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Atmospheric Issues

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AIR QUALITY

UK OZONE PEAKS IN JULY SUMMER SUNSHINE

The hot, dry weather across the UK during July led to the expected build up of ozone in several places. Ozone pollution levels in the DETR 'moderate' air pollution banding (running 8 hour mean or a 1 hour mean: 50-89ppb) were widely recorded throughout the UK during July and early August. Levels in the 'high' banding (1 hour mean: 90-179ppb) were recorded on fewer occasions, mainly in rural areas. Lullington Heath in Sussex and Aston Hill in mid Wales both recorded 8 'high' level readings on July 31st and Norwich a further 8 'high' level readings on August 2nd.

Details of exceedences for ozone and other air pollutants can be found via the NETCEN website:

http://www.aeat.co.uk/netcen/airqual/

Source: Air Quality Management, August 1999

NEW PAH LIMIT SET BY EPAQS

The Expert Panel on Air Quality Standards has published a new report for PAHs (polycyclic aromatic hydrocarbons), confirming the maximum desirable level of 0.25ng/m^3 in ambient air.

PAHs are organic compounds emitted from road traffic and industrial processes and are thought to be a possible cause of lung cancer. PAHs are not one of the eight air pollutants currently covered by the National Air Quality Strategy.

DETR have confirmed that the EPAQS PAH level of 0.25ng/m^3 are likely to be exceeded in most urban areas and sites close to industrial processes which emit PAHs.

However, the EPAQS panel of scientists, state that there is little information on the health effects of PAHs. The EPAQS level is much lower than the results of a study in Canada which showed that cancer effects could be observed at concentrations of 0.25 - 2.5 µg/m^3.

Source: Air Quality Management, August 1999

LOW EMISSION ZONES FOR URBAN AREAS?

The National Society for Clean Air Transport Forum has published a report on Low Emission Zones. This report highlights the role that Low Emission Zones can play in reducing the environmental impact of vehicles in urban areas.

The National Air Quality Strategy Reviews and Assessments being carried out at present will lead to some local authorities designating problem areas concerning air quality as Air Quality Management Areas. Local authorities will be required to control air pollution emissions within these areas to 'safe' limits. Low Emission Zones may be a tool to help local authorities achieve such a task.

A Low Emission Zone is a zone within an urban area, which restricts vehicle movements by a variety of factors, for example, only vehicles which are very low polluting may be allowed into the zone. This could help to reduce air pollution from traffic in urban areas.

For further details of the NSCA report, contact NSCA (Tel: 01273 326313).

Source: Low Emission Zones, NSCA; Air Quality Management, August 1999

NEW 4-WAY CATALYST

A new catalyst is said to be very effective at reducing pollution from heavy-duty diesel engines.

The 'Ceryx' Quadcat can reduce four regulated diesel emissions: HC; NOx; CO and particulates. It reduces the pollutants simultaneously and has no effect on engine performance or fuel economy. It claims to fit a wide range of engine sizes and costs well below the £3,000 – £4,000 price of competitor systems.

Source: Air Quality Management, August 1999

TRAFFIC POLLUTION KILLS MORE PEOPLE THAN ROAD ACCIDENTS

The World Health Organisation (WHO) carried out a study in Austria, France and Germany and found that air pollution is responsible for more deaths than traffic accidents. Throughout the three countries a total of 21,000 pollution related deaths were found compared to 10,000 due to road accidents.

Researchers at WHO tried to put a price on pollution related illnesses and it was found to costs approximately £40bn a year.

Source: Air Quality Management, July 1999

FRENCH AIR POWERED VEHICLES

Researchers in France are currently working on low and zero pollution vehicle engines that run on compressed air.

The zero pollution vehicles top up on compressed air at filling stations and use this air to power the vehicle. Low pollution vehicles have three separate chambers that reduce emissions of pollutant gasses and improve fuel efficiency.

A hybrid development will allow the vehicles to use their low emission engines when traveling outside urban areas. The stored compressed air would be used for journeys within urban areas. This would help to reduce urban pollution problems.

Source: Air Quality Management, July 1999

CLIMATE

CLIMATE CHANGE MAY DESTROY WORLD'S CORAL

If global warming occurs as projected then the majority of the world's coral reefs may be dead by the end of the next century, according to a report by Ove Hoegh-Guldberg of the University of Sydney, Australia (published by Greenpeace). Climate models were used to generate sea surface temperature projections and estimates of the intensity and frequency of coral bleaching events were made.

Coral bleaching is expected to happen throughout the world on an annual basis causing a great decline in the world's major reef systems. It is thought that the Great Barrier Reef off Australia's north-west coasts could be dead within the next 30 years.

Mark Warner and colleagues from the University of Georgia discovered that for some species of algae, the process of photosynthesis is impaired if the water temperature is slightly higher than normal. It is thought that high water temperatures damage a key protein in the photosynthesis process. Bleaching occurs when the coral expel the algae, possibly because they know it is damaged.

Source: Global Environmental Change Report, 23rd July 1999

GLOBAL CO_2 EMISSIONS DECLINE IN 1998

According to a new analysis from the World Watch Institute (Washington DC), there was a slight decline in carbon emissions from fossil fuel combustion during 1998. In 1998 global carbon emissions were estimated to be some 6318 million metric tonnes. This figure shows a drop of 0.5% from 1997 levels and represents the first time since 1993 that global carbon emissions have decreased, despite a global economic growth of 2.5%.

Source: Global Environmental Change Report, 13th August 1999

GLOBAL WARMING ESTIMATES UNDERESTIMATED?

In 1992 the Intergovernmental Panel on Climate Change (IPCC) generated emission scenarios which were used in all IPCC projections to date. Based on these projections, the IPCC estimated that by 2100, the global temperature would increase by 2°C and the sea level would rise by 50cm.

A recent report released on 29th June by the Pew Centre on Global Climate Change, *'The Science of Global Climate Change: Global and US Perspectives'*, suggests that the temperature increases and sea level rises may be greater than the IPCC predicted.

Based on new scenarios, with reduced projections of sulphur dioxide emissions, the globe is expected to warm by between 1.9°C and 2.9°C from 1990 to 2100. Sea levels are expected to rise by between 48cm and 58cm.

Source: Global Environmental Change Report, 9 July 1999

DENMARK SET TO MISS 2005 CO_2 TARGETS

By 2005, Denmark planned to cut emissions of carbon dioxide by 20% from 1988 levels. However, unless additional measures are taken, they may only manage to reduce emissions by 16.5%.

Emissions from transport appear to be a major problem, they were predicted to remain stable at 1988 levels, but have increased by 16%. The transport minister

aims to propose a number of measures to try and stabilize transport emissions.

Source: Global Environmental Change Report, 23 July 1999

ENERGY

SERVICE STATIONS BECOME SOLAR

Bp Amoco recently launched a US$50 million initiative to use solar panels to power the needs of 200 new service stations around the world. The solar panels will provide a total of 3.5MW of energy, which will save around 3500 tonnes a year in carbon dioxide emissions. Enough energy will be supplied to power the lighting and pumps. In the daytime any excess energy will be exported to local electricity networks, and at night the energy can be imported back again.

These new service stations will be situated in Austria, Australia, Germany, Japan, the Netherlands, Portugal, Spain and the UK. There are also plans to develop solar installations in France and the USA.

The program was announced at the opening of the Perivale 'solar station', the first of its kind in London, and supports the EU's strategy, to significantly increase the use of renewable energy sources.

Source: New Review, August 1999

PRIMARY SCHOOL ADOPTS WIND POWER

Cassop Primary School in County Durham is the first school in Britain to install a wind turbine, through a project jointly funded by Durham County Council and Northern Electric plc.
The wind turbine produces, on average, 270 kWh/day, double the schools electricity requirement. Any surplus energy can be exported to the national grid via an import/export metre.

The school, which has already won the Tetra Pak Award for Environmental Work, is also hoping to receive funds for the development of an onsite environmental centre.

Source: New Review, August 1999.

ENERGY SAVING TRUST CALLS FOR MORE FUNDS FOR ENERGY EFFICIENCY

The Energy Saving Trust has welcomed Ofgem's proposals to cut electricity bills, but is calling for more funds for improvements to energy efficiency.

Eoin Lees, the Trust's Chief Executive, has stated that 'the average £15 cut in customer bills that should result from these proposals is good news particularly for low-income consumers, but not such good news for the environment, as energy use is bound to rise.'

The recent Ofgem paper on energy efficiency standards for gas and electricity, has introduced a £1 per fuel per customer investment towards improvements to energy efficiency. The Energy Saving Trust suggests that a higher contribution could be paid from this latest proposed cut in bills, with consumers and the environment both coming out as winners.

Source: Energy Saving Trust - www.est.org.uk, 13/08/99

are you doing your bit?