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Andrew Pankowski Ozone and Synthetic Gas Team



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Australia's approach to Climate Change

The Australian Government recognises that climate change is a serious challenge that requires an effective global and national response

Australia is committed to meeting its internationally agreed emissions target of 108 per cent of 1990 levels by 2008-2012, and is on track to do so



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Synthetic greenhouse gases in Australia

Synthetic greenhouse gases (HFCs, PFCs, SF₆) currently contribute around 1% to Australia's greenhouse gas emissions

 Australia has a national strategy to manage each of these gases



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Australia's approach to SGGs

Montreal Protocol industries Non-Montreal Protocol industries

HFCs PFCs (consumption) ↓

PFCs (aluminium) SF6 ↓

Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 and its Regulations Cooperative approach between the government and industry



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SF₆ Programmes

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Best Practice SF₆ Management Guidelines

- management of SF₆ −
- reporting component \rightarrow

Australian Greenhouse Office

Greenhouse Challenge Plus

- focuses industries on greenhouse gas abatement
- reporting of greenhouse gas emissions including SF₆



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2006 desk top audit

Reasons for inconsistencies in reported data

Problems and successes with SF₆ management

Issues of greatest concern to the industry



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General findings

 All companies are implementing strategies to manage SF₆

Some degree of cooperation evident at the regional level



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General findings

- Not all companies address all aspects of SF₆ management, or strategies used are not always effective
- Formalising and reinforcing procedures was stressed as an important component of a successful SF₆ management strategy



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Emerging issues

Disposal of sealed for life switchgear

Contaminated SF₆ - reprocessing or disposal



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Solving emerging issues

Two companies are trialling a cryogenic process to purify contaminated SF₆

Switchgear decommissioning service being established

Plasma-arc disposal of heavily contaminated SF₆



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SF₆ reporting

Several methods in common usage

- inventory methodology
- assumed leakage rate
- SF₆ purchases
- top up method



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				TRICITY SU		
		Top Up Me	thod			
	Company:					
	Period of reportir	ng: / /	to	/ /		
		Emissions of SF ₆				<u> </u>
		Amount (kg)		Comments		
A	Total SF ₆ in Service - end of year					
В	Top-ups of existing equipment					
-	Accidental leakage by company employees					
C	or subcontractors					
D	Accidental leakage by equipment suppliers					
E	Total Annual Emissions (B+C+D) =	0		kg		
	Total Annual Emissions in Carbon dioxide					
-	equivalent (E x 23,900) =	0		kg		
Total Annual Emissions as a Percentage of Gas in Service (E / A) x 100 =						
		COMMENTS				<u> </u>
	s on calculations. This can include confidence in assumptions and factors such as details of increased					



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Barriers to accurately estimating SF₆ emissions

Staff do not always follow company procedures
Residual gas supplied with new switchgear
Outsourcing maintenance
Lack of information about effective systems



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Audit developed support for guidelines

- Frequent comment that a benchmarking exercise would be useful
- Industry leaders were not sure if they had done enough
- Environmental managers who are struggling to implement effective strategies wanted more information from industry leaders



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Benefits of guidelines

- Financial benefits
- Avoids duplication
- Identify simple effective strategies
- Communicate innovation and latest developments
- Raise industry's environmental profile
- Solve emerging issues



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Benefits of guidelines

Improve emissions reporting

- the Council of Australian Governments has agreed to establish a national streamlined system for greenhouse and energy reporting
- mandatory reporting for companies above a certain threshold



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How to develop guidelines

Energy Networks Association (ENA)

- all transmission and distribution companies are members
- develop guidelines and standards for the industry
- formal proposal will be considered by an ENA committee in early December



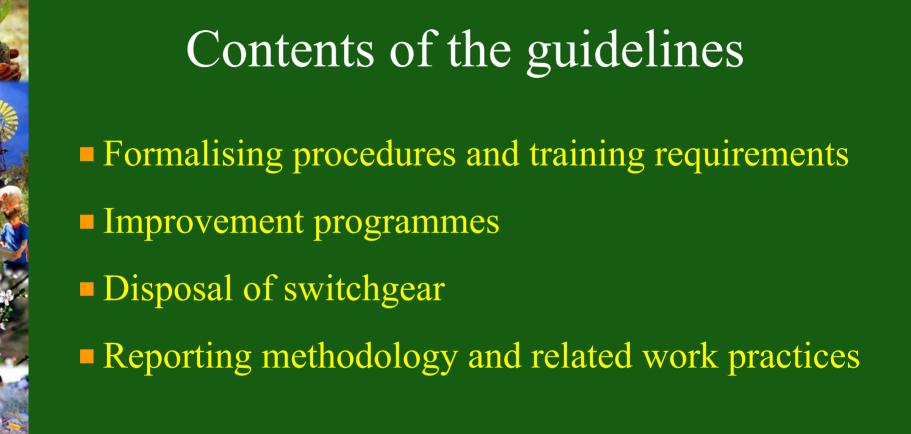
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Contents of the guidelines

- All aspects of SF₆ management
- Responsible use principles
- Gas handling and guidance on reusing, reprocessing or disposing of SF₆
- Leak monitoring and detection



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Future plans

DEH involvement in developing these guidelines

 international perspective
 ensure reporting component meets the Government's future requirements

 Potential to share guidelines internationally

 Promote guidelines through Greenhouse Challenge Plus



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Thank You!

Further information available in accompanying conference paper or from Andrew.Pankowski@deh.gov.au