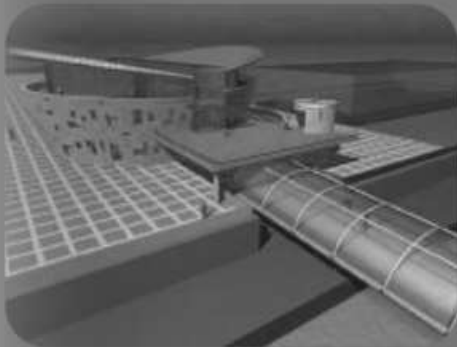


# The City of Liverpool – achieving zero CO<sub>2</sub>



The energy industry has changed dramatically over the last decade but where is it heading? It may have been a long time in coming but as the Kyoto years begin, the patterns are beginning to form and the City of Liverpool has been working hard to ensure that it is up to speed. Kyoto aims to significantly reduce GHG emissions and the pressure to reduce CO<sub>2</sub> emissions is one of the leading factors of the energy markets. The holy grail of zero CO<sub>2</sub> emissions to any organization would seem implausible within the foreseeable future, or is it?

The Energy White Paper clearly puts the UK on a mission to reduce emissions across the board. To achieve the targets set by government LCC first needed to ensure that an absolute year on year measurement system was in place as an essential. Outdated estimated paper billing systems for large multi site users like LCC are no longer valid so LCC has busied itself transferring all utilities to a monthly electronic billing operation standardising all data across all utilities & against all inclusive operations. This, however, was still not enough. Why?

The energy markets have changed dramatically, stretching basic market fundamentals of supply and demand, distorting all trends. The fact is that energy markets will continue to change with more price volatility to come and accelerated market risk, one in which all organisations must prepare for. Energy is a tradable commodity but carbon (CO<sub>2</sub>) is becoming the new asset that may be the biggest of markets tomorrow. Customers, though, cannot simply just measure estimated consumption, costs and emissions but high on their list must be absolute real time measurement systems that will allow full data control and protection from market risk.

To do this LCC has been busy preparing its systems, with the installation of Automated Meter Reading (AMR) equipment across its entire estate providing half hourly consumption and emissions data on its entire utility portfolio. The systems handle large volumes of data providing actual real time data, total budget control and a shared basis for analysis and benchmarking. Data standardisation is key.

The benefits of the new meter systems are immense to both customer and supplier alike along with the risk protection they provide in the future markets of time-based pricing and demand response strategies essential to mitigating new generation capacity. Compared to other resource

options, this is a clear winner with the ability to clearly target and reduce environmental impact. Such a strategy can provide the single largest direct load control system. This is real energy efficiency.

Across LCC's entire property portfolio all site customers will have access to their personal energy usage data. The days of simply only one energy manager monitoring such data will be gone. The openness of the system will be key to many of LCC's savings with more individuals playing a part in the efficient management of LCC's energy use.

The information provided has had immediate effect providing real management information pinpointing exactly where to target scarce resources.

	kWh	£	CO <sub>2</sub>	Carbon Strategy
Electricity	23%	57%	43%	Purchase 100% green electricity
Gas	73%	38%	53%	Purchase carbon credits
Oil	4%	5%	4%	Convert to Gas

**Electricity:** LCC policy has been purchasing green electricity for nearly ten years presently acquiring 100% for all of its commercial building stock, street and traffic lighting.

**Oil:** consumption continues to reduce through conversions to gas.

**Gas:** LCC is a founder member of the LGIU Carbon Trading Councils and is looking to offset its Carbon Emissions via Carbon Trading through this or other mechanisms. The ability to measure 100% of all real time gas usage is an essential makeup of the trading mechanism.

The strategy of offsetting 100% carbon emissions may at first look to be the easy option but LCC believes it to be achievable and the appropriate route to take. LCC continues to reduce emissions through projects on individual sites but to achieve the same result against the entire LCC estate will require considerable long-term investment for generations to come. The environment will not wait!



The City of Liverpool

For further information, please contact:  
Brendan Purcell, Energy Manager  
The City of Liverpool  
brendan.purcell@liverpool.gov.uk