

CASE STUDY

The succeeding pages present for your examination and discussion an actual, on-going initiative on green jobs. A facilitator will be provided to your group to direct the discussions and assist you in completing the assigned tasks within the time provided.

Instructions:

1. Read the case study provided your group. (15 min)
2. Discuss among yourselves, using as guide the questions indicated below. The facilitator may also pose some questions to probe further or elaborate certain points. (30 min)
3. Write your responses to these questions on the flip charts provided. (5 min)
4. Choose a member of your group to present your outputs in plenary. Each group is given a maximum of 10 minutes to give a brief description of their case, then present their discussion results.

Total time: 1 hour 45 min

Guide Questions:

1. What is the social/economic (labour) challenge or issue in the case?
2. What environmental factors greatly affect/are affected by this challenge/issue?
3. What are the probable impacts of this challenge/issue on specific stakeholders?
4. How are these impacts responded to?
5. How could these responses be enhanced or strengthened to ultimately lead towards green jobs?

This case study results from the on-going multi-country research project 'Skills for green jobs' implemented jointly by ILO and Cedefop.

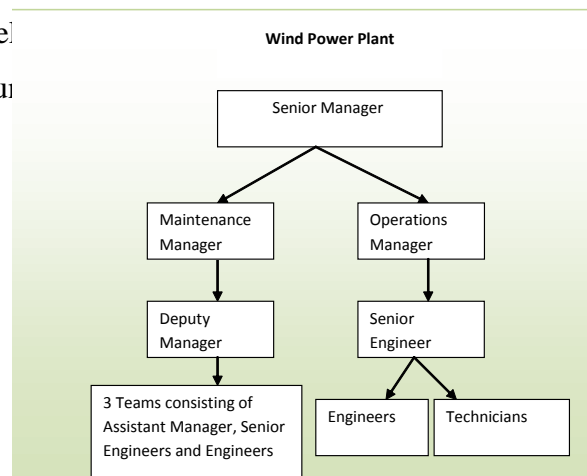
The greening of existing jobs is an outcome of the implementation of energy efficient green technologies. This case study refers to two projects in the energy sector, i.e.

1. Biomass Based Power Plant: This project includes the construction, installation and operation of a 6MW grid connected and biomass based power plant (rice husk). The power plant is intended to export the generated electricity to the connected local grid, part of the Eastern regional grid of India.

2. Wind Power plant: The project activity is an initiative from the *Transport Corporation of India Limited* for clean energy generation. It intends to install 4 state-of-art wind electricity generators (1.25 MW each, amounting to 5MW in total) at two locations, namely village Baramsar and Soda Mada in Rajasthan. The generated electricity is sold to the state electricity utility through a special power purchase agreement.

These technological innovations convert the traditional coal-based power generation to renewable biomass or wind based energy generation systems, contributing to climate change mitigation and needing a re-skilling of the existing workforce.

The Wind Power Plant project demonstrates the success of large sized wind turbines, which feed the generated power into the nearest substation, thus increasing energy availability and improving quality of power under the service area of the substation with almost zero carbon emissions. Similarly, the Biomass Based Power Plant inculcates renewable energy generation technology in a coal grid which leads to the achievement of renewable energy targets set by the government for distribution companies. About 60 workplaces have been created through this “greening” operation. The employees are all male, aged 25 to 55, and of various educational level while others are without any formal education and u



Sl. No.	Designation	Number
1	Managers (Engineer)	5
2	Junior engineers	12
3	Chemists	2
4	Accountants	1
5	Stores personnel	2
6	Office staff	3
7	Unskilled workers	17
8	Contract workers	10
9	Security guards	5
10	Transporters	2

Figure 1: Break-up of the manpower in the two units studied in the case study

Skill gaps and retraining needs

Biomass plant: Skills needed to operate a biomass based power plant were non-existent within the manufacturer's workforce. Since the use of biomass is not significant in the region, rice husk was dumped as waste and the methane generated was lost. Several skill gaps have been identified, among others:

- understanding of potential usage of rice husk as biomass (rice producing community);
- operating boilers and turbines; and
- use and maintenance of diesel model trucks specifically designed for transporting high volumes of rice husk - transporters.

Wind energy plant: The skill gaps in the wind project are related to:

- knowledge on intelligent control required for maximizing yield, unique micro-pitching control for fine pitching with 0.1° resolution to extract every possible unit of power;
- quality control procedure: grid interactive wind projects require rigorous QA/QC (quality assessment and quality control) procedures in terms of operation and maintenance and also from the perspective of monitoring and verification of data quality as per the clean development mechanism guidelines;
- working at height may be required during construction activities as well as during routine maintenance, including the assembly of wind tower components and general maintenance activities during operations; and
- proper disposal of hazardous waste-like lube oil, PCB and more.

For both the initiatives, the training needs were identified by the management and the project team along with the development of the project activity. A management system was put in place, according specific responsibilities to some staff members in charge of both the implementation, operation and monitoring of the projects and training schedules to ensure proper upgrading of required competencies.

Structured training plans had the aim to close identified skill gaps and to re-skill the workforce in both the projects.

The skill gaps were identified in the existing workforce pertaining to the skills required for implementation, operation and maintenance of the technologies. The training had the sole objective to close identified skills gaps of the workforce.

Policy Response

Specific training policies do not exist to date. However both the Bureau Of Energy Efficiency and the National Enhanced Energy Efficiency Mission under the National Action Plan on Climate Change have specified the training requirement for capacity building in the energy sector. IFC and other guidelines are used to formulate training on EHS wherever required. The financial institutions and CDM validators require the project proponents to demonstrate due diligence with respect to EHS and project performance and adequate documentation on training is maintained at the project site.