

Introductory remarks by Richard Gilbert on

ENERGY SUPPLY CHALLENGES AND SOLUTIONS

for the session entitled

Tackling the challenges:

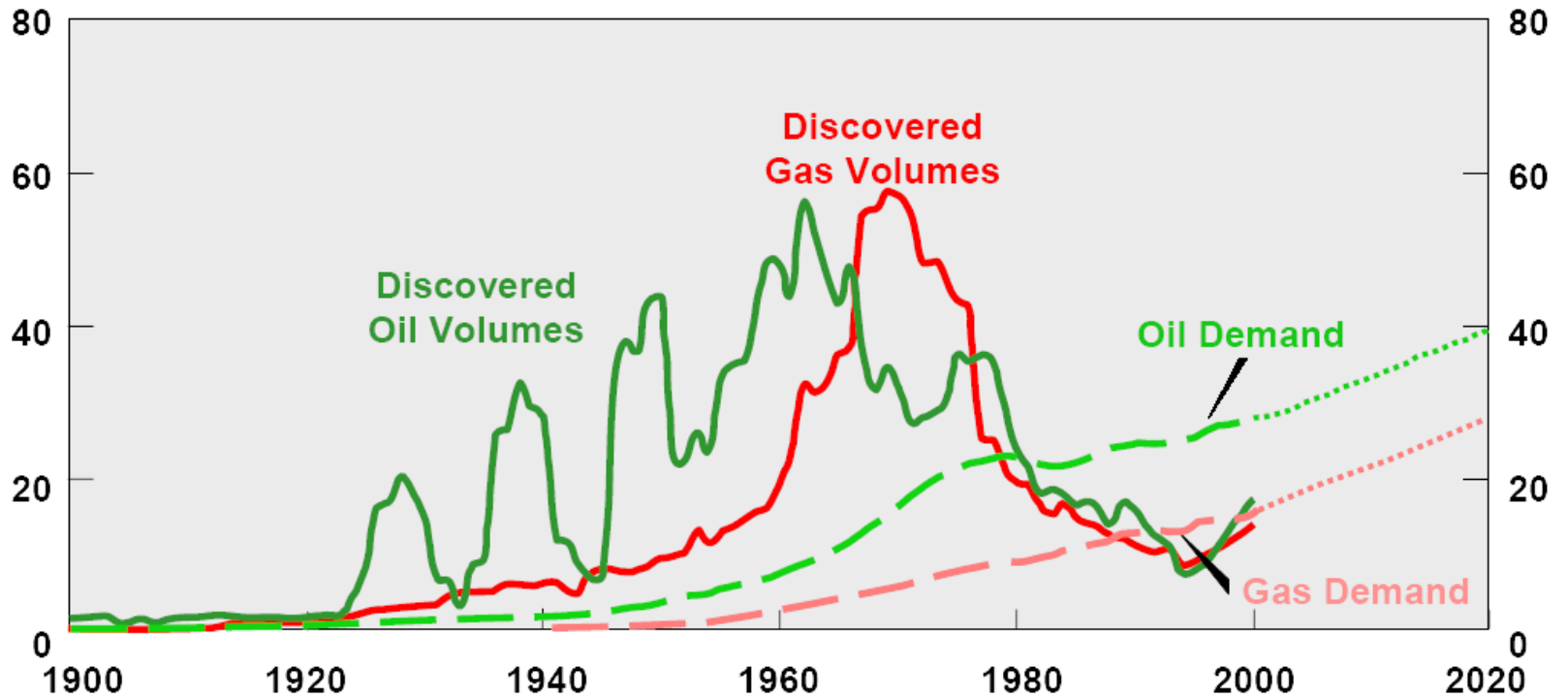
looking for a common understanding
on the sense of urgency and the role
of the transport sector

at the Energy in Motion conference
Amsterdam, October 19-20, 2004

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World discovery of and demand for oil and natural gas, 1900-2000, and projected potential demand until 2020

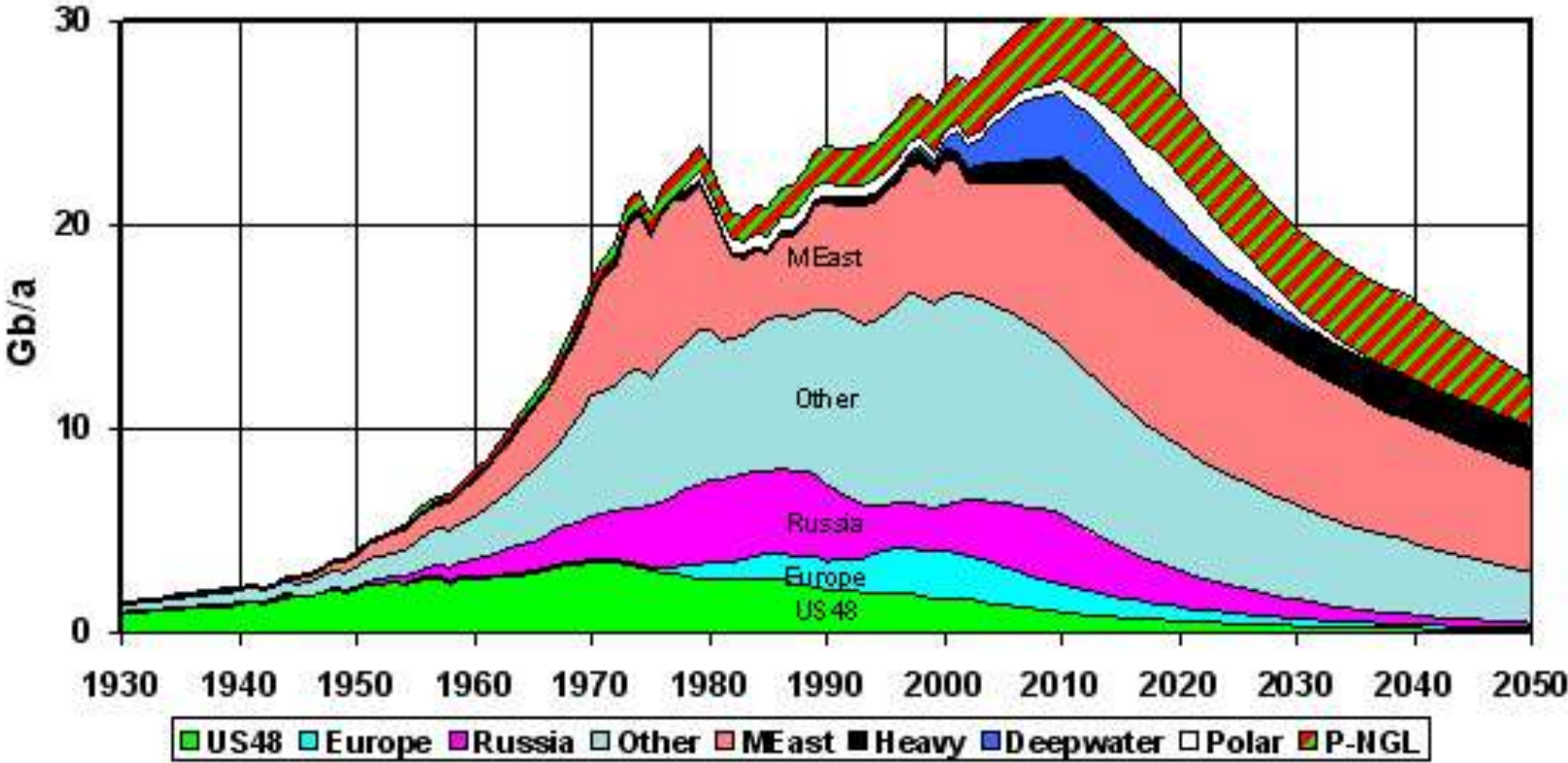
Billions of Oil-Equivalent Barrels



Source: Exxon Mobile Corporation

We haven't been finding the fuel we need to sustain what we depend on. In this decade, we are using more natural gas than we are discovering, and very much more oil.

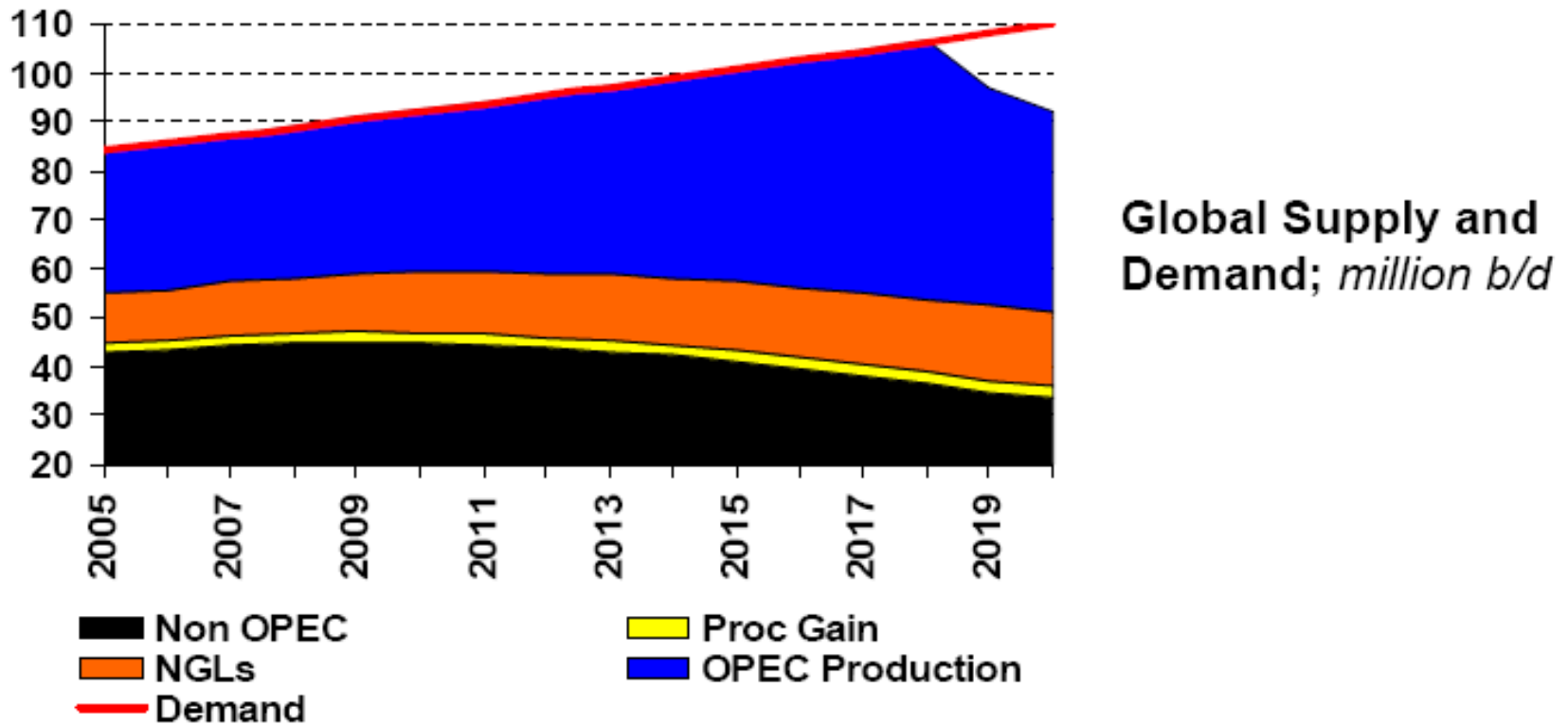
World production of regular oil by region, non-conventional oil, and natural gas liquids, actual and estimated, billions of barrels per year, 1930-2050



Source: Uppsala Hydrocarbon Depletion Group

Production of crude oil and equivalents—which provide >95% of transport fuels worldwide—may peak in 2012, which will mean very high prices unless demand falls first.

PFC Energy's base-case demand-growth scenario for petroleum liquids (1.8%/y)



Source: PFC Energy (September 2004)

“Production will likely not be able to meet global demand in the latter part of the next decade”
(IEA’s 2002 projection is for 1.6%/y growth in oil demand until 2030; current rate is ~2.5%/y.)

Global Peak Oil Gathering

Gathering And Think-Tank

A Gathering of Intelligence, Facts and Visions
19-20 October 2004, Koblenz, Germany

“ Are we actually running out of oil (and gas) or not? And if so when?
Will the reserves collapse or will new finds take care of the future?
Will production keep up with demand? And if not, what then? ”

For full details & registration visit <http://www.gasandoil.com/peakoil>

This Gathering will be a process of awareness and realization, in which all, in a neutral, non-political way, will go through the facts and projections of our global energy situation and what this might mean.

Organised by:



Should we be here today?

Or here on November 10?

Oil Depletion – No Problem, Concern or Crisis?

Wednesday 10 November 2004
Energy Institute, London

There is mounting concern that oil supplies may peak in the relatively near future. A rash of recent books and articles have concluded that the cheap oil era is over and that fairly soon supplies will fall short of demand with almost incalculable impacts on our oil-addicted societies. Recent high oil prices and Middle East instability have heightened supply concerns. As if this was not enough, doubts have recently been raised about Saudi Arabia's ability to supply future requirements and about the real size of Middle East reserves.

So has oil depletion reached the point where it will restrict supply? Is the fundamental driver of future oil supplies geology? Or is there little or no supply problem because economics — prices and investment — are the real keys to future supplies?

The conference will tackle all aspects affecting future oil supplies — geological, financial, economic and political. Speakers from a range of backgrounds and interests will discuss all aspects of oil depletion and attempt to answer the question as to how concerned we should be about future oil supplies.

An extended panel discussion among the speakers and guests will take the debate forward with particular emphasis on economic factors, technology and the future of alternative fuels.

Programme

- 09.00 Registration
 - 09.30 Chairman's Welcome
Martin Fry, Director, Martin Fry and Associates
 - 09.45 Joining the Dots
Chris Skrebowski, Editor, *Petroleum Review*
 - 10.15 View Points in Collision
Roger Bentley, Senior Research Fellow, Department of Cybernetics, The University of Reading
 - 10.45 Coffee Break
 - 11.05 Oil Peak – A Geologist's View
Francis Harper, BP
 - 11.30 No Problem? An Economist's View
Professor Peter Odell, Professor Emeritus of International Energy Studies, Erasmus University
 - 11.55 Middle East – Miracle or Mirage?
Dr Mike Smith, Technical Director, Energy Files
 - 12.20 Oil Depletion or Depleted Policies!
Dr Robert Arnott, Senior Research Fellow, Oxford Institute of Energy Studies
 - 12.45 Lunch
 - 14.00 Oil Depletion – The Database
Dr Ken Chew, Vice President – Industry Performance and Strategy, IHS Energy
 - 14.20 Short Break
 - 14.30 Panel Discussion
The afternoon session with the distinguished panel of speakers and guests will discuss the pertinent issues covering surrounding the oil depletion debate, with particular attention to: economic factors, technology and the future of alternative fuels
Chair: Richard Hardman, Consultant, Oil and Gas Exploration
Panel includes morning speakers and guests.
 - 16.00 Round-up
 - 16.10 End of Forum
- Booking form on reverse



Tickets:
Member: £85.00 + VAT
Non-Member: £120.00 + VAT

Strategizing for sustainable transport (1)

1. **Identify date of oil production peak**; ensure that oil consumption is falling by then.
2. If proposed rate of decline in consumption is not sufficient to help meet **greenhouse gas targets** or **local air quality requirements**, steepen it.
3. **Convert transport to electric drive-trains** from drive-trains based on internal combustion engines; use hybrids as a bridge.
4. Provide widely available **infrastructure for tethered vehicles** (wires or rails); allow for limited battery use.

Strategizing for sustainable transport (2)

5. Provide **electricity generation from renewable sources** (wind, sun, tide, geothermal, perhaps some biomass, etc.).
6. **Don't think about** (i) **natural gas** as a bridge fuel (production will also soon outstrip supply); and (ii) **hydrogen** as an energy carrier (too inefficient; how made? why not drive by electricity directly?).
7. **The goal (for 2021?)** should an EU transport system—for moving people and freight—that uses only renewable fuels, has less than one tenth of current energy requirements, and yet provides today's or better comfort, convenience, and utility.

Goals for this session

1. Figure out how much **progress**, if any, has been made towards **sustainable transport** (what is it?) and whether there is shared **commitment** and a **sense of urgency** about doing more.
2. Note, as we proceed, **transport's contribution** to fundamental issues of energy supply (demand exceeding production) and climate change (accumulation of greenhouse gases).
3. Agree as to the **necessary next steps**, particularly with respect to reducing fossil fuel use for transport.