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# Gas Hydrates as Alternative Hydrocarbon Resource

Posted by Schebetov - 2008/09/16 08:17

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<http://yweec.org/images/fbfiles/images/Picture1.jpg> Gas hydrates are crystalline ice-like compounds of water and natural gas. A cubic meter of hydrate contains gas that will expand to over 150 cubic meters at standard temperature and pressure. Gas hydrates have the highest energy density of non-conventional gas resources, comparable to oil sands and heavy oils. A significant amount of natural gas is stored throughout the world in hydrate form – some estimates say hydrates hold more than 10 trillion tons of carbon. This is more than twice as much as the world's coal, oil and conventional gas reserves combined.

In spite of large reserves trapped in hydrates worldwide their production potential has not yet been fully understood. The problems associated with possible gas production from hydrates have become of great interest to the petroleum industry. Many people still believe that conventional oil and gas will remain the main sources of energy for a long time because they will continue to be more economic than alternative resources.

But natural hydrates are really huge hydrocarbon resource and it is worth to include them in the gas production business. To do that we need to take a major effort involving industry, government, industry associations, technical providers and academia using multidiscipline's approach.

I'd like to initiate the discussion concerning possible technologies which allows us to successfully commercialize the gas production from hydrates throughout the world. I believe that the exploitation of this hydrocarbon resource will change the energy industry significantly over the first half of the century.

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