

# The North West Energy Forum

## A Business Strategy for Climate Change

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## Manchester Airport

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- Busiest in UK outside London
  - Owned by 10 Local Authority's of Greater Manchester
  - 100 airlines serving 180 destinations
  - 22 million passengers per year
  - 225,000 aircraft arrivals and departures
  - 154,000 tonnes of cargo
  - 16,250 employees on site  
in 270 companies
  
  - 40 million passengers  
by 2015!!

## Sustainable Development

- Electricity Consumption Forecast for FY05/06 – 122m kWh
- Gas Consumption Forecast for FY05/06 – 169m kWh
- 1 x Dual fuel (gas/gas oil) 10 MW electrical output CHP Plant
- 34,000 tonnes ETS requirement for CY2005
- Signatory to the North West Climate Change Charter 'Green Charter'
- Corporate Environment Plan to 2015

## Carbon Management Pilot Project

- Carbon baseline
- Business drivers
- Costs & risks
- Carbon abatement opportunities
  - Renewable energy
  - Energy efficiency
  - Aircraft on ground
  - Surface access & vehicle fleet
  - Monitoring & reporting
  - Communication
- Implementation plan

Step 1:  
Evaluate Business  
Case

Step 2:  
Develop Strategic  
Objectives

Step 3:  
Identify Opportunities

Step 4:  
Develop Implementation  
Plan

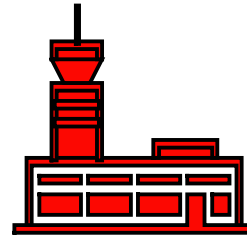
Step 5:  
Manage Implementation

## Why Carbon Management

- EU Emissions Trading Scheme – target set for 2005-08
- Climate Change Levy - £600k per year
- Rise in utility costs – 47% electricity, 35% gas
- 'The Future of Aviation' white paper
- MA's document 'Our Vision for Sustainability'
- ISO 14001 by 2006
- Public perception
- Support government targets/ initiatives
- Impact on airlines e.g. aircraft emissions in EU Trading Scheme in 2008

## Carbon Emissions Baseline

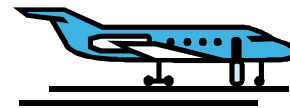
Energy use 78,800 18%  
 Electricity 43,000 10%  
 Gas 34,300 8%  
 Oil for CHP 1,500 0%



Vehicle fleet  
 1,700 0%



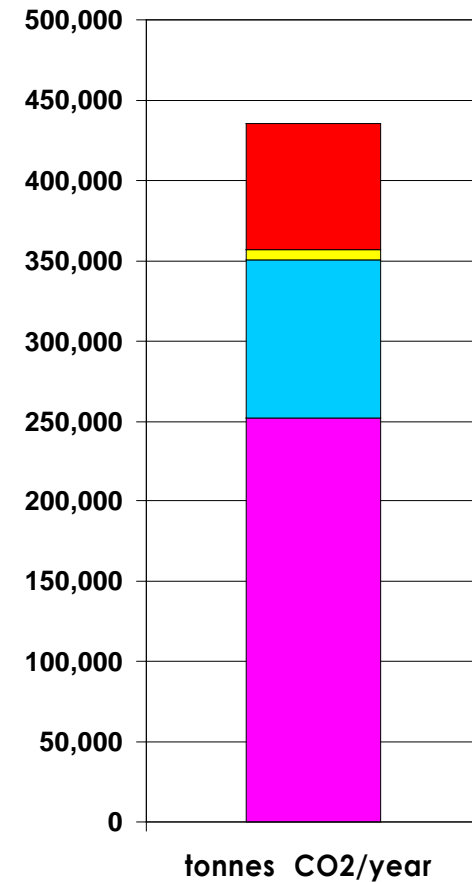
Aircraft on ground  
 98,900 23%



Surface access  
 251,800 58%



Total 431,000 tonnes CO<sub>2</sub>/year



## Manchester Airport in Context

	Annual CO <sub>2</sub> Emissions, tonnes CO <sub>2</sub> /year			
	Transport		All sources	
Manchester Airport – Whole Site Emissions	352,000	-	431,000	-
North West Region CO <sub>2</sub> Emissions	14,014,000	2.5%	59,389,000	0.7%
UK National CO <sub>2</sub> Emissions	125,788,000	0.3%	561,482,000	<0.1%

\*Source of North West and UK National CO<sub>2</sub> Emissions data :  
Sebastian Carney, GRIP (Greenhouse Gas Regional Inventory Project), Tyndall North – UMIST

## Environment Plan to 2015

Policy	Target
CC1 CO <sub>2</sub>	→ Reduce CO <sub>2</sub> from energy sources by 10% by 2015 from 2000 levels
CC2 Energy	<ul style="list-style-type: none"> <li>→ Source 25% of site electricity from renewable sources by 2015</li> <li>→ Reduce energy consumption by 25% from 2000 levels by 2015 (interim target of 15% by 2007)</li> <li>→ Consider climate change issues in any review of CHP operation</li> </ul>
CC3 Aircraft	<ul style="list-style-type: none"> <li>→ Review how taxi and hold times can be minimised to reduce ground emissions</li> <li>→ Lobby airlines to encourage introduction of low emission aircraft</li> </ul>
CC4 Surface Access	<ul style="list-style-type: none"> <li>→ 40% of journeys to site by public transport when passenger numbers reach 40 million (2015)</li> <li>→ Promote switch off policy and purchase of alternatively-fuelled vehicles</li> </ul>
CC5 Monitoring & Reporting	→ Report all greenhouse gas emissions for all MA and airport sources in annual Sustainability Report
E17 Environmental	→ Remain involved in the international, national and regional debate on aviation and environmental issues and in influencing relevant EU and UK Government policy


## Energy Efficiency

- Reduction of 33% on energy/metre<sup>2</sup> floor between 1990 & 2000
- Target 25% reduction in energy use by 2015 (on 2000 levels)
- Achieved
  - Implementation plan developed as part of CMPP
  - 4M office block BREEAM 'excellent' rating
  - Airport Carbon Management Group
- Estimated CO<sub>2</sub> savings 10,300 tonnes/year from identified projects + significant financial savings
- Changing Priorities
  - CHP – A carbon problem?
  - Efficiency projects focused on gas
  - Carbon widens the energy efficiency net
  - EPBD impacts


## Renewable Energy

- Target 25% electricity from renewable sources by 2015
- 10% achieved from April 2005 Electricity purchased from renewable sources
- CO<sub>2</sub> savings 4,305 tonnes/year
- Gap 15%
  - Mix of green tariff, investment off site & on site generation
  - Short rotation coppice on MA land feasibility study completed
  - Small scale PVs e.g. bus shelters
  - Purchase renewable electricity
  - Invest in off site schemes

## Aircraft on the Ground

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- Target
    - Review taxi and hold times to minimise ground emissions
    - Lobby airlines to introduce low emissions aircraft
  - Achieved
    - 'Aircraft on Ground' study completed as part of CMPP
    - Through AOA support aviation entering EU Emissions Trading Scheme in 2008
    - Towbarless tractors
  - CO<sub>2</sub> savings are potentially large
  - Gap
    - Further study required
    - Target setting & implementation plan for aircraft emissions on ground

## Surface Access & Vehicle Fleet

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- Target
    - 40% journeys to site by public transport at 40 mppa (2015)
    - Promote switch off policy & alternatively fuelled vehicles
  - Achieved
    - 20% journeys by public transport
    - Airport caterer & hotel recycling used cooking oil
    - Landrover running on bio-diesel blend
    - 4½ litre engined buses
  - CO<sub>2</sub> savings are small
  - Gap
    - Ground Transport Strategy to 2015
    - 100% bio-diesel blend used by all vehicles?

## Further Information

✈ [www.manchesterairport.co.uk](http://www.manchesterairport.co.uk)