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India's initiative towards exploration of shale gas & oil shale and development of underground coal gasification

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India's economy is back on track with projected gross domestic product growth of 7- 8% during 2009 -10. To meet the future demand of India's energy need, the initiatives towards development of unconventional fossil fuel resources have gained considerable momentum. Oil and Natural Gas Corporation (ONGC) and the Directorate General of Hydrocarbons (DGH) have taken the major lead towards assessment of resource potential of shale gas & oil shale. ONGC is also heading a technology development program on underground coal gasification (UCG). ONGC and Schlumberger commenced field surveys in the Gondwana and Cambay basins of India for the evaluation of shale gas potential. The target areas for shale gas exploration could be organic rich shale horizons associated with unmineable coal seams of Gondwana basins. The oil shale in India is reported from the northeast with estimated in place oil reserves of ~15 billion tons. DGH has signed a contract with the Bureau des Recherches Geologic et Mineraux (BRGM), France and Mineral Exploration Company, Limited (MECL), India for carrying out detailed geo-scientific studies for evaluation of shale oil potential in the Assam-Arakan Basin, NE India. Mehsana in North Gujarat with coal reserves of about 63 billion tons at depths > 700 meters was chosen for the UCG studies by ONGC. The study has revealed recoverable energy estimates of ~15,000 billion m³ of natural gas in the area. ONGC has recently signed a Memorandum of Understanding (MoU) with Coal India Ltd. for taking up UCG projects in India and has selected Skochinsky Institute of Mining, Russia for technical collaboration. The status and relevance of India's drive towards exploration and exploitation of these unconventional fossil fuel resources will be presented and discussed in reference to CO₂ management.