

# **Low Carbon Policies: Formulation and Implementation Issues**

## **Concept Note**

Unprecedented and devastating floods in different parts of the world including India have once again drawn attention to climate change issues. These floods nearly submerged equally devastating news – carbon dioxide (CO<sub>2</sub>) levels in the atmosphere reached 400 ppm. To limit increase in temperature to 2 degrees Celsius it was understood that CO<sub>2</sub> emissions should be limited to 400 ppm. With CO<sub>2</sub> already crossing 400 ppm we have entered the danger zone. Increasing carbon emissions and resultant global warming are leading to dangerous ecological imbalances. It is time for all countries including India to take effective steps to bring down carbon emissions.

Though India's per capita greenhouse gas (GHG) emissions are only about 25% of the global average, its contribution to cumulative emissions between 1970 and 2009 is less than 4% compared to 14% of China and 24% of USA, its per capita electricity consumption is less than 50% of China and 10% of USA, and more than 40% of the population do not have access to electricity it should not shirk from its responsibility to bring down GHG emissions. India stands third after USA and China in country wise GHG emissions.

People on the margins will be worst hit due to climate change. India houses largest concentration of poor in the world. 75% of India's population can be considered poor. Government of India has a responsibility to see that these vulnerable people are not exposed to vicissitudes of climate change. As many poor and developing countries in the world look to it as a thought leader India has to take initiatives in this regard. Though Prime Minister of India had offered to reduce carbon emissions by 20-25% of 2005 levels by 2020 the steps taken so far are not inspiring.

In evolving steps to limit GHG emissions close attention shall be paid to electricity sector. In India electricity sector accounted for 38% of GHG emissions and 51% of CO<sub>2</sub> emissions. It is higher than all other sectors. Between 1994 and 2007 GHG emissions by the electricity sector increased by 5.6% annually, next only to cement industry.

The Government of India (GoI) under National Action Plan on Climate Change (NAPCC) has initiated some steps to address issues related to climate change. These include mission for promotion of solar energy (Jawaharlal Nehru National Solar Mission) and another mission meant for promotion of energy efficiency (National Mission on Enhanced Energy Efficiency). It is important to assess different components of these missions.

The World Resources Institute (WRI) in association with its partners has designed a 'Policy Implementation Diagnostic Framework' tool kit to support an in-depth assessment of the institutional factors on which effective climate policy implementation depends. It aims to identify bottlenecks in the implementation of climate policy and ways to strengthen implementation process and enhance policy effectiveness. The Diagnostic Tool is organized around four key 'functions' that are essential for policy implementation and five 'principles' of good governance.

The four functions of policy implementation to be examined include administration, finance, compliance and enforcement, and monitoring and reporting. The five principles of good governance to be explored as part of the Diagnostic Tool include roles and responsibilities, institutional capacity, coordination, stakeholder engagement, and transparency.

The above Diagnostic Tool is used by the People's Monitoring Group on Electricity Regulation/Chetana Society to assess implementation of low carbon policies in electricity sector in Andhra Pradesh. While assessing the interventions are divided in to supply side and demand side interventions. One way is to reduce power generation from GHG emitting conventional plants and attempt to fill the gap with power from renewable sources of power like wind and solar. These can be described as supply side interventions. Another way is to reduce electricity consumption through energy conservation and energy efficiency. These can be described as demand side interventions. Electricity generation capacity addition, wind energy policy and solar energy policy are examined under supply side interventions. DSM in agriculture and industrial sectors is examined under demand side interventions.

The People's Monitoring Group on Electricity Regulation/Chetana Society wish to share its experiences, insights and findings in the implementation of low carbon policies in power sector in Andhra Pradesh with stakeholders in different parts of the country. The aim of the workshop is to introduce 'Policy Implementation Diagnostic Framework' tool kit and share experiences and findings in using the tool kit.

Participants in the workshops will include representatives of CSOs, licensees and other service providers in the sector, regulatory bodies, Energy Development Agencies vested with the responsibility of promotion of both renewable energy sources and energy efficiency, and related government departments.