

There's rapid increase in energy demand, coupled with the enormous amount of Co₂ discharged into the environment. Exhaustion of conventional reserves of fossil fuel has led to exploitation of novel resources through modern technologies.

Gas hydrates is one of the potential source of methane and therefore it is sometimes called as fuel of the future. Gas hydrates (clathrate) are basically a solid and crystalline compound made up of water and low molecular weight hydrocarbons found offshore in the subsea beds. It occurs naturally and abundantly in deep water sediment at a depth of 300 – 1000 feet beneath the sea floor.

Methane gas hydrates is one source of methane gas which is captured in crystalline ice like structure in permafrost regions and under the sea in outer continental margins. According to recent researches and statistical study, it is evaluated that the total amount of carbon in the form of methane (clathrate) obtained from gas hydrates is far more than the carbon content in all the fossil fuel reserves put together and hence these are seen as the future potential energy resource.



These gas hydrates are found in Nigeria, and till date is untapped. Nigerian hydrates are biogenic in origin. At present Nigeria has no national program for natural gas hydrates exploitation as other countries like USA, Japan, and India.

Oil and natural gas that are produced from the wells are found beneath the earth at very high pressures caused by the strata of earth. The deeper we go, the higher is the pressure. Oil and natural gas at this incredible pressure flow naturally to surface through the wells drilled down to those depths. On the other hand, gas hydrate is a solid substance and thus unlikely to flow out naturally in the same manner as oil and natural gas.

I suggest a technique of exploiting our gas hydrate reserve via the injection of steamed brine into the hydrate zone which would force gas hydrate dissociate underground and generate methane gas, hence would be possible to apply the same techniques used in the production of oil and natural gas. Injection of steamed brine can take out methane from Gas hydrates and can reduce the global warming by achieving two objectives of giving new resource of energy, methane the burning fuel, by reducing pollution.

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