The Senate

Standing Committee on Rural and Regional Affairs and Transport

Australia's future oil supply and alternative transport fuels

Final report

© Commonwealth of Australia
ISBN 0 642 71726 5
This document was prepared by the Standing Committee on Rural and Regional Affairs and Transport, and printed by the Senate Printing Unit, Department of the Senate, Parliament House, Canberra.

Membership of the Committee

Members

Senator the Hon. Bill Heffernan LP, New South Wales Chair

Senator Rachel Siewert AG, Western Australia Deputy Chair

Senator Jeannie Ferris LP, South Australia

Senator Anne McEwen ALP, South Australia

Senator Julian McGauran LP, Victoria

Senator Fiona Nash NATS, New South

Senator Kerry O'Brien Wales

ALP, Tasmania

Senator Glenn Sterle ALP, Western Australia

Participating Members involved in the inquiry

Senator Lyn Allison AD, Victoria

Senator Grant Chapman LP, South Australia

Senator Barnaby Joyce NATS, Queensland

Senator Christine Milne AG, Tasmania

Senator Ursula Stephens ALP, New South Wales

Senator Ruth Webber ALP, Western Australia

Committee Secretariat

Mr Peter Hallahan, Inquiry Secretary

Mr Geoff Dawson, Principal Research Officer

Ms Jeannette Heycox, (on secondment from the Dept. of Environment and Heritage)

PO Box 6100

Parliament House

CANBERRA ACT 2600

Telephone: (02) 6277 3511 Facsimile (02) 6277 5811

Internet: www.aph.gov.au/senate rrat.sen@aph.gov.au

TABLE OF CONTENTS

Membership of the Committee	iii
Executive summary	ix
Recommendations	xxi
Chapter One	1
Introduction	1
Structure of the report	2
Chapter Two	3
Future oil demand and supply	3
Oil and gas basics	3
Oil and gas in context of total energy use	7
World oil production and consumption	10
Oil production and consumption in Australia and projections	16
Chapter Three	19
'Peak oil' concerns about future oil supply	19
Peak oil views and responses in summary	19
Is 'ultimately recoverable resource' a useful concept?	20
Estimating the ultimately recoverable resource: issues	24
Estimates of the ultimately recoverable resource	35
Relating the ultimately recoverable resource to peak: the Hubbert curve	38
Estimating the timing of peak oil	40
Investment needed to maintain production	45
The prospects of nonconventional oil	47
Implications for the price of oil	49
New warnings in World Energy Outlook 2006	51
General comment on peak oil concerns	54
Will market forces sort things out?	56
Chapter Four	59
Economic and social impacts of possible higher fuel prices and reduce supply	ced oil 59
Introduction	59

The effects of recent price increases	60
Macro economic impacts of rising oil prices	61
Impacts on industry	66
Impacts on communities	68
The risk of supply side disruptions	70
Avoiding adverse impacts	73
Committee comment	75
Chapter Five	77
Supply side responses – overview and exploration	77
Overview	77
Exploring for more oil in Australian territory	78
Chapter Six	87
Supply side responses – Alternative fuels from	87
gas, coal and shale	87
Introduction	87
Gaseous fuels – LPG, natural gas and hydrogen	90
Liquefied Petroleum Gas (LPG)	102
Synthetic fuels derived from coal or gas	107
Oil Shale	116
Chapter Seven	119
Supply side responses – Alternative fuels – Biofuels	119
Introduction	119
Ethanol	122
Biodiesel	132
Committee comments on alternative fuels in general	137
Chapter Eight	139
Demand side responses	139
Increasing the fuel efficiency of vehicles	139
Reforming urban road use charges: congestion charges	148
Encouraging walking, cycling and public transport in cities	150
Integrating transport planning and land use planning to reduce car use	154
More use of rail for long distance freight	158
Other matters: fringe benefits taxation of employer-provided cars	160
General comment on demand management measures	163

Appendix One	165
List of Submissions	165
Appendix Two	175
Witnesses who appeared before the Committee	175
at the Public Hearings	175
Appendix Three	183
CSIRO response to question on notice on 12 May 2006	183
Appendix Four	187
Documents Tabled at Public Hearings	187
Appendix Five	193
Index of Documents Provided During Inquiry	193

