Glossary

**Additionality** - any improvements that would not have otherwise occurred without the existence of a project. In the context of a joint implementation or a clean development mechanisms project, any reduced emissions of greenhouse gas or increased carbon sequestration that occurs beyond the baseline projections are additionalities.

**Annex 1 Parties** – industrialized countries and economies in transition that are listed in Annex 1 of the United Nations framework convention of climate change (UNFCCC). Their responsibilities under the UNFCCC included a non-binding commitment to return their greenhouse gas emissions to 1990 levels by the year 2000 as per article 4.2(a) and (b) of the convention.

**Annex B parties** – industrialized countries and economies in transition that are listed in Annex B of the Kyoto Protocol. Their responsibilities under the Kyoto Protocol would include legally binding national emissions ceilings during the period 2008-12 as per Article 3 of the protocol. The ceilings for Annex B parties range from an 8 percent decrease to a 10 percent increase relative to 1990 levels.

**Anthropogenic** - Directly or indirectly related to (or caused by) human influence on the nature (for example, anthropogenic emissions).

**Assigned Amounts** – Allowed greenhouse gas emissions based on the emissions reductions for Annex B countries in the Kyoto Protocol, relative to 1990 baseline emissions.

**Auction** – A sales method whereby the items are sold to the highest bidder. In a domestic emissions trading regime, permits or allowances for emitting greenhouse gases could be allocated by an auction.

**Banking** – saving emissions permits or certified emissions reduction units for future use.

**Bubble** – A collection of emission sources that are required to meet a single overall emission limit, rather than having separate limits for each source. Can apply to countries as well as facilities.

**Cap- and -Trade Policy** – A system of emissions control in which a target level of aggregate emissions is distributed among sources, and these sources can achieve more or less control by selling or buying emission permits from other sources.

**Carbon Sequestration** - The collection or absorption of carbon in sinks such as oceans, forests, or soils that reduce the total amount of carbon in the atmosphere.

**Carbon Sink** - Any process, activity, or mechanism that removes carbon carbon from the atmosphere.
Carbon Taxes - Surcharges on the carbon content of oil, coal, and gas meant to discourage the use of fossil fuels and reduce carbon dioxide emissions. Can apply to other greenhouse gases based on their global warming potentials.

Certified Emission Reductions (CERs) (or certified emission reduction units) – Verified and authenticated units of greenhouse gas reductions from abatement or carbon sequestration projects that are certified by Clean Development Mechanism.

Clean Development Mechanism (CDM) – A modified version of joint implementation that was included in the Kyoto Protocol for project-based activities in developing countries. The CDM was established to help developing countries achieve sustainable development and help Annex 1 parties meet their obligations for emissions limitations and reductions.

Commitment Period- a range of years within which parties to the Kyoto Protocol are required to meet their greenhouse gas emission reduction target, which is averaged over the years of the commitment period. The first commitment period will be 2008-12.

Conference of Parties (COP) – The supreme body of the UNFCCC, comprising more than 170 nations that have ratified the convention. Its role is to promote and review the implementation of the UNFCCC. It will periodically review existing, commitments in the light of convention’s objectives, new scientific findings, and the effectiveness of national climate change programs. The first COP session was held in Berlin, Germany, in 1995, and the parties have continued to meet annually.

Countries With Economies In Transition- Countries that undergoing the transition to a market economy but also are classified with the European union, Japan and united states as Annex 1 parties to the convention (the Czech Republic, Hungary,, Poland, and others) face smaller reductions.

Developing Countries- Countries that are in the process of becoming industrialized and have limited resources (such as China and India) have no formal binding targets but have the option to set voluntary reduction targets.

Distortionary Taxes – Taxes that reduce the economic efficiency of production or consumption decisions. In practice, all taxes cause economic distortions; income taxes reduce overall economic activity, and specific commodity taxes inefficiently shift input or purchasing decisions.

Downstream- In the U.S. fossil fuel economy, it is commonly interpreted to be industrial boilers, electric utilities, and other major energy users but also applies, in theory, to all consumers of gasoline, coal, electricity, and other fuels.

Emission Trading – An economic incentive-based alternative to command-and-control regulation. In an emissions trading program, sources of a particular pollutant, are given permits to release a specified volume of the pollutant. The government issues only a
limited number of permits consistent with the desired level of emissions. The owners of the permits may keep them and release the pollutants, or reduce their emissions and sell the permits. The facts that the permits have value as an item to be sold or traded gives the owner an incentive to reduce emissions.

**EU Bubble** - The policy and reallocation of the assigned amounts of individual European Union members.

**Flexibility Mechanisms** - As established by the Kyoto Protocol, methods that seek to increase options and thereby reduce the costs of reducing emissions. The three primary mechanisms contained in the protocol are clean development mechanism, emissions trading, and joint implementation.

**Fossil Fuels** – Nonrenewable energy sources that include coal, petroleum products, and natural gas.

**Greenhouse Effect** - The progressive, gradual warming of earth’s atmospheric temperature caused by the insulating effect of carbon dioxide and other greenhouse gases that have proportionately increased in the atmosphere. This effect disturbs the way the Earth's climate maintains the balance between incoming and outgoing energy by allowing short-wave radiation from the sun to penetrate through to warm the Earth but preventing the resulting long-wave radiation from escaping back into the atmosphere.

**Greenhouse gases (GHGs)** – Gaseous constituents of the atmosphere, both natural and anthropogenic, that act to retain heat energy from the sun. GHGs include the common gases of carbon dioxide. Water vapour, and methane as well as rarer gases such as chlorofluorocarbons (CFCs). The increase in greenhouse gases in the atmosphere, which contributes to global warming, is result of the burning of fossil fuels, the emission of pollutants into the atmosphere, and deforestation.

**Hot Air** - In recent climate change negotiations, surplus assigned amounts from unintentional reductions in emissions of greenhouse gases (as opposed to reductions that resulted from intentional efforts), such as those that followed the economic collapse of the former Soviet Union.

**Joint Implementation** – An arrangement in which industrialized countries meet their obligations for reducing greenhouse gas emissions by receiving credits for investing in emissions reductions in developing countries.

**Kyoto Protocol**- An international agreement among 159 nations that attended the third Conference of Parties (COP-3) of the UNFCCC held in 1997 in Kyoto Japan.

**Nitrogen Oxides (NOx)** – often mentioned in discussions of nitrogen-based air pollution as a reference to both nitric oxide (NO) and nitrogen dioxide (NO2). In addition to particulate matter and sulfur dioxide, NOx is one of the major local and regional
pollutants related to fossil energy combustion. It can transform to nitrates (a harmful fine particulate) in the atmosphere.

**Organization For Economic Co-Operation And Development (OECD)** - An international organization whose member countries include Australia, Austria, Belgium, Canada, the Czech Republic, Denmark, Finland, Ireland, Italy, Korea, Japan, Luxembourg, Mexico, the Netherlands, New Zealand, Norway, Poland, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

**Ozone** - A form of ground-level air pollution that is produced when nitrogen oxides and hydrocarbons react in sunlight. It is not to confused with stratospheric ozone, which is found 9-18 miles high in Earth’s atmosphere and protects people from harmful solar radiation. Ground-level ozone pollution is a problem mainly during hot summer days.

**Particulate Matter** - A form of air pollution that includes soot, dust, and aerosols. It has readily apparent effects on visibility and exposed surfaces. Particulate matter can create or intensify breathing problems and hear problems and can lead to premature death.

**Renewable Resources** - Energy sources that is not exhaustible. Sources of renewable energy include water, wind, the sun (solar energy), the Earth (geothermal energy), and some combustible materials (for example, landfill gas, biomass, and municipal solid waste).

**Revenue** - Raising instruments- policies that raise funds as goal of regulation. In environmental policy, revenue- raising instruments include emissions taxes, which are levied against producers of pollution, and auctioned trade-able emissions permits, which can be bought or sold by coal- burning electric utilities and other industries.

**Sink** - Any process, activity or mechanisms that remove a greenhouse gas from the atmosphere. Sinks often refer to the absorption of atmospheric carbon by forest.

**Source** - Any process, activity or mechanism that contributes a greenhouse gas to the atmosphere; the opposite of a sink.

**Stock** - A cumulative amount or volume of something durable or persistent, as in the atmospheric stock of carbon or the capital stock of the electricity sector.

**Sulfur dioxide (SO₂)** - a gaseous form of air pollution. SO₂ is by product of the combustion of fuels that contain sulfur and is most prevalent in combustion of coal.

**Supplementarity** - In the context of the Kyoto Protocol limits on use of the flexibility mechanisms such as emissions trading to lower greenhouse gas mitigation costs, in order to increase the force of domestic energy and other policies for greenhouse gas reduction.

**Sustainable Development** - A broad concept referring to the need to balance the protection of the interest of future generations, including their interests in a safe and
healthy environment. As expressed by the 1987 United Nations world commission on environment and development (the Brundtland Commission), sustainable development “meets the needs of the present without compromising the ability of future generations to meet their needs.”

**Tradeable Emissions Permits** - An environmental regulatory scheme in which firms emitting the pollutant to be regulated are given permits to release a specified volume of the pollutant. The government issues only a limited number of permits consistent with the desired level of emissions. The owners of the permits may keep the permits and release the pollutants, or reduce their emissions and sell the permits. The fact that the permits have value as an item to be sold gives owners an incentives to reduce their emissions.
Upstream – in the U.S. fossil fuel economy, it is commonly interpreted too mean the input to oil refineries, coal processing plants, and natural gas pipelines.