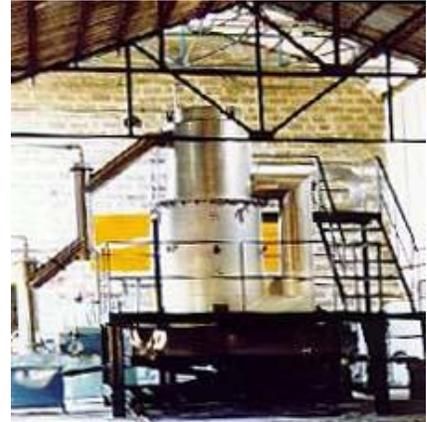


Decentralised Energy Systems (India) Private Limited (DESI)

DESI POWER

DESI Power is a collaboration between DASAG, India and TARA (Technology for Action and Rural Advancement) which offers at a turnkey system to supply electricity and energy services using renewable sources of energy. DESI, is a company which promotes decentralised Independent Rural Power Producers. It sets up independent Rural Power Producers (IRPPS) at the unit level, as joint ventures with local communities and private entrepreneurs. Its management and approach is similar to that of private sector power producers in the centralised sector.



DESI Power promotes packages, builds, operates and later transfers the plants to local ownership. Although the objectives of DESI Power have their origins in social, environmental and sustainable development concerns, its operations and financial structures are designed to be commercially viable so as to ensure scalability and long term viability. DESI power plants are based on the gasification of locally available biomass which is available on regular basis.

Technology

The electricity generation process involves the following major steps:

- Biomass collection
- Cutting and drying
- Gas formation and scrubbing
- Power production

Advantages of DESI power plants

Resource efficient

Conserve non-renewable energy resources (diesel) to the tune of more than 75%; new plants will offer 100% replacement of diesel.

Environment Friendly

Utilizes waste biomass to produce valuable electricity

Considerably lower emissions and less pollution if compared to coal fired power plants

Consistent in supply

Highly reliable source of electricity when compared to grid supply

Extremely useful for continuous industrial production processes which otherwise hampers the efficiency.

Technology profile

Cost efficient

Even at as low plant load factor as 40% and with high raw material cost, the cost of production per unit comes to Rs. 4.50 - Rs. 5.00, which is highly competitive with grid electricity price. The cost of generation is even lower with gas engines.

Encourage livelihood creation

Promotes job creation – work within the power plant, in new local micro-enterprises and small scale industries, which consumes the power from the gasifier plant.

Promote sustainable development

Local value addition to local resources will accelerates the village/small town development process, reduce migration to large cities and hence strengthen the local economy.

Business

DESI Power is building or has built more than 12 gasifier based power plants of varied capacities ranging from 20 Kwe to 1.2 MW. These are running efficiently in various part of the country. The two most determining factors for cost of production include: the cost of biomass fuel and the plant load factor achieved. It is observed that even with Plant Load Factor (PLF) lower than 40%, with high biomass cost and lower than optimal diesel replacement, the cost of electricity remains competitive to the cost of electricity per unit from the grid supply.

Market

In a country like India, it has a varied market with a wide range of investors, which mainly include:

- Large number of non-electrified and “theoretically electrified” villages (most of rural India)
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- Rural micro industries for local value addition
 - Agro processing
 - Building material (low cost housing)
 - Mechanical workshops
 - Cold storage
- Domestic energy services
 - Lighting
 - Water
 - Cooking (energy efficient stoves)
- Farmer
 - Irrigation Water
 - Agro-forestry
- Small scale industries