



# Energy Alternatives India

Project Profile



## About EAI

**Energy Alternatives India (EAI)** was formed in 2008 to provide Consulting, Research, Promotion and Marketing support to the fast growing Renewable Energy and Cleantech industry in India. Started by a team of professionals from IITs and IIMs having prior experience in the alternative energy industry, we have had the opportunity to work in most of the diverse Renewable energy sectors such as Algae bio-fuels and products, castor oil, Solar, Wind, Biomass, Waste-to-energy etc.

We also operate the country's largest renewable energy portal ( [www.eai.in](http://www.eai.in) ) and the solar energy portal ( [www.solarmango.com](http://www.solarmango.com) ). In addition, we run a popular renewable energy community the EAI Club ( [www.eai.in/club](http://www.eai.in/club) ) , and India's largest renewable energy newsletter, EAI Daily ( [www.eai.in/newsletter](http://www.eai.in/newsletter) ) .

## Consulting

EAI provides consulting assistance for all the major renewable energy sectors with a major focus on Solar (PV and thermal), Bio-energy, Wind, Energy Efficiency and Sustainable heating for industries.

We work for industrial and commercial companies, public and private utilities, governments, investors, developers, banks, financial institutions, private equity companies, venture capitalists and private entrepreneurs.

## Consulting / Research work related to Bio and Other Cleantech domains

Our team has extensive acquaintance with the entire spectrum of renewable energy and cleantech domains and has provided end-to-end services to clients looking for assistance in Bio and other Cleantech sectors. The EAI team has the expertise of developing and demonstrating successful business models for robust supply chain management for biomass power projects.

Our large network of technical contacts for the biomass and biofuels industry in India has assisted our clients get easier access to latest technological solutions.

EAI has done biomass and biofuels related projects for globally reputed companies & organizations such as Huber, General Electric, GSK, Bill & Melinda Gates Foundation, Pepsi Co., etc. Some of them are listed below:

S.No	Assignment	Client	Country
1.	<p><b>Biomass Supply Chain Optimization</b></p> <p>In their shift from the use of coal to biomass in their boilers used for heating applications, we assisted the client in</p> <ul style="list-style-type: none"> <li>Analysing their existing biomass vendors and suggesting new vendors we identified</li> </ul>	GlaxoSmithKline	Delhi, India

	<ul style="list-style-type: none"> <li>Analysing the current biomass feedstock and suggesting additional feedstock they could try</li> <li>Arriving at the optimal processing of the biomass briquettes for use in their current boilers and soon-to-be installed CHP boilers.</li> </ul>		
2.	<p><b>Research Report on Renewable Energy Investment Trends</b></p> <p>EAI analysed the investment trends in various renewable energy fields like biomass, wind, solar etc and presented a comprehensive report to World Bank</p>	World Bank	Assignment for India
3.	<p><b>Pan India Study on Biomass</b></p> <p>GE’s bio-energy division was interested in conducting a comprehensive study on the use of biomass gasification, and drivers and constraints for the same. EAI assisted the client by identifying technical constraints and drivers, as well as operational constraints and provided a comprehensive report on the state of biomass supply chain in key regions.</p>	GE (General Electric), Delhi	US Co., Assignment for India
4.	<p><b>Feasibility study - Waste To Energy for Indian conditions</b></p> <p>The Gates Foundation wished to undertake a comprehensive review of the technologies available and the exploration into logistical and revenue models for sustainable conversion of fecal waste (human waste that does not reach the sewers) into energy.</p> <p>EAI provided the complete support to the team from Seattle on the following</p> <ul style="list-style-type: none"> <li>Current situation and trends in fecal waste management in India</li> <li>Technology feasibility from a conceptual research – this is applicable for any region in the world</li> <li>Feasibility of adapting various technologies to Indian conditions</li> </ul>	Bill & Melinda Gates Foundation	US Co.,
5.	<p><b>Identifying Technologies to convert fruit waste to Energy</b></p> <ul style="list-style-type: none"> <li>Identification of companies that have developed novel processes or technologies along any point in the biomass-to-value process chain.</li> <li>Co-ordination of meetings between Pepsi team from US and these companies/ research organizations</li> </ul>	PEPSICO	US Co.,

6.	<p><b>Biomass Supply Chain Analysis</b></p> <p>The company was using natural gas for its process heating, and was exploring the use of biomass to replace natural gas. As there are supply chain concerns for biomass, EAI did a complete biomass supply chain feasibility study for Huber.</p>	JM Huber Corp	US Co., Assignment for Indian Plant at Bharuch, Gujarat
7.	<p><b>Technical Evaluation of Specialized Technologies in Bio Fuels</b></p> <p>EAI has a team that has specialty focus on industry research for second and third generation biofuels. This division, called Oilgae, is in fact considered a knowledge reader for the global algae fuels industry, and our web resource (<a href="http://www.oilgae.com">www.oilgae.com</a>) is the #1 intelligence resource for the global algae fuel industry.</p> <ul style="list-style-type: none"> <li>The Oilgae team assisted Lafarge (France) research division in developing a model to compute the net CO2 balance while producing biofuels from algae through the use of smokestack emissions.</li> </ul>	La Farge	France
8.	<p><b>International Study on Algae Bio Fuels</b></p> <ul style="list-style-type: none"> <li>Provided comprehensive assistance to Reliance top management while they were in the initial stages of explorations into algae-based biofuels.</li> <li>A 4-month study which helped Reliance to start a pilot division for algae division in India, as well as invest over \$100 million in a US-based algae fuels company, Algenol.</li> </ul>	Reliance Industries	India
9.	<p><b>Feasibility study and Project Report on Biomass Gasification Power Plant</b></p> <p>A complete feasibility study and detailed project report for a 2 MW biomass gasification power plant. It was a 3 month study that included both technical evaluation of the gasifier &amp; gas engine they were considering, as well as a thorough analysis of the feedstock availability in Bankura district, West Bengal.</p>	Green Concretex	West Bengal, India
10.	<p><b>Research and Data Support for Biomass availability in Tamil Nadu</b></p> <p>EAI has an ongoing relationship with TEDA (Tamil Nadu Energy Development Agency) and we support their bio-energy division on a continuous basis with regard to research and data support for biomass availability in Tamil Nadu.</p>	TEDA, Chennai	India

<p><b>11.</b></p>	<p><b>Exploring Potential of Distributed Green Power for Rural Communities</b></p> <ul style="list-style-type: none"> <li>Wanted EAI to help in their entry strategy into the renewable energy market by being an integral part of the strategy team.</li> <li>Study covered Economics of Renewable Energy, Economics of Hybrids, Sustainable Communities, Funding of Renewable Energy / Cleantech in India, VC/PE Perspectives, Companies investing directly or indirectly in Cleantech</li> </ul>	<p>Small scale entrepreneur</p>	<p>Karnataka, India</p>
-------------------	---	---------------------------------	-------------------------

## Partial List of Clients for Bio-energy Assignments

Following is the partial list of clients for our biomass power, heat and other bio-based assignments.

S.No	Name of the Company	Region for Which Research Undertaken	Domain
1	Saudi Aramco	Saudi Arabia	Third Generation Biofuels
2	National Algae Association	USA	Algae Fuels
3	Algae Biomass Organization	USA	Algae Fuels
4	Agracast de Mexico	Mexico	Bio- products from Castor Oil
5	BioFields	Mexico	Bio- products from Castor Oil
6	Gendoc	Korea	Bio- products from Castor Oil
7	Kaiima	Israel	Bio- products from Castor Oil
8	Rhodia Polymer	France	Bio- products from Castor Oil
9	BASF	Germany	Bio- products from Castor Oil & Jatropha Oil
10	Bayer	Germany	Bio- products from Castor Oil
11	DSM	India	Bio- products from Castor Oil

<b>12</b>	Eastman Chemical	USA	Bio- products from Castor Oil
-----------	------------------	-----	-------------------------------

## Partial List of Clients for assignments related to Solar

In the context of solar power plants and related domains, **a partial list of the projects** completed by EAI/Solar Mango is:

<b>Client</b>	<b>Project Brief</b>
<b>MINDA group, Delhi</b>	Renewable Energy Market Entry strategy and feasibility analyses of solar microgrids in rural areas
<b>Bosch, Bangalore</b>	A strategic analysis on India Rooftop OPEX model – Market research and intelligence
<b>ARCIL, Mumbai</b>	Due Diligence of acquiring a Solar Cell manufacturing company
<b>World Bank, Delhi</b>	We are an empanelled expert with World Bank for communication strategy for their solar PV programs in India
<b>United Energy Holdings, Australia</b>	Assistance in finding solar projects for Acquisition
<b>TEDA, State Govt of Tamil Nadu</b>	Assistance in framing Solar policy and conducting large solar energy industry events
<b>KPCL, State Govt of Karnataka</b>	KPCL is a buyer of our research report on solar; we also assisted them in financial analysis of ground mounted solar power plants
<b>NREL, US Dept of Energy</b>	Research assistance in the latest trends in solar and biofuels
<b>International Copper Association, Mumbai</b>	Study of potential for copper in the solar and wind energy sectors, especially in cables and windings
<b>Amway</b>	Feasibility study -Use of grid connected solar and other sustainable energy sources for their newly built manufacturing facility at Madurai, TN

<b>ReGenPowerTech</b>	Market entry strategy for India's leading wind turbine OEM into Solar Inverter market
<b>Garware Polyester</b>	Strategy for diversification & market entry strategy into solar PV backsheet segment
<b>iPLON, Germany</b>	Indian Market Entry Strategy for German Solar PV firm
<b>Sterlite Industries (Vedanta Group)</b>	Solar PV diversification strategy for this global metals and mining firm
<b>Sirwar Renewable Energy</b>	Turnkey Assistance for 2 MW Solar Power Plant in Karnataka
<b>Madhav Group , Mumbai</b>	Market Intelligence for Diversification into Off grid Solar Products
<b>Goyal group of companies</b>	Pre-Feasibility study for setting up a 100 MW project in Madhya Pradesh
<b>Tata Power</b>	Research study evaluating wave energy sources for generating power in India

## Publications

EAI has published many professional industry reports and whitepapers in the Bio-energy and other renewable energy domains. Our biotech team has also produced some of the globally acclaimed reports in the following sectors

- Biomass Gasification
- Algae biofuels
- Algae-based Non-fuel Bioproducts
- Algae-based Wastewater Management & Carbon Sequestration
- Comprehensive Jatropha Report
- Comprehensive Castor Oil Report

All our publications, whitepapers and reports in all the renewable energy domains can be found [here](#).

**Simply put:** There are few, if any companies, in India as good as EAI who can provide the specialized, high quality intelligence, market research support and business contacts for the bio-energy market.

*All the Best!*