Industry-Wise Opportunities

Carbon Services assists you in analyzing your projects by providing a list of opportunities for different industries. This helps in acquiring carbon benefits and enables you to contribute to environment protection.

Sectors Covered

- Cement Industry
- Sugar Industry
- Textile Industry
- Paper and Pulp Industry
- Power Sector
- Oil and Petrochemical Industry
- Iron Steel Industry
- Transport Industry

Cement Industry

- Waste heat recovery power generation
- Use of alternative fuels such as MSW, RDF, biomass, tires, etc in cement kilns
- Energy efficiency improvements
- Use of blends in cement production: Fly ash, blast iron slag, non-carbonated calcium sources in the raw mix for cement processing, etc.

Sugar Industry

- High pressure boilers and cogeneration: Bagasse based cogeneration in sugar industries with high pressure boilers
- Waste water treatment and biogas recovery
- Biogas power generation

Textile Industry

- Energy efficiency improvements
- Fossil fuel switch from high carbon intensive fuel to low carbon intensive fuel (e.g. from HFO/Diesel to Gas)
- Use of alternative fuels (Rice husk, cotton waste, etc)

Paper and Pulp Industry

- Gas turbine cogeneration with Waste Heat Recovery for boiler replacement
- Energy efficiency improvements
- Methane avoidance by waste water treatment
- Use of biomass waste as feedstock
- Use of alternative fuels

Power Sector

- Wind Power
- Hydro Power
- Solar Power
- Biomass based cogeneration: Biomass based (agriculture residue such as rice husk) power generation, and replacement of electrical power being imported from national electricity grid, and dispatch of surplus power supply to the grid.
- Biogas Power generation
- Conversion from open cycle to combined cycle power plant
- Rehabilitation of boilers to increase efficiency of steam generation
- Fossil fuel switch from high carbon intensive fuel to low carbon intensive fuel

Renewable Power Projects

Increasing efficiency in the bagasse (a renewable fuel source, residue from sugarcane processing) cogeneration facility avoiding that fossil-fuelled thermal plants dispatch the same amount of energy to that grid.

Oil and Petrochemical Industry

Energy efficiency improvements
Recovery and utilization of gas from oil wells that would have flared
Leak reduction from Natural Gas pipeline and compressors

Iron Steel Industry

Energy Efficiency improvement of thermal and electrical energy systems.
Waste heat recovery power generation
Use of alternative fuels

Transport Industry

Energy efficiency improvements
Mass transit substitution for private transport
Bus Rapid Transport System (BRTS)
Fossil fuel switch
Implementation of cleaner engine technologies
Traffic flow controls

Renewable Energy Areas

Energy Efficiency
Methane Recovery
Cogeneration
Carbon Sequestration
Forestry and Land Use Change
Waste to Energy
Special Gases

Energy Efficiency

Improvements in efficiency, modernisation, new capital investments on the generation side (power, heat, etc), altering the power station infrastructure to reduce distribution losses, modifying processes on the demand side to reduce the amount of electricity required in industry, and changes in production processes in industry qualify as energy efficiency initiates.

While Capacity Utilisation & Fine Tuning of existing resources can result in energy savings of up to 15%, Technology upgrades to a facility can result in Energy savings up to 30-40%.

Potential sectors where industries can avail CDM benefits are:

Textile
Fertilizers
Cement
Pulp & Paper
Sugar
Chemicals
Railways
Iron & Steel

Transport Sector

Methane Recovery

In landfills, Methane (CH4) is generated by the anaerobic decomposition of waste in land mines. In coal mines, it is generated as a by-product of the coal mining process. If untreated, the emitted methane contributes severely to global climate change. Since methane is a powerful greenhouse gas, its collection and combustion can lead to the creation of 'carbon credits'.

Owners or operators of sites that produce methane (landfills, sewer gas, coal mines, and associated gases from petroleum and natural gas production) have the potential liability to treat this gas emission. Carbon Services ensures that this environmental responsibility is taken care, and turns it into a profitable financial project. We can help design and implement efficient methane extraction systems, emission control devices, thermal destruction systems, and energy recovery technologies for our clients, that lead to CDM emission credits.

Some of the various options, other than gas flaring, available for making productive use of methane gas include electricity generation, which can be fed to the national grid or to private customers. Methane can also be used for in vehicles after scrubbing, purification, and compression. Alternative use of the gas can be explored including in boilers or as a replacement for fuels used in certain industries.

Cogeneration

By increasing the overall efficiency of fuel conversion to electricity and heat used by process industries, cogeneration plants lead to a reduction in the primary energy consumption of a plant, lower emissions to the atmosphere, and reduce the production costs of the plant.

Cogeneration systems based on biomass (rice-husk or other agricultural residue) that replace oil fired boilers for process steam and internal power generation, or partial feeding to the national grid, qualify as CDM projects. Industrial fuel switching, i.e. substitution of carbon-rich fuels by lower-carbon energy sources: coal by oil, oil by gas, and gas by biomass, are good examples of cogeneration projects.

Carbon Services provides industries such as paper, sugar, chemical processing industries, metallurgy and oil refining with cogeneration CDM project development services. We evaluate the minimum energy requirements of a facility, identify potential cost and savings that can result from additional technology and machinery, and conduct the financial and technical feasibility of the project to derive the benefits from lower energy costs, as well as the CDM revenue stream.

Nitrous Oxide Abatement

Nitrous Oxide is a byproduct from the production of nitric acid, which has a global warming potential of 310, compared with 1 for carbon dioxide. Carbon Services and its international partners are developing nitrous oxide reduction projects, utilizing cutting edge catalyst technology, which converts nitrous oxide into its constituents (nitrogen and oxygen). The Fertilizer industry classifies as an ideal Nitrous Oxide CDM Project.

Carbon Sequestration

Activities in this sector can provide a relatively cost-effective way of combating climate change, either by increasing removals by sinks of greenhouse gases from the atmosphere (e.g. by planting trees or managing forests), or by reducing emissions (e.g. by curbing deforestation).

Forestry and Land Use Change

The development of policy on SINKS cover emissions and removals of greenhouse gases resulting from land use, land-use change and forestry. Carbon Services participates in projects that increasing removal of GHG from the atmosphere, by planting trees or managing forests, or by reducing emissions , i.e. by curbing deforestation.

And through these methods, we can Offset Carbon Emission in a better way.

Individuals and businesses are taking keen interest in carbon offsetting, giving them opportunities to participate in global warming solutions.

Waste to Energy

Municipal Solid Wastes (MSW) are currently dumped in the open, in an unmanaged manner. Projects that utilize this waste for energy generation, thereby replacing and reducing the amount of fossil fuels used in Pakistan's thermal power plants, can qualify for CDM projects.

Qualify for CDM projects & Special Gases

Carbon Services helps clients in the avoidance of N2O, PFC, HFC, and SF6, and the subsequent creation of CDM projects, monitoring of these projects, and the trading of CERs resulting from their implementation.