



Government of
Kazakhstan

LLDCs and Future Energy: Expo 2017, Astana, Kazakhstan

A Side event on the occasion of the Second UN Conference on LLDCs

Concept Note

Monday 3 November 2014 (1300-1415 Hours) Venue: M4

Background

Energy services play an important role in creating conditions that support economic growth and improve social equity, as well as gender equality and empowerment of women. Access to electricity and other forms of modern energy services creates new employment opportunities in both formal and informal sectors, improves productivity, and enhances incomes. At the 2012 United Nations Conference on Sustainable Development, held in Rio de Janeiro, Brazil, world leaders acknowledged that access to sustainable modern energy services contributes to poverty eradication, saves lives, improves health and helps provide for basic human needs. In addition, they stressed that these services were essential to social inclusion and gender equality, and that energy was also a key input to production. While it is evident that most developing countries are unlikely to attain the Millennium Development Goals (MDGs) by 2015, access to energy, especially electricity, has been seen as a significant contributor to much of the progress that has been realized so far.

Currently, energy is a central part of the international deliberations on the Post-2015 Development Agenda and Sustainable Development Goals (SDGs). This is not least because of energy's links to other core development areas as an enabler, such as of gender equality, health, food and clean water. As merely one example: When burned in open fires and basic cook stoves, wood, coal, charcoal, and other solid fuels emit a harmful smoke that claims 4 million lives annually through a range of diseases and injuries. This is making household air pollution from cook stove smoke the fourth greatest health risk in the world, being responsible for more than the deaths attributable to malaria, HIV/AIDS and tuberculosis combined. Women and children are the most affected, which is one reason why the first two years of the United Nations Decade of Sustainable Energy for All 2014-2024, as declared by the General Assembly, will have a special focus on Energy for Women, Children and Health.

Globally, over 1.3 billion people are without access to electricity and 2.6 billion people are without clean cooking facilities. More than 95% of these people are either in sub-Saharan African or developing Asia and 84% are in rural areas.



In addition, if the international community does not change course, current trends point to a situation in 2030 where 12-16 percent, and 31-36 percent of the world population will be without access to electricity, and modern cooking solutions, respectively¹. Furthermore, oil and other hydrocarbons – important stimuli of economic growth and development since the industrial revolution – are finite, and are expected to run out at some point in the not-too-distant future. As these resources become less scarce, there is likelihood that this would create an economic crisis of global proportions. But before then, energy scarcity is bound to lead to price increase for oil and other derivative products.

Besides energy scarcity, the combustion of fossil fuels for energy production contributes to climate change and a host of other environmental problems which threaten development and human well-being. For instance, incomplete combustion leads to the emission of harmful substances and gases that pollute the air and water sources. Increased reliance on automobile for daily commute has led to the accumulation of smog – which has reached dangerously high levels in a number of cities around the world. Air pollution is responsible for a growing number of health problems, including respiratory diseases.

Unless major policy reforms and technologies are introduced to transform the way energy is produced and consumed, one report² warned that global energy-related carbon dioxide emissions would increase by some 50 percent between 2004 and 2030. In the absence of major transformative policies and technologies, the same report stated that developing countries would account for three-quarters of the increase in carbon dioxide emissions over the same period. In short, sustainable energy for all is a master key to unlocking the potential of solving two of our biggest global challenges at the same time, energy poverty and climate change.

The role of energy in the development of LLDCs

The development of road and rail, along with energy, telecommunication and other infrastructure are vital for the connectivity of landlocked developing countries (LLDCs) internally and to the rest of the world. In the coming years, LLDCs would be counting on improved access to clean, reliable, affordable and renewable energy sources to strengthen their participation in global value chains, development of a robust service sector that includes tourism and ICT, as well as achieve the long overdue economic transformation in favour of external trade characterized by high-value low-bulk product mix, for the benefit of people who are at the centre of sustainable development. Indeed, if LLDCs are to achieve economic diversification and reduce dependency on a limited number of commodities and minerals, they would have to invest in modern energy sources - with the goal of building up their productive capacity and industrial base, as well as domestic demand. This is no simple feat for majority of LLDCs.

Since high investment is often needed to install, maintain and develop electricity and other energy utilities which simultaneously hold prospects that are of high risks and low short-term profitability, the energy sector in majority of LLDCs is characterized by low involvement of the private sector and local microfinance institutions, especially in the distribution of electricity in the rural areas. In fact, two-thirds of the LLDCs lack an electrical grid in the rural areas which makes extension costly and return on investment very difficult. This problem is further compounded by the low population density, low energy demand, and limited, uncertain and irregular incomes of their rural communities. It is, therefore, not surprising that electricity and grid maintenance are often managed by national authorities.

¹ SE4ALL (2013) Global Tracking Framework

² As reported in UNIDO (2008), Energy Development and Security: Energy issues in the current macroeconomic context

Sustainable Energy for All (SE4ALL) is an initiative that was launched in 2012 to promote the energy agenda. This initiative is backed by a grand global coalition of governments, private sector partners, civil society and international organisations. SE4ALL seeks to achieve, by 2030, universal access to electricity and safe household fuels, a doubled rate of improvement of energy efficiency and a doubled share of renewable energy in the global energy mix. SE4ALL released its *Global Tracking Framework* in 2013 – a comprehensive snapshot of the status of more than 170 countries with respect to energy access, action on energy efficiency and renewable energy, and energy consumption. The report’s conclusive and actionable findings demonstrate that Landlocked developing countries fall behind other groups of countries when it comes to access to energy. As it has been argued elsewhere, there is no doubt that LLDCs’ structural impediment and geographical disadvantages are important predictors of this situation.

There has been some slight improvement in global access to electricity. SE4ALL shows that 83 percent of the global population had access to electricity in 2010 - up from 76 percent in 1990. In 2010, 70 percent of rural and 95 percent of urban populations had access to electricity. By contrast, less than 44 percent of people in LLDCs had access to electricity - a figure that had shown some slight improvement from 38 percent in 1990. While about 74 percent of people in the LLDCs’ urban areas had access to electricity, the number was much lower for rural populations, which stood at 33 percent. It is not simply that LLDCs performed poorly when compared to global averages, they performed worse when compared to their transit developing neighbours as can be seen from the table below.

But LLDC is hardly a homogenous group: data disaggregation reveals a disturbing reality. In more than one-third of LLDCs, less than 17 percent of the populations have access to electricity. The situation is particularly dire for South Sudan (2%), Chad (4%), and Burundi (5%). In addition, a negligible proportion of rural populations in Chad, Burkina Faso, Burundi, South Sudan, Niger, Malawi and Zambia have access to electricity. Since energy is at the heart of economic, environmental and social development issues, Landlocked developing countries need to expand access to reliable and modern energy services if they are to alleviate poverty, enhance productivity and ultimately attain rapid and inclusive economic growth and development³. This data shows that the international community needs to support LLDCs when it comes to ensuring that the vast majority of their populations have access to reliable and affordable energy⁴.

Access to Electricity (% of population)						
	1990	2000	2010	% Change 1990-2010	Rural 2010	Urban 2010
LLDCs	38.4	41.2	43.2	12.6	33.2	74.7
Transit developing countries	52.3	63.6	72.5	38.6	63.5	88.4
World	76.0	79.0	83.0	9.2	70.0	95.0

Data sourced from: SE4ALL (2013) *Global Tracking Framework*

³ In order to meet global energy demand in the next 30 years, the United Nations estimates that there need to be some cumulative investments of up to US\$ 20 trillion in clean energy sources (SE4A). Even if this level of investment is secured, some 1.4 billion people will still lack access to electricity, and 2.7 billion will still rely on traditional biomass for cooking and heating.

⁴ While there are SE4ALL programmes for LDCs and SIDS, it is important to keep in mind that a number of LLDCs that are neither SIDS nor LDCs suffer from inadequate access to energy. In 2010, only 35% of people in Swaziland, 37% in Zimbabwe and 43% in Botswana had access to electricity. At 13% and 22%, access to electricity among rural communities in Zimbabwe and Swaziland respectively, were much lower than the global average of 70%.

While gender inequalities are exacerbated by the lack of universal access to sustainable energy, enhanced access to such energy contributes in important ways to the full, effective and accelerated implementation of the Beijing Declaration and Platform for Action. As we approach the 20th anniversary of its adoption at the Fourth World Conference on Women in 1995, this is the time to ensure women's leadership and participation in catalysing sustainable energy solutions in the transition to sustainable energy for all and in reaching internationally agreed development goals. Women remain underrepresented in the energy industry work force and in ministerial positions in the field of energy, and they are rarely considered as key stakeholders for energy initiatives.

It is also the time for addressing women's and girls' gender-specific needs in terms of energy access and use. Women and children bear the main negative impacts of fuel collection and transport, indoor air pollution, and time-consuming and unsafe cooking technologies. Women's economic empowerment, including entrepreneurship, is hampered by the absence of, or limited access to modern energy.

The search for improved and sustainable energy services can increase potential employment opportunities for women within the energy sector. Such services can, in turn, strengthen women's productive activities, enabling them to be more efficient and generate greater returns. As a result, incomes can rise, food security and nutrition can improve, income and time poverty can decline, and other indicators of individual and community wellbeing and ecosystem resilience may be enhanced. The impact on human development is significant: from cleaner indoor air and improved health to more income generating opportunities and more time for other pursuits that can ultimately enhance gender equality.

Energy efficiency and renewable energy are considered some of the key solutions to tackling energy challenges. It is estimated that energy efficiency alone, if implemented properly and fully, could cut energy demand by 20-24 percent, and save hundreds of billions of dollars per year. On the other hand, energy efficiency is the least-cost strategy for improving economic efficiency across sectors in countries with high energy prices and high energy intensities. The potential for renewable energy, which includes hydropower, solar, wind, geothermal and biomass remains very large.

Astana EXPO-2017: Future Energy

In November of 2012, the International Exhibitions Bureau awarded Astana, the capital of the Republic of Kazakhstan the opportunity to organize and host the EXPO 2017 that would run from 10 June to 10 September. With over 5 million domestic and international visitors expected, the expo is expected to attract participants from more than 100 countries. The theme of the EXPO 2017, "**Future Energy**", reflects the energy challenges of the 21st century, which include but not limited to: energy security, energy efficiency, energy access, pollution and global warming. The primary goal of the EXPO is to remind the international community about the importance of rational consumption of energy resources. The project's subheading called "The ways of solving the most difficult problem of humanity" contains the main idea of EXPO 2017, which is turning attention of international community to the issues of climate change and emissions of carbon dioxide, promoting the use of alternative energy sources, and ensuring security of energy supply.

Although Kazakhstan is richly endowed with hydrocarbons, it has nevertheless, prioritised the preservation of traditional energies and promotion of alternative and renewable sources of energy such as solar, wind, marine resources, ocean and geothermal energy. For instance, **Kazakhstan 2050 Strategy** – the country's current development blueprint aims to: (i) increase the share of alternative energy sources in electricity generation by at least 50 percent; increase the share of

gas-burning plants in electricity generation by up to 30 percent; (iii) reduce carbon emissions in the electricity sector by 40 percent; and (iv) reach European emission levels when it comes to nitrogen and sulphur oxide emissions in the environment.

Fittingly, the mission of the EXPO 2017 is to create a lasting socioeconomic legacy by generating thought leadership, debate, and renewed sense of responsibility amongst citizens of the world about global energy challenges. The Government of Kazakhstan and the EXPO organizers would like to invite landlocked developing countries to participate in Astana EXPO 2017.

Monday 3 November 2014 (1300-1415 Hours), Vienna, Austria

A Side-event on LLDCs, and Future Energy: Expo 2017, Astana, Kazakhstan

The Government of the Republic of Kazakhstan, in conjunction with the Sustainable Energy for All Initiative (SE4ALL), United Nations Office of the High Representative for Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS), and the United Nations Entity for Gender Equality and Empowerment of Women (UN-Women) have the pleasure to invite distinguished delegates to the Second UN Conference on LLDCs to the side event that would consider LLDCs' current energy needs and their search for sustainable energy solutions for all. In addition, the Commissioner of the International Specialized Exhibition, Astana EXPO 2017, would provide information on how landlocked developing countries can participate in this important global exhibition.

Issues to be discussed

The side event will discuss the following issues.

- What is the role of energy in the post-APoA development agenda?
- How can LLDCs strike a balance between the search for renewable energy sources and energy efficiency?
- How can access to sustainable energy contribute to the realization of gender equality and empowerment of women, 20 years after the adoption of the Beijing Declaration and Platform of Action?
- What are some of SE4ALL-created opportunities that can benefit LLDCs?
- Are LLDCs positioned to take advantage of emerging opportunities in the energy sector?
- Astana EXPO 2017: How can energy-needs of LLDCs addressed in the EXPO?

Participation

All distinguished delegates to the Second UN Conference on LLDCs are invited. Additionally, staff from UN-OHRLLS will attend to provide substantive support.

Format

This event will feature presentations, and an interactive Question and Answer segment.

Date and Venue

The side event takes place on **3 November 2014, at 1:00 PM to 2:15 PM in M4**, on the margins of LLDC II Conference, in Vienna, Austria

Documentation

SE4ALL, UN-OHRLLS publications and EXPO 2017 promotional material

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