

The Senate

Community Affairs
References Committee

Impacts on health of air quality in Australia

August 2013

© Commonwealth of Australia 2013

ISBN 978-1-74229-903-7

Secretariat

Dr Ian Holland (Committee Secretary)

Mr Gerry McNally (Principal Research Officer)

Mr Jarrod Baker (Senior Research Officer)

Ms Annemieke Jongsma (Senior Research Officer)

Ms Eloise Menzies (Research Officer)

Ms Carol Stewart (Administrative Officer)

PO Box 6100
Parliament House
Canberra ACT 2600

Phone: 02 6277 3515

Fax: 02 6277 5829

E-mail: community.affairs.sen@aph.gov.au

Internet: www.aph.gov.au/senate_ca

This document was produced by the Senate Community Affairs Committee Secretariat and printed by the Senate Printing Unit, Parliament House, Canberra.

MEMBERSHIP OF THE COMMITTEE

43rd Parliament

Members

Senator Rachel Siewert, Chair	Western Australia, AG
Senator Claire Moore, Deputy Chair	Queensland, ALP
Senator Ronald Boswell	Queensland, NATS
Senator Sue Boyce	Queensland, LP
Senator Carol Brown (to 25 February 2013)	Tasmania, ALP
Senator Dean Smith	Western Australia, LP
Senator the Hon Lin Thorp (from 25 February 2013)	Tasmania, ALP

Substitute members

Senator the Hon. Ursula Stephens for Senator Claire Moore (from 16 April to 16 April 2013)	New South Wales, ALP
--	----------------------

Participating members for this inquiry

Senator Richard Di Natale	Victoria, AG
Senator Lee Rhiannon	New South Wales, AG
Senator Larissa Waters	Queensland, AG

TABLE OF CONTENTS

Membership of the Committee	iii
Abbreviations	vii
List of Recommendations	ix
Chapter 1	
The impacts on health of air quality in Australia.....	1
Terms of Reference	1
Conduct of the inquiry.....	1
Structure of the report.....	1
Chapter 2	
Particulate matter sources and effects.....	3
Sources.....	4
Health impacts of poor air quality	7
Populations most at risk.....	10
Chapter 3	
Standards and monitoring of air quality.....	13
PM _{2.5} ultrafine particles and other contaminants.....	20
Reducing community exposure: buffer zones	23
Air pollution monitoring and data	25
Chapter 4	
Coal	33
Sources of coal emissions.....	33
Impact of coal dust on health.....	34
Protecting vulnerable communities	36
Regulation.....	42

Chapter 5

Diesel and non-road engines	47
Health impacts of diesel emissions	47
On-road diesel vehicles	48
Off-road and industrial diesel engines.....	49
Regulating off-road diesel emissions	53

Chapter 6

Wood smoke	55
Costs of action and inaction	57
Regulation.....	58

Appendix 1

Submissions and additional information received by the Committee.....	65
--	-----------

Appendix 2

Public hearings.....	75
-----------------------------	-----------