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creating green communities for a better tomorrow



Crucial renewable and clean energy solutions in the spotlight at WETEX 2017

Zayed Foundation felicitates new Minister of State for Food Security



Emirates Appreciation Award for the Environment

Together for a green home



Prof. Mohammed bin Fahad
Executive Editor

The UAE government's renewed commitment to build a smart and sustainable city by ensuring the availability of clean energy sources and protecting natural resources such as soil, water and air, saw the emirate of Dubai play host to two major ecologically-focused events last month.

The 19th annual Water, Energy, Technology and Environment Exhibition (Wetex) opened amid a growing concern for the region's water security. Despite having some of the lowest available water resources anywhere in the world, demand for water in the UAE is estimated at 4.2 billion cubic metres per year, one of the highest in the world. Naturally, therefore, many of the technologies on display at Wetex sought to answer the dilemma of how to insure sustainability of water resources to meet the demands of the region.

Although Dubai has made significant progress on its path towards a sustainable and more environmentally friendly economy, there is still more work to be done in transforming the emirate into a global capital of green economy. Three key issues facing the green economy - innovation and technology, finance and investment, and leadership and policy - were in the spotlight at the 4th annual World Green Economy Summit (WGES).

Adopting the green agenda is the only way to tackle some of the challenges created by climate change. However, there is a popular misconception that climate change is merely an environmental problem. Floods, storms, rising sea levels and droughts are not the only impact of climate change. This phenomenon will impact the economy, and also have far-reaching social and health consequences.

Although the UAE government is working tirelessly on ensuring that strategies are being put in place to combat the effects of climate change, I believe that the path towards a greener future is not the responsibility of one entity alone, but requires the concerted efforts of both the public and private sectors. Together, we have to integrate improvements in resource efficiency to create synergies across the social, economic and environmental pillars of sustainable development to help achieve the global agenda of green economy.

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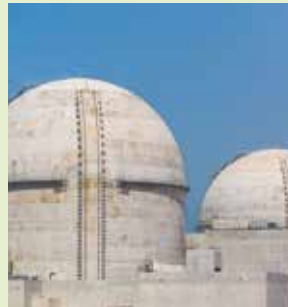
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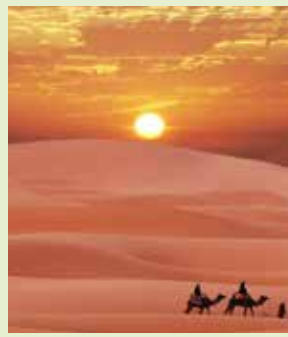
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From the Managing Editor



Dr. Meshgan Al Awar
Secretary General
Zayed International Prize for
the Environment

Women in Science Hall of Fame

I am honored and humbled to be invited to attend the prestigious World Science Forum (WSF) in Jordan from 7 to 11 November. This invitation has been extended to me by HRH Princess Sumaya bint El Hassan, Chair of WSF, President, Royal Scientific Society; and Professor László Lovász, President, Hungarian Academy of Sciences, WSF.

I have also been invited to participate as a panelist in a special session titled 'Promotion of Arab Women in Science' to highlight the challenges I have faced, the particular opportunities that helped me succeed and the pathways one must journey to become a successful Arab woman scientist. This invitation has come about in recognition

of my inclusion in the Women in Science Hall of Fame 2012 that honored 12 outstanding female scientists throughout the region who were selected for their accomplishments and to serve as role models to inspire young girls to study science and pursue scientific careers.

It is a great privilege and honor to be sharing this global platform with HRH and other esteemed dignitaries to discuss the significance, relevance, and power of science to address the pressing concerns of the world today.

I have always been a strong advocate of the role of science, technology and innovation to help create a sustainable and more equitable future. Especially in the UAE, new initiatives are in place to strengthen its position as a global hub for the Fourth Industrial Revolution by means of advancing innovation and future technologies. As world leaders descend on Bonn, Germany, this month for the 23rd edition of the world's climate change conference to take urgent action on climate solutions and keep the spirit of the Paris Climate Agreement alive, now more than ever, the influence and responsibility of science in transforming the principles of global sustainability into reality has come to the fore.

I look forward to being part of the scientific community at WSF where we can engage and embrace the glorious potential of science as an enabler of equitable and sustainable development for all people.

Executive Editor

Prof. Mohammed Bin Fahad

Managing Editor

Dr. Meshgan Al Awar

Advisor

Dr. Eisa Abdellatif

Editor

Sangeetha Swaroop
editor@zayedprize.org.ae

Design Director

Nash - Intoto
nash@intotoadz.com

Marketing

marketing@zayedprize.org.ae

Published by



P.O. Box 28399, Dubai, UAE

Tel: +971 4 3326666

Fax: +971 4 3326777

Website: www.zayedprize.org.ae

email: secretary@zayedprize.org.ae



Eng. Mariam Mohammed Saeed Hareb
Minister of State for Food Security



6 c r e a t i n g g r e e n c o m m u n i t i

Zayed Foundation felicitates new Minister of State for Food Security

Eng. Mariam Mohammed Saeed Hareb, a member of the Higher Committee of the Zayed International Foundation for the Environment, was appointed as Minister of State for Food Security in the recent UAE cabinet reshuffle.

In the UAE Cabinet reshuffle announced in October 2017 by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, Eng. Mariam Mohammed Saeed Hareb, a member of the Higher Committee of the Zayed International Foundation for the Environment, was appointed as Minister of State for Food Security. Making the announcement, HH Sheikh Mohammed pointed out that the new changes in the Cabinet “were about the science and technology of the future.”

Accordingly, Eng. Mariam Mohammed Saeed Hareb was given the new post of Minister of State with responsibility for research and planning for the UAE’s food security.

Eng. Mariam Mohammed Saeed Hareb was previously the Assistant Under-Secretary of Environmental Affairs and Nature Conservation in the Ministry of Climate Change and Environment. As part of her key duties, she developed the Ministry’s general strategic plans for the natural resources and nature conservation sector.

Felicitation

To felicitate Eng. Mariam Hareb on her new role, members of the Higher Committee of the Zayed Foundation met recently under the Chairmanship of Prof. Dr. Mohamed Ahmed bin Fahad to offer their congratulations and felicitations to the new minister.

The Higher Committee meeting was held in the presence of the Deputy Chairman, Mr. Ahmed Mohamed Rafie; Dr. Ghaith Al Suwaidi, Legal Advisor; Dr. Meshgan Al Awar, Secretary General of the Zayed International Prize for the



e s f o r a b e t t e r t o m o r r o w

ENG. MARIAM HAREB won the Prime Minister's Medal for the most innovative Government Employee, and oversees several innovative aquaculture projects under the initiatives of HH the President of the UAE.

Environment; Eng. Hamdan Khalifa Al Shaer, Secretary General of the Emirates Appreciation Award for the Environment; Dr. Saleh Al Hamrani; Eng. Alia Abdulrahim Al Harmoodi; Eng. Aseela Al Mualla; and the Chief Technical Advisor , Dr. Eisa Abdellatif.

Offering his sincere greetings and congratulations to Her Excellency Mariam Hareb, Dr. Bin Fahad pointed out that the Zayed Foundation was proud to have among its members a minister in the new ministerial cabinet of the UAE, which was formed as part of the federal government's efforts

to meet the requirements of the next stage of development and growth of the nation.

Dr. Bin Fahad also paid tribute to the outstanding contributions of Eng. Mariam Hareb in her capacity as member of the Higher Committee of the Zayed Foundation, especially in matters of education & awareness for the youth, and for the promotion of the Foundation's biennial awards. He also praised her role in enhancing cooperation and boosting relations between the Foundation and government agencies in general.

Dr. Bin Fahad and the members of the Higher Committee also discussed the Foundation's preparations for the Year of Zayed 2018, and reviewed the community and environmental initiatives that highlight Sheikh Zayed's life and interest in the environment.

The members were also briefed on the report prepared by the Technical Committee of the Emirates Appreciation Award which will honor the winners in multiple categories in February 2018 to coincide with UAE Environment Day celebrations.

Cover Story

8 c r e a t i n g g r e e n c o m m u n i t i e s

Crucial renewable and clean energy solutions in the spotlight at WETEX 2017



Under the theme 'At the Forefront of Sustainability', WETEX 2017 showcased the latest developments in conventional and renewable energy around the world, and featured business opportunities and potential partnerships to drive business.

Renewable and clean energy solutions and technologies were the top priorities of the 19th Water, Energy and Environment, Technology Exhibition (WETEX) 2017, organized by Dubai Electricity and Water Authority (DEWA) from 23 to 25 October.

The exhibition, held under the directive of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, and the patronage of HH Sheikh Hamdan bin Rashid Al Maktoum, Deputy Ruler of Dubai, Minister of

Finance and Chairman of DEWA, seeks to achieve Dubai's vision of building a sustainable future for the Emirate.

WETEX, the largest exhibition of its kind in the region, coincided with the second Dubai Solar Show, which highlighted the latest innovations in the solar sector, showcased the region's largest solar projects and provided a unique platform for building partnerships with all government and private sectors to develop innovative energy solutions.

The two exhibitions highlighted

DEWA's Shams Dubai initiative, in support of the Smart Dubai Initiative, launched by HH Sheikh Mohammed bin Rashid Al Maktoum, to make Dubai the world's smartest and most successful city by encouraging homeowners to install photovoltaic (PV) panels connected to DEWA's network on the roofs of their buildings to produce electricity.

Such initiatives will increase reliance on clean energy and the buildings' share in the energy mix, as well as engage the public in reducing the carbon footprint in Dubai.



e s f o r a b e t t e r t o m o r r o w

WETEX is a meeting point for experts, solution providers and investors, as well as decision makers and consumers from the public and private sectors.

“WETEX 2017 and the second Dubai Solar Show are ideal platforms to showcase the latest developments, solutions and technologies in the field of renewable and clean energy. Shams Dubai contributes to the establishment of a sustainable energy model that promotes Dubai’s economic growth without harming the environment or its resources,” said HE Saeed Mohammed Al Tayer, MD & CEO of DEWA, and Founder and Chairman of WETEX.

“Solar energy is one of the most preferred energy sources in the

Middle East. Due to the region’s unique geographic location around the solar belt, it receives a large amount of solar radiation. The UAE, under the directives of our wise leadership, has been gearing up to say goodbye to the last drop of oil by investing in energy production projects by using different solar technologies.

“DEWA is therefore keen to encourage research and development in this area to promote energy security and sustainability as the most important forms of safe, unlimited energy. It is a source

that does not cause any carbon emissions, which makes it healthy and environmentally friendly. This form of energy reduces our dependence on traditional non-renewable sources of energy such as gas, oil, and coal,” added Al Tayer.

Al Tayer praised the efforts of institutions and individuals who have participated in the Shams Dubai initiative and have already installed photovoltaic panels on 433 buildings with a total capacity of 14.6 megawatts (MW). The number of panels is expected to double in the future



to eventually cover all buildings in the Emirate by 2030. Requests to connect solar energy, with a total capacity of 170MW, have been submitted to DEWA. This clean energy capacity is enough to meet the demands of 30,000 homes, which is equivalent to a decrease of approximately 150,000 tonnes of carbon emissions per year, equivalent to planting 170,000 new trees annually.

The 20th WETEX and 3rd Dubai Solar Show reflect Dubai's commitment to supporting the global efforts to increase reliance on renewable energy, achieve sustainability in all its environmental, social and economic aspects, and strengthen the Emirate's regional

and global leadership in this field. The events provided an opportunity for thousands of companies to promote their businesses and products and show the latest technologies in the energy, renewable energy, water and the environment sectors, and establish partnerships.

Empower showcases its latest district cooling solutions

Emirates Central Cooling Systems Corporation (Empower), the world's largest district cooling services provider, highlighted its latest range of district cooling solutions at WETEX 2017 to help increase more awareness in the importance of utilizing energy-efficient, environmentally-

friendly cooling products and services.

Industry analysts have revealed that district cooling has gained a lot of momentum over the last few years. The growth of the segment is likely to escalate due to the important role it plays in the move towards developing more energy efficient as well as green buildings in the region. In fact, a report from Global Market Insights (GMI) has forecasted that the district cooling market will exceed USD 12 billion by 2024--attributing the growth to the continuous influx of investments in infrastructure development and the equally increasing demand for reliable and cost-efficient cooling systems.

Dubai's hosting of WETEX 2017 supports its efforts to achieve the national Green Economy for Sustainable Development initiative, which was launched by HH Sheikh Mohammed bin Rashid Al Maktoum to transform the country into a global hub for exporting, and re-exporting green products and technologies.



Pioneering clean energy projects from Masdar

Abu Dhabi's renewable energy company, Masdar, showcased its growing clean energy portfolio in the UAE and worldwide, including innovative projects in water desalination and waste-to-energy production. At WETEX, it also addressed conference delegates on critical issues such as clean-tech innovation, renewable energy desalination options for the UAE, opportunities and challenges for the development of smart cities, and the next stage of urban evolution.

Over the last decade, Masdar has been at the forefront of the renewable energy industry, and today has more than

2.8 gigawatts of projects in operation or under development globally. During WETEX, the company showcased several projects including the 800MW third phase of the Mohammed bin Rashid Al Maktoum Solar Park in Dubai.

Other projects featured included Masdar's joint venture with Bee'ah, the Emirates Waste to Energy Company, which is developing the first waste-to-energy plant in the region, its cutting-edge seawater desalination pilot programme in Ghantoot, and Shams 1, the largest CSP project in operation in the UAE.

Khalifa University showcases research in water, energy and

environment

The Khalifa University of Science and Technology, a research university dedicated to the advancement of learning through teaching and research and to the discovery and application of knowledge, showcased a number of water and energy-related research projects. These include projects to reduce the cost



Ideal platform to develop partnerships

WETEX 2017 is a leading MENA event focused on water, electricity, energy, environment, oil, natural gas, green buildings and environmental sustainability. The event, which is being held under the theme, 'At the Forefront of Sustainability', is an ideal platform to develop strategic partnerships with international companies and their local and regional counterparts in the fields of electricity, water, energy, environment among others.

30,000
expected
visitors

2000
exhibitors

14
halls

75
sponsors

20%

increase in the
number of expected
visitors compared to
2016

70,000
sqm

area of the
exhibition

10%

increase in the number
of expected exhibitors
compared to 2016



WETEX goals

1. To provide a unique business platform and display the advanced technologies of water, energy, environment, oil and gas sectors.
2. To form a forum that brings together the best experts, solution providers, leaders, decision-makers and consumers from the public and private sectors.
3. To attract specialists in the fields of water, electricity, energy, environmental technologies, oil and gas.



and improve the efficiency of photovoltaic cells, solar-powered atmospheric water collection, low-cost solar humidification-dehumidification (HDH) desalination, a novel system for air quality monitoring in the UAE using advanced satellite and modeling techniques, optimization of hybrid refinery wastewater treatment processes, novel materials for the capture of carbon dioxide for use in enhanced oil recovery, thermal energy storage solutions to ensure constant power supply from renewable resources, and water production from humidity using smart materials.

DP World and Jafza showcase sustainability projects

Global trade enabler DP World

and its flagship subsidiary Jebel Ali Free Zone, Jafza, showcased sustainability projects at WETEX this year.

As part of its commitment to sustainability, DP World has been installing 88,000 solar panels in Jebel Ali and Port Rashid on the rooftops of buildings, car parks and warehouses while Jafza has recently completed the biggest retrofit project in the region, with Etihad Energy, of 157 accommodation buildings housing 55,000 people working for companies in the free zone with the replacement of 5,200 old window air-conditioning units with modern energy efficient split a/c units. The AED85 million project, self-financed through energy savings, is set to meet

the target of the UAE 2030 plan to cut energy consumption by 30 percent ahead of time.

Meanwhile, over 85,000 conventional light fixtures and lamps have been replaced with energy-saving LED lamps.

Other planned retrofits for 28 office buildings have also started with a target to save 25 percent of energy consumption once completed in 2018.

DP World and the Jafza Phase 1 roof top solar project of 22 MWp is in an advanced stage of construction with several facilities already supplying power to the grid. Phase 2 of the project for another 15-25 MWp is about to be contracted with

The Dubai Solar Show provides a deeper insight into the latest innovative solutions and modern trends in the solar industry.



completion scheduled for 2019.

Meanwhile, Jafza has installed a smart solar flower to generate solar power for Gate 4's power requirement. It features solar panels which automatically track the sun to maximise exposure and can adapt to changing weather conditions by folding up if wind speed increases.

Several Jafza companies have started installing solar panels in their own facilities, contributing to a greener environment and contributing towards Dubai's daytime peak electrical loads.

Ducab invests in UAE's clean energy future

Through recent investments in both products and projects,

Ducab is working to power the UAE's renewable energy agenda with a particular emphasis on solar, nuclear and wind energy. In an industry with rapidly evolving requirements, Ducab is diversifying its product range to meet energy needs of the future. In addition to its new SolarBICC range, Ducab also showcased its Ducab NuBICC nuclear-grade cables which are already being used in nuclear power plants in

the UAE and abroad. Wind energy also featured prominently at this year's WETEX following the recent announcement of the first large-scale wind farm set to be developed in the GCC. Today, Ducab offers specialised expertise plus a broad range of certified and type-approved products for wind energy, having already supplied specialist products for wind farm projects in the UK.



WGES 2017

14 c r e a t i n g g r e e n c o m m u n i t i

WGES 2017
concludes
with the
announcement
of the 4th Dubai
Declaration



The Dubai Declaration reflects the relentless endeavours and efforts to make Dubai a global hub of green economy.

The 4th World Green Economy Summit (WGES), held under the patronage of HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai concluded on 25th October 2017. The summit, held under the theme 'Driving Innovation, Leading Change' brought together many prominent speakers from across the globe, in addition to dignitaries and representatives from government organisations, academics, experts and the media.

HE Saeed Mohammed Al Tayer,

Vice Chairman of the Dubai Supreme Council of Energy, MD & CEO of Dubai Electricity and Water Authority (DEWA), and Chairman of WGES, announced the Dubai Declaration 2017 at the conclusion of WGES 2017. HE expressed his gratitude and appreciation to His Highness Sheikh Mohammed bin Rashid Al Maktoum, for his presence and his patronage of the Summit.

Al Tayer said that the Dubai Declaration reflects the relentless endeavours and efforts to make Dubai a global hub of green economy. He then summarised

the achievements of the past years and commitments for the next year. Al Tayer emphasised that Dubai has always delivered on its promises as it continues its endeavours to become the global capital of green economy, reinforcing its global position as a role model in partnerships and green finance.

The major strategies - starting from the UAE Centennial 2071, UAE Vision 2021, Dubai Plan 2021, UAE Green Agenda 2030 and Dubai Clean Energy Strategy 2050 to the Paris Agreement - have set the course for a



THE FOURTH edition of WGES was held under the theme 'Driving innovation, Leading change'.

continuous economic growth and sustainable development.

In the spirit of the Summit's outcomes, he reaffirmed Dubai's engagement in global efforts to promote sustainability, energy security and protection of environment for future generations.

"As we work to further enhance Dubai's position as a global role model for sustainability, we will be relentless in our efforts to deliver innovative solutions that contribute to the transformation towards a green economy. Our

wise leadership has recently announced its support for the UAE National Climate Change Plan 2050, to reflect the nation's goals to become among the best-prepared country to combat climate change and achieve sustainable development. This plan unifies our concerted efforts and enhances cooperation between the private and public sectors and will become a major element in the transition to a green economy. This is why the UAE has set an example for an economy based on solid public-private partnerships as part of its pioneering role to achieve

environmental sustainability," Al Tayer said.

Future Plans and Aspirations

Talking about Dubai's future plans and aspirations, Al Tayer said that Dubai continues its journey of excellence by launching mega green projects, particularly the Mohammed bin Rashid Solar Park, which is the largest single-site solar park in the world based on the IPP model with a capacity of 5000 MW by 2030.

"His Highness Sheikh Mohammed bin Rashid Al Maktoum launched the world's largest single-site



Concentrated Solar Power (CSP) project based on the IPP model with a total capacity of 700-megawatt as part of the Solar Park. Additionally, an Innovation Centre and R&D Centre, equipped with the latest renewable and clean energy technologies are being developed," Al Tayer pointed out.

Global Partnerships and Future Endeavours

Focusing on global partnerships, His Excellency said that following the successful launch of the World Green Economy Organisation (WGEO) last year, the organisation has been working with many countries to implement the global green economy agenda, by collaboration, joint discussions

and technical support. WGEO has launched seven platforms, including the Country Platform that was revealed at the Summit, where in addition to the UAE, Italy and the Republic of Korea have joined as members.

Al Tayer stated that they will continue to work with the United Nations Development Program to support the growth and development of WGEO as a key strategic player for achieving the aspirations of a green economy.

Green Finance

His Excellency said that green finance is one of the five main pillars of the Dubai Clean Energy Strategy 2050 that was announced by His Highness Sheikh Mohammed bin Rashid Al

Maktoum, in 2015. The strategy includes the establishment of the AED 100 billion 'Dubai Green Fund' with a view to finance investments in the clean energy sector through partnerships with financial institutions to provide innovative solutions to support green projects locally and internationally.

In this regard, a joint collaboration between DEWA and National Bonds was announced to launch the green fund with an initial AED 2.4 billion, and a Sharia-compliant arm. Lastly, His Excellency took the opportunity to highlight the role of the youth and their effective contribution considering they are tomorrow's leaders, who would lead the change for a better future now

UAE's major strategies - starting from the UAE Centennial 2071, UAE Vision 2021, Dubai Plan 2021, UAE Green Agenda 2030 and Dubai Clean Energy Strategy 2050 to the Paris Agreement- have set the course for a continuous economic growth and sustainable development.



and for generations to come.

'Driving innovation, Leading change'

The fourth edition of WGES was held under the theme 'Driving innovation, Leading change'. The summit adopted innovation as its main theme, since it plays a pivotal role to boost sustainable development solutions which thereby lead the change to a green economy.

WGES 2017 attracted more than 3000 participants making it the largest in the MENA region. The summit was held in conjunction with the 19th edition of Water, Energy, Technology and Energy Exhibition 'WETEX 2017' and the 2nd edition of 'Dubai Solar Show 2017', as part

of the Green Week activities in Dubai. Over two days, the Summit discussed varied new technologies and solutions that not only provides renewable and alternative resources of energy, but also offers several ways to tap productive and eco-friendly technologies. The Summit also witnessed participation of top-notch experts in various sectors such as administrations, partnerships, financing, innovation, and global markets.

WGES 2017 is a world leading event focusing on green economy globally. The Summit aims to create sustainable future for humanity, and aims to adapt a shift to a greener economy. It attracted thousands of participants including decision

makers, green economy pioneers, CEOs from public and private sectors, governmental officials and green economy experts. v This year, the Summit focused on supporting partnerships and collaboration between governments and organisations from public and private sectors.

The fourth cycle of WGES is timely, particularly as the world is facing the threat of climate change and the increasing need to move to green economy.

WGES 2017 shares the same values with United Nations Framework Convention on Climate Change (UNFCCC), Paris Climate Agreement 2015, COP22 in Marrakech, the upcoming COP23 in Bonn and SDGs 2030.

Youth encouraged to take responsibility and implement green plans and strategies



Al Tayer called upon the youth in the UAE and around the world during the World Green Economy Summit to become part of the country's global efforts for a green transition.

Aimed at promoting the engagement of youth in a green economy, His Excellency Saeed Mohammed Al Tayer, Vice Chairman of the Dubai Supreme Council of Energy, MD & CEO of Dubai Electricity and Water Authority (DEWA), Chairman of WGES; called upon the youth in the UAE and around the world to become part of the global efforts towards reaching a green economy.

He made the remark for the opening speech at the 'Youth Dialogue - Going Green: Practical or unrealistic for today's youth'

held at the fourth edition of the World Green Economy Summit on October 24th at Dubai International Convention and Exhibition Centre (DICEC).

"As we all know, the youth's contribution in the green economy is one of the most important topics on the agenda for the fourth edition of the World Green Economy Summit. As such the theme 'Driving Innovation, Leading Change', illustrates the pivotal role that young people play in the transformation to the green economy, because innovation and creativity are qualities of youth, and

the change we seek is a continuous process, which to a large extent is driven by the youth," said HE Saeed Mohammed Al Tayer.

"The youth is the future and hope of our country, and it is imperative that we support them, encourage their views and opinions and strive hard to make them an integral part of the economic, social and environmental development and growth," he added.

"Youth activism and engagement can bring about important social changes. As such, it is important that the young population is



e s f o r a b e t t e r t o m o r r o w

IDEAS, SUGGESTIONS and contributions from the youth session at WGES will serve as a boost for sustainable development and protection of the environment plans and strategies.

given a chance to contribute to the growth of a green economy. Each individual's contribution can be a qualitative addition to the development and implementation of green plans and strategies, particularly because today's youth are the leaders of tomorrow and the drivers for change leading us and the generations to come close to a better future," he said.

The Youth Dialogue facilitated discussions on various topics including how can governments benefit from this immense opportunity and leverage the power of young people to

lead a global transformation towards sustainability, are there sufficient incentives and alternatives for those who want to adopt environmentally friendly lifestyles, can the youth be empowered to lead the next generation of businesses as change agents towards a green economy and much more.

Spearheaded by speakers as Khalid Al Ameri, Columnist, The National; Laila Mostafa Abdullatif, Director General at Emirates Wildlife Society - WWF; Noura Alhammadi, R&D Technologist, Dubai Electricity

and Water Authority Research & Development Center and Simon Bushell, Co-founder & CEO, Sympower, the Youth Dialogue discussed issues related to sustainability and climate change and shared ideas on their importance for achieving a sustainable future and preparing for a post-oil era.

At the end of the session, the participating youth along with the speakers and facilitators pledged to carry the responsibility, both on local and global levels, to successfully combat climate change and achieve sustainability.

WSF 2017

20 c r e a t i n g g r e e n c o m m u n i t i

Zayed Prize
Secretary General
to participate in
World Science
Forum 2017 in
Jordan



[Dr. Meshgan Al Awar, Director, Research & Studies Center, Dubai Police Academy, and Secretary General, Zayed International Prize for the Environment, invited to participate at the World Science Forum in Jordan and as a panelist in a special session entitled "Promotion of Arab Women in Science" at the event.](#)

As an honoree of the Women in Science Hall of Fame 2012, Dr. Meshgan Al Awar, Director, Research & Studies Center, Dubai Police Academy, and Secretary General, Zayed International Foundation for the Environment, has been extended a special invitation on behalf of HRH Princess Sumaya bint El Hassan, President of the Royal Scientific Society, the Hashemite Kingdom of Jordan, and Professor László Lovász, President, Hungarian Academy of Sciences, World Science Forum, to participate in the World Science Forum to be held from 7th to 11th

November in Jordan.

She has also been invited to participate as a panelist in a special session entitled "Promotion of Arab Women in Science" which will be held in conjunction with the WSF.

Held under the patronage of His Majesty King Abdullah II Ibn Al Hussein and under the theme of "Science for Peace", World Science Forum 2017 will present a vision of a world in which science plays an increasingly important role as an enabler of equitable and sustainable development for all

people. Over 2,000 scientists, decision-makers from the world of politics and industry, and representatives of civil society and the media will meet at WSF 2017 to exchange their views on the common challenges facing all humankind, and on how those challenges may be tackled through science and policy for the benefit of all.

Special Session: Promotion of Arab Women in Science

To be held at The Arab Women in Science exhibition room, King Hussein Bin Talal Convention Centre, Dead Sea, Jordan, on

DEBATE-DISCOVER-ENGAGE-DEFINE-CELEBRATE-EXPLORE

WORLD SCIENCE FORUM

2017 JORDAN

SCIENCE FOR PEACE

HUMANKIND'S MOST PRESSING CONVERSATION

7-11 NOVEMBER 2017

KING HUSSEIN BIN TALAL CONVENTION CENTRE, DEAD SEA

WWW.WORLDSCIENCEFORUM.ORG

DR. MESHGAN AL AWAR was inducted into the Women in Science Hall of Fame in 2012 in her capacity as an outstanding female scientist of the UAE and having accomplished several noteworthy achievements in her career.

November 8th, the Special Session titled 'Promotion of Arab Women in Science' seeks to strengthen lifelong learning trends for Arab women and highlight its mechanisms, approaches and technical platforms in order to utilize them within the contexts of education and work.

Earlier in 2012, Dr. Meshgan Al Awar was inducted into the Women in Science Hall of Fame in her capacity as an outstanding female scientist of the UAE having accomplished several noteworthy achievements in

her career. Her remarkable accomplishments in her field were found to serve as an inspiration for young girls to study science and pursue scientific careers.

The World Science Forum is a biennial gathering that was initiated in 1999 by its founding partners, the Hungarian Academy of Sciences and the United Nations Educational, Scientific and Cultural Organization (UNESCO).

It is organized jointly by its prestigious partners The International Council for

Science (ICSU), the American Association for the Advancement of Science (AAAS), The World Academy of Sciences (TWAS), the European Academies of Science Advisory Council (EASAC), the InterAcademy Partnership (IAP), and the Royal Scientific Society of Jordan (RSS).

Under the banner of Science for Peace, the WSF 2017's programme will examine how science and science policy can improve lives, protect the planet and build a durable and secure future for all of the world's citizens.

Campaign

22 c r e a t i n g g r e e n c o m m u n i t i e s

Dubai marks
World Food
Day with
#ZeroFoodWaste
campaign



World Food Day is a chance to show our commitment to Sustainable Development Goal (SDG) 2 – to achieve Zero Hunger by 2030.

Dubai Municipality has called for a commitment to zero tolerance for food waste in the UAE from both the consumers and the food industry. The call has been made on behalf of the UAE Food Bank and Dubai Municipality in support of World Food Day, which was observed with a wide variety of activities on 16th October.

The programmes, organized by the Food Safety Department of Dubai Municipality, included a social media campaign with the hashtag, #ZeroFoodWaste, food donation drive and competitions

focused on the Zero Food Waste theme. The general public was encouraged to use the hashtag #ZeroFoodWaste on social media to promote the theme.

The municipality invited food establishments and individuals to present innovative ideas, tools and methodologies for identifying food losses, their causes and potential solutions along the entire food value chain, from production, storage and processing to distribution and consumption. Participants submitted their ideas through the official website by clicking on the

link #ZeroFoodWaste.

The members of the public along with Dubai Municipality employees were invited to join UAE Food Bank and the Food Safety Department in supporting the World Food Day by participating in the social media campaign by sharing their creative thoughts, ideas and messages on ways and means to reduce food wastage on their favourite social media channels using the #ZeroFoodWaste hashtag.

A 'Fill up the Fridges' campaign was organised on World Food



THE WORLD produces enough food to feed everyone, yet, about 800 million people suffer from hunger.

Day through volunteers to ensure that all fridges are full with foods that can be donated to someone else without being wasted. Only packaged foods were recommended to be put in the Food Bank Food fridges placed at different locations throughout Dubai.

“We as individuals, as well as government and the food business, have to commit ourselves to reducing food waste in Dubai and the UAE, whether it is by reducing portion sizes, communicating with consumers in a better way by identifying their

expectations or by better stock management, every food business will be able to do something to reduce food waste,” Khalid Mohammed Sharif, Assistant Director-General of Dubai Municipality for the Environment, Health and Safety Control Sector.

“According to the UN, one-third of food produced for human consumption is lost or wasted globally each year. This loss and waste occurs throughout the supply chain, from farm to fork. Beyond food, it represents a waste of labour, water, energy, land and other inputs. If food loss

and waste were a country, it would rank as the third highest national emitter of greenhouse gases. By reducing loss and waste along the food value chain, healthy food systems can contribute to promoting climate adaptation and mitigation, preserving natural resources, and reinforcing rural livelihoods,” he said.



Initiative

24 c r e a t i n g g r e e n c o m m u n i t i

Boosting energy efficiency in Dubai homes through personalised advice



TAQATI - Dubai Energy Efficiency Program announces the successful completion of the pilot 'Home Energy Advice Program'.

Building on the momentum to improve energy efficiency in Dubai, TAQATI - Dubai Energy Efficiency Program has announced the successful completion of the pilot 'Home Energy Advice Program'.

The program was run across 60 homes in Dubai as part of Dubai Electricity and Water Authority (DEWA) 'Ideal Home Initiative' and supports DEWA's efforts to achieve the Smart Dubai initiative launched by HH Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai,

to make Dubai the smartest and happiest city in the world.

The 'Home Energy Advice Program' was created to support TAQATI's efforts in raising awareness on energy efficiency amongst Dubai residents, as part of Dubai's Demand Side Management (DSM) Strategy which aims to reduce energy consumption by 30% by 2030.

The program provides personalised advice to homeowners to help reduce their energy consumption. As part of the pilot program, teams made up

of representatives from TAQATI, DEWA and AESG advisors visited 60 homes in Dubai to collect information on electricity and water consuming appliances and on behavioural elements, and to conduct basic technical tests, including water flow testing.

"The Home Energy Advice Program is one of the enabling mechanisms to improve awareness amongst Dubai residents to achieve energy savings in the residential sector as part of the Demand Side Management strategy," stated by H.E. Ahmad Buti Al Muhairbi, Secretary General of the Dubai



60 households in Dubai receive expert advice on lessening energy and water consumption.

Supreme Council of Energy.

“TAQATI works in line with the strategies and goals set by the Dubai Supreme Council of Energy and contributes to promoting sustainable development. The Home Energy Advice program not only provided the residents with advice and information on methods to minimise home energy use, but also helped them reduce energy bills without compromising on comfort,” said Ali Al Jassim, CEO of Etihad ESCO.

Following the visits, a personalised home energy conservation report

(in English and Arabic) was shared with each home to highlight potential water and electricity savings through customised energy conservation measures and tips.

The ‘Home Energy Advice Program’ is the first-of-its-kind in the UAE, and has received positive feedback from the home owners, displaying their interest in learning more about their home energy efficiency and willingness to conserve energy and generate savings on their utility bills.

“Utilising personalised

assessments and expert advice, the ‘Home Energy Advice Program’ is designed to make beneficial long-term changes for Dubai consumers,” said Aref Abou Zahr, Executive Director of TAQATI.

TAQATI is a dedicated Program Management Office for Dubai’s DSM Strategy which targets a reduction in energy consumption by 30 per cent by 2030. It was established by the Dubai Supreme Council of Energy (DSCE) under Etihad Energy Services Company to provide implementation support and guidance to all relevant stakeholders for the DSM Strategy.

Initiative

26 c r e a t i n g g r e e n c o m m u n i t i e s

453 photovoltaic installations connected as part of Shams Dubai with total capacity of 18.7 MW



['Shams Dubai' initiative encourages customers to install solar photovoltaic panels on the roofs of their premises to generate electricity from solar power and export any excess to the power grid.](#)

Dubai Electricity and Water Authority, DEWA, has connected 453 photovoltaic, PV, installations on the roofs of residential, commercial and industrial buildings in Dubai, with a total capacity of about 18.7 MW.

This was carried out under the 'Shams Dubai' initiative launched by DEWA to encourage customers to install solar photovoltaic panels on the roofs of their premises to generate electricity from solar power and export any excess to the power grid.

The numbers are expected

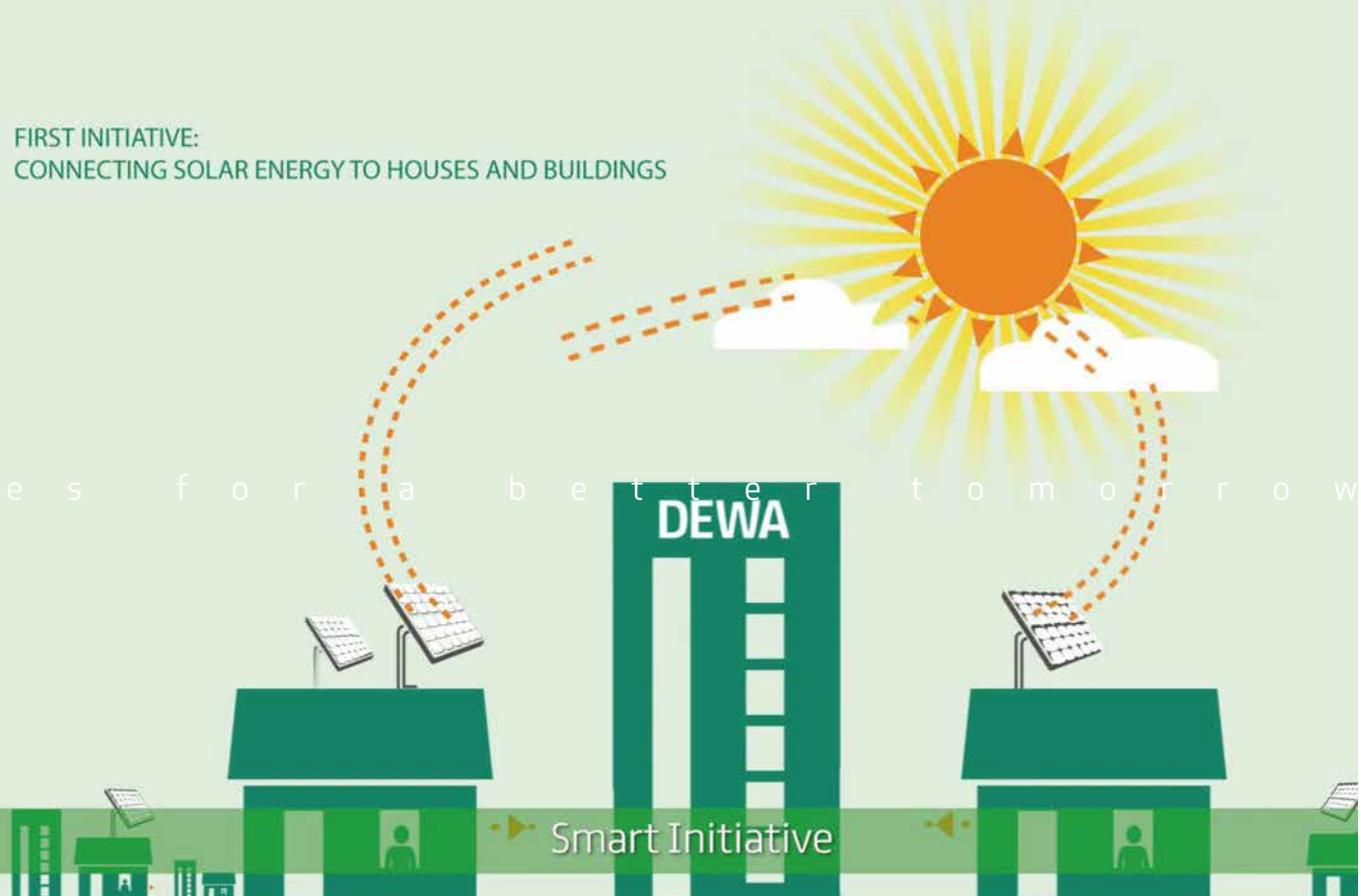
to increase in the future to eventually cover all buildings in the emirate by 2030.

Commenting on the initiative, Saeed Mohammed Al Tayer, MD & CEO of DEWA, said, "Shams Dubai gives its residents the opportunity to transform their buildings into sustainable ones, reduce the emirate's carbon footprint, and increase the proportion of solar power in Dubai's environmentally friendly energy mix. Through this initiative, community members will promote sustainable development in Dubai and transform the emirate into a

global hub for clean energy and green economy, and support the Dubai Clean Energy Strategy 2050, launched by Vice President and Prime Minister of UAE and Ruler of Dubai, His Highness Sheikh Mohammed bin Rashid Al Maktoum, to generate 7 percent of Dubai's total power output from clean energy by 2020, 25 percent by 2030 and 75 percent by 2050.

"Shams Dubai helps customers avoid using very expensive power storage systems by connecting the photovoltaic panels to the network. Furthermore, the surplus

FIRST INITIATIVE:
CONNECTING SOLAR ENERGY TO HOUSES AND BUILDINGS



SHAMS DUBAI gives its residents the opportunity to transform their buildings into sustainable ones and reduce the emirate's carbon footprint.

power will be exported to DEWA's grid, which will be deducted from the customers' future bill. Apart from providing those direct benefits to electricity customers, and increasing the value of buildings where solar photovoltaic systems are installed, Shams Dubai establishes a sustainable model for providing clean energy and supporting Dubai's economy without harming the environment and natural resources.

"This is aligned with the long-term 'Green Economy for Sustainable Development' initiative, launched by Sheikh Mohammed bin Rashid,

to build a green economy in the UAE. Moreover, Shams Dubai contributes to the UAE Vision 2021, to make the UAE one of the best countries in the world by 2021, by its sustainable environment and infrastructure objectives, through the improvement of air quality and increasing the share of clean energy.

"The first customers' solar photovoltaic systems connected to DEWA's grid, under Shams Dubai initiative, was the rooftop of the employees' building at Dubai World Central - Al Maktoum International Airport,

with a capacity of 30 kilowatts at peak load, kWp. After that, a number of ambitious projects were completed, including the 1 megawatt at peak load, MWp, carport installation at Emirates Engine Maintenance Centre in Warsan, a number of Dubai Municipality buildings, including the 260kWp carport at Al Qusais Park, the 1,210kWp installation at the Engineer's Office's water pumping station at Al Qudra, the 126kWp canopy at ENOC petrol station near Dubai Internet City, and 353 villas at the Sustainable City as of 31st August, 2017," Al Tayer added.

Dubai Environment Outlook traces path to sustainability



The report provides a comprehensive assessment of the current status of the environment, while also highlighting challenges the emirate will need to overcome in the coming years.

The Dubai Environment Outlook report, supervised by The General Secretariat for The Executive Council in cooperation with Dubai Municipality, has said that rising population demographics and economic growth are the main drivers of environmental change in Dubai. The report provides a comprehensive assessment of the current status of the environment, while also highlighting challenges the emirate will need to overcome in the coming years. In total, it takes a look at seven separate themes: air, water, biodiversity, land, coastal zone, built

environment, and waste.

The report responds to global calls for greater transparency and access to environmental data, as Dubai makes a conscious effort to adopt a sustainably clean and healthy environment. The report also supports Dubai Plan 2021, which has committed to building a smart and sustainable city, by ensuring the availability of clean energy sources and protecting natural resources such as soil, water, and air.

In addition to the two main drivers, the report notes that

while there was widespread environmental degradation during the construction boom as city planners and developers rolled out mainland and offshore development schemes of epic dimension, often with little regard for the environment, evidence now may suggest that Dubai has reached a turning point, with environmental improvement prominently featured in national plans like Dubai Plan 2021 and Dubai Clean Energy Strategy 2050.

In addition, technological advances and multilateral environmental agreements



THE REPORT noted that the degradation of air quality in Dubai was an increasing concern.

have an increasingly large role to play. In Dubai, technological innovations by the likes of DEWA present powerful tools for mitigating some of the environmental impacts caused by human activities. And all of these efforts will be central to the UAE's broader global obligations. Last year, the country ratified the Paris agreement. The central goal of the agreement is to hold the increase in global average temperature to well below 2 degrees Celsius above pre-industrial levels.

Commenting on the report, Abdullah Al Shaibani, Secretary-

General of The Executive Council of Dubai, said, "Ensuring a sustainable pathway for the future is vital, and Dubai has taken bold and swift steps in that direction of late. Economic growth and the resulting increase in construction activity have both necessitated the need for a deeper examination of the resulting environmental impact, providing us with the opportunity to develop a greener and more sustainable approach."

He continued, "The importance of sustainable solutions for future generations is of unquestionable

importance, and directing more investment towards research and development, innovation and advanced technologies should be given special priority. We are seeing increasing momentum in this regard, to create systems that are resilient to climate change, and institutions that are building sustainable development into their core business strategy."

Saeed Mohammed Al Tayer, Chairman of the Infrastructure and Environment Committee of the Executive Council of Dubai, said, "We work under the directives of His Highness



Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to be first in everything we do. The Infrastructure and Environment Committee, a part of the Executive Council of Dubai, is working with several government organisations to achieve long-term sustainability goals. This supports the United Nations' Sustainable Development Goals 2030 and the UAE Centennial 2071, to provide all the elements of success to empower people and ensuring their happiness. This is done by investing in an advanced physical and digital infrastructure."

He added, "The need to innovate and foresee the future is more

important than ever before. The committee aims to develop and adopt modern innovative technologies to ensure a futuristic infrastructure, and create a healthy environment with good quality air for Dubai's residents. This is done by identifying the elements that affect air quality and their impact, and controlling those factors, which is an important way of supporting the leadership's vision to further sustainable development."

Hussain Nasser Lootah, Director General, Dubai Municipality, said, "Addressing these challenges effectively requires our urgent attention, as well as continued efforts to develop programmes that aim to minimize the negative

impact on our environment. Reports such as this one are invaluable for our sustainable planning efforts, and represent a starting point as we begin to prioritizing environmental issues. In this respect, Dubai Municipality has provided its full support and backing to this project, which demonstrates Dubai's commitment to ensuring a sustainable future. I am confident that we can work together to help the city reduce its carbon footprint and provide more sustainable choices to our residents."

"The Dubai Environmental Outlook notes some challenges that Dubai will need to overcome moving forward. These include: diversifying

The Dubai Environment Outlook report takes a look at seven separate environmental themes, in line with global best practice - including air, water, biodiversity, land, coastal zone, built environment, and waste.



its fuel mix without affecting total emissions, reducing car ownership and controlling the size of its fast growing vehicle fleet, concomitant and costly expansion of the sewage networks and treatment plants, changing the common perception by city planners and the general public that drylands and deserts are waste lands with little value to society, mitigating the long-term effects of completed Offshore Development Schemes on Dubai's shoreline and marine ecosystems, as well as mitigating the impacts of desalination on the marine environment.

“Overcoming these challenges, and others mentioned in the report, will be key to effectively improve environmental governance.”

Sameera Al Rais, Director of Policies and Strategies - Sustainable Development, said, “The report takes a look at seven separate environmental themes, in line with global best practice - including air, water, biodiversity, land, coastal zone, built environment, and waste. This report is one of many steps we are taking in our efforts to manage against Dubai's future growth by ensuring the availability of clean energy sources and protecting our natural resources, for the benefit of our future generations.”

The report noted that the degradation of air quality was an increasing concern. Key pressures impacting this included the transport and

energy sectors; in 2014, there were 1.4 million vehicles, a figure that is expected to rise to 2.7 million by 2030.

With less than 100 mm of annual rainfall concentrated in a few storm events, Dubai lacks perennial freshwater. Dubai relies on desalination plants to supply it with most of its domestic water needs. Dubai Electricity and Water Authority, DEWA, produced in 2014 1.27 million m³ per day of desalinated water, a figure that is expected to rise to 2.45 million m³ per day by 2030.

The report indicated that lowering per capita water consumption from 546 to 430 liters per day 2030 can be



achieved by mainstreaming greywater treatment in all new residential developments as well as recreational facilities.

The report notes that Dubai has made a conscientious decision to mainstream biodiversity conservation in all economic sectors including urban planning.

The Convention on Biological Diversity, CBD, has gained renewed attention and popularity and Dubai Municipality has teamed up with leading research centres and faculties to identify and implement approaches in support of the UAE National Biodiversity Strategic Action Plan, NBSAP. To promote urban biodiversity, Dubai has joined the global network of biophilic cities.

The report also emphasised the importance of reviving the Dubai 2020 Urban Master Plan and updating this to cover the period through 2030. It also recommends that Dubai Municipality adopt a unified land cover/use classification and publishes biannual land use/cover data - such data may influence responses to climate change and land degradation.

The report also recommends that policies are developed that promote a transit-oriented development aimed at concentrating business and population around Dubai metro stations to increase ridership and reduce daily travel distance. The report also recommends that the Dubai Roadmap towards

Sustainable Waste Management is updated and revised based on a detailed field assessment of recycling activities and outlets in Dubai and the UAE.

The waste recycling value chain for each type of waste (e.g., green, electronic, paper and cardboard, plastics, glass, and metals) would then become the basis for the revised roadmap. All segments of Dubai's consumer society (residential, commercial, institutional/government, and industry) can then be engaged to achieve the declared waste diversion goals.

As a result, per capita waste generation drops from 3.4 kg/capita/day in 2014 to 2.5 kg/capita/day in 2030.



Pushing the Green Agenda in the region

Dubai Carbon Centre of Excellence (DCCE), established under the guidance of the Dubai Supreme Council of Energy (DSCE), and global energy player ENGIE have signed a Memorandum of Understanding (MoU) to explore opportunities to implement renewable energy and energy efficiency solutions in Dubai and the region. The MoU was signed by Sebastien Arbola, CEO of ENGIE Middle East, South & Central Asia and Turkey, and Ivano Iannelli, CEO of Dubai Carbon.

The partnership will also enable joint projects in the field of sustainability, environment, climate change and social responsibility. DCCE and ENGIE will work together on

the development of Green Certificates and a Carbon Market, including the DCCE's project on International Renewable Energy Certificates (IRECs). DCCE will facilitate IRECs, a market based instrument that is issued when one megawatt hour (MWh) of electricity is generated and delivered to the electricity grid from a renewable energy source.

Together, DCCE and ENGIE will enable access to a range of tried and tested technologies in energy performance management, industrial maintenance, data management, green mobility, whilst offering the chance to tap into ENGIE's international expertise and experience. They will also jointly organise Innovation Platforms and

periodic stakeholder roundtables to promote sustainability and green economy solutions, as well as innovative strategies for resource efficiency and carbon emission reductions & offsetting.

"The core objective of the partnership is to act as a catalyst to share knowledge, introduce leading solutions and build a better sustainable future for Dubai and the UAE," said Iannelli.

With an ultimate goal to support sustainable development in the UAE, the partnership between Dubai Carbon and ENGIE aligns with the government's all-encompassing renewable energy programmes and drives the country closer to its goals of UAE Vision 2021.

Award

34 creating green community

Winners of 3rd
Emirates Energy
Award (EEA)
unveiled



EEA attracted wide participation from Middle East & North Africa in addition to European, American and Scandinavian countries.

Dubai Supreme Council of Energy held on 24th October the 3rd Emirates Energy Award 2017 organised concurrently with the fourth edition of The World Green Economy Summit (WGES). The event saw the attendance of the industry's elite and leading energy professionals who came together under one roof to recognise and celebrate the achievements of 33 winners in this ever-evolving industry. The prestigious ceremony was also graced by the presence of HH Sheikh Ahmed bin Saeed Al Maktoum, Chairman of Dubai Supreme Council of Energy.

Organised under the patronage of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai under the theme of "Innovative Solutions for Clean Energy", The Emirates Energy Award (EEA) aims to encourage the rationalised use of energy and resources. The award also targets to highlight the best practices and pioneering work in energy efficiency, alternative energy, sustainability and protecting the environment.

"This year's edition has attracted

wide participation from countries across the Middle East and North Africa, including the European, American and Scandinavian countries, which exceeded expectations after doubling the number of entries, which stood at 210 compared to 112 in the previous cycle," said HE Saeed Mohammed Al Tayer, Vice Chairman of the Dubai Supreme Council of Energy, President of Emirates Energy Award.

Emirates Energy Award recognises brilliant ideas, innovative minds and creative projects which support



33 WINNERS were recognised for their outstanding contribution to energy efficiency.

sustainable development efforts and renewable energy technologies that preserve environment and natural resources.

“Following the directives and wise vision of HH Sheikh Mohammed bin Rashid Al Maktoum, we celebrate today all categories of Emirates Energy Award. This wise vision was reflected in many strategies and innovative initiatives that supported the UAE efforts to achieve sustainable development and green economy, thus making the country a global hub for green technology,

conservative consumption techniques and renewable energy,” added Al Tayer.

Standout winners from this year’s Emirates Energy Awards included Abu Dhabi Carbon Capture Company (UAE), Mohammed Bin Rashid Space Centre (UAE), Moroccan Agency for Energy Efficiency (AMEE – Morocco), Emirates District Cooling (Emicool) LLC (UAE), Diamond Developers Co Ltd. (UAE) and The Hashemite University (Jordan), Dr. Rebhi A. Damseh from Al-Balqa Applied University (Jordan), Bethel Business and Community

Development Centre (Lesotho), Orbital Systems (Sweden), Soner Hacıhaliloglu (Turkey), Dr. Elie Azar from Masdar Institute of Science and Technology (UAE) and Marj Elhamam from Rosary School (Jordan) amongst others.

“Emirates Energy Award is an important platform that not only shapes the future of the energy sector in the UAE, but also focuses on best practices and key trends which serve as a benchmark for countries across the world to follow. On this important occasion, I’d like to extend warm wishes to all



the winners and encourage more companies operating in the industry to participate in the coming editions. Let's all pledge to innovate, build and find solutions that will meet the challenges of climate change, energy security and the environment for the present and future generations to come," said His Excellency Ahmad Buti Al Muhairbi, Secretary General of the Dubai Supreme Council of Energy (DSCE), and Vice President of the Executive Committee of the Emirates Energy Award (EEA).

The winners were awarded the honours in categories such as Large Energy Project, Small Energy Project, Energy Efficiency - Public Sector, Energy Efficiency

- Private Sector, Distributed Solar Generation Large Scale → 500kW, Distributed Solar Generation Small Scale < 500kW, Education & Capacity Building, Research & Development, Young Professional and Special Recognitions.

"Emirates Energy Award reflects the UAE's strategy to promote innovation that helps the country achieve the UAE Centennial 2071 and reinforce the country's leadership in all fields. The Award meets the futuristic vision of the wise leadership which leads to sustainable prosperity in the post oil future of the UAE. My congratulations to all the winners for their outstanding contributions to energy efficiency. Their remarkable

work has not only guided us to unlimited innovation and progress, but has also driven us closer to our goals of protecting our planet and ensuring sustainable development for future generations," said Al Tayer.

The Emirates Energy Award provides a global platform for all energy companies and professionals to showcase their achievements in energy management and conservation and highlight their efforts throughout the energy sector, providing the recognition that is due to them. The award is managed by The Supreme Council of Energy, which reviews and conducts the award assessment and selection based on specific criteria.



Dubai observes 32nd International Coastal Cleanup Day

550kg waste collected from sea, 600 volunteers participate

Dubai Municipality's Environment Department observed, for the third consecutive year, the International Coastal Cleanup Day, with the participation of more than 600 volunteers from schools and government and private organizations.

"The initiative to protect the sea is the largest voluntary global effort to raise public awareness about the importance of coastal areas and highlights the threats faced by the maritime system as well as the participation of people in the collection of waste from beaches and waterways," said Eng. Alya Al Harmoudi, Director of Environment Department in Dubai Municipality.

"More than two and a half tons of rubbish was collected along the four-kilometer stretch of the coastline of the Jebel Ali Marine Sanctuary in two days. About 65% of the collected waste material was plastic. Other materials included rubber, ropes, wood, bottles, and personal equipment such as shoes, shirts, etc. About 550kg of garbage was collected by volunteer divers (scuba dive), mostly metal waste, abandoned nets and fishing equipment, glass and plastic bottles," Al Harmoudi said.

"Plastic destroys the ocean for years after entering the marine environment because it does not completely decompose, so it is important to educate the consumers about its impact on

marine life," said Aisha Al Murr Al Muhairy, Head of Natural Resources Protection Section.

"The Jebel Ali Marine Sanctuary is characterized by its unique coral species and marine animals of global importance, which contributed to its declaration in 2015 as an ecologically and biologically sensitive area under the Convention on Biological Diversity. The cleaning done at the sanctuary with the support of our partners, such as the Emirates Environmental Group, Nakheel and the various volunteers, underscores the commitment of the Dubai community to preserving the fragile marine environment and sustainability of its components in Dubai," said Al Muhairy.

Conference

38 c r e a t i n g g r e e n c o m m u n i t i

UAE Peaceful Nuclear Energy Program highlighted as a role model for major projects



[UAE nuclear energy leaders showcased to global industry audience the “The UAE’s Journey Towards Peaceful Nuclear Energy” at the International Ministerial Conference on Nuclear Power in the 21st Century in Abu Dhabi.](#)

When the four reactors are completed, the Barakah Nuclear Energy Plant will save up to 21 million tons of carbon emissions each year.

The United Arab Emirates (UAE) Peaceful Nuclear Energy Program was showcased as a role model for other nations around the world considering launching major peaceful nuclear energy projects to meet their growing energy demands. The session took place at the International Ministerial Conference on Nuclear Power in the 21st Century that was recently held in Abu Dhabi.

Speaking at the UAE Side Event session entitled “The UAE’s Journey Towards Peaceful Nuclear Energy”, industry leaders

displayed how the UAE has benefitted from the support of and collaboration with the international nuclear energy community in its efforts to develop the UAE Peaceful Nuclear Energy Program.

The three-day conference was organized by the International Atomic Energy Agency (IAEA) and the Organization for Economic Cooperation and Development’s Nuclear Energy Agency (OECD/NEA), and hosted by the UAE Ministry of Energy.

The session included prominent



NUCLEAR ENERGY provides 11% of the world's electricity, while emitting virtually no greenhouse gases.

UAE nuclear industry experts including, H.E. Ambassador Hamad Alkaabi, UAE Permanent Representative to the IAEA and President of the Conference, Eng. Mohamed Al Hammadi, Emirates Nuclear Energy Corporation (ENEC) Chief Executive Officer, Mohammed Sahoo Al Suwaidi, Acting CEO of Nawah Energy Company, Nasser Al Nasser, Barakah One Company Chief Executive Officer and Christer Viktorsson, Federal Authority for Nuclear Regulation (FANR) Director General.

The industry leaders gave a brief

historical background on the UAE Peaceful Nuclear Energy Program since it was conceived almost 10 years ago with a vision to power the future growth and prosperity of the nation.

They also looked back on the release of the UAE's Policy on the Evaluation and Potential Development of Peaceful Nuclear Energy, which provided the foundation for the UAE's efforts to develop the program and related infrastructure.

The session discussed the partnership with IAEA, as well

the establishment national institutions including FANR in 2009 as the independent federal regulatory body for the nuclear sector in the UAE, and ENEC later that year as the developer of the UAE first Nuclear Energy Project , supporting energy diversification in the UAE.

Speakers also highlighted cooperating with international experts and industry players as a key part of the development of the Program through the exchange of best practices and knowledge transfer. This has helped ensure sustainability of



the Program in line with the highest international standards of safety, quality, security and transparency.

In addition, the UAE nuclear energy leaders touched upon the UAE's human capacity building efforts by educating and nurturing the nation's next generation of energy leaders through specialist training programs and scholarships.

This falls in line with UAE Vision 2021 and UAE Centennial 2071, which will ensure a sustainable future by providing opportunities for talented and ambitious individuals who want to be part of developing long-term energy goals in meeting the growing demands of the nation.

The International Ministerial Conference on Nuclear Power in the 21st Century gathered global nuclear energy experts and leaders to assess the latest trends in the industry and propose new strategies to tackle energy challenges faced across the globe.

The conference featured nearly 700 delegates from 68 countries. The UAE Nuclear Energy Program is progressing steadily with Unit 1 now more than 96 percent, Unit 2 is more than 87 percent, Unit 3 is more than 78 percent, and Unit 4 is now 58 percent complete.

Overall, construction of the four Units is now more than 84 percent complete. All four units will deliver clean, efficient and

reliable electricity from nuclear energy to the UAE grid, pending regulatory reviews and licensing. When the four reactors are completed, the Barakah Nuclear Energy Plant will save up to 21 million tons of carbon emissions each year.





Dubai Tap agreement to save 80 percent of ablution water

Dubai Municipality has signed an agreement to produce a highly efficient water tap that can save water in big quantities. The product, named Dubai Tap, will be used to save ablution water in the mosques of Dubai in the first phase of the project. Dubai Tap is expected to save 80% of the ablution water from being wasted.

Eng. Ahmed Saeed Al Badwawi, Director of Applied Sustainability and Renewable Energy Department of Dubai Municipality signed the agreement with Ali Majid Al Shamsi, Assistant Director of Hamad Rahma Al Shamsi General Trading Corporation, in the presence of Eng. Hussain Nasser Lootah, Director General of Dubai

Municipality. The company will produce and market Dubai Tap by employing modern and innovative technology in this field.

“It is an embodiment of the objectives of the Applied Sustainability and Renewable Energy Department in Dubai Municipality to start the first innovation in water saving. This tap will achieve the greatest possible savings in water for ablution and will be used in all existing and new mosques in Dubai as a first phase,” he said.

Lootah pointed out that every year approximately 35,100 liters of water is consumed by a person during ablution and Dubai Tap will decrease water consumption by 80%.

As per the agreement, the company shall bear all production and marketing costs for the product, while the Municipality shall encourage property developers to use Dubai Tap and work on the success of the initiative by all possible means. A joint working group has also been formed for overseeing the implementation of this agreement.

As per the agreement, both parties will finalize, within three months, a specialized agreement that includes all the operational and technical details, conditions and obligations and other details necessary for the implementation of the programs and activities that fall within the provisions of the agreement.

Campaign

42 c r e a t i n g g r e e n c o m m u n i t i e s

“Go Wild Dubai”
campaign
to celebrate
protected areas



New initiative marks the start of an ongoing wider objective to ensure Dubai’s protected areas are understood, visited and appreciated.

Dubai Municipality has embarked on a two-week campaign to bring together communities to raise awareness on Dubai’s wildlife and the beauty of its natural world. A series of events were undertaken for the campaign, themed “Go Wild Dubai,” which was organized during 15-31 October, focusing on getting the community outdoors to discover Dubai’s protected areas.

Eng. Alya Al Harmoudi, Director of the Environment Department in Dubai Municipality commented: “Dubai has a very rich and unique natural world, which is home to a

variety of protected areas that boast impressive species of biodiversity. It’s important that visitors and residents understand, appreciate and care for these areas, as well as all ecosystems in Dubai.”

Emphasizing the importance the initiative, she said that Dubai’s protected areas are key to species conservation. “Dubai has eight protected areas that were established to protect vulnerable and important species in their natural habitat. Some species include Ghaf trees, Arabian Leopards, Hawksbill Turtles,

Houbara Bustards and many more. These protected areas cross various ecosystems, such as coastal, marine, desert and wetland and feature a large variety of flora and fauna species,” pointed out Al Harmoudi.

Aisha Almurr Al Muhairy, Head of Natural Resources and Conservation Section commented that “the protected areas in Dubai cover 16.5 % of the total area of the Emirate which represent the various ecosystems - desert, marine, coastal and mountain habitats, which are rich with multiple species of plants, animals,



DUBAI MUNICIPALITY hopes this initiative will inspire the community to become further involved in conservation and species protection programmes.

fish and birds.”

“Our protected areas were established to protect Dubai’s main threatened species which inhabit them, which include Arabian Tahr, Hawksbill Turtle and Houbara and we should put high priority into conserving these species for us and for generations to come,” she added.

The Go Wild Dubai initiative was established to coincide with the observance of 2017 as the International Year of Sustainable Tourism for Development as designated by the United

Nations 70th General Assembly. In the context of the universal 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs), the International Year of Sustainable Tourism for Development 2017 aims to support a change in policies, business practices and consumer behavior towards a more sustainable tourism sector and contribute to the SDGs.

Dubai’s eight protected areas were established with the purpose of conserving and protecting its habitats and wildlife while encouraging and promoting

sustainable tourism. The Go Wild Dubai initiative activities aim to showcase and inform people about the protected areas and encourage them to visit these areas.



Conference

44 creating green communities

Experts present compelling insights on 'Powering Smart, Happy & Efficient Cities'



At the sixth Annual EmiratesGBC Congress, panel discussions and keynote speeches highlighted new trends in promoting the wellbeing of urban residents and effective strategies for energy management.

The newest trends in powering smart, happy and efficient cities with a focus on urban energy management were highlighted on 17th October, 2017, at the opening day of the sixth Annual EmiratesGBC Congress at Pullman Dubai Creek City Centre hotel. Organised by Emirates Green Building Council (EmiratesGBC), an independent forum aimed at conserving the environment by strengthening and promoting green building practices, and held under the patronage of the Ministry of Climate Change & Environment, the Congress hosted international

experts in the field of sustainable built environments.

Welcoming delegates, Saeed Al Abbar, Chairman of EmiratesGBC, said: "The deliberations of the Congress serve as guidelines on how various stakeholders across the construction industry and the community can come together to develop sustainable built environments that promote human well-being. The transformational steps that we take today are our investment in a greener future for our coming generations."

A highlight of the Congress was

the keynote presentation via video link on well-being and cities by John Alker, Campaign and Policy Director; Steering Committee Better Places for People, UK Green Building Council; World Green Building Council.

Holley Chant, Executive Director of Corporate Sustainability, KEO International Consultants, and the Congress Moderator, introduced the event. The opening day witnessed insightful keynote presentations by Shaima Alaydarous, Head of International Climate Change Policy, Ministry of Climate Change & Environment;



THE SIXTH Annual EmiratesGBC Congress served as an important platform to discuss built environment sustainability, covering all aspects that drive energy efficiency.

Rajiv Rajgopal, Regional Director, AkzoNobel Middle East & Africa, and Samira Al Rais, Director of Policy and Strategy Sustainable Development, The General Secretariat of the Executive Council.

The Congress hosted discussions under three themes: Powering Efficient Cities, Powering Smart Cities and Powering Happy Cities. Opening the 'Powering Efficient Cities' sessions, Karim Elgendy, Founder & Coordinator; Senior Sustainability Architect, Carboun Initiative, made a keynote presentation on 'Emissions in

the Middle East', examining local, regional and international clean energy strategies, as well as the role of retrofitting the existing building stock to achieve the necessary targets.

Saeed Al Abbar opened the 'Powering Efficient Cities' session with a keynote presentation on 'Accelerating Building Efficiency'. A panel discussion followed with Christos Mimikopoulous, Executive Director Solar, Etihad ESCO; Michel Abi Saab, Manager of Sustainability, Masdar; Charles Blashke, Founder and Managing Director, Taka Solutions; and Maria

Malo, Business Development Manager MEA, AkzoNobel.

A WELL certified office case study on 'Powering Happy Cities' was made by Sreya Vempatti, Environmental Coordinator, AESG. This was followed by a panel discussion on 'Wellbeing in Buildings' moderated by Holley Chant.

The second day was dedicated to a field visit to City Centre Me'aisem where a workshop and a Green Building Tour of the LEED Platinum Core and Shell Property took place.

Clean Energy

46 c r e a t i n g g r e e n c o m m u n i t i

Climate Innovation Exchange to facilitate investment in clean technology solutions



UAE aims to increase clean energy contribution towards the total energy mix to 24% by 2021 and 50% by 2050.

The Climate Innovation Exchange (CLIX), an Abu Dhabi-based global marketplace that connects capital with new innovative concepts, has been officially announced to forge partnerships between entrepreneurs and investors. The initiative aims to drive sustainable climate change solutions through knowledge, innovation and funding and represents a significant new addition to the World Future Energy Summit, which takes place 15-18 January 2018, during Abu Dhabi Sustainability Week.

CLIX is being held under

the patronage of the UAE Ministry of Climate Change and Environment as part of Abu Dhabi Sustainability Week, in collaboration with Masdar and the Zayed Future Energy Prize, and welcomed submissions from local, regional and global entrepreneurs who have developed ground-breaking cleantech and sustainability technologies and require funding.

His Excellency Dr. Thani Ahmed Al Zeyoudi, Minister of Climate Change and Environment, said: "In sustainability, the UAE is prioritising research,

development and capability building that will significantly contribute to our transformation to a knowledge and innovation-based economy. This requires building partnerships between the public and private sectors to support efforts to develop successful solutions for all of today's global challenges."

He added, "CLIX serves as one of Abu Dhabi Sustainability Week's most prominent platforms that will create a competitive environment, bringing together investors and innovative entrepreneurs, and stimulate



e s f o r a b e t t e r o m o r r o w

The investment marketplace forms part of the Abu Dhabi Sustainability Week and World Future Energy Summit.

partnerships and innovation to help transform creative ideas into reality.”

In the UAE, CLIX will further establish the country as a destination for climate change innovation, and builds on the national progress in renewable energy development and other areas of sustainability. According to the UAE Energy Plan launched in January 2017, the UAE will increase its clean energy contribution towards the total energy mix to 24% by 2021, and to 50% by 2050. National energy efficiency improvements of 40%

by 2050 will result in savings of USD 190 billion.

Mohamed Jameel Al Ramahi, Chief Executive Officer, Abu Dhabi Future Energy Company (Masdar), said: “Tackling climate change is a global challenge and one that cannot be addressed only by the technologies of today. That is why we must nurture the next generation of powerful sustainable innovations that will also open up new business opportunities in the future. By bringing together entrepreneurs and investors, the CLIX initiative will be the first step of taking

great ideas and making them a reality.”

The inaugural edition of CLIX will focus on innovations that solve challenges in three areas: Air Pollution, Clean Mobility and Agriculture. The event will facilitate selected CLIX participants in their quest for funding by hosting a private space where they can pitch their ideas directly to investors. Entrants will also have the chance to exhibit their innovations to attendees at WFES with the potential of developing new business opportunities.

Migratory Species Champion honor for Abu Dhabi



For its long-term support to the conservation of migratory species, Abu Dhabi receives two Champion Plus awards at the 12th Session of the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS COP12), held in Manila.

The Environment Agency – Abu Dhabi (EAD) has received two Champion Plus awards for its long-term commitment to the Conservation of Migratory Species (CMS). The awards were presented at the Twelfth Session of the Conference of the Parties to the Convention on the Conservation of Migratory Species of Wild Animals (CMS COP12), held in Manila, the Philippines from 23-28 October, 2017.

Dr. Abdullah Eisa Zamzam, EAD's Assistant Secretary General of Operations, accepted the

two Champion Plus awards, on behalf of HE Razan Khalifa Al Mubarak, EAD's Secretary General in the presence of Dr. Bradnee Chambers, CMS Executive Secretary. The awards were in recognition of EAD's scientific and in-kind support to the office and the two MoUs for the period 2015-2019.

Launched in 2014, the Migratory Species Champion Programme has recognised several institutions. Through their financial assistance, political leadership and advocacy efforts, each of these Champions has

been a critical part of a solution to issues that concern migratory species. EAD was among the five new Champions who received awards during this year's event for supporting initiatives ranging from combating illegal killing of birds to implementing comprehensive measures to preserve marine life across its range states.

HE Razan Khalifa Al Mubarak, EAD's Secretary General, commented: "Winning these awards is a reflection of the Agency's commitment to conservation, we dedicate this



CMS IS the only global biodiversity-related treaty specializing in the conservation and sustainable use of a wide array of terrestrial, aquatic and avian migratory species, their habitats and migration routes.

award to our Chairman HH Sheikh Hamdan bin Zayed Al Nahyan, Ruler's Representative in Al Dhafra Region, it is his stewardship that helped the Agency to become a Conservation Champion".

Al Mubarak said; "Species conservation has been a priority for the United Arab Emirates government since the Union was formed. Our environment is home to dozens of species of mammals, amphibians and reptiles, and two to three million birds pass through the UAE each year on their migration from the heart

of Asia southwards to Africa, or eastwards to India and beyond.

"Our marine habitats are home to the second largest population of Dugongs in the world. These habitats are also home to the endangered Hawksbill and Green Turtles, the world's largest population of Indian Ocean humpback dolphins, four globally threatened species of shark, three threatened species of ray, and around 456 species of fish" she added.

HE Al Mubarak noted that; "Many of the migratory species of

priority interest to Abu Dhabi Emirate and the UAE are also the focus of the Convention on Migratory Species of Wild Animals (CMS). Our agendas are therefore perfectly aligned.

The UAE sits along the migratory pathway for 42 of the 93 species of African-Eurasian migratory birds of prey under the Raptors MOU. While, eighteen of Abu Dhabi's twenty most threatened marine and terrestrial species are migratory. Of these, sixteen are addressed by CMS or one of its instruments".



Global EVRT announces second Electric Vehicle Road Trip Middle East 2018

The second electric vehicle road trip in the Middle East region by Global EVRT will start on 18th January 2018 from Abu Dhabi at the World Future Energy Summit, part of Abu Dhabi Sustainability Week, and the foremost global platform dedicated to advancing renewable energy and clean technology.

The road trip will run for nine days across the UAE and Oman and will include the opening of new electric vehicle charging stations along the route, opening up new roads to electric vehicle owners. The public can now register to join the adventure for the full nine days, or for one of the two stages. As well as enjoying the breathtaking

scenery of the two countries, the road trip will stop for sustainability focused site visits along the way.

As the launch partner for the Electric Vehicle Road Trip Middle East, the World Future Energy Summit will host The Mobility Conference in collaboration with Global EVRT and CleanTechnica, the world's number one site for cleantech news. Within its three-day programme the event will showcase a variety of electric vehicles, and industry experts will take part in detailed discussions on the future of mobility for the creation of smart and sustainable societies.

Additional event partners include Volt, a local leader in electric

vehicles and sustainable energy infrastructure installation, in addition to the Middle East's Clean Energy Business Council

Ben Pullen, Managing Director of Global EVRT said: "We are thrilled to be back in the Middle East, after successful electric vehicle road trips and mobility conferences in the UAE and Europe earlier this year.

The rate at which electric vehicles are progressing in the Middle East, and in the UAE especially, is very exciting, and we aim to expand and accelerate the adoption of electric vehicles even further through our events, aligning with the inspiring sustainability initiatives of the UAE government."



ENOC Group to power all future service stations with solar energy

All future ENOC service stations will be powered by solar energy to support the UAE's long-term strategy to target an energy mix that combines renewable, nuclear and clean energy sources to meet the country's economic requirements and environmental goals.

The announcement was made during the Water, Energy, Technology and Environment Exhibition, WETEX, 2017. Earlier this year, ENOC piloted the first solar-powered service station in the country at its Dubai Internet City, DIC, facility. The station features Photovoltaic solar panels on the roof of the canopy with a peak capacity of 120kW energy on an ideal day, generating approximately 30 percent

more than the average energy required to run the station. The excess energy generated is transmitted back to DEWA's main grid through a DEWA solar meter that measures and monitors the power injected to the power grid.

MoU to increase awareness on environmental issues

Dubai Electricity and Water Authority, DEWA, has revealed that it has signed a Memorandum of Understanding, MoU, with the Emirates Marine Environmental Group, EMEG, to enhance co-operation between the two parties, especially on issues covering climate change and energy.

Under the agreement, both DEWA and EMEG have affirmed

their commitment to developing and implementing initiatives and programmes designed to facilitate a smooth exchange of knowledge and increase key awareness on environmental issues, sustainability and climate change through awareness programmes, capacity-building and biodiversity conservation activities for the local community.

The areas of co-operation includes the creation of biodiversity conservation activities and programmes, the launch of volunteer-based initiatives, participation in various joint environmental and sustainability programmes, and efforts to reduce the environmental footprint.

Opinion

52 c r e a t i n g g r e e n c o m m u n i t i e s

Waste management - the next-generation driver for realising a green economy



Aisha Mohamed Abdullah Al Abdooli, Director, Green Development Department in Ministry of Climate Change and Environment writes that the UAE has identified waste management as one with enormous potential to create employment and generate entrepreneurial opportunities.

Today, waste management has the potential to contribute significantly to making a green economy possible. Communities around the world have identified waste management not only as part of an environmental strategy but also as an economic case with enormous potential to cut cost, create employment and generate entrepreneurial opportunities. In the UAE, the roots of this idea can be traced back to the pioneering ideas of late His Highness Sheikh Zayed bin Sultan Al Nahyan, the nation's founding father, on sustainability. The establishment

of local waste management companies like Tadweer, Averda and Bee'ah has not only paved way for a cleaner and greener UAE but also offered jobs to many UAE residents.

At the national level, the UAE Green Agenda 2030 adopted by the Cabinet in 2015 places National Waste-to-Resource Programme as one of the 12 implementation programmes. This programme includes harmonisation of waste management strategies and standards across the emirates, promotion of the 3Rs principle –

reduce, reuse and recycle – among businesses and residents alike, and dissemination of waste-to-energy technologies. This strategy complements and strengthens the environmental objectives of the UAE Vision 2021.

In fact, governments and organisations across the emirates have already been introducing a number of waste management initiatives in a bid to maintain cleanliness and greenery of the emirate, as well as to tackle the global climate change. Dubai Municipality has doubled its efforts to shift 75 per cent



FOR WASTE management to work effectively, it is important for businesses and residents to work together in harmony.

of the waste produced in the emirate from the landfills. RAK Recycles, an innovative recycling programme introduced by Ras Al Khaimah Waste Management Agency aims to modernise the waste management technology used by community members in the emirate. At a recent food waste awareness raising event, leading chefs demonstrated ways to reduce food waste.

For waste management to work effectively, it is important for businesses and residents to work together in harmony. For example, a 'leave-no-footprints'

eco venture by Meydan is making a real difference by cleaning and recycling all waste like plastic bottles and caps left behind during endurance horse racing. Another example came from the Dubai Mall, where 26 tonnes of compost was produced from the waste collected from its food outlets through a partnership between the mall, the outlets and waste management companies. The produced compost will be used for landscaping at Emaar's communities around Dubai.

Waste prevention, recycling and better waste management in

general are all certainly crucial to minimise the flows into and out of the economy. Nevertheless, closing the material loop is not sufficient to prevent further impacts on the environment and human health and well-being. 'Circular economy' approaches are required to go beyond waste management, and to facilitate the transition to a green economy. The fourth World Green Economy Summit (WGES) 2017 is an exciting opportunity that will explore and identify most innovative approaches to the UAE's waste management which are built on the philosophy of



circular economy and 3Rs. An interesting application of the circular economy principles is Jumeirah Golf Estates. This \$272 million Dubai development will feature gardens and landscaped area that use solar power and smart irrigation systems to regulate heat and moisture levels. It also features eclectic carports, wastewater technologies and organic waste management and ecologically sourced furniture.

In the UAE, responsible waste management and an emphasis on lowering consumption has already made its way. Companies like Averda and Tadweer have introduced smart solutions that help wastes to be reduced, reused and recovered to

substitute demand on original resources. These companies not only offer an attractive collection system and waste segregation but also provide risk-free waste treatment and awareness programmes that create additional value for UAE industries.

Averda has provided the Dubai Municipality with smart e-waste bins since 2014 where the bins are equipped with sensors that interact live and online with Averda's Dubai operations department. The bins' intelligent systems provide analysts with data related to their filling level and expected dates for collection. Similarly, Tadweer, which recycles more than 30 per cent of around 800,000 tonnes

of waste generated every month, set up new recycling plants in Abu Dhabi that focus on recycling more than 60 per cent of waste by 2020 and 75 per cent by 2021.

While the UAE has made a significant progress with its waste management strategy, there is scope for a lot more to be done. It is for this reason that the UAE will continue to invest in infrastructure and support entrepreneurship and alternate technologies to boost the waste management sector. More public-private partnerships will build and transform the sector to the point that it makes a significant contribution to job creation as the UAE's radical waste minimization targets are being achieved.



The Middle East's first fully operational sustainable community is living up to its creators' ambitions

The Sustainable City, the Middle East's first fully operational sustainable community, revealed the results of one year of monitoring at the city during WETEX 2017, which ran from 23rd to 25th October at the Dubai International Convention and Exhibition Centre. The Sustainable City, a joint venture between Diamond Developers and SEE Nexus, participated at WETEX for the second consecutive year with the biggest stand at the exhibition, which took place under the theme 'At the Forefront of Sustainability'.

Since October 2016, SEE Nexus has been monitoring all operations at The Sustainable City to assess performance. The

results so far reveal that water recycling, electric mobility, and solar energy production have saved 1,402 tonnes of carbon dioxide emissions.

This is equivalent to 157,769 gallons of gasoline consumption avoided. Specifically, The Sustainable City recycled 63,444 m³ of greywater, (equivalent to 25 Olympic size swimming pools), driven 179,000 km in electric buggies (equivalent to 5 times around the equator), and diverted 87% of its waste from landfills (equivalent to 18 tennis courts).

For the outstanding success of its sustainable solutions, The Sustainable City was recognised at WETEX 2017 with a prestigious Emirates Energy

Award for large scale distributed solar generation. The Sustainable City in Dubai embraces the three pillars of sustainability; Social, Environmental, and Economic, across one all-inclusive and comprehensive community landscape.

Providing a full array of residential wellness facilities that have no negative impact on the environment, this is a unique concept that redefines sustainable living through its energy efficient housing, first Net Zero Energy city, net Zero service or maintenance fees, green education and health care, eco-attractions and a full range of indoor and outdoor leisure activities, urban farming, and an Innovation Centre.



Battery storage capacity estimated to grow 17-fold by 2030 as costs plummet

Energy storage capacity to triple by 2030 if countries double the share of renewables in the world's energy system, according to a new IRENA report.

The cost of battery storage for stationary applications could fall by up to 66 per cent by 2030, according to a new report published on 6th October, 2017, by the International Renewable Energy Agency (IRENA). The falling price of batteries could stimulate 17-fold growth of installed battery storage, opening up a number of new commercial and economic opportunities, the report highlights.

Launched during the 'Innovation for Cool Earth Forum' in Tokyo, Japan, IRENA's Electricity Storage and Renewables: Costs and

Markets to 2030 assessment of electricity storage in stationary applications also found that global storage capacity could triple if countries double the share of renewables in the energy system.

"As storage technology improves and prices decline, both utility-scale and small-scale, distributed applications could grow dramatically, accelerating renewable energy deployment" said IRENA Director-General Adnan Z. Amin. "In this dynamic, low-carbon energy environment, now is a crucial time for storage technology."

The report, which is focused on stationary applications, highlights that while pumped-hydro systems currently dominate total installed power storage capacity, with 96% of the installed electricity storage power globally, economies of scale and technology breakthroughs will support the accelerated development and adoption of alternative storage technologies, such as lithium-ion (Li-ion) batteries and flow batteries.

Stationary electricity storage can directly drive rapid decarbonisation in other key



e s f o r a b e t t e r t o m o r r o w

THE COST of battery storage for stationary applications could fall by up to 66 per cent by 2030, according to a new report published by IRENA.

segments of energy use, such as in the transport sector where the viability of battery storage for electric vehicles (EVs) is improving fast. At the end of 2016, the cost of Li-ion batteries had fallen by as much as 73 per cent for transport applications from 2010.

While Li-ion batteries in stationary applications have a higher installed cost than those used in EVs, in Germany, small-scale Li-ion battery systems have also seen their total installed costs fall by 60 per cent between the fourth quarter of 2014 and

the second quarter of 2017.

“The growth of lithium-ion battery use in electric vehicles and across the transport sector over the next 10 to 15 years is an important synergy that will help drive down battery costs for stationary storage applications,” said Dolf Gielen, Director of the IRENA Innovation and Technology Centre and an author of the report. “The trend towards electrified mobility will also open up opportunities for electric vehicles to provide vehicle-to-grid services, helping feed a virtuous circle of renewable energy and storage

integration.

“Storage technology will deliver service flexibility to the grid and electricity storage to small-scale rooftop solar applications in markets where commercial and residential electricity rates are high, and grid feed-in remuneration is declining,” concluded Gielen.

By 2030, the calendar life of Li-ion batteries could also increase by approximately 50 per cent, while the number of full cycles possible could potentially increase by as much as 90 per cent.



MOCCA and DEWA sign MoU on solar carports

The Ministry of Climate Change and Environment, MOCCA, and Dubai Electricity and Water Authority, DEWA, have signed a Memorandum of Understanding, MoU, to install solar carports at the ministry's building in Dubai. The MoU was signed during the Water, Energy, Technology, and Environment Exhibition, WETEX 2017. These solar carports will have a total capacity of 220KW/h.

Dr. Thani bin Ahmed Al-Zeyoudi, Minister of Climate Change and Environment, and Saeed Mohammed Al Tayer, MD and CEO of DEWA signed the MoU in the presence of Reem bint Ibrahim Al Hashimy, Minister of State for International Cooperation and

Director-General of Expo 2020 Dubai Bureau.

"The signing of the MoU is in adherence to the vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the UAE and Ruler of Dubai, to continue the sustainable development efforts and make a balance between the economic, social, and environmental development. It also supports the objectives of the UAE Vision 2021 to create a sustainable environment," said Al-Zeyoudi.

"As part of its strategic objectives to enhance national efforts and initiatives to mitigate climate change based on anticipating the future

and employing innovative technologies, solutions and best practices for dealing with climate change; the ministry is keen to reduce the UAE's carbon footprint by taking preventive measures, and developing policies to reduce and adapt to the effects of climate change, which is one of the priorities of the first phase of the UAE Strategy for the Future," he added.

Al Tayer said, "The MoU is part of integrated efforts among local and federal organisations to achieve the vision of UAE wise leadership to continue sustainable development efforts, and balance economic, social and environmental development in the UAE."



f o r a b e t t e r t o m o r r o w

Zayed Desert Learning Centre celebrates 1st anniversary

The Sheikh Zayed Desert Learning Centre, SZDLC, at Al Ain Zoo marked five days of activities in October to celebrate the first anniversary of the opening of the centre. The activities included a daily series of workshops and shows, including camel accessories, doll-making, origami, a birds 'pop-up', coffee making and story-telling, along with pottery painting and face painting.

The Centre was conceived as an educational facility that combines knowledge and learning through specially-designed interactive exhibits, multimedia and visual materials.

It has five interactive galleries, which are Sheikh Zayed Tribute

Hall, Abu Dhabi's Desert over Time, Abu Dhabi's Living World, People of the Desert and Looking to the Future.

The Sheikh Zayed Desert Learning Centre is the first building in the UAE to earn a rating of five pearls in sustainability accreditation at the Design & Construction stage, in accordance with the exacting standards set by the Abu Dhabi Urban Planning Council. The Centre has also received a LEED Platinum certification.

Established in 1968 by the late Sheikh Zayed bin Sultan Al Nahyan, as part of his vision to create a facility that offered natural habitats for animals to live freely, the Zoo provides

both entertainment and an opportunity to learn about UAE wildlife in a natural outdoor environment. It currently has a collection of over 3,500 animals, many of which are globally-endangered species, including the charismatic Arabian oryx.

A member of the World Association of Zoos and Aquariums, WAZA, the Al Ain Zoo has strategic partnerships with leading zoos, conservation agencies and associations from across the world, including the World Conservation Union and its Species Survival Commission, the Environment Agency - Abu Dhabi, Edinburgh Zoo in the United Kingdom, the Northern Rangelands Trust of Kenya and the Sahara Conservation Fund.

Green Initiative

60 c r e a t i n g g r e e n c o m m u n i t i

Ras Al Khaimah launches green rating for schools



Schools across Ras Al Khaimah will be assessed for environmental best practices and rewarded for going green in government initiative.

Schools across Ras Al Khaimah will be assessed and graded to measure their commitment to environmentally sustainable practices from the beginning of the 2017/18 academic year, in a pioneering initiative that was announced on 5th October.

The new 'Green Rating' system for schools is a joint scheme being launched by the Ras Al Khaimah Waste Management Agency, RAKWMA, a subsidiary of the Public Works Department, and the Ras Al Khaimah Education Zone. It aims to ensure that

students and teachers across the Emirate are learning more about sustainable environmental practices and developing more proactive and positive responses to environmental issues, through evaluating and grading participating schools based on a set of established criteria.

The schools programme has the blessing and support of His Highness Sheikh Saud bin Saqr Al Qasimi, Member of the Supreme Council and Ruler of Ras Al Khaimah, and demonstrates the important connection between education and sustainability, two

cornerstones of His Highness' vision for Ras al-Khaimah.

Janet Hartzenberg, RAKWMA's Outreach Co-ordinator, said, "The new Green Rating system provides schools with an accepted, standard measure in which they can record their efforts, encouraging the youth to be active participants in protecting the environment in Ras Al Khaimah and to make our schools cleaner and greener."

"We will be evaluating and grading schools to ascertain whether they are participating in



e s f o r a b e t t e r t o m o r r o w

RAS AL KHAIMAH schools will be assessed and graded to measure their commitment to environmentally sustainable practices in the 2017/18 academic year.

environmentally friendly projects and initiatives, and working to gain an understanding of how 'green' the schools in Ras Al Khaimah currently are."

"We want students and teachers to be more aware about the decisions that they make in their day to day lives and the effect that they have on their surroundings, whether it's recycling, reducing the amount of paper they are using, or volunteering in community efforts. All of these actions can and will make a difference, and schools will now be rewarded

for their participation." Participating schools will be assessed on criteria including their registration with the Ras Al Khaimah Waste Management Agency's recycling programme and their level of participation. A school's Green Rating can be improved through introducing 'Green Ambassadors', implementing and participating in environmental activities such as exhibitions and clean up campaigns.

Evaluations will be shared with schools and gradings given in the form of recycling symbols on an

assessment rating certificate. Schools will then be recognised and rewarded annually for their achievements.

Through this evaluation and grading system for schools, RAKWMA is actively encouraging the development of positive, environmentally friendly sustainable waste management practices in students of all ages, and is hoping to create a generation of young people who will truly believe that our environment needs to be protected and that this is the responsibility of every resident.

Getting to the heart of the Paris Agreement in Bonn



The UN Climate Change Conference - November 2017 will take place from 6-17 November in Bonn, Germany and will be presided over by the Government of Fiji.

At the UN Climate Change Conference this year (COP23, from 6 to 17 November) nations of the world will meet to advance the aims and ambitions of the Paris Agreement and achieve progress on its implementation guidelines.

The conference, officially referred to as COP 23/ CMP 13/ CMA 1-2, will take place in Bonn, Germany, hosted by the secretariat of the UN Framework Convention on Climate Change (UNFCCC), and presided over by Fiji. The UNFCCC secretariat and the Government of Fiji are closely working with

the Government of Germany, the State of North Rhine-Westphalia and the City of Bonn to ensure a dynamic and successful Conference.

Underlining the importance of cooperation in the preparations for the conference, the UNFCCC Executive Secretary Patricia Espinosa said: "Cooperation makes COP23 possible. It also raises awareness of the vulnerability of islands and all nations. And it opens the door to even more collaboration and support – for resilient communities and for the

transition to growth powered by clean energy."

One Conference, Two Zones

The COP23 is being organized following an innovative concept of "one conference, two zones". During the two weeks of the conference, a vast area of the city of Bonn will become the Climate Campus that will be organized in two zones: the "Bula Zone" and the "Bonn Zone". This approach focuses on a close integration of the zones to ensure that negotiations, events and exhibits are integrated into one conference.



e s f o r a b e t t e r t o m o r r o w

COP23 is the next step for governments to implement the Paris Climate Change Agreement and accelerate the transformation to sustainable, resilient and climate-safe development.

The Bula Zone, where talks between governments will take place, will be composed of the World Conference Center Bonn, UN Campus and an extended area behind the Deutsche Welle building in Bonn. The word Bula originates from the Fijian culture and means hello as well as a blessing of health and happiness.

The Bonn Zone, which will be located in Bonn's Rheinaue Park area, will accommodate events showcasing climate action, including high-level events, side events and exhibits organized by both UNFCCC and the

Government of Germany. It will also include some media activities as well as events in the delegation pavilions.

WWF to participate in COP23

UN climate negotiators will meet in Bonn this month to hash out key issues that go to the heart of the implementation of the Paris Agreement - keeping warming below 1.5°C. Alongside governments from around the world, leading conservation organizations including the World Wide Fund for Nature (WWF) will be participating in the discussions.

Close to a year after the landmark treaty's coming into force, member states must make substantive progress on the actual content of the agreement's implementation guidelines in order for it to be fully operational by 2020. They must also launch a process to encourage national governments to increase the ambition of their national targets (NDCs) by 2020.

Following the COP decision in Paris to bring non-State actors like business, cities, investors and subnational governments into the UN Framework Convention



on Climate Change, there will also be a strong focus on their role and achievements, and discussions on how to more effectively integrate them into international and national efforts.

Manuel Pulgar-Vidal, leader of WWF's global climate and energy programme, said: "Recent extreme weather events that we have witnessed globally are a stark reminder of what is at stake. In Bonn, we must spark the momentum necessary to accelerate the climate action happening now, and scale up efforts, in line with keeping warming to 1.5°C."

"COP23 will be the biggest test yet of the commitment and

resolve of Parties to deliver on the Paris Agreement.

"With the collaboration of non-Party stakeholders, Parties can pass this test by showing ambition and urgency in each of these areas."

Dr. Deepti Mahajan Mittal, Programme Leader - Climate and Energy at Emirates Wildlife Society in association with World Wide Fund For Nature (EWS-WWF) commented: "COP 23 is shining the spotlight on closing the global emissions gap which is critical if we are to limit warming to below 1.5 degrees.

"The current Nationally Determined Contributions (NDCs) will not be adequate to

meet the Paris Agreement goals and we hope to see the dialogue at COP inspire more ambition globally."

She added, "Here in the UAE we have a strong foundation for more climate ambition thanks to the adoption earlier in the year by the UAE Cabinet of the National Climate Change Plan 2050 and launch of the UAE Energy Plan 2050."

Mahajan Mittal concluded: "However, we recognise that climate mitigation and adaptation goals can only be achieved if all sectors of society take action and thus we encourage businesses and the wider community to also play their role."



31 tonnes of waste collected in Hatta cleanup drive

In preparation for the rainy season, the Waste Management Department of Dubai Municipality recently carried out a specialized campaign to clean the dams and valleys of the Hatta area in cooperation with a number of organizations and with the participation of volunteers from the private sector and the people of the region.

According to Eng. Abdul Majid Sifaie, Director of Waste Management Department in Dubai Municipality, "Nearly 31 tonnes of waste, trees and stones that obstruct the flow of water in the valleys and streams were removed in the cleanup drive. Seven trucks equipped with cranes and other trucks and boats were used to collect waste from water with the

participation of 32 volunteers from among the residents of Hatta. The campaign, held for three days with the participation of Masfout Municipality and private sector companies, cleaned the Hatta dam, the bicycle road, the Masfout valley and the mountain walkway."

He also stressed the need for visitors, nature lovers and tour operators to adhere to the basic rules for maintaining the cleanliness of the Hatta tourist area, as it is full of activities and sites that attract tourists and visitors during the winter season.

"We urge them to be committed to not to leave the barbecue and other waste of their trips without clearing them. They should to be

careful to put the waste in the designated places provided by Dubai Municipality. It is worth mentioning that many of the wastes that were dumped in dams, streams and valleys and the barbecue wastes needed double effort to remove them," said Sifaie.





Green Flash

66

green communities for a better tomorrow



4 Reasons to take Climate Change more seriously

The threat of climate change is real and frightening. Mother Earth is fast accelerating towards an unpredictable fate. We can identify at least 4 good reasons to take climate change very seriously.

First, the tipping point, at which irreversible change occurs, is not far from us today. The Paris Agreement 2015, which has been ratified by 169 countries so far, has set the tipping temperature rise at 2°C and the global community is pushing to keep it at not more than 1.5 °C above the preindustrial temperature. Even a tiny change beyond this can dramatically affect the whole system. Arctic summers may become ice-free before 2050 if this vicious cycle of sea ice melt continues. A global sea level rise of up to 6 meters can be seen as full ice sheet collapse occurs, especially in Greenland and West Antarctica. Major global coral reef systems, which are vital for marine ecological balance, may collapse soon as rise in temperature and acidity break down the

vital relationships between algae and corals.

Secondly, a changing climate is directly related to unpredictable extreme weather conditions. Many devastating events occurred in 2017; the most severe drought in Somalia, a killing heat wave in India, wildfires in California, record-breaking hurricanes in America & Europe and flooding in Nepal, Bangladesh and India. With temperatures on the rise, disasters are expected to become more intense, more frequent and longer lasting. Disasters further feed each other; e.g. drought prompts wildfires while changing atmospheric circulation patterns have the potential to increase hurricanes in power and direction. These disasters inflict serious losses of human lives and impact health and threaten crops and ecosystem stability. Hurricanes Harvey, Irma and Maria killed more than 150 people and caused around \$300 billion in damages in the U.S. alone.

Thirdly, sea level rise, due to expanding ocean waters and melting ice sheets and glaciers, is one of the most visible impacts of climate change, as increased coastal erosion physically erases continental borders affecting 75% of the cities worldwide. Communities in Alaska and Pacific Islands are already relocating as their villages are engulfed and eroded. Protecting people from such disasters will be difficult and costly, as we already saw in the aftermath of super storm Sandy.

Fourthly, it has never occurred in human history that global temperatures reached close to 2°C above preindustrial levels. Unprecedented events have become the norm in a changing climate scenario. Infectious diseases are spreading into previously untouched regions and an Arctic ozone hole threatens to open. We are creating a more hostile and dangerous world for ourselves and coming generations.

The Paris Accord is a major step in promoting climate change mitigation policy on a global scale, and as COP23 assembles in Bonn, the USA is the only country not agreeing to tackle this looming threat. The rest are striving to implement meaningful climate policy, including China's unparalleled growth in renewable energy support.

We all need to be worried and to take action to save the planet.

Dr. Eisa M. Abdellatif

Chief Technical Advisor

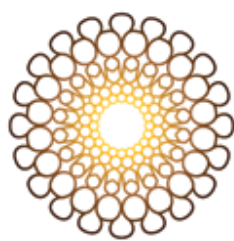
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