Agriculture, Horticulture & Food Processing

The total geographical area of Gujarat is 19,602,400 hectares, of which crops take up 10,630,700 hectares. The three main sources of growth in Gujarat's agriculture are from cotton production, the rapid growth of high-value food such as livestock, fruits and vegetables, and from wheat production. Gujarat is the main producer of tobacco, cotton and groundnuts in India. Other major food crops produced are rice, wheat, jowar, bajra, maize, tur, and gram. The state has an agricultural economy; the total crop area amounts to more than one-half of the total land area. Animal husbandry and dairying have played vital roles in the rural economy of Gujarat. Dairy farming, primarily concerned with milk production, functions on a cooperative basis and has more than a million members. Gujarat is the largest producer of milk in India. The adoption of cooperatives in Gujarat is widely attributed to much of the success in the agricultural sector, particularly sugar and dairy cooperatives.

Food processing has an important role to play in linking Indian farmers to consumers in the domestic and international markets. The Ministries are making all efforts to encourage investments across the value chain.

- Agriculture tools and appliances
- Equipment for dairy industry
- Fertilizers, seeds and crop stimulators
- Sowing and harvesting machinery
- Food processing equipment & fermentation technologies
- Dairy Technology and processing Equipment
- Agriculture Research Institute
- Agriculture Insurance
- Animal husbandry, poultry farming



Health Care

Improvement in the standard of living and health status of the population has remained one of the important objectives in Indian planning. The five year plans had reflected long term vision consistent with the international aspiration of which India has also been a signatory. These long term goals have been stressed in National Population Policy, National health policy, etc. These goals have to be achieved through improving the access to utilization of Health service, Family Welfare and Nutrition services with special focus on underserved and under privileged segments of population. A comprehensive approach that encompasses individual health care, public health, sanitation, clean drinking water, access to food, and knowledge of hygiene, and feeding practices. The transformation of public health care into an accountable, accessible, and affordable system of quality service.

MEDICAL

The Government of Gujarat is committed to improve the health status and quality of life of its people, by focusing on health issues with the objective of reducing diseases burden, creating and enabling environment, influencing direct and indirect health determinants such as nutrition, water, sanitation and other factors like education and

employment in the state. To improve the accessibility and quality of health care services, specific efforts are being ensured to strengthen health infrastructure and promote Public Private Partnership. Arrangements are also being made for the spot health checkups/advise about the usage of self diagnostic equipments and display of products as well as services under the able and expert guidance of specialized professionals from the medical fraternity will be exclusive feature of the event.

The event will also witness various programmes on health, Indian system of medicines and nutrition.

- AIDS prevention & control
- Purity & safety of food
- Improvement of healthcare facilities
- Protection from Dangerous Diseases
- Family welfare schemes
- Diagnostics facilities
- Government schemes & Policies
- Healthcare and Nutrition Schemes
- Awareness on medication system
- Government Plans & Projects and many more





Science and technology, Biotechnology, **Earth Science & Research and Development**

The objective of this exhibition is promoting new areas of Science & Technology and to organising, coordinating and promoting Science & Technology activities in the country. To promote research and Development through your research institutions or laboratories for development of indigenous technologies concerning bio-fuel production, processing, standardization and applications, in co-ordination with the concerned Ministry or Department; for the Promotion of Science and Technology at the State, District, and Village levels for grassroots development through State Science and Technology Councils and other mechanisms. This pavilion of the exhibition will offer detailed information pertaining to scientific education and scientific research & development. All the detailed policies, schemes, documents and programmes for scientists, researchers, scholars, students, etc. will also be showcased multiple career options and scientific education in the event.

The aim of the exhibition is to bridge the gap

between the urban and rural divide. The exhibition will highlight efforts of the science and technology for the rural masses, and bring the information about at their door steps, also with a strong message for promoting useful rural technologies through and showcase the varied technologies, products, demonstration and services of the scientific department and disseminate information to the visitors about their respective areas of expertise.

- Science & technology
- Earth Sciences
- Biotechnology
- Research labs
- Rural technologies
- Financial assessment for technology development
- Weather science & monitoring
- Grants in Aid agencies and many more...





IT & Communication

IT and Communication Creating Pathways of Economic Transformation

IT has been the key driver of growth in various verticals. It has influenced manufacturing, trading, Medicare, education, e-governance and number of other services sectors like finance and insurance. The Government of the Gujarat has taken various policy decisions to strengthen the IT sector is offering various incentives to set up production or research hubs in the state.

Directorate of ICT, Govt. of Gujarat is playing a leading role in nation building by facilitating investment in manufacturing industry to create employment opportunities for citizens and economic growth and prosperity for the state, the nation and its citizens. They aim to set up a globally competitive electronics system design and manufacturing industry with the right eco system in Gujarat which, apart from catering to the global and domestic needs of the country, leads towards all round development and inclusive growth of the State. They are also creating a vibrant start-up culture where in ideas materialize into products, entrepreneurs

are mentored, businesses are incubated and product or process innovation is facilitated to become a business of global scale to contribute to economic prosperity of the state and to generation of employment

- Software Research and development centers
- Electronics component manufacturing units
- Knowledge and IT parks, BPOs and KPOs
- IT and ITES enterprises
- Internet and its application Mobile Banking
- E-governance
- Disaster Management
- Tele-communication





Energy

Energy has been universally recognized as one of the most important inputs for economic growth and human development. India has the 5th largest electricity generating capacity and is the 6th largest energy consumer amounting for around 3.4 % of global energy consumption.

Gujarat is rich in solar energy, biomass and wind energy. It is also the leading state in terms of overall solar energy installation in India. As part of its renewable energy promotion policy, Gujarat enacted the country's first Wind Energy policy in 1993 and become the first state with a Solar Policy in 2009. As per the Gujarat Energy Development Agency (GEDA), the state has tremendous renewable energy potential.

Gujarat has become successful in securing its

overall energy requirements with installed power generation capacity of 23,927 MW. The state of Gujarat has established the Gujarat Urja Vikas Nigam Limited (GUVNL).

- Petroleum Products
- Dealers and Distributors
- Solar Energy Equipments
- Non-Conventional & Renewable Energy Resources
- Natural Gas Supply System
- Oil and Natural gas transportation equipments
- Government Schemes & Polices





Power

Power has been universally recognized as one of the most important inputs for economic growth and human development. It has been recognized as one of the key drivers for rapid growth and poverty alleviation. India is the world's third largest producer and third largest consumer of electricity. Electricity Consumption is one of the most important indices that decide the development level of a nation. The Government of India is committed to improving the quality of life of its citizens through higher electricity consumption.

Indian power sector is facing challenges despite the significant growth in generation capacity over the past few decades. The power situation in India is characterized by demand in excess of supply, high transmission and Distribution losses, peak demand and energy shortages, low plant load factors and decreasing availability of best quality fuel to run the power plants. However, over the last few years, Gujarat has successfully crossed all these barriers. Gujarat has become successful in securing its overall energy requirements with installed power generation capacity of

23,927 MW.

Actual power supply position of the state of Gujarat has improved in the last seven years considerably. The power requirement and availability deficit in the state has been decreased by CAGR of 38%. Year 2012 shows nearly zero percent deficit made Gujarat power sufficient.

Gujarat is rich in solar energy, biomass and wind energy. It is also the leading state in terms of overall solar energy installation in India. As part of its renewable energy promotion policy.

Display's Profile

- Thermal Power Projects
- Wind Energy projects
- Nuclear power plants
- Energy Conservation method & Procedure
- Power Transmission
- Traditional Modes Of Power production
- Government Plans & Policies and many more....





WATER RESOURCES & SANITATION

India is the world's largest democracy with a population of 1.2 billion, an economy growing at an annual rate of 8% and a highly skilled work force fluent in two main languages (Hindi & English). India has a vision that India soon, will be one of the world's top five economic superpowers, and the way the country deals with water will be central if this goal is to be attained. India is the 16% of the world's population, 2.5 percent of land mass and just 4 percent of the water resources.

Water resources in India includes information on precipitation, surface and groundwater storage and hydropower potential. India experiences an average precipitation of 1,170 millimetres (46 in) per year of rains annually or about 1,720 cubic metres (61,000 cu ft) of fresh water per person every year. Some 80 percent of its area experiences rains of 750 millimetres or more a year.

The main source of water for Gujarat is surface water. The State has 185 river basins and the available quota of water in the State is 55608 million cubic meters, out of which, 38100

million cubic meters is surface water, which is only 2% of the entire quota of surface water of the country. The underground water resources of State are 17508 million cubic meters.

After independence, construction was undertaken for irrigation projects such as Shetrunji, Dantiwada, Kakrapar Weir, Ukai, Kadana, Dharoi, Vanakbori Weir etc. and at the end of 2012-13, 19 major and 70 medium irrigation projects have been completed. Moreover, more than 1000 minor irrigation projects have also been completed. Upto 2012-13, under Water Conservation Project, nearly 1,59,000 check dams have been constructed.

- Water Supply & Services
- Water Conservation
- Water Pollution monitoring
- Sewage & sludge treatment
- Rainwater Harvesting
- Water Purification & hygiene
- Government projects & Plants and many more....





Environment and Forest

Natural resources such as lakes, river, forests, wildlife etc., have a pivotal role in Indian lifestyle but growing population of the country. The entire geography of Gujarat is a rich store of one of the most diverse plethora of flora and fauna

Flora & Fauna

The landmass of state is host to a varied plethora of ecosystems that exists in peace with the natural surroundings here. An incredible number of flora and fauna have been found surviving here in various different habitats which is well preserved and maintained to ensure that the future of natural beauty in Gujarat remains intact and our future generations are thankful for the conservation efforts here. There are 400 different species of flora. The tree cover includes trees like teak, diospyros, Boswellia serrata etc. Gujarat is indeed a very diverse land with a variety of mesmerizing and unique categories of flora and fauna

Diversity

The diversity among living organisms – plays an essential role in ensuring the survival of life on earth. Gujarat is blessed with richness of biodiversity. However, in order to make it more

people friendly with awareness for conservation, the state will soon establish the Biodiversity Park at district level to showcase the best biodiversity elements of the district at one place.

Wild Life Destinations

The vivacious state is also one of the wealthiest wildlife destinations in the country. Well, we cannot forget that Gujarat is the only state in India that shelters a sizable population of the Asiatic Lions, which is a threatened species. It is a secure habitat for rare species of blackbuck and the Indian wild ass. Call it a heaven for wildlife, retreat for the ornithologists or paradise for the nature lovers, Gujarat is all in all an ideal place for wildlife getaways in India.

- Co-ordination of Environment & Forest
- Conservation & Survey of Flora & Fauna
- Forest and Wildlife
- Prevention & control of pollution
- A Forestation & Regeneration of degraded areas and protection of environment
- Govt. schemes & policies





Infrastructure

Maintenance of existing infrastructure of Roads, Bridges, and Buildings & Water supply system to ensure better facility to public in exposure for eco-friendly building material and products among the youngsters, students, general public and showcasing prefab bamboo structures for residential schools in urban and rural area.

Roads are an essential ingredient of the infrastructure which is prerequisite for industrial growth. The industrialization cannot take place in the absence of infrastructural facilities. The infrastructural facilities include availability of developed roads, railways, power, water, airport, communication, transportation, education, industrial estate, banking facilities etc. Transport facilities are considered as an administrative necessary as well as public convenience. The linking of one place with another by road and train is very essential to provide good transport system.

Roads & Highway

Road Construction, Bridge Construction, Tunneling, Transport Infrastructure, Parking technology & Management. Gujarat is home to a huge transportation network comprising national highways, state highways, district highways, district roads, and rural roads .The state houses over 300 state highways spanning 19,761 km and 13 national highways spanning 3245 km. The total distance covered by the national highways in Gujarat is 2,016 miles or 3,245 km.

Railway Technology, Railway infrastructure, Railway materials

Shipping & Ports

Ship Yards, Ship Buildings, Ship Repairs, Port Equipments, Manufacturers & Technology Providers, Logistics Providers

Aviation

Airport Infrastructure, Airlines, Aircraft Machinery & Equipments, Supply Chains, Passenger Transportation, Material handling and technology, Transport & Warehouses

- Aviation Companies
- Urban Development
- Low cost construction Utilities
- Infrastructure Development Companies
- Government Projects & plans and many more..









Building Material & Construction Machinery Technologies

Construction equipment industry and the building material machinery industry is globally on the rise. Especially for construction equipment manufacturers, business has been much better. It is also true for all sub-sectors. namely earthmoving, civil engineering, tunneling, building and road construction machines. Gujarat offers great road connectivity and reliable power supply to its consumers. It has one of the highest per capita power consumption (1175 units, as compared to India's average of 592 units) and competitive commercial real estate rates in comparison to other states in India. Gujarat was amongst the first states in India to set-up an industrial park and is a leading State in harnessing wind energy. More importantly, this infrastructure has strong public policy support and is critical to the infrastructure needs of the country as a whole.

Focus Areas:-

Housing Urban and Infrastructure

• Housing Complexes and Apartments

- Villas, bunglows and Condominiums
- Commercial Complexes and IT Parks
- Government and Non Government Companies
- Turn key project development companies
- Financial Institutions Banks
- Multiplex and Superplex Promoters
- Architects & Project consultants
- Developers
- Builders
- Energy Efficient Housing technology
- Housing and urban Development organization from all states
- Government Schemes & Policies

Construction Machinery & Equipments

- Brick making Machinery
- Construction Vehicle
- Earthmoving Equipments
- Glass & ceramics Manufacturing
- Ready Mix Concrete
- Stone Cutting and Polishing Machinery
- Tower Cranes







Handloom & Handicrafts/Textile

Gujarat has a rich legacy of weaving and handicrafts, encompassing disciplines like—embroidery, tie-dye, block printing, beadwork, metalworking, woodcarving, lacquer work, pottery, marquetry, quilting, stone carving, etc. Here's bringing you the very best that the state has to offer.

Embroidery is the quintessential handicraft of Gujarat, a state identified with the colours of the heavily embroidered chaniya cholis worn by girls and women during festivals like Navratri. Several communities in different parts of the state do fine embroidery, beadwork or appliqué. From the wooden toy makers of Idar to the weavers of Surat, handicraft techniques have been passed down from father to son, mother to daughter. The skilled artisans across Gujarat are trying to conserve the ageold art forms of Rogan, Namda, Weft Ikat and Mashru from decline. These artisans and art forms need as much of love, respect and support as any popular art from across the country.

Gujarat has a large flourishing textile industry which contributes to the arts and crafts of India. The textiles have a large variety to offer to the end consumers. It mainly depends on factors

like varied raw materials, combination of yarns and effective use of traditional techniques. The enriched range of textiles owes to the people of different communities, castes, tribes and regions of the state, who have kept the age old tradition alive. It is also among the oldest industries in the state. Due to its perfect combination of skilled labor, vast variety of raw materials, seamless blend of yarns and the use of traditional techniques the state produces the finest range of textiles.

- Jute Products
- Khadi Products
- Bamboo Products
- Carpets and Rugs
- Toys and Miniature paintings
- Cane furniture
- Gift items and souvenirs
- Coir Industries
- SME-Units
- Eco friendly Products
- Women Entrepreneurs / Self help group
- Jute Products
- Silk
- Wool Utility and Products
- Handloom and Handicrafts









Tourism and Heritage

Gujarat is the 6th largest state in India, located in the western part of India with a coastline of 1600 km (longest in India). It is one of the most popular tourist regions in the country and was visited by 20 million domestic and international tourists in 2010-11. Gujarat offers scenic beauty from Great Rann of Kutch to the hills of Saputara. The Statue of Unity is a colossal statue of Indian politician and independence activist Sardar Vallabhbhai Patel, who was the first Deputy Prime Minister and Home minister of independent India and the chief adherent of Mahatma Gandhi during the non-violent Indian Independence movement. The Statue of Unity is located on the Sadhu Bet Island on the Narmada River between Satpura and the Vindhya mountain ranges. Gujarat is home to multitude devotional centres and temples with famous religious centers like Dwarka, Dakor, Ambaji, Palitana, Mahudi, Somnath, Girnar, Shamlaji,

Bahucharaji, Pavagadh Kabirvad, Sun Temple,Modhera, Akshardham(Gandhinagar), Ashapura mataji madh- Kutch, Swaminarayan Mandir - Bhuj, Narayan Sarovar, Tulsi Shyam, Sattadhar, Lojpur, Junagadh Buddhist Cave Groups etc. Gujarat is well known for its rich culture. Gujarat preserves the rich tradition of song, dance, drama as well. Handicrafts include Bandhani, patolas of Patan, kutchhi work, Khadi, bamboo craft, block printing, embroidery, woodcraft, metal crafts, pottery, namda, rogan painting, pithora and many more handicrafts.

- Tourism Boards
- In-Bound and Out-Bound Tourism
- Travel and Tow Operators
- Hotel and hospitality industry
- Resorts and Green Valley Projects









Renewable Energy

India is one of the countries with the largest production of energy from renewable sources. In the electricity sector, renewable energy account for 34.6% of the total installed power capacity. Large hydro installed capacity was 45.399 GW as of 30 June 2019, contributing to 13% of the total power capacity.

Wind power capacity was 36,686.82 MW as of 31 July 2019, making India the fourth-largest wind power producer in the world. The country has a strong manufacturing base in wind power with 20 manufactures of 53 different wind turbine models of international quality up to 3 MW in size with exports to Europe, the United States and other countries. Wind or Solar PV paired with four-hour battery storage systems is already cost-competitive, without subsidy, as a source of dispatchable generation compared with new coal and new gas plants in India.

Solar power in Gujarat is a fast developing industry given that the large state is mostly arid. Gujarat was one of the first states to develop solar generation capacity in India. A total of about 1100 MW were commissioned as of March 2016, with individual solar parks ranging from hundreds of kW to 40 MW capacity.

- Solar water heating/cooling systems and pumps
- Solar street and billboard lighting systems
- Manufacturers of wind electric generators, spare, components etc
- Bio- fuel dispensing and mixing equipments
- Bio mass heating and drying equipment manufacturer







Coals & Mines

Coal mining is the process of extracting coal from the ground. Coal is valued for its energy content and since the 1880s, has been widely used to generate electricity. Steel and Cement industries use coal as a fuel for extraction of iron from iron ore and for cement production. Coal mining has had many developments over the recent years, from the early days of men tunneling, digging, and manually extracting the coal on carts to large open cut and long wall mines. Mining at this scale requires the use of draglines, trucks, conveyors, hydraulic jacks and shearers. Gujarat Mineral Development Corporation Limited (GMDC) is a major minerals and lignite mining company of India. It is a state owned company. GMDC was founded in 1963. Its corporate headquarters is at Ahmedabad. The company has grown in strength since its inception over the years. GMDC has 2*125 MW Thermal Power Project at village Nani Chher, Taluka Lakhapat, Dist. Kutch in Gujarat State. It is getting Lignite from its own mines located at Panandhro, Mata no Madh and Umarsar. The water requirement

for the power plant is taken from the nearest Kori Creek through a 1.4 KM long sea water intake channel. The CFBC boiler is used here as it is environment friendly and controls sulphur in the flue gas emission. A 100 metre thick green belt surrounds the entire site. The state of the art technology DDCS has been used here. Mining is one of the core sectors that drives the growth of an economy, contributing to GDP. It acts as a catalyst for growth of other core industries like power, Steel, Cement, Aerospace, Defense, Oil, & Gas, Alluminium, Mettalurgical, Automotive, Auto Components, etc., which, in turn, are critical for overall development of the economy.

Display's Profile

- Coal Production, Conservation
- Geology
- Power, Energy
- Non-Conventional Energy Resources
- Mining Machinery
- Mining Organizations
- Technology & Automation Companies







SKILL

Skill Development

India is expected to be home to a skilled workforce of 500million by 2022. About 12 million people are expected to join the workforce every year. India has one of the youngest populations in the world, a trend that is expected to continue until 2040. This presents the country with a unique opportunity to complement what an ageing world needs the most and that is a large pool of productive workers. This talent pool our country has needs to be adequately skilled. Skills and knowledge are the driving forces of economic growth and social development for any country. The accelerated economic growth has increased the demand for skilled manpower, but that has increased the demand for skilled manpower in the country.

Skill India is an initiative of the Government of India which has been launched to empower the youth of the country with skill sets which make them more employable and more productive in their work environment. National Skill Mission is chaired by the Hon'ble Prime Minister Shri Narendra Modi himself. India is a country today with 65% of its youth in the working age group. If ever there is a way to reap these demographic advantages, it has to be through skill development of the youth so that

they add not only to their personal growth, but to the country's economic as well. Skill India offers courses across 40 sectors in the country which are aligned to the standards recognized by both, the industry and the government under the National Skill Qualification Framework. The courses help a person focus on practical delivery of work and help them enhance their technical expertise so that they are ready for day one of their job and companies don't have to invest into training them for their job profile.

Training Sector:-

- Agriculture
- Electronics
- Gems & Jewellery
- Iron & Steel
- Green Job
- Health Care & Life Science
- Retail
- Soft Skill
- Beauty and wellness
- Food Processing
- Business & Commerce
- FMCG

- ICT
- Electrical Sector
- Textile
- Travel









WOMEN EMPOWERMENT

There is no denying the fact that women in India have made a considerable progress in almost seven decades of Independence, but they still have to struggle against many handicaps and social evils in the maledominated society.

Swami Vivekananda, one of the greatest sons of India, quoted that "There is no chance for welfare of the world unless the condition of women is improved. It is not possible for a bird to fly on only one wing." Therefore, the inclusion of "Women Empowerment" as one of the prime goals in the eight Millennium Development Goals underscores the relevance of this fact. Thus, in order to achieve the status of a developed country. India needs to transform its colossal women force into an effective human resource and this is possible only through the empowerment of women.

WOMEN'S EMPOWERMENT in the truest sense of the word is largely the creation of an environment where women can claim and obtain their rightful, equal and open opportunity-based status as citizens, where they can take independent decisions in their personal capacities as well as become truly equals in society. The principles of gender equality are enshrined in India's Constitution which has granted equality to women and has also empowered the state to adopt measures of "positive discrimination" in favor of women.

- Education facilities for women
- Healthcare & nutrition
- Financial assessment
- Development of cooperative programmes
- Entrepreneurship programmes for rural women
- Family welfare schemes
- Government plans & policies and many more...









Social Justice

The main objective of Social Justice is to improve the quality of life of the general masses by providing basic amenities like shelter, food, medical care and entertainment opportunities and by encouraging productive and active ageing through providing support for capacity building of Government/ Non Governmental Organizations/ Panchayati Raj Institutions/ local bodies and the Community at large. Development and empowerment of scheduled castes (SCs), Scheduled Tribes(STs), Other Backward Classes(OBCs), minorities, disabled and other social groups in order to bring them at par with the rest of society is a commitment enshrined in the Constitution.

Effective implementation of the centrally sponsored scheme of Post-Matric Scholarship (PMS) to SC students involving 100 per cent financial assistance to states over and above their earlier committed liability has been accorded high priority during the Tenth Plan Period. The scholarships are awarded to all eligible SC students to pursue their education

beyond matriculation and in other professional courses based on a means test, and covers payment of tuition and compulsory fees besides maintenance allowance. There is a need to enhance the opportunities to SC & ST student to pursue higher studies especially M.Phil and Ph.D in view of the changing economic and labor market scenario demanding higher qualifications for senior placements/jobs.

- Grants to Minority Groups
- Policies related to Equality of women
- Government Schemes & Policies against Racism
- Development of sense of social sensitivity
- Connectedness and responsibility among members and surroundings
- Loans and provisions for farmers
- Relaxations for students in education and skill development sector







Entrepreneurship and Human Resource Development

India is the seventh largest country in the world. Our country is blessed with many natural resources. But all these resources cannot help our country unless they are tapped, handled and used in a planned way. This can be done only by the people. Man can develop the resources only when he is wise, healthy, educated and properly trained. Thus, the real resources of our country are its people. They are our human resources.

The quality of its people is more important than their number for the development and progress of the country. With improvement in the quality of our human resources, we can make better use of our natural resources. We must all work to improve our own lives and the lives of those around us.

School Education and Literacy is responsible for development of a human brain and movement towards higher living standards. Illiteracy is the biggest barrier in the development of our nation. Globalization of education and cultivation of higher standards for citizenship among the youth is the need of

the hour.

Higher & Secondary Education in India is engaged in bringing world-class opportunities of higher education and research to the country so that Indian students do not feel inferior on international platforms.

- Scholarships, Loans & Subsidies granted for Education
- Encouraging International Cooperation
- Workings with UNESCO, Foreign Governments and Universities
- Enhance the Educational Opportunities
- Recruitment & Employment
- National schemes for graduates & post graduates





Atomic Energy

India was one of the first countries to adopt nuclear power technology. Nuclear energy has to play an important role in India's energy scenario. Unlike renewable, nuclear sources can provide bulk energy in certain manner to the base load. Nuclear energy is a clean energy source and hence is very important to attain carbon free economy. It enhances energy independence and energy security especially with the potential use of domestically available thorium input use.

India has been making advances in the field of thorium-based fuels, working to design and develop a prototype for an atomic reactor using thorium and low-enriched uranium. The country has also recently re-initiated its involvement in the LENR research activities in addition to supporting work done in the fusion power area through the ITRE initiative. DAE is enhancing the share of nuclear power in the Power Sector by deployment of indigenous and other proven technologies. Building and operating of research reactors for the production of radioisotopes and deploying radiation technology applications in the field of

medicine, agriculture, industry and basic research. Their aim is to develop advanced technologies such as accelerators, lasers, supercomputers, robotics, area related to Fusion research, strategic materials and instrumentation and encouraging the transfer of technology to industry. DAE is carrying out and supporting basic research in nuclear energy and related frontier areas of science; interaction with universities and academic institutions.

- Radiological Safety
- Desalination Technologies
- Radio Isotopes and Radiation in Health Sector
- Industrial Applications
- Applications in Food and Agriculture
- Production of Radiation source of equipments
- Environmental Aspects Radiation and safety









Petroleum & Natural Gas

The oil and gas sector is among the eight core industries in India and plays a major role in influencing decision making for all the other important sections of the economy.

India's economic growth is closely related to energy demand; therefore the need for oil and gas is projected to grow more, thereby making the sector quite conducive for investment. In 2017, India retained its spot as the third largest energy consumer in the world with oil and gas accounting for 37 per cent of its total energy consumption. Annual oil consumption stood at 4.69million barrels per day (MBPD) and 52.40 billion cubic meters (bcm) gas. According to the International Energy Agency(IEA), India is expected to account for almost one-third of the global growth in energy demand of all major economies, on the back of continuous robust economic growth. Consequently, India's energy demand as a percentage of global energy demand of India is anticipated to grow faster than energy demand is expected to rise to 11 per cent in 2040 from 5.58 per cent in 2017. Gujarat Refinery is the Mother Industry of Vadodara and is catering to the increasing energy demand due to the fast-paced development and economic prosperity of the vibrant state of Gujarat. The Refinery has been playing a catalytic role in encouraging over 200 small and big industries over the course of five decades. Gujarat Refinery's flexibility to process various crude types allows it to meet stringent quality and environmental norms. The Refinery processes indigenous and imported crudes into LPG, petrol, diesel, ATF and other value added petroleum products. The green belts, spread across an area of 148 acres in and around the refinery speak volumes about its commitment towards environment.

- Petroleum Products Dealers and Distributors
- Oil Refining Companies
- Natural Gas Supply Systems
- Oil and Natural Gas Transportation equipments and tailors

