


Peak Oil Briefing

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October 7, 2010

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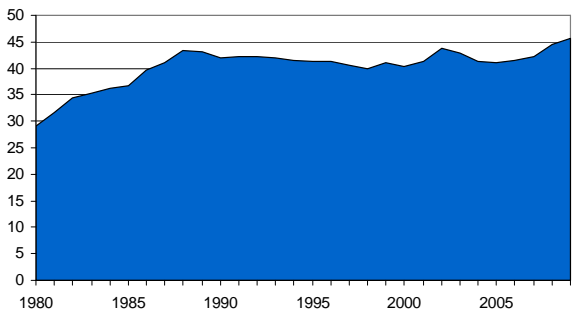
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PRELIMINARY 

Where We Have Been

- To date, petroleum reserves growth has more than kept up with consumption

Years of Reserves at Current Consumption



Year	Years of Reserves
1980	28
1985	35
1990	45
1995	42
2000	40
2005	45

Source: BP Statistical Review, 2010

■ Reserves/Production


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So Why Worry?

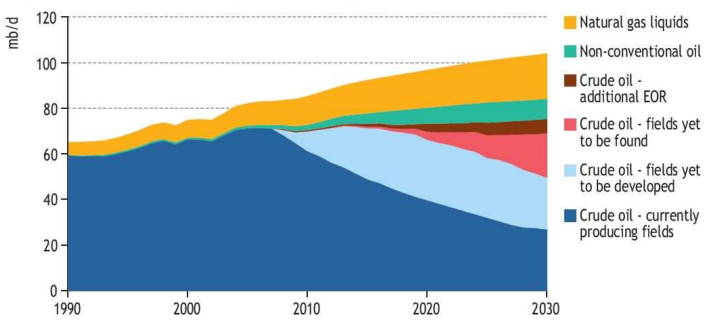
- Future oil demand is highly uncertain but will rise with global economic expansion.
- Some predict a peak in conventional crude oil production which, when coupled with rising demand will lead to extreme price increases and economic dislocations.
- Whether or not (or when) a peak occurs, rapid increases in conventional production will be increasingly challenging and depend on below the ground and above the ground factors.
 - Below the ground: The total reserves of conventional oil are uncertain but are certainly finite. Huge pools of easy-to-extract oil have almost all been found and exploited. Exploiting new reserves will require large investments by many companies and countries.
 - Above the ground: Even if sufficient conventional reserves exist, will they be available and will they be developed in a time frame to keep up with growing demand? Oil reserves are spread out across the globe, much of it in unstable regions or environmentally sensitive areas that are currently off limits.

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A Projection of Where Future Supply May Come From

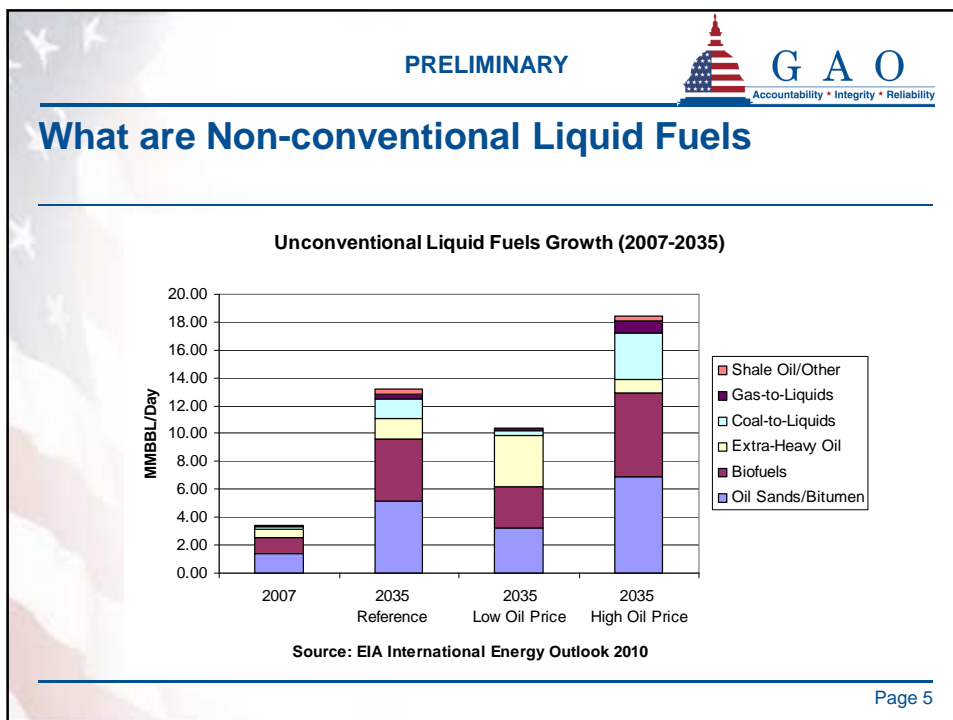
Figure 11.1 • World oil production by source in the Reference Scenario




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Unconventional Liquid Fuels Face Many Challenges

- With possible exception of biofuels, unconventional liquid fuels have larger carbon emissions per BTU than conventional oil.
- Unconventional liquid fuels generally require more water to produce and pose greater environmental risks to extract and process.
- All unconventional fuels cost more to produce and deliver.

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What Does This Mean?

- For either below or above the ground reasons, prices of liquid fuels may rise if supply growth can not keep up with the growth in demand caused by global economic expansion.
- Depending on the severity of oil price increases, economic growth may be slowed until and unless alternatives to liquid fuels are developed.
- The other speakers will elaborate on these and other issues and we will leave ample time for questions at the end.

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