Sustainable Air Quality in Auckland:

Introduction

Dr Gerda Kuschel

NZSSES Seminar
18 September 2009

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Seminar Outline

- What's the *current state* of Auckland's air quality?
- What's happening with *domestic fires*?
- What's happening with *motor vehicles*?
- What's happening with *industry*?
- ----------
- What about *other stuff*?

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So What Do We Mean by *Sustainable* Air Quality?

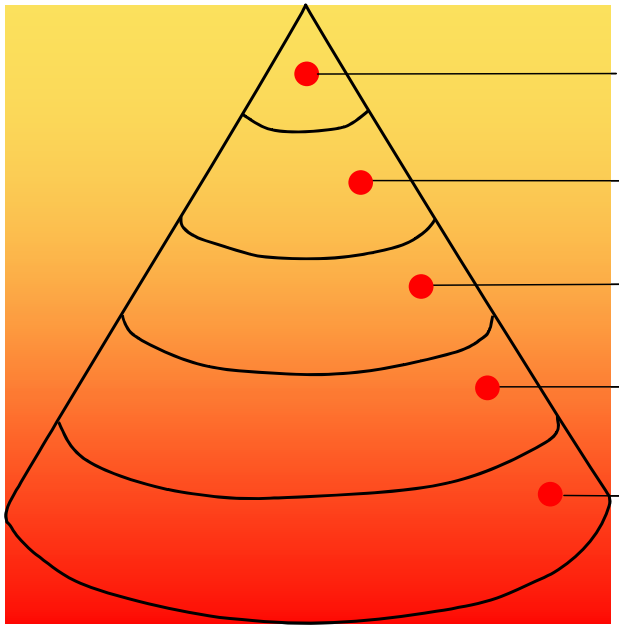
Probably NOT This!

9am on 4 June 2009

Auckland Regional Council
TE RAUHITANGA TAIAO

Probably NOT This Either!

Auckland health effects due to PM_{10}* air pollution



~530 premature deaths per year

~1.1 million restricted activity days per year

Estimated annual health costs ~$550 million for the region

* PM_{10} is fine particulate matter smaller than 10µm in diameter

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Need to Ensure that *Air Quality Meets Accepted Standards and Guidelines* in the Face of Population and Activity Pressures

Air Quality National Environmental Standards (AQNES)

The AQNES consist of 14 standards:

- **7 activity standards** that ban "unacceptable" activities e.g. high temp incinerators
- **2 design standards** covering woodburners & landfill gas treatment
- **5 ambient air standards** for CO, PM_{10}, NO_2, SO_2 & ozone set to protect health

But there are also Ambient AQ Guidelines for other pollutants

How Does Auckland Measure Up?

Number of exceedances of the PM_{10} 24-hour average in Auckland for 2000 to 2008

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008
Days*	4	7	3	2	2	6	6	7	3
Sites**	3	6	1	1	2	4	2	5	2

* No of days per year when an exceedance at one or more monitoring sites occurred.
** No of monitoring sites at which one or more exceedances occurred each year.

The AQNES allows only **one** exceedance in a year so

Auckland is in breach of the PM_{10} standard

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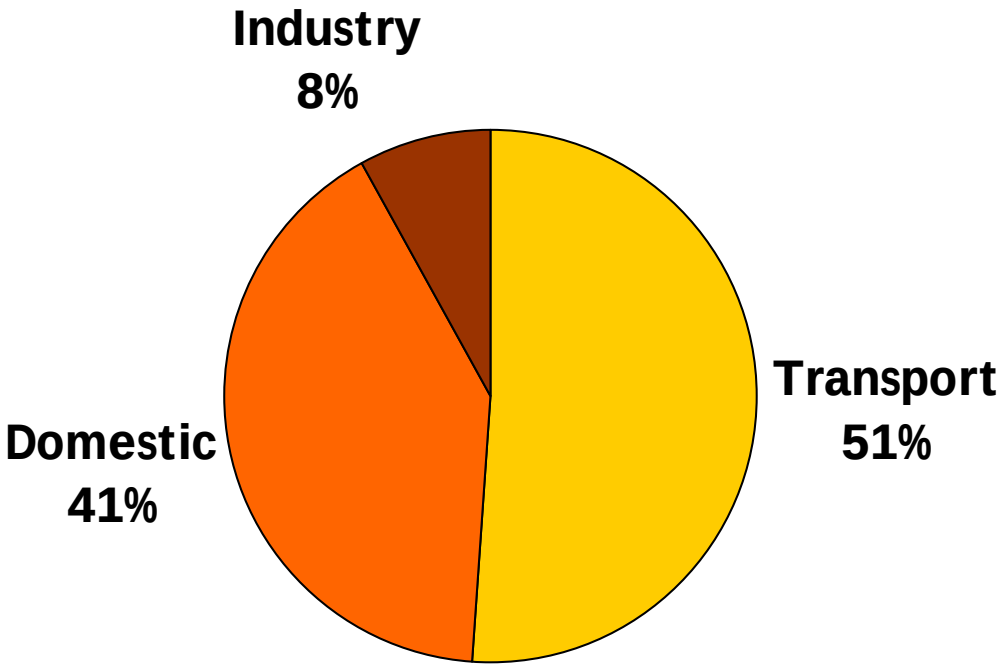
What are the sources and ...?

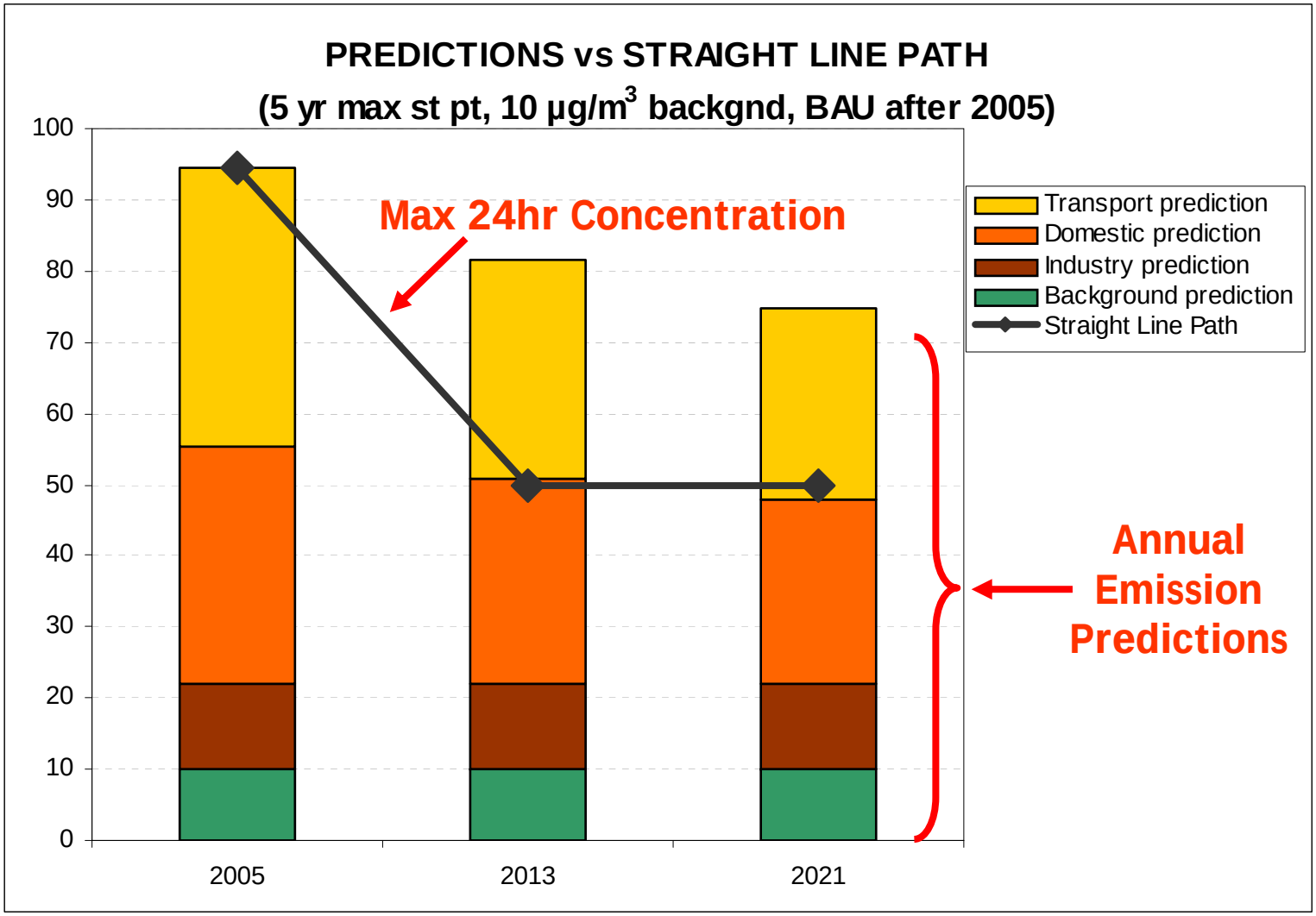
… how much do they emit now … ?

Emissions in 2004
4.9 kt/yr in Auckland urban area



Source: ARC Air Emissions Inventory 2004

… and are likely to in future?



What are the Reduction Targets?

To meet PM_{10} AQNES in Auckland by 2013:

Total = 53%

Domestic reduction = 58%
Transport reduction = 58%
Industry reduction = 0%

Current BAU trends likely to deliver 18% overall but still have a shortfall of 35%

BAU = business as usual

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The Emissions Sources in Detail