

Selected Underground Coal Gasification Projects Table 1

Project Name, Location	UCG Developer	Latest announcements/notes
Sindh Province, Pakistan	Cougar Energy	Nov. 23, 2009: Cougar Energy announced the award of a coal block in Pakistan. The Geological Survey of Pakistan deemed the site possibly suitable for a UCG project. Cougar needs 100-200 million tons of coal to support the project.
India	ONGC	Nov. 16, 2009: India's Oil & Natural Gas Corporation Ltd (ONGC) will commission the country's first underground coal gasification (UCG) plant near Surat in Gujarat by October 2010, according to <i>Commodity Online</i> . ONGC plans to expedite the process of UCG project at Vasthan near Surat in Ahmedabad. The field is expected to produce about 0.55 million cubic metres of syngas per day by December 2010. ONGC plans to reach 2 billion cubic meters annual capacity by 2014.
Orroroo, South Australia	Linc Energy	Nov. 6, 2009: Linc Energy Ltd announced completion of an initial drilling program near Orroroo, -South Australia, where five exploration wells intersected coal at depths of between 200 and 293 meters with coal seam thickness of up to 23 meters. The company aims to fast track the commissioning of a "modest sized" UCG commercial facility to confirm the suitability of the resource for low-cost synthesis for power generation and GTL production.
Powder River Basin, Wyoming	Gas Tech	Oct. 13, 2009: Casper, Wyo.-based Gas Tech, Inc. announced a demonstration operation in the Powder River Basin within two and a half years. They are working on adapting technologies used in Australia to the Powder River Basin. In 2007-2008, Gas Tech announced a partnership with BP with permitting and engineering of the pilot project initiated. Gas Tech reports that it acquired 80,000 acres of coal leases in 2005 with coals from 500 to 2,000 feet deep, 100 feet thick aggregate.
Cook Inlet, Alaska	Cook Inlet Region Inc.	Oct. 10, 2009: CIRI presented a UCG project sized to fuel a new 100-MW combined-cycle power plant. The project would be located on CIRI lands on the west side of Cook Inlet. The company is committed to carbon capture and sequestration by way of enhanced oil recovery. Project timeline: 28Dec. 2009: Resource assessment drilling begins Feb. 2010: Preliminary resource assessment results; preliminary site selection Mar. 2010: Pre-feasibility drilling begins Aug. 2010: Site characterization drilling begins Nov. 2010: Project permit application preparation begins Nov. 2012: Project permits received Jan. 2013: Above-ground project construction begins Jan. 2014: Commercial operations begin
Kingaroy, Queensland	Cougar Energy	Sept. 7, 2009: The Kingaroy project, located 10 km south of the township of Kingaroy completed the acquisition of the outstanding interest in Mineral Development Licence MDL 385 during 2009 to take 100% control of the tenement. On Aug. 27, the Queensland government granted authority to Cougar Energy to develop the pre-production phase. Construction commenced Sept. 2. In June 2008 Cougar Energy announced a resource of 73 million tons of coal contained in two seams. The depths range from 130 – 300 metres with thicknesses of 5 – 17 metres and 2-13 metres respectively. The resources support a project life of 30 years.
Bloodwood Creek, Dalby, Queensland	Carbon Energy	July 22, 2009: Carbon Energy announced an agreement between Carbon Energy and ZeroGen to advance a UCG demonstration project with carbon capture and storage technology. The agreement signaled the first phase of a CO ₂ injection test program ZeroGen has been conducting a CO ₂ storage exploration program in the Northern Denison Trough (NDT), near Springsure in Central Queensland, since 2006. Captured CO ₂ from the Carbon Energy UCG plant will be transported for injection and storage up to two kilometers underground in the NDT. The alliance aims to reduce coal-fired electricity emissions by up to two thirds.
Eskom, Majuba, South Africa	Escom, Ergo Exergy	Jan. 20, 2007: South African power producer, Eskom, announced first flaring of gas from the UCG pilot project at Majuba Power Station near Volksrust in Mpumalanga. Ergo Exergy Inc. (Canada), worked with Eskom for four years to develop the technology for South African application.
Chinchilla, Queensland	Linc Energy, Ergo Exergy	Nov. 10, 2006: Ergo Exergy terminated provision of UCG services to Linc Energy Ltd (Queensland, Australia). In 1999, Linc was granted an exploration permit for coal at Chinchilla December 1998 and commenced work July 1999. Gas was first produced before 1999 yearend. According to the company, the cost of the UCG gas produced was comparable to thermal coal in the Australian market. Some 35,000 tons of coal were gasified, producing 80 million cubic meters of gas over 30 months.
Laurus, Canada	Laurus Energy	April 07, 2005: Laurus Energy Inc. announced the completion of geological inventory of Canada coal resources suitable for UCG technology.
Barmer Rajasthan, India	GAIL India	Nov. 13, 2006: Gail presented a 5 MW pilot project in alliance with Ergo Exergy with a target completion of 2009. This project was supposed to have led to an accelerated development of a 750 MW greenfield IGCC plant.
Angren, Uzbekistan		Commercial UCG has been operated for more than 40 years at the Yerostigaz facility in Angren, Uzbekistan. According to Linc Energy, Yerostigaz is the only remaining UCG site in the former Soviet Union.