



Monthly Sustainability Newsletter

CHAIRMAN'S MESSAGE

August 2017, Vol. 1, Issue 7

Dear members, partners and friends,

It is my pleasure to introduce the August issue of the monthly sustainability newsletter from the Al-Attiyah International Foundation. This issue is devoted to renewable cities and their ambition to convert to 100% renewable energy supplies.

Cities are hubs for ideas, commerce, culture, science, social, human and economic development. Throughout the last century, the world has been rapidly urbanizing. In 2008, for the first time in history, urban population outnumbered rural population. This milestone marked the advent of a new 'urban millennium' and by 2050, it is expected that two-thirds of the world population will be living in urban areas. With more than half of humankind currently living in cities and the number of urban residents growing by nearly 73 million every year, it is estimated that urban areas account for 70% of the world's gross domestic product and have therefore generated economic growth and prosperity for many.

Rapid urbanization also brings with it enormous challenges. The 2030 Agenda for Sustainable Development looks to tackle these challenges through its Sustainable Development Goal 11, which aims to "make cities and human settlements inclusive, safe, resilient and sustainable".

With this and other Sustainable Development Goals in mind, a rapidly growing number of cities have committed to dramatically transforming their energy supply systems away from fossil fuel and toward zero carbon or renewable sources. A handful of cities have achieved a 100% renewable energy supply, and dozens more have committed to 100% renewable energy goals. Others have targeted robust greenhouse gas emission reductions (e.g. 80% reduction by 2050 and carbon neutrality) that will require a dramatic transformation of energy supply systems to achieve this goal.

Every commitment is a positive step forward, but are these commitments achievable? And do city planners understand what it takes to achieve such ambitious goals? This month's issue explores the challenges.

Upcoming Events

Sep12 CEO Roundtable Series 5

Dec 5 CEO Roundtable Series 6

Important Announcement

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CEO Roundtable Series 5

The Implications of the Paris Agreement for Oil and Gas Companies in Qatar.

Date: 12th September 2017

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Featuring High Level International Experts

Dr. Dirk Forrister
CEO and President of IETA

David Hone
Chief Climate Change Advisor,
Shell International Ltd

Dr. Karsten Sach
Member of the GCF Board &
Director General of BMUB,
Germany

THIS MONTH'S HIGHLIGHTS

100% Renewable Campaign

Focus Areas

Which Cities are Onboard?

Leading Cities Action Plans

Draw Backs

The Future

100% Renewable Campaign

The notion of cities switching completely to solar, wind, hydro and other renewable energy sources has long seemed unrealistic. Indeed, the goal feels even more distant to many following President Donald Trump's controversial decision to withdraw from the Paris Climate Accord. However, the Global 100% Renewable Energy campaign, the first international platform advocating for the total reliance on clean alternatives to



fossil fuel for cities and regions, shares a more positive outlook. Founded in San Francisco in 2013, the campaign comprises of international organizations dedicated to renewable options. This defiantly optimistic coalition insists that such transitions are much more achievable through initiation of dialogue, building capacity and educating policymakers. *(Source: www.citiscope.org)*

Focus Areas for Cities

Recent studies show that urban environments generate an estimated 75% of fossil fuel related emissions but to reduce emissions and to design urban growth around clean energy requires careful coordination. What actions should interested city leaders focus on?



The Creation & Implementation of Strategies:

Coordination of efforts that meld renewable commitments with broader development and environmental goals have proven more effective than isolated initiatives.

Mobilizing Resources: The linking of local governments with community groups, citizens

and other stakeholders to form coalitions of interested parties predictably maximizes resources.

Charting Progress: Monitoring shifts to renewable fuel while assessing the quality, flexibility and cost of the energy network and the benchmarks accomplished have shown to be a central tool in measurement and progress.

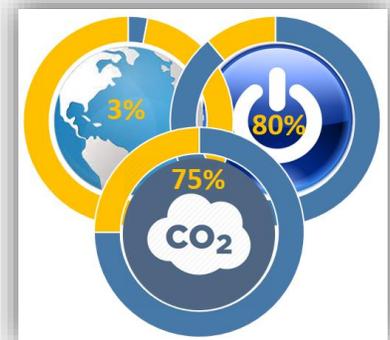
Legal and Regulatory Framework: Frameworks that encourage decentralized and inclusive energy systems often allow households and neighborhoods to generate small amounts of fuel for personal consumption and sell any excess for profit, thus using their own fuel more effectively and efficiently.

Financial Incentives: Financial incentives that prompt private investment, coupled with investments from national, regional and local governments, have proven to be essential in building stable funding mechanisms.

Renewable Cities Facts



Half of humanity – 3.5 billion people live in cities today.



Cities occupy just 3 % of the earth's land, but account for 60-80% of energy consumption and 75 % of carbon emissions.

Source: www.un.org



Which Cities are on Board

Over 300 cities worldwide have made the elimination of fossil fuels a policy objective including Frankfurt, Vancouver, Sydney, San Francisco and Copenhagen. Time frames vary - Vancouver is seeking to achieve this goal by 2050, while Malmö, Sweden, by 2030. In response to Trump's infamous quote: "I represent people of Pittsburgh, not Paris", Pittsburgh Mayor William Peduto, recently pledged that his city would also seek to go 100% renewable by the end of the next decade, in partnership with a broader movement.

(Source: www.citiscopes.org)

Leading Cities Action Plans

Vancouver embarked on the Greenest City Action Plan — with targets for the Canadian city to be the world's greenest by 2020. The city has made great strides in citizen engagement and partnership building. The blueprint sets a mid-century target for complete reliance on renewables. **Malmö** in Sweden, aims to achieve 100% government-wide use of clean fuel by 2020 and community-wide reliance on such sources a decade later. The goals are significantly more ambitious than the European Union targets. **Frankfurt**, the German financial hub, solicited input from citizens and businesses for its shift away from fossil fuels. Their master plan features initiatives intended to spur the use of alternative sources and advanced energy technologies.

(Source: www.greenbiz.com)

Aspiring Cities

Most cities in developing countries currently lack the capital markets and adequate sources of finance for major investments in sustainable development. Significant upfront capital costs and longer time horizons for payoffs further hinder private investment for renewable initiatives. Attracting funds remains the key obstacle to fostering low carbon cities in the 21st century. However, there are great examples across the developing world where countries are overcoming such challenges.

Africa: Urban authorities in centres like Narok and Kisumu in Kenya, and Moshi in Tanzania are investing in improved risk assessment, urban upgrading, smarter land use and plans to strengthen environmental protection. Major cities like Accra (Ghana), Arusha (Tanzania), Enugu (Nigeria) and Kigali (Rwanda) are also striving for improvement, including a partnership with the 100 Resilient Cities Initiative.

Asia: The Asian Development Bank has advanced an operational framework that enables cities in the region to realize their aspirations to create greener, more livable environments. The city of Melaka (Malaysia), is developing solar power, and other renewable energy projects, designed to reduce the dependence on fossil fuel energy.

(Source: www.weforum.org.com. www.brookings.edu)

Renewable Cities Facts



By 2030, almost 60% of the world's population will live in urban areas.



High density cities can bring efficiency gains and technological innovation while reducing resource and energy consumption.

Source: www.un.org



Draw Backs

There are complexities and complications aplenty for cities that have taken on the ambitious goal for their energy supplies to be 100% renewable. Firstly, they need to clearly distinguish between just providing renewable electricity or reviewing the whole energy mix including transportation and heating/cooling. Another is establishing a system of tracking energy that does not “double count” electrons, so that two different entities can’t claim to be consuming the same clean energy. Whether to involve utilities in these city efforts, or whether cities should try to bypass them is also a fundamental issue. Although some cities are boasting large renewable objectives, and there has been a lot of media uptake on these targets, it is unclear how most cities will reach them. As the buzz for 100 % renewable goals grows, more questions will likely be asked about how these goals will be reached.

(Source: www.vox.com)

The Future

As we move toward sustainability in urban development, many existing strategies are still reliant on fossil fuels. Renewables today depend increasingly



on natural gas as an intermittent fuel, particularly when the sun isn’t shining and the wind isn’t blowing.

The use of oil, natural gas and coal in the manufacture of renewable energy plants and facilities, is also often overlooked. Oil, natural gas and coal provide the overwhelming share of energy necessary to

manufacture solar panels, wind turbines, batteries and most other sustainable technologies. For example, using synthetic fertilizer, an oil byproduct, can be a more environmentally friendly way to attend to plant growth: synthetic fertilizer in some cases may be carbon negative even though it is made with fossil fuels, because it saves more carbon by avoiding the conversion of forests for agriculture than is created in the process of manufacturing fertilizer.

Environmental policy experts advise that the best possible solutions often combine time-tested resources with smart, exciting innovations that ensure the cities we build tomorrow will survive for many years to follow. Despite the progress and commitment to renewable energy and electric vehicles, the age of fossil fuels is far from over. The shorter term target therefore is to reduce a city’s dependence on fossil fuels, with elimination being a much longer term ambition.

(Source: www.mic.com)

Journal Reference

[https:// www.un.org](https://www.un.org)
[https:// www.citiscopes.org](https://www.citiscopes.org)
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[http:// www.mic.com](http://www.mic.com)

Information

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Renewable Cities Facts



95 % of urban expansion in future decades will take place in developing world.



828 million people live in slums today and the number keeps rising.

Source: www.un.org