.
50.	The World Bank/IFC, Nepal 2014		Feasibility study and market assessment report for bagasse cogeneration in sugar mills in Nepal.
51.	UNIDO Austria 2014		Development of biomass gasification based combined heat and power (CHP) system for improving power availability and reduction of energy cost in MSME industry in Punjab State of Pakistan.
52.	ADB Manila 2014	 ASIAN DEVELOPMENT BANK	Consultancy for preparing a comparative assessment report on various municipal solid waste-to-energy technologies including bio-methanation, incineration, gasification, pyrolysis and high efficiency power generation system of gas engine, gas turbine & fuel cell
53.	ADB Manila 2013	 ASIAN DEVELOPMENT BANK	Development of financial model for implementation of large scale industrial energy efficiency projects under ESCO guaranteed savings performance contract and preparation of a co-financing plan for sustainable development of large capacity Industrial ESCOs in China.
54.	MNRE/UNDP New Delhi 2012		Assessment of investment market for solar hot water system in the industrial sector and preparation of feasibility and scaling up report.

**PROJECT QUALIFICATIONS**  
**Energy Efficiency & Consulting Services**

Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
55.	e Gen Consulting Bangladesh 2012	 ASIAN DEVELOPMENT BANK	Sub-consultants for carrying out investment and financial assessment for energy efficiency improvement projects in the power plants and transmission system, and development of solar irrigation pumping system in Bangladesh.
56.	Nexant Inc; 2012		Implementation of Industrial Efficiency tasks under the PACE-D TA Programme. Activities undertaken include a) PAT Programme: Developed methodology for normalization for pulp and paper units b) Waste Heat Utilization: Macro assessment of potential; situational analysis; preparation of a technology compendium
57.	GIZ Bangladesh 2012		Training of technical personnel of Titas gas transmission & distribution co. Ltd (TGTDC) for Increasing the efficiency of natural gas-fired Industrial boilers & furnaces.
58.	e Gen Consulting Bangladesh 2011	 ASIAN DEVELOPMENT BANK	Sub-consultants for carrying out the investment and financial assessment for hydro power projects under funding by ADB in Nepal.
59.	ADB Manila 2011	 ASIAN DEVELOPMENT BANK	Development of resource conservation evaluation system (RCES) for the Government building and Cement industrial sectors in China and preparation of case study reports.
60.	DFID India 2011		Market assessment and development of barrier removal strategy for increased private sector investment in the biomass energy projects in India.
61.	e Gen Consulting Bangladesh 2010	 ASIAN DEVELOPMENT BANK	Sub-consultants for carrying out investment and financial assessment for the Bangladesh power system efficiency programme funded by ADB.
62.	Asian Development Bank Mongolia 2010	 ASIAN DEVELOPMENT BANK	Assessment of air pollution caused by use of inefficient coal stoves, setting up a testing lab and assessment of efficiency and environment performance of number stoves, development of improvement projects and launching of project pilots based on modification of existing stoves and replacement by new highly efficiency stoves. Carrying out consumer satisfaction and affordability survey and preparation of recommendation report on scaling up for cleaning up the Ulaanbaatar environment.
63.	The World Bank India 2010		Development of real time remote monitoring and carbon accounting system for about 300 Chillers all over India under the India Chiller Energy Efficiency Programme.

Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
64.	GTZ India 2009		Preparation of bid document, assisting in the tendering process including bid evaluation and selection for implementation of the Trigeration project pilot.
65.	GTZ 2009		Energy audit and feasibility study for an integrated energy efficiency and rooftop solar PV project for a Government building.
66.	VisionRI Bangladesh 2009	 ASIAN DEVELOPMENT BANK	Technical assistance and training of power engineers in Vietnam for capacity building for monitoring of environmental performance of operating power plants.
67.	World Bank India 2008	 WORLD BANK	Energy and water audit in nominated MSME industrial clusters and providing implementation support and preparation of a plan for scaling up.
68.	ADB Manila 2008	 ASIAN DEVELOPMENT BANK	Development of resource conservation evaluation system (RCES) for the Government building and Cement industrial sectors in China and preparation of case study reports.
69.	GTZ India 2008		Preparation of feasibility report, carrying out basic engineering and preparation of an implementation plan for a demo project.
70.	MVV Consulting Germany 2007		Feasibility study and development of demonstration model for establishing a robust energy balance for India.
71.	Asian Development Bank Manila 2007	 ASIAN DEVELOPMENT BANK	Technical due diligence, economic and financial analysis, environment impact assessment, social and poverty assessment and preparation of resettlement action plan for Dagushan hydro project in China.
72.	The World Bank India 2007	 WORLD BANK	Market assessment study for the commercial and residential building segments in India for development of low carbon growth strategy for the segments.
73.	Entec AG Switzerland 2006	 ASIAN DEVELOPMENT BANK	Economic & Financial analysis for community based rural hydro project in remote areas of Tajikistan.
74.	Asian Development Bank Manila 2006	 ASIAN DEVELOPMENT BANK	Economic analysis for the Erlongshan hydropower project (50 MW) in Gansu province based on least cost generation studies and computation of EIRR as per ADB norms.
75.	Alliance to Save Energy (ASE) India 2006		Prepared standard methodology, terms of reference, EOI documents and contract documents, evaluation criteria for bidding of Municipal projects under ESCO performance contract.



**PROJECT QUALIFICATIONS**  
**Energy Efficiency & Consulting Services**

Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
76.	GTZ 2006		Preparation of an assessment report on the market for energy efficiency investments in the commercial sector in India and an action plan for implementing a 100 Building energy efficiency projects.
77.	Sofreco, France Algeria 2005		Market assessment and development of project pipelines including configuration of pilot demonstration projects for development of investment market for energy efficiency projects. Preparation of a GEF project brief for investment plan in Algeria.
78.	APRUE Algeria 2005		Assessment of co-generation market potential in Algeria and identification of industrial units and cogeneration projects by taking account of various constraints (environmental, legal, economic and technical).
79.	Asian Development Bank Manila 2005		Technical assistance and project engineering support for implementation of two rural energy projects-integrated biomass gasification and power generation and 60 MW run-of-river hydro-in the Gansu province in China.
80.	GEF KAM , Kenya 2004		Technical assistance for design of a national energy conservation award scheme in Kenya and adjudication for the 1 <sup>st</sup> national EC awardees.
81.	GEF KAM, Kenya 2004		Providing training to the nominated staff from KAM Energy Management team at DESL office for building capacity to carry out energy audit and implement energy conservation projects.
82.	International Institute for Energy Conservation India 2004		Assistance in developing the overall work programme for the project viz. implementation of DSM programmes in identified customer sector through private sector financing and preparation of energy efficiency building codes for commercial buildings.
83.	World Bank/IREDA MSME cluster India 2004		Energy audit, preparation of project pipeline and assist the participating units in a paper cluster for raising debt funds from IREDA.
84.	GEF KAM, Kenya 2004		Follow on assignment for implementation of demonstration projects in the food processing and consumer goods sectors.
85.	Charles River Associates, Australia 2003		Sub-contractor for ADB TA project on development of EE investment market in India-preparation of detailed project reports for EE projects in the industrial, commercial & municipal sectors.
86.	Nexant Inc., USA 2003		Presentation of completed feasibility study to proposed sources of finance. Submission of

Sl. No.	CLIENT, YEAR		BREIF DESRIPTION OF SERVICES PROVIDED
			financial closure assessment report. Completion of financial closure, including documentation.
87.	ICRA Advisory Services 2003		Providing inputs to help define the technical parameters for evaluation of energy efficiency projects & conduct training sessions for participating banks/ financial institutions to illustrate the importance of technical evaluation of the project for assessing the viability of the project.
88.	GEF-KAM Kenya 2003		Follow on project providing technical assistance for implementation of demonstration projects in selected sectors.
89.	GEF-KAM Kenya 2003		Follow on project on development and implementation of M&V protocol, capacity building for regular monitoring for sustaining energy savings & preparation of case studies.
90.	Global Environment Facility, Kenyan Association of Manufacturers (GEF-KAM), Kenya 2003		To validate findings of energy audits carried out by GEF KAM and to develop framework for implementation of the measures as demonstration projects in a textile, paper and automotive unit in the SME sector.
91.	Nexant Inc., USA 2002		Energy audit and preparation of feasibility reports for energy efficiency project types in the commercial, residential and industrial sectors.
92.	Southern Engineering Exposure, California, USA 2001		Engineering audit of installation, illumination levels, development of the coding system, and analysis of logger data for lighting operations.
93.	Policy Research Institute, Canada 2000		Formulating project proposal for obtaining development assistance for DSM project; analysis of electricity consumption pattern by NDMC; implementation of demonstration project for lighting retrofit in Palika Kendra building; study of sub-station system and design on integrated metering, measurement and monitoring system.





## PROJECT QUALIFICATIONS: PERFORMANCE CONTRACT -

### INDUSTRY

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
1.	Reliance Industries Limited, Vadodara 2014		Rationalisation of compressed air network; payment of fee linked to savings in energy.
2.	Asian Paints (Nepal) Ltd. 2013		Design stage performance contract for utility system.
3.	Welspun Syntex Ltd 2012		Energy assessment study and reduction of energy consumption in the cooling water network under guaranteed savings performance contract.
4.	Reliance Industries Limited, Hazira 2010		Improvement of energy consumption in the cooling water system by rationalisation of cooling water network under savings linked consulting assignment.
5.	United Phosphorous Ltd., Vapi 2009		Energy audit and technical assistance for project implementation under shared savings concept without project financing.
6.	Reliance Industries Ltd., Patalganga 2008 & 2009		Energy audit of utility system of the petrochemical plant, fee structure linked to identified and accepted energy savings.
7.	Global Energy Ltd 2008		Energy diagnostic study and improving the reliability, availability and efficiency of a 5 - MW biomass based thermal power plant under performance contract.
8.	United Phosphorous Ltd., Jagadia 2008		Energy audit and technical assistance for project implementation under shared savings concept without project financing.
9.	Rama Newsprint & Paper Ltd., Surat 2006		Audit of the utility and paper manufacturing processes, identification of projects, financial analysis, prioritisation and implementation of priority projects under guaranteed savings performance contract.
10.	Shree Shyam papers & Board Mills Ltd. 2006		Energy audit and implementation of energy efficiency improvement projects in the water pumping system under performance contract.
11.	Ahlcon Parenterals India Ltd. 2006		Energy audit and implementation of energy cost reduction projects in the utilities.

**PROJECT QUALIFICATIONS**  
**Energy Efficiency & Consulting Services**




Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
12.	Bridgestone India P Ltd. 2006		Energy audit and implementation of energy cost reduction projects in the boilers and process thermal system.
13.	Promed Exports Ltd 2005		Energy audit and implementation of energy efficiency improvement projects covering utilities-HVAC, lighting & water system.
14.	Mohan Meakins Ltd 2005		Energy cost reduction in the bottle manufacturing section under performance contract.
15.	ABC Paper 2004		Process audit and implementation of projects for reduction of water and steam consumption under performance contract.
16.	Yash Papers Ltd 2004		Energy audit and implementation of energy efficiency improvement projects in the water pumping system under performance contract.
17.	Abhishek Industries Ltd. 2003		Energy audit in the paper and sulphuric acid plant followed by implementation of energy efficiency improvement projects in the water pumping system under performance contract.
18.	Amrit Paper 2003		Revamping and re-commissioning of the captive co-generation power plant under guaranteed savings performance contract.
19.	Dhampur Sugar Mills 2002		Performance contract for design and engineering of waste heat recovery system on boilers for concentrating distillery effluent.
20.	Sainsons Paper Ind. Ltd. 2002		Energy audit and implementation of energy efficiency improvement projects in the water pumping system under performance contract.
21.	Amrit Paper 2001		Sustaining the savings achieved under shared savings based on quarterly measurement and verification of energy savings.
22.	West Coast Paper Mills 350 TPD paper mill 2001		Engineering & consulting services for implementation of energy savings project identified during audit under guaranteed savings performance contract.
23.	Magnum Power Generation Ltd 2001		Performance linked Energy audit services for energy efficiency enhancement of a 25 MW DG based Independent Power Project (IPP).
24.	Dhampur Sugar Mills 2001		Energy audit followed by project implementation in the water pumping system & hydraulic network under performance contract.

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
25.	Amrit Paper 2000		Comprehensive energy audit followed by project implementation under shared savings ESCO performance contract.
26.	Dhampur Sugar Mills 1999		Boiler efficiency improvement and sustainability services for one year under performance contract.

## PROJECT QUALIFICATIONS: PERFORMANCE CONTRACT - BUILDINGS

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
1.	President Estate New Delhi 2010		BEE sponsored project for reduction of energy consumption in the Estate under project Roshni. Provided audit and engineering services resulting in verified reduction of energy cost by over 20%.
2.	All India Institute of Medical Sciences, New Delhi 2009		Comprehensive energy audit followed by establishment of energy baseline, design of the performance contract protocol for project implementation under shared savings performance contract.
3.	Batra Hospital New Delhi 2006		Identification & implementation of projects under ESCO performance contract covering lighting, HVAC system, boilers, cooling towers in various wings of the hospital. Design of innovative cascade financing mechanism to support project implementation in a staggered manner utilising the savings from the previous project.
4.	PVR Cinemas, New Delhi 2006		Identification of energy savings projects in the building & projection energy system and providing engineering services for project implementation.
5.	Pearl Global NOIDA 2004		Reduction of lighting energy consumption under performance contract in Export processing building.
6.	ICICI Bank Ltd Mumbai 2002		Design stage efficiency improvement under guaranteed savings ESCO contract-benchmark against design of the architect and energy performance of an adjoining similar building.

**PROJECT QUALIFICATIONS**  
*Energy Efficiency & Consulting Services*

Sl. No.	CLIENT, Year		BRIEF DESCRIPTION OF SERVICES PROVIDED
7.	BPL Display Devices Ltd. NIDA 2002		Implementation of energy savings projects in the water spray system.
8.	Sir Ganga Ram Hospital 2002		Design stage performance contract in the new super speciality building under development.
9.	New Delhi Municipal Corporation 2001		Financed shared savings ESCO performance contract improving the performance and efficiency of the building –the 1 <sup>st</sup> commercial ESCO project in India.

*For more details please contact:*

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