



LDC Watch Position Paper

Energy Poverty in LDCs: Ensure Access to Sustainable Energy for All



LDC
Watch

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Background

Energy is inherently linked to all aspects of our lives, including access to water, agricultural productivity, health care, education, job creation, gender equality and environmental sustainability. But, millions of households in the developing world still lack access to reliable, sustainable and affordable energy and pay high prices for poor-quality substitutes. It is estimated that 62 per cent of people in Least Developed Countries (LDCs) still have no access to electricity, compared with 10 per cent across other developing countries (ODCs). By 2014, the majority (54 per cent) of people without access to electricity worldwide were living in LDCs – this proportion was 30 per cent in 1990. Rural-urban divide in energy access is evident through the fact that 82 per cent of people without access to electricity in LDCs live in rural areas (UNCTAD, 2017). Besides, the levels of production and access to energy in the majority of LDCs are inadequate, seriously constraining their development. The installed generating capacity per person in LDCs is barely one twelfth of that in ODCs, and one fiftieth of that in developed countries (UNCTAD, 2017).

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Energy security is one of the pre-requisites for productive capacity building, private sector development and expansion of trade, and is therefore closely linked to the graduation efforts of LDCs. The European Commission defines energy security as the 'uninterrupted physical availability of energy products on the market at an affordable price for all consumers.' For LDCs, energy security has more focus on meeting basic human needs at the household level where per capita consumption levels and the quality of energy supplies are far lower than in developed countries. In actual, universal access to energy should not be limited to energy usage for basic household needs (which accounts two thirds of the total energy usage in LDCs) but should also serve building of productive capacities by significantly contributing towards the structural transformation of LDC economies. Such structural transformation, in turn has a role in increasing energy access by generating adequate demand for electricity for productive uses to make viable the infrastructure investments required for universal access. This nexus between energy and structural transformation has extended the concept beyond "energy for all" towards "transformational energy." This concept reflects a two-way relationship – from access to electricity through productive use, to structural transformation, and from structural transformation, through increased demand, to increased investment in electricity generation and distribution. Harnessing this relationship requires moving beyond a goal of universal access based on minimal household needs to a goal of transformational energy access.

The current global energy model, which comprises of large, highly centralised and fossil fuel based energy generation systems, is not helping the poor. Under this model, extending access to remote and rural areas and the urban poor with low consumption rates becomes expensive. Thanks to rapid technological progress and cost reductions associated with it, rural electrification has been much easier through decentralised generation and mini-grids. Rural electrification has the prospect of easing people's access to modern energy, which has potential benefits across social, environmental and economic pillars of sustainable development.

Increased energy use is often associated with its contribution to climate change. Intergovernmental Panel on Climate Change (IPCC) claims that carbon dioxide emissions from fossil fuel combustion and industrial processes contributed about 78 per cent of the total greenhouse gas emission increase from 1970 to 2010. Hence, an effective implementation of the

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Regarding energy mix, about half of the LDCs rely almost entirely on fossil fuels for electricity generation, a quarter mostly rely on hydroelectric power supplemented by fossil-fuel generation, and a quarter have a more even balance between the two. Energy usage in LDCs is also characterised by heavy reliance on traditional biomass, such as fuelwood and charcoal accounting for 59 per cent of the total (UNCTAD, 2017). Fossil fuels are likely to persist as an important part of generation mix in most of the LDCs for some years to come. Hopefully, access to modern renewable energy will further lower the use of traditional biomass which will slow forest deforestation. Other than large-scale hydropower development, the uptake of renewable technologies is, however, at nascent stage in most LDCs, especially for utility-scale generation. Nevertheless, 24 LDCs have pledged, as members of the Climate Vulnerable Forum, to achieve 100 per cent renewable generation by 2050.

LDCs' Struggle for Energy Security

Majority of LDCs struggle with similar types of energy challenges limiting their economic potential that include lack of adequate infrastructure for electricity generation, transmission and distribution; limited institutional capacity and resource constraints with respect to the development of the energy sector; and lack of scalable technology and know-how. Ensuring energy access to all by 2030, as envisioned by the 2030 Agenda for Sustainable Development, will be very challenging. Although LDCs have made some progress in increasing access to electricity which has more than tripled from 12 per cent to 38 per cent since 1990, only four of the 47 LDCs could achieve universal access to electricity by 2030 without an acceleration of the rate of increase in access, while only seven more could do so even if they doubled their current rate of progress. In nearly a quarter of the LDCs, by contrast, achieving universal access by 2030 would require the number of persons gaining access annually to be 10 times higher in the coming years than over the past decade (UNCTAD, 2017).

Poor people in LDCs have to spend much of their income, more than a third of household expenditures in some counties, on energy services. People in rural areas have to rely heavily on traditional fuels for cooking, which are injurious to health and the environment. For the majority of the poor in the LDCs, the harsh reality includes numerous hours of labour each week grinding grain into flour, cooking over a smoky fire,



with women and girls spending hours each day collecting biomass fuels – all because they have no access to modern energy services.

Many LDCs' vulnerability to energy supplies and dependence on imported fuels leave them prone to economic instability. In many LDCs, with the net energy imports rising every year, a large percentage of export earnings are diverted to pay for importing petroleum fuels. For example, in Fiscal Year 2016/17, the amount of import of petroleum products in Nepal exceeded the entire export amount during the period by 49.46 billion rupees (approximately USD 478.64 million) (Trade and Export Promotion Center, Government of Nepal, 2017).

Across LDCs as a whole, raising electricity production to the minimum level for productive use would mean an increase by a factor of between 3.4 and 6.8, while reaching the minimum threshold for modern societal needs would require production to increase by a factor of 13.5. For this, a significant financial commitment, around USD 12 billion to USD 40 billion per year is needed. At the same time, to achieve the Sustainable Energy for All goals, it is estimated that global clean energy investments need to nearly triple from the current USD 400 billion a year to more than USD 1 trillion a year (SE4All, 2015). Domestic resources in LDCs are inadequate for such heavy investments. Financing energy access to LDCs is also challenging because of the high costs for energy infrastructure projects, limited access to funding due to poor or non-existent credit ratings and lack of domestic and foreign private sector partners understanding the business case in the LDC energy sector, and long gestation period. Likewise, financing for decentralised energy systems, including micro-grids and household systems, and investment in smaller, local energy enterprises, is not readily available in all LDCs, even though many innovative approaches have been adopted in some LDCs. This is due to the perceived higher risk and lack of investment ready business plans.

Lately, political developments and continued economic stress in some traditional donor countries are giving rise to pressure on Official Development Assistance (ODA) budgets and funding of some multilateral agencies, while there is increasing emphasis on the use of ODA to catalyse private financing and movement towards making multilateral funding for electricity conditional on private-sector investment. In an optimistic note, the prospects for South-South financing, notably from China, are encouraging. There has also been an explosive growth in the number of international funds offering infrastructure and climate finance, but they are generally insufficiently focused on LDCs. For instance, out of USD 14.1 billion approved for international public climate finance 2003-2015, USD 5.6 billion (40 per cent) was allocated for energy projects. LDCs received only USD 300 million (5 per cent) under this financing scheme. On the other hand, USD 5.3 billion (95 per cent) was directed toward middle and high-income countries, who actually do not require grant based public finance as they can potentially raise significant capital from private sources of finance. This shows the plight of financing for universal access to sustainable energy in LDCs.

Global and Regional Initiatives towards Energy Security

In an aim to promote energy security, the United Nations launched the Sustainable Energy for All (SE4All) initiative in 2011 with three main objectives: universal energy security, doubling the rate of improvement in energy efficiency, and doubling the percentage of renewable energy by 2030. The UN General Assembly has also declared 2014-2024 the "Decade of Sustainable Energy for All." SE4All is an effort to create stronger public private partner-

ships, promoting partnerships among governments, business and civil society to achieve universal access to sustainable energy in accordance with Sustainable Development Goals (SDGs) and Paris Climate Accord. In total, 39 LDCs have chosen to be so called “Opt-in” countries in the SE4All initiative and started to develop their national strategies for energy transition (UN-OHRLLS, 2016). Access to affordable and clean energy is also included under Goal 7 of the 2030 Action Agenda for Sustainable Development. SDG7 focuses on a concerted global effort to ensure access to affordable, reliable, sustainable and modern energy for all, with a special focus on renewables.

The Istanbul Programme of Action (IPoA) for LDCs for the Decade 2011-2020 stresses on access to energy as a critical factor for enhancing productive capacity in LDCs. Energy security is included within one of the eight priority areas for action in the IPoA. The far-reaching impact that the development of energy sector in LDCs can have on poverty eradication was also emphasised in the Mid-term Review (MTR) of IPoA in 2016. Similarly, LDCs also initiated Renewable Energy and Energy Efficiency Initiative (REEEI) in 2016 at 22nd session of the Conference of the Parties (CoP 22) to the UN Framework Convention on Climate Change in Marrakech. REEEI aims to strengthen regulatory framework and implement renewable energy projects in LDCs.

Many LDCs fall under the categories of Landlocked Developing Countries (LLDCs) and Small Island Developing States (SIDS) and are more vulnerable due to their disadvantaged geographical characteristic. The Vienna Programme of Action for the LLDCs for the Decade 2014-2024 (VPoA) calls on the LLDCs to enhance their collaboration in promoting cross-border energy trade and energy transit through transmission lines to third countries, and develop national energy policies to promote modern, reliable and renewable energy. Meanwhile, the SIDS Accelerated Modalities of Action (S.A.M.O.A) Pathway urges the international community including regional and international development banks, bilateral donors, the UN system, the International Renewable Energy Agency (IRENA) and other relevant stakeholders to continue to provide adequate support to develop and implement national, regional and inter-regional energy policies, plans and strategies to address the special vulnerabilities of SIDS. Likewise, at the Third Summit of Heads of State and Government of OPEC Member Countries held in Riyadh in 2007 (also called the Riyadh Summit 2007), OPEC leaders established the “eradication of energy poverty” in the developing countries as an objective of OPEC aid institutions and emphasised on the need to cooperate with energy industry and other financial institutions to enhance such important endeavour.

Towards Transformative Energy Access: Policy options

Energy is a prerequisite for meeting all other SDGs because of its close linkage with poverty alleviation, education, gender equity, health and environmental protection. Moreover, the focus should not only be on providing minimum amount of electricity to households but ensuring access that promotes income generating activities and economic development ultimately creating a basis for structural change in the LDCs’ economy. To harness such transformative power of energy in economic, social and environmental aspects of sustainable development, LDC Watch recommends the policy options as follows.

- Universal energy access and timely shift towards modern energy must be fully integrated into development strategies of LDCs.
- The nexus between energy and structural transformation should be included in national policies. This means ensuring that the nature, quantity and quality of energy supply and

access meet the needs of structural transformation, and that development policies generate the demand for electricity needed to make the necessary investments in generation, transformation and distribution viable.

- Development of energy infrastructure should necessarily build on an existing energy system. With the addition of new capacity, the planning process should steer the energy mix towards a progressively more diversified and balanced combination of energy sources suited to the country's resources and future needs, taking account of the technical and economic characteristics, and the environment and social impacts of different technologies. While this may entail the continued use of fossil fuel for some period of time,



given the context of sharply rising electricity demand, increasing renewable generation can make a substantial contribution. In parallel with increasing generation, a second key priority is grid extension and upgrading.

- LDCs' weakness lies in poor absorptive capacities and weak innovative capabilities. This highlights the need for greater emphasis on capacity development in energy-related projects; robust science, technology and innovation (STI) policy frameworks; greater involvement of local research institutions in energy-related activities; and efforts to promote experience-sharing and mutual learning in energy-related research. South-South and triangular cooperation may play a leading role in this area. There is also an increasing importance of South-South trade for LDCs' access to electricity-related technologies.
- In the current international environment which has been putting strong pressure on ODA budgets and multilateral funding, enhancing domestic resource mobilisation is crucial. There is a strong need for prioritising public funding and the development of domestic capital markets to drive needed investment in national electricity sectors.
- Public investments alone may not be adequate enough to spur growth in energy infrastructure and LDCs should also use a multi-stakeholder approach that includes finances through various sources, including Private Partnership (PPP), Foreign Direct Investment (FDI), ODA, and concessional loans from multilateral and regional development banks.
- There is a need to be cautious that the use of private financing may impact the affordability of electricity supply – a key aspect of universal access. LDC governments must also be cautious in using external commercial financing since there is a risk of external debt crisis associated with it, particularly in African LDCs.
- Considering the financial constraints faced by LDCs against attaining universal energy access, development partners should fulfil their longstanding and long-unmet aid commitments of 0.15 to 0.20 per cent of GNI towards LDCs. For renewable technologies particularly, grant financing would be appropriate, reflecting the principle of "common but differentiated responsibilities"; but despite clear pledges in the context of the Paris Climate Accord, climate finance for LDCs falls far short of the LDCs' needs, as well as it is fragmented among multiple channels, funds and sources.

- Development partners are to provide enhanced financial and technical support through technology transfer. The current framework for the transfer of energy-related technologies is underfunded, and its effectiveness at best uneven; and bilateral, South-South and triangular cooperation initiatives are yet to play a decisive role. We expect the Technology Bank for LDCs, which got operationalised in September 2017, to play a catalytic role by improving this situation by acting as a hub for these countries.
- Regional integration of LDCs' energy markets could allow for more intensive exploitation of lower-cost energy sources and could increase flexibility by creating greater scope for diversification, geographically and across energy sources. For some LDCs, importing electricity from neighbouring countries through regional power pools may provide a viable alternative to domestic generation. Enhancing regional cooperation is also an important tool to reach the much needed economies of scales to attract investments and empower domestic "green energy" entrepreneurs. Regional support is also needed to assist LDCs in attracting and absorbing international climate finance earmarked for the implementation of the Intended Nationally Determined Contributions (INDCs) under the Paris Climate Accord.
- Energy efficiency in LDCs also need to be enhanced by minimisation of losses through transmission and distribution (T&D) networks, the impact of which is estimated at up to 6 per cent of GDP in some African LDCs (UNCTAD, 2017).
- LDC governments should encourage clean and sustainable energy projects that can guarantee universal access to energy. They should desist from providing subsidies to energy projects that cause adverse effects on the environment and serves corporate interests rather than the need of the general public. It is also desirable that LDCs refrain from seeking fake solutions to energy crisis such as the construction of mega dams and big hydropower projects that devastate river ecosystems and the industrial wood based bio-energy that encourage destruction of forests. Instead, the resources are to be directed towards community-led and decentralised renewable and clean energy system.
- Although technological advances are taking place in the area of rural electrification, LDCs are not taking advantage of it and the energy policies of LDCs are still biased towards traditional energy sources based on fossil fuel and central grid connectivity. In remote places where connection to central grid is difficult, distributed renewable energy such as pico-solar, micro-hydro and micro-grids, and mobile solar firms can be faster, cheaper and cleaner source of electricity. For achieving SDG7, LDCs need to emphasise on rural electrification by allocating adequate budget for renewable energy; lowering tariffs and taxes on materials and equipment required for building renewable energy plants; and arranging local finance through loans, grants and microfinance.
- The transformational impact of modern energy access can be further enhanced through complementary interventions in economic diversification, job creation, skill and technological upgrading, business development, access to credit and financial services, development of small and medium-sized enterprises, and women's economic empowerment.
- There is a need for a strong and multi-stakeholder national leadership and ownership



to ensure a coherent and enabling policy framework to promote investments in the energy sector accompanied with effective implementation mechanism and monitoring system.

- Policymakers must take into account the cross-linkage of SDG7 with other SDGs such as SDG 13 on climate change mitigation and adaptation and SDG9 on inclusive and sustainable industrial development. Energy and water efficiency as well as food security can also be enhanced through promoting sustainable energy programme.
- Equally important is to plan for an effective mobilisation of the investments in LDCs by defining energy access as a national development priority and integrating it into macro-development strategies, policies and development programmes, as recommended by the IPoA.
- Likewise, sensitization of population, involvement of civil society organisations (CSOs) and community-based organisations (CBOs) in planning and implementation, and inter-agency coordination should also be the priority.

Hence, all the relevant stakeholders need to understand the importance of reliable and affordable access to sustainable energy as a key development multiplier with large transformative power. LDCs themselves must adopt a comprehensive and holistic approach that should include a strong political leadership, forward-looking long-term planning, enabling policy and regulatory framework, increased capacities to prepare and implement projects, and access to finance. Lastly, LDCs' access to affordable, reliable and renewable energy and related technologies requires a confluence of efforts from all stakeholders including governments, development partners, private sectors, international financial institutions and civil society to summon the right blend of best practices, innovative financing instruments and creative solutions that can build momentum towards sustainable energy.

About LDC Watch

LDC Watch is a global network of national, regional and international civil society organisations (CSOs), alliances and movements based in the Least Developed Countries (LDCs), defined by the United Nations (UN). It acts as a coordinating body for LDC civil society to advocate, campaign and network for the implementation of the Istanbul Programme of Action (IPoA) for LDCs for the Decade 2011-2020 and other Internationally Agreed Development Goals (IADGs) such as the Sustainable Development Goals (SDGs). Since its establishment in 2001, LDC Watch has been raising its voice and articulating its perspectives in a multi-stakeholder framework, engaging with the UN, LDC governments and their development partners, both as partner and pressure group. LDC Watch has Special Consultative Status with the Economic and Social Council (ECOSOC) and is accredited to the UN Framework Convention on Climate Change (UNFCCC).

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