Unconventional Oil and Gas: Mountain or Molehill?

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The transition from a fossil-energy present to an alternate-energy future will span a century and involves the interplay between energy, environment, economy, and policy. Today, fossil fuels represent 85% of the global energy mix. Ironically, the foundation of the bridge to a lower carbon energy future will be built with fossil fuels. As existing and new conventional oil and natural gas reserves decline, unconventional resources - shale gas, coal bed methane, tight gas, shale oil, oil shale, oil sands, and perhaps eventually natural gas hydrates and beyond - could represent a vital part of the fossil energy mix. The above ground human challenges are as great, or greater, than the below ground technical challenges. Economic extraction of unconventional gas will depend on an educated public and the ability for industry, government, academe, and NGOs to work together to develop and deliver balanced solutions.