RETIRED MEN'S ASSOCIATION OF GREENWICH, Inc. (RMA) invites you to attend its meeting, on <u>Wednesday, Oct. 16, 2013</u>. First Presbyterian Church, Lafayette Pl., Greenwich.

ARNOLD STANCELL

HYDRAULIC FRACTURING: GAME CHANGER TOWARD U.S. ENERGY INDEPENDENCE



Hydraulic fracturing is the fracturing of rock by a pressurized liquid. Commonly known as fracking, it is a technique in which water is mixed with sand and chemicals, and injected at high pressure into a wellbore to create fractures along which natural gas, oil, and brine water may flow into the well. The technique is very common in wells for shale gas and shale oil where flows are naturally very limited.

Proponents of fracking point to the economic benefits from the vast amounts of formerly inaccessible hydrocarbons the process can extract. Opponents point to potential environmental impacts such as contamination of ground water and depletion of fresh water. Dr. Stancell will discuss the fracking process, its impact on U.S. energy security, and environmental concerns.

Arnold Stancell is Turner Professor of Chemical Engineering, Emeritus at Georgia Tech and was earlier in academia at MIT (1970) where he was Visiting Professor and taught and was offered tenure, but he decided on a career in industry. He had a 31 year career at Mobil Oil where he was VP Exploration and Production for the U.S., and then for Europe, the Middle East and Australia. Prior to that, he held senior executive positions at Mobil in Chemicals and Marketing and Refining. He joined Mobil in research and has 11 patents.

He received his bachelor's degree in chemical engineering from City College of New York, and his doctor of Science degree from M.I.T. He was elected to the National Academy of Engineering in 1997, and recently was appointed by President Obama, with Senate confirmation, to the National Science Board which oversees the \$7.5 billion per year National Science Foundation which funds U.S. university research for basic knowledge, innovation and jobs.

RMA meetings are free and open to the public; no reservations are required. Please plan to arrive around 10:30 for our social break (coffee and cake), followed by our speaker at 10:45. Meetings are held at the First Presbyterian Church in Greenwich. For additional information, call Bernard Schneider, 203-698-2558; bgsesq@gmail.com.