



Expert Workshop on Carbon Emission Management: Upstream & Downstream Best Practices and Opportunities

on October 29-30, 2015

at The Lalit Hotel, New Delhi

Day-I

October 29, 2015



Giving details of the various initiatives launched by India to reduce carbon emissions the Hon'ble Union Minister of State (I/C) for Petroleum & Natural Gas, Mr. Dharmendra Pradhan assured the audience that the Indian oil companies would play a pioneering role in reducing the carbon emissions in the entire value chain and contribute towards making the world cleaner and greener. He was delivering the inaugural address at the Expert Workshop organised by the Petroleum Federation of India in association with the World Petroleum Council on 'Carbon Emission Management: Upstream & Downstream Best Practices and Opportunities' at New Delhi on October 29, 2015. Pointing out that the most adversely affected by climate change are the poor people of developing countries like India he mentioned that this is why our Prime Minister Mr. Narendra Modi mentioned last month that

the discourse must shift focus from 'climate change' to 'climate justice'.

India, Mr. Pradhan said is a fast growing economy and has voluntarily accepted responsibilities towards carbon emission management. A number of initiatives have been taken during the past 1 ½ years which will directly affect and reduce carbon emissions. Diesel price deregulation, progressively improving Auto Fuel specification for both, petrol and diesel are all steps towards reduction in carbon emissions. The Director Benefit Transfer scheme for domestic LPG cooking gas subsidy has been recognised as the largest such scheme in the world by the Guinness Book of World Records. To provide LPG connections to rural households and relieve them from cooking with firewood or biomass the reach of LPG will be extended to 75% of the households



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over the next four years. Energy efficiency standards have also been introduced for not only consumer products but also industries. The smart cities mission which will cover 100 cities over a five-year duration would also reduce carbon dioxide emissions substantially, he added.

In its Intended Nationally Determined Contribution, India has pledged to improve the carbon emission intensity of its GDP by 33 to 35% by 2030 from 2005 level and to create an additional carbon sink of 2.5 to 3 billion



tonnes of carbon dioxide equivalent through additional forest and tree cover by 2030, said Mr. Dharmendra Pradhan.

Earlier, Mr. B. Ashok, Chairman, IndianOil & Chairman, PetroFed sharply brought out in his address the fact that the global oil & gas industry was a significant contributor to GHG emissions. The flaring of gas and its production value chain also contributed to methane emissions. It was important, therefore, to not only adopt energy efficient technologies and processes but consider the impacts of climate change as a part of

project conceptualization. What is needed, he pointed out is a change in mind set. Energy conservation and energy efficiency should not be looked at only in terms of saving oil or gas but also in terms of reduction in GHG emissions. Even the Swachh Bharat Mission of the Prime Minister will translate into not merely cleanliness but also reduction in GHG emissions.

The Director, General, World Petroleum Council, Dr. Pierce Riemer discussed the problem of carbon emissions in the global context and



the need for energy efficiency and other steps required to be taken to ameliorate the conditions. He pointed out that the world will need an extra six million barrels per day by next year and that to reduce energy use we need to have more efficient end-use, carbon capture and alternate energy sources besides attempting to eliminate emissions at the local level.

Ms. Anita Marangoly George, Senior Director, Energy Extractive Industries Practice, World Bank Group during her theme address said that 1.1 billion people in the world don't have access to energy and 2.9 billion are without access to efficient cooking fuels. There are 1.5 billion people who do not have access to reliable energy. The oil & gas industry, she said needs to make a dent these areas. Globally 560 billion dollars are spent on oil subsidies whereas 80% of the subsidies go to the top 40%. She rooted for zero routine flaring by 2030. This mission was launched by the World Bank in April this year. To put in perspective, she said, 140 billion cubic metres of gas is flared every day. The oil companies, she said, should pledge to have zero flaring in new oil fields.

Earlier, Dr. Jozsef Toth, President, World Petroleum Council complimented the Petroleum Federation of India and the Indian National Committee for hosting the meetings of the WPC and the organization of this excellent workshop.

Dr. R. K. Malhotra, Director General, PetroFed in his welcome address gave a broad but comprehensive picture of the issues involved in





mind are being able to measure in order to manage; management support; assessment tools and incentivisation.

While talking of technology in upstream carbon emission management Dr. D. V. Swaminathan, Chief Engineer Production, Oil & Natural Gas Corporation Limited stressed on sustainable water management, sustainability reporting with third party validation and taking care of carbon footprint while conceptualizing and executing projects. Dr. Harikrushna Patnaik, General Manager (Environment), Cairn India Limited presented a case study on reduction of methane emissions besides gas and vapour recovery which could yield substantial revenue generation. In another case study presentation Dr. B. N. Sahoo, Chief Engineer (Safety & Environment), Oil India Limited gave examples of carbon mapping, replacement of old and inefficient equipment, use of solar gen-sets and bio-remediation of land with in-situ bacteria.

carbon emissions, its management and issues of energy efficiency besides renewable energy.

A vote of thanks was proposed after the inaugural session by Mr. Y. Sahai, Director (Communication & Coordination), PetroFed who particularly highlighted the guidance of the Ministry of Petroleum & Natural Gas and in particular the contribution of Mr. U.P. Singh, Additional Secretary (E) and Mr. Prashant Lokhande, Director (E), Ministry of Petroleum & Natural Gas.

Chairing Session-I Mr. D. K. Sarraf, Chairman & Managing Director, Oil & Natural Gas Corporation Limited commented on the role of the



In the last session of the day chaired by Dr. Pierce Riemer and Mr. Prabh Das, Managing Director & CEO, HPCL-Mittal Energy Limited there were five speakers. Dr. Riemer re-iterated the importance of GHG emission management in downstream oil & gas industry. Mr. Prabh Das elaborated on the technical issues and introduced the speakers. Presentations were made by Mr. Shyama Sadhan Maji, Head (Operations), Essar Oil Limited with particular emphasis on their refinery which is the 2nd largest in the country. Mr. K. K. Acharya, Head (CTS/Centre of Excellence Refining), Reliance Industries Limited touched on some of the latest technologies in the area. Mr. Prasad Panicker, Executive Director, Kochi Refinery, Bharat Petroleum Corporation Limited elaborated on the latest technologies being adopted while undertaking a refinery expansion. Ms. Vartika Shukla, General Manager (Process & R&D), Engineers India Limited spoke on carbon emission reduction through energy audit. Dr. S. K. Majumdar, General Manager (IL & Tribology), IndianOil presented a comprehensive case study on the subject.

E&P sector in GHG emissions and carbon management. Dr. Ajay Mathur, Director General, Bureau of Energy Efficiency during his keynote address on 'GHG Emission Management Strategy 2030' highlighted the countries Intended Nationally Determined Contribution. He stressed on the importance of energy intensity reduction, output efficiency and emission management. The four issues to be kept in



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0930-1200	Session-III Session Chairs: 1) Mr. U. P. Singh, Chairman & Managing Director, Oil India Limited 2) Mr. N. K. Verma, Managing Director, ONGC Videsh Limited	
0940-1020	Keynote Address on Upstream GHG Emissions: Lessons Learned from the US Regulatory Landscape	Ms. Nancy Meyer, Associate Director, Climate Strategies, IHS
1020-1040	Carbon Emission Management in Natural Gas/LNG Logistics – Case Study	Mr. Rajender Singh, Director (Technical), Petronet LNG Limited
1040-1100	<i>Tea/Coffee</i>	
1100-1120	Carbon Emission Management in Transportation Logistics	Mr. N. V. Marathe, Senior Deputy Director and Head of Power Train Engines Division, The Automotive Research Association of India
1120-1140	Carbon Emission Management in Pipeline Logistics	Mr. Anil Pande, Executive Director (Projects & Pipelines/Operations & Distribution), Hindustan Petroleum Corp. Ltd.
1140-1200	<i>Q&A</i>	
1200-1320	Session-IV Session Chair: Mr. A. P. Sawhney, Additional Secretary, Ministry of Petroleum & Natural Gas	
1210-1230	GHG Accounting Standards	Ms. Nimisha Pandey, Fellow, The Energy and Resources Institute
1230-1300	Alternatives for Carbon Emission Reduction	Mr. Prabhakar Nair, Vice President, Business Development, LanzaTech/Dr. D. K. Tuli, Executive Director & Centre Coordinator, DBT-IOC Centre for Advanced Bio-Energy Research, IndianOil R&D Centre
1300-1320	<i>Q&A</i>	
1320-1405	Valedictory Session	
1320-1330	Workshop Summary	Dr. R. K. Malhotra, Director General, PetroFed
1330-1340	Address	Dr. Pierce Riemer, Director General, WPC
1340-1400	Valedictory Address	Shri K. D. Tripathi, Secretary, Ministry of Petroleum & Natural Gas, Govt. of India
1400-1405	Vote of Thanks	PetroFed
1405	<i>Lunch</i>	

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