Under the patronage of His Highness Sheikh Hamdan Bin Rashid Al Maktoum, Deputy Ruler of Dubai, UAE Finance Minister and Chairman of Dubai Municipality

Maste Management & Recycling Solutions

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Pacific Control's headquarters in the UAE has been constructed using green building principles, making it one of the few of its kind in the country

BUILDING ON AN ECO-FRIENDLY NOTE

The pace of construction of new buildings may have slowed, but something else is abuzz in the real estate industry in the UAE — it's going green, says Anton Garcia

rom high-profile developments to smaller scale projects, green buildings are on the rise. This growing support for sustainable building principles and the increased use of renewable energy reflects a growing realisation that green buildings also have economic benefits — they not only minimise the strain on local infrastructure, but also reduce overall operating costs.

UAE authorities and developers have been quick to respond — the number of firms involved in developing green buildings tripled from only 17 per cent in 2003 to 58 per cent last year, according to a McGraw-Hill

Construction study titled Global Green Building Trends Report. The same report expects the number to nearly double the current forecast by the year 2013.

All these are well and good, but the 'go green' buzz is a recent phenomenon that started only about three years ago at the time of the establishment of the Emirates Green Building Council (EGBC). So what about the buildings and communities that mushroomed before 2006?

A recent study published by the UKbased Investment Property Forum (IPF), titled Costing Energy Efficiency Improvements in Existing Commercial Buildings, can help developers and

their facilities managers turn existing structures into green buildings. The research study investigates the costs of making energy efficiency improvements to existing commercial buildings, where opportunities to improve energy performance are identified as well as the improvements that offer the best financial returns and the extent to which emissions can be reduced and at what cost.

Sustainable development methods can be incorporated into buildings at any stage, including renovation and maintenance. Although the most significant benefits can be obtained if design and construction teams

integrate this approach from the inception stages of a project. The IPF study says there are ways by which commercial buildings can go green. The report outlines its key findings in terms of overall CO2 reductions possible as well as energy efficiency improvements that should be implemented in a refurbishment to achieve CO2 reductions.

The IPF report makes several improvement recommendations, specifying actual refurbishment that can be done on existing buildings to improve energy efficiency.

Replacing fixed speed heating pumps with variable speed pumps is the most cost effective opportunity for all offices as part of a refurbishment scenario and also when a building is occupied.

The electricity saved by using variable speed pumps will pay for the additional capital cost after year one and give

The electricity saved by using variable speed pumps will pay for the additional capital cost after year one and give an internal rate of return (IRR) of more than 100 per cent.

an internal rate of return (IRR) of more than 100 per cent. Another way by which energy efficiency can be achieved is to improve lighting installations — an opportunity that is the most cost effective for the

supermarket and industrial buildings. Energy efficient fan coil units are the next key efficiency improvement for existing buildings that the report recommends. Fan coil units regulate the temperature within a given space, such as an office floor.

The additional cost of these higher efficiency units compared with conventional units is small which enables an IRR in the region of 40 per cent to be achieved with a three year payback at current energy prices.

Heat recovery systems — and this has great relevance for the UAE — will be critical to the energy efficiency of existing structures in the country. Such a system employs a heat exchanger between the supply and extract air flows to reduce the amount of energy lost through the exhausted air, whether heated or cooled.

Philipp von Zitzewitz, Senior Consultant with Sesam Business Consultants, which recently organised the Solar Days conference, talks about green issues

ON THE GROWING DEMAND FOR SOLAR ENERGY IN THE REGION?

Yes, people want to use solar energy in the UAE because they hear a lot about it and they also want to know how feasible it is for the market.

People from Germany conducting the workshop for Solar Days —TUV Rhineland — are testing photovoltaic products, with Masdar, under this region's environmental conditions.

The UAE, has a lot of dust, sand and humidity and so we need to conduct a lot of tests to see which products will be most hard-wearing.

These technologies are already in use in some places in the UAE. Some street lights, for example, are solar powered and use solar panels and new buildings such as The Lighthouse in the Burj Dubai area

are using photovoltaic systems.

In Europe, the government can finance you for the electricity that you're providing.

In rural areas, this system has caught on fast because it allows governments to provide electricity to areas that may not otherwise have them. It's really up to the government to step in now and incentivise this kind of shift.

ON WASTE MANAGEMENT AND GREEN CONSTRUCTION

Waste management is still very young here in the UAE. The country has the largest per capita CO2 footprint in the world and it is essential that this be reined in. But, the focus now is on saving energy.

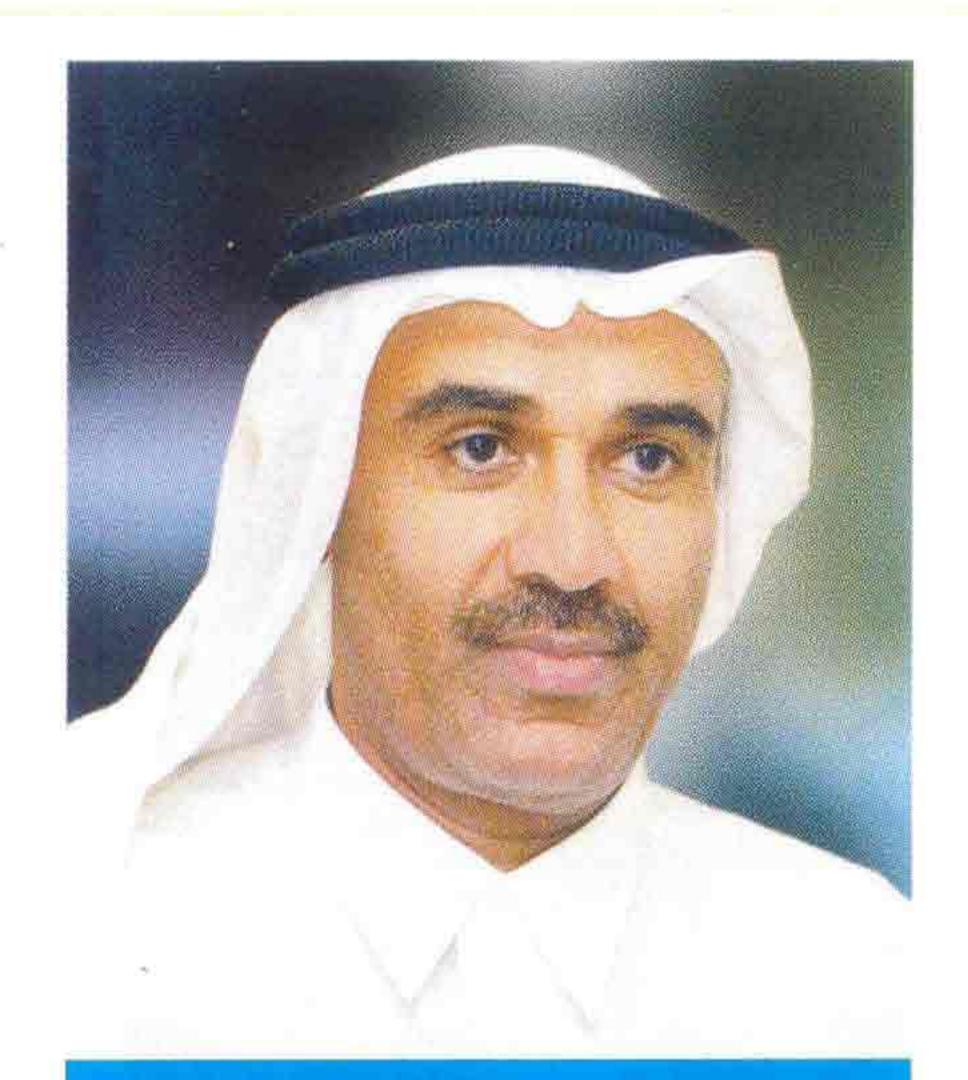
We use too much energy via simple

actions — the trend here has been to disregard the real cost of wasting energy. If we contextualise it, 80 per cent of all energy is used to support air-conditioning units.

This could be checked by constructing buildings, by defining the sufficient amount of cooling that is needed and also by insulating buildings properly. This is exactly the point at which the market needs to think about green technology.

Renewable energy resources
need to be tested a bit more.
However, the market is still a little
apprehensive of this technology.
Other elements, such as insulation,
are more widely accepted and there
is a lot of work being done in this area
at the moment.

- As told to Reshma Mehra



Hussein Nasser Lootah Director General, Dubai Municipality

WELCOME NOTE

The event will have experts exchange their experiences and suggest methods that will yield a positive impact on the environmental quality of life in the Middle East.



We welcome you with the highest regards to the landmark city of Dubai, where we are privileged and honoured to hold the Middle East Waste Summit 2009 from 26 to 28 May 2009, at the Dubai Airport Expo Centre, under the patronage of Sheikh Hamdan Bin Rashid Al Maktoum, Deputy Ruler of Dubai, UAE Minister of Finance and Chairman of Dubai Municipality.

The summit was launched as a platform that brings environmental professionals from all over the world to engage in discussions that directly relate to the management, recycling and disposal of wastes. The event serves as a venue for environmental experts to exchange their experiences in order to come up with successful methods that will yield a positive impact on the environmental quality of life in the Middle East.

We are pleased with the response from registered visitors and exhibitors for our event, which reflects the successful bilateral relationships between the UAE and Middle Eastern countries. We look forward to welcoming them to Dubai, a city whose leadership and support made this event possible, and one of many examples that echoes Dubai's and the UAE's dedication for a pollution-free environment. Our plans and programmes for the development and improvement of the environment are sustained through our strong collaborations with regional and international nations; this leads to major efforts towards protecting and maintaining a healthy environment with the help of international and modern scientific and technical methods.

We look forward to a successful event in this year's Middle East Waste Summit.

Eng. Hussein Nasser Lootah Director General, Dubai Municipality نحييكم أطيب قية ونرحب بكم في دولة الإمارات العربية المتحدة بصفة عامة ودبي بصفة خاصة حيث تنال شرف تنظيم (منتدى الشرق الأوسط للنفايات)والذي يعقد في دورته الأولى في الفترة من 11 إلى ١٨ مايو٩٠٠ في مركز معارض مطار دبي الدولي قت رعاية كرمة من سمو الشيخ حمدان بن راشد آل مكتوم نائب حاكم دبي. وزير المالية رئيس بلدية دبي.

يعقد المنتدى من أجل مناقشة مختلف القضايا المتعلقة بالنفايات و طرق التخلص السليم منها و إدارتها و تدويرها، إضافة إلى الإطلاع على ججارب الدول في هذا المجال بما يتيح إمكانية تبادل الخبرة، و تطبيق الناجح منها مما ينعكس إيجابا على البيئة مناط الحياة.

وإنه لمن دواعي سرورنا أن تكون استجابة هذا الجمع من المشاركين والمهتمين والزائرين هي ترجمة للعلاقات المتميزة بين دولة الإمارات. ودول الشرق الأوسط على اتساعه فمرحبا بكم جميعا على أرض دبي في ظل قيادتها الرشيدة. ورعايتها لهذا الحدث تأكيدا لما توليه الإمارة والدولة ككل لهذا المجال المرتبط بالبيئة والمجتمع ضمانا لحياة خالية من التلوث قدر المستطاع. مع استدامة خطط وبرامج التحسين والتطوير في الأساليب وبالتعاون الوثيق مع جميع البلدان محليا وإقليميا في كل ما من شأنه الحفاظ على البيئة وحمايتها وبذل قصارى الجهد. وتوفير الإمكانيات. والأخذ بالأساليب العلمية والتقنيات الحديثة في هذا المجال الحيوى.

راجين لكم طيب الإقامة. وأن يتحقق النجاح المنشود الذي نتطلع إليه جميعا.

> م. حسين ناصبر لوناه مدير عام بلدية دبي