

The Least Developed Countries Renewable Energy and Energy Efficiency Initiative for Sustainable Development

LDC REEEI



FRAMEWORK



LDC REEEI

www.ldcreeei.org



TABLE OF CONTENTS

EXECUTIVE SUMMARY.....	3
1 THE LDC RENEWABLE ENERGY AND ENERGY EFFICIENCY INITIATIVE.....	6
1.1 The Case for a Dedicated Initiative for LDCs	6
1.2 Goals.....	7
1.3 LDC REEEI Principles	8
1.4 The LDC REEEI Implementation Approach	9
The strategic dimension	9
The technical and policy dimension	10
The partnership dimension	11
1.5 Pioneers and LDC Solidarity	12
1.6 Contributing to the LDC REEEI.....	12
1.7 Focus Areas and Work Plans.....	13
1.8 Financing of LDC REEEI Activities.....	15
The important role of climate finance	15
1.9 Evaluation and Expected Results.....	17
2 THE VISION	18
2.1 Long-Term Plans for People-Centered and Sustainable Well-Being for All LDC Citizens	18
2.2 Focus on Productive Sectors	19
2.3 A New, Efficient & Distributed Energy Model for the Future	20
2.4 People-Centered Energy: Communities and Cooperatives.....	21
A Community Energy Cooperative in Cambodia.....	22
Indigenous renewable energy at utility-scale	23
3 THE CONTEXT	24
What are Least Developed Countries?	24
3.1 Development context, the Istanbul Agenda, and the SDGs.....	25
3.2 Energy and development context	26
3.3 Energy and climate context.....	28
3.4 The Economics of Renewable Energy	31
4 INSTITUTIONAL ARRANGEMENTS.....	33
4.1 Political level.....	34
4.2 Technical level	34
4.3 Secretariat support.....	34

EXECUTIVE SUMMARY

The *Least Developed Countries Renewable Energy and Energy Efficiency Initiative for Sustainable Development (LDC REEEI)* is an LDC-initiated, LDC-owned and LDC-driven effort to accelerate the harnessing of the renewable energy potential across least developed countries and to promote energy efficiency. Under the mandate of LDC Ministers, the LDC REEEI aims to support LDCs to achieve their development aspirations by addressing three overarching goals:

- **100% access to sufficient, affordable, modern and renewable energy by all citizens in LDCs by 2030;**
- **100% electricity from renewable energy sources in all LDCs by 2050 that caters to all needs of their citizens, social services and industries; and**
- **100% utilization of energy efficiency potentials along the value chain through full implementation of best practice measures and planning by 2040.**

At its core, the LDC REEEI is about energy for people-centered development. The Initiative recognizes the importance of energy for development and seeks to enable the LDCs achieve their Sustainable Development Goals, to align these efforts with the Paris Agreement's objectives, and to revitalize the Istanbul Programme of Action.

The Initiative is a strategic framework for driving transformative change across sectors and a platform for sharing experiences and disseminating knowledge to reach universal energy access and accelerate the transition to renewable energy and energy efficiency in all LDCs. The Initiative will consult multiple stakeholders in each country to help them develop their own solutions and action plans to leapfrog to modern renewable energy systems. The LDC REEEI will complement ongoing initiatives with tangible impacts on renewable energy and energy efficiency, while addressing areas that the existing initiatives do not. Primarily the Initiative will focus on developing and accelerating the implementation of national renewable energy and energy efficiency policies. The Initiative will also collaborate with regional, national, and local stakeholders to jointly identify opportunities to make energy services more accessible and affordable for productive uses, social services such as education and health, and to promote gender equality and women's empowerment.

The LDC REEEI will assist countries in mobilizing and developing capacities, in formulating tailored policies and regulations, and in drawing lessons from a growing body of experience in deploying renewable energy technologies. The Initiative is predicated on solidarity and cooperation rather than competition: countries running ahead will share and support other LDCs to initiate actions aligned with LDC REEEI. The Initiative will also support country-led efforts to access climate dedicated funding such as the Global Environment Facility, LDC Fund, Adaptation Fund, Special Climate Fund, and Green Climate Fund.

The LDC REEEI is guided by a set of principles that outline the conditions and values under which the renewable energy transformation should be undertaken. Those seeking to partner with or have their activities recognized as aligned with the Initiative will need to subscribe to these principles:

- » **LDC leadership:** The Initiative is initiated, owned and driven by LDCs. It is designed to provide a unique platform for LDCs to affirm their priorities and visions, and direct non-LDC partners to support these visions.
- » **Country-driven:** Countries are sovereign in their choices and decisions. Recognizing that each country is unique, the LDC REEEI shall support different technologies and implementation models that are appropriate to the country context.
- » **LDC solidarity and cooperation:** The LDC REEEI is about LDCs supporting each other. Pioneering LDCs shall support other LDCs and foster cooperation rather than competition. The Initiative will also work towards reducing LDCs dependency by promoting cooperation with a wide range of partners.
- » **Equity at heart:** The Initiative is firmly grounded in the principle of equity at all levels. This includes the principle of 'common but differentiated responsibilities and respective capabilities'

at the international level, equity between LDCs, gender equity, and protect the rights of marginalized groups and indigenous peoples.

- » **Bottom-up, smart, distributed energy systems:** The Initiative shall actively promote smart, distributed and people-centered systems; and the application of innovative technologies that are appropriate for, and empower, communities.
- » **Meet the needs of local productive sectors:** The LDC REEEI will work towards ensuring energy systems cater to the needs of smallholding farms and micro, small and medium-sized enterprises; sectors that constitute the backbone of LDC societies and are essential for promoting local economies.
- » **Diversified ownership towards people- and community-centered energy systems:** By empowering citizens, communities, cooperatives, public institutions, and private entities to become power producers, the Initiative shall enhance energy democracy, local economic development and resilience.
- » **Participation and multi-stakeholder engagement:** The Initiative shall promote and facilitate the genuine involvement of local governments, citizens, communities, civil society, academia, private firms and media in the energy transition. New ways to foster engagement in decision-making processes and search for solutions shall be continuously explored and refined.
- » **South-South and North-South cooperation:** While the LDC REEEI is driven by LDCs, it is also a collaborative endeavor, and thus will stimulate partnerships with non-LDC countries and relevant institutions in the global North and South.
- » **Explicit efforts to transition to zero-carbon societies:** The Initiative was conceived and originates in the context of the international climate negotiations under the United Nations Framework Convention on Climate Change. While the Initiative goals, objectives and work areas are framed from an energy and development perspective, the climate dimension is an equally important motivation.

The activities of LDC REEEI will be guided and framed by eight focus areas, including: i) mapping and monitoring; ii) knowledge, capacity mobilization, building, and learning; iii) planning and policy; iv) funding and financing; v) multi-stakeholder engagement and people-centered/community energy systems; vi) equity, women and social/environmental safeguards; vii) Nationally Determined Contributions and national development plans; viii) public awareness, communication and outreach.

The LDC REEEI envisions a rapid paradigm shift in the global energy sector towards 100% renewable electricity, participatory and equitable energy systems. Renewable energy will become a source of income for the many, a way to empower communities, a tool for increasing resilience and breaking dependencies on other countries and big firms, an enabler of a flourishing of economic activity by local farms, local businesses and a functioning public sector. The Initiative will support LDCs in formulating long-term plans for people-centered and sustainable well-being for their citizens; harnessing energy to drive the productive sector; developing diversified, efficient and distributed energy systems for the future; and encouraging community ownership and energy cooperatives around the world.

The Initiative recognizes that while most LDCs are endowed with significant renewable energy source potentials, the majority of their people, productive sectors, and development efforts suffer from energy deficits. Increased access to energy has the potential to vastly improve the lives and livelihoods of populations, and the LDC REEEI regards basic energy services as a human right, which should be available on demand and delivered through the most efficient and affordable systems. The Initiative will therefore prioritize the needs of people currently without adequate access to modern, affordable, reliable and sustainable energy services. Further, the Initiative highlights the importance of going beyond a focus on increased household energy access, to more focus on the productive and social services sectors – driving economic development, creating new jobs, supporting the expansion of social and welfare services, and increasing resilience. This will require energy strategies that are integrated into broader development strategies, building a mix of energy systems with both on and off-grid approaches, and must be underpinned by sound science, technology, financial and innovation policies and frameworks.

Although the LDCs are low emitters of greenhouse gases, they are especially vulnerable to the adverse impacts of climate change. Hence global decisive action on climate change is a top priority for the LDCs. Through LDC REEEI, LDCs can take international leadership by setting example and exerting moral pressure on countries that are slow to take action. The LDCs can furthermore take advantage of being ‘late-comers’, and jumpstart their renewable energy revolution when it is already cheap, and they have not expended large sums on expensive, conventional energy infrastructure.

This LDC-led Initiative builds on existing LDC political and decision-making processes. At the political level, the LDC REEEI will remain accountable to all LDC Ministers, and will operate under the guidance and supervision of a Steering Committee of LDC Ministers or their representatives comprising the countries involved in the Initiative, with participation by partners and stakeholders, as appropriate. At the technical level, the Initiative’s Coordinator will convene a Technical Expert Group comprising LDCs and international experts in renewable energy and related areas, to play a leadership role in developing, operationalizing and implementing the Initiative in practice. Activities at the political and technical level will be supported by a lean secretariat function connected with the existing LDC Secretariat, to ensure the most effective use of scarce resources and alignment with other LDCs activities.

The Initiative recognizes that while the energy challenges facing LDCs are enormous so too are the opportunities. LDCs will work together to embark on transformative action, set their own course, and take charge of their own future though pioneering a model of energy and development that is in accord with what both people and the planet need. The LDC REEEI can make a major contribution towards a future that delivers on aspirations for 100% energy access, renewable energy and best practices in energy efficiency and use – and in so doing helps to place us on path to a cleaner, fairer and more prosperous world for all.



1 THE LDC RENEWABLE ENERGY AND ENERGY EFFICIENCY INITIATIVE

The *Least Developed Countries - Renewable Energy and Energy Efficiency Initiative for Sustainable Development (LDC REEEI)* is an LDC-led effort to accelerate the harnessing of their renewable energy potential and to promote energy efficiency. The Initiative focuses on building a mix of energy systems to respond to development aspirations of the LDCs in ways that are compatible with climate change imperatives. Rapid advances in technology and their significant reduction in cost in recent years have made it possible for renewable energy systems of all sizes to constitute the mainstream of energy options. The LDC REEEI stresses the benefits of moving rapidly to adopt modern renewable energy systems. It also views the ‘late-comer’ status of member countries not as a limitation, but as a unique opportunity to build dynamic capabilities for transferring practical and cost-effective technologies that would enable LDCs to address local needs while contributing to the Paris Agreement goals. Above all else, the Initiative prioritizes the needs of people currently

without adequate access to modern and adequate energy services. The Initiative seeks to be a key driver for the LDCs to achieve their Sustainable Development Goals (SDGs) and to align these efforts with the Paris Agreement’s objectives. The Initiative will also seek to revitalize the Istanbul Programme of Action for the LDCs.

The goals and principles of the LDC REEEI are fully in line with the overarching goal of the Istanbul Programme of Action to overcome the structural challenges the LDCs face to eradicate poverty and achieve internationally agreed goals such as the Paris Agreement and the 2030 Agenda for Sustainable Development. The Initiative also recognizes that while LDCs are facing enormous energy-related challenges, so too are the opportunities. Transformational change is both needed and possible but it must be stimulated by truly collaborative international efforts and goodwill that avoids piecemeal and fragmented approaches.

1.1 THE CASE FOR A DEDICATED INITIATIVE FOR LDCS

The LDC REEEI was catalyzed by a call from LDC Ministers to deliver a dedicated initiative for the LDCs on renewable energy and energy efficiency. The Initiative was formally welcomed by Ministers in September 2016 at a Ministerial meeting of the Least Developed Country Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Kinshasa, and officially launched at the twenty-second session of the Conference of the Parties (COP) in Marrakech 2016.

The LDC REEEI is taking stock of current development–energy–climate context and envisages LDCs taking advantage of the promises and opportunities associated with the necessary transition to renewable energy societies.

The LDC REEEI complements other efforts and provides a platform for collective engagement across all LDCs. It is a purely LDC-initiated, LDC-owned and LDC-driven initiative.

The Initiative is country-led, where most action will be implemented at the country level, and where each LDC engages with both domestic and international stakeholders and partners. Through the Initiative these efforts can be synchronized, enhanced and supported. While the Initiative’s formal structures (its Secretariat and Technical Expert Group) will play important roles, most of the work will be implemented through LDC governments and in partnership with institutions and individuals, including related efforts such as the Africa Renewable Energy Initiative (AREI).

The Initiative is primarily a strategic framework and platform for sharing of experiences and capacity building resources that can accelerate the transition to renewable energy and maximum energy efficiency in all LDCs.

Its primary role is *not* that of a funding entity for the direct financing of LDC’s renewable energy and energy efficiency actions. The Initiative will however need funds to enable its

core coordinating functions, and for disbursements of initial grants to kick-start country-level initiatives. The Initiative will also play an important role in helping varied country interventions find dedicated, long-term support, as well as support LDC governments to gain the necessary, substantial funds needed to drive ambitious renewable energy and energy efficiency policies, incentives, capacity building, guarantees and other interventions. The LDC REEEI will particularly focus on supporting LDC access to existing and future scaled-up climate financing.

1.2 LDC REEEI GOALS

The LDC REEEI has three concrete and overriding goals that are also aligned with the overall vision of LDCs as thriving, renewable energy societies:

- 100% access to sufficient, affordable, modern and renewable energy by all citizens in LDCs by 2030;
- 100% electricity from renewable energy sources in all LDCs by 2050 that caters to all needs of their citizens, social services and industries; and
- 100% utilization of energy efficiency potentials along the value chain through full implementation of best practice measures and planning by 2040.

These goals are aspirational anchor points that need to be translated into continuously re-evaluated mid-term performance indicators. A first set of such indicators is presented at the end of this section.



1.3 LDC REEEI PRINCIPLES

The LDC REEEI is guided by a set of principles that outline the conditions and values under which the renewable energy transformation should be undertaken. Those seeking to partner with or have their activities recognized as aligned with the Initiative need to subscribe to these principles:

LDC leadership: The Initiative is initiated, owned and driven by LDCs. It provides a unique platform for LDCs to affirm their priorities and visions, and direct non-LDC partners to support these efforts. The Initiative aims to fill gaps and shall work in a complementary manner, recognising and supporting others aligned with this Framework.

Country-driven: While the LDC REEEI provides a strategic framework, countries are sovereign in their choices and decisions. The Initiative acknowledges the different characteristics of LDCs and recognize that different technologies and implementation models will be appropriate in different countries.

LDC solidarity and cooperation: The Initiative is about LDCs supporting each other and strengthening LDC solidarity. Pioneering LDCs will support other LDCs and foster cooperation rather than competition. The LDC REEEI will work towards reducing dependencies by LDCs on non-LDC countries and other actors while promoting cooperation with a wide range of partners.

Equity at heart: The Initiative is firmly grounded in the principle of equity, which shall be applied at all levels. This includes common but differentiated responsibilities and respective capabilities at the international level, but also equity between LDCs, and equity and rights in relation to women, marginalized groups and indigenous peoples within countries.

Bottom-up, smart, distributed energy systems: The Initiative shall actively promote planning and actions towards smart, distributed and people-centered renewable energy systems. The Initiative shall support application of innovative technology that is appropriate for, and empowers, local communities, including the use of smart grids, small, micro and individual production units and financing models that support modular household and community-level energy systems that can be scaled up over time.

Meet the needs of local productive sectors: The Initiative shall as a priority be explicitly geared towards ensuring energy systems are expanded to cater to the energy needs of small-scale farming and micro, small and medium-sized enterprises, recognizing these sectors constitute the backbone of LDC societies and are essential for fostering thriving local economies.

Diversified ownership towards people- and community-centered energy systems: Consumers, communities, cooperatives, public entities and diverse sets of companies shall be empowered and enabled to also become owners and producers of energy generation, thereby enhancing energy democracy, local economic development and resilience.

Participation and multi-stakeholder engagement: The Initiative shall work with LDCs to promote and facilitate genuine involvement of more actors in the energy transition, including local governments, citizens, communities, social movements, civil society organisations, academia, private companies and media. New ways to foster engagement in decision-making processes and search for solutions shall be continuously explored and refined.

South-South and North-South cooperation: While the Initiative is driven by LDCs it is a collaborative endeavour at heart. The Initiative shall promote genuine partnerships with non-LDC countries as well as with relevant institutions in both the global North and South, recognizing that the goals of the LDC REEEI will only be achievable with international equity and the provision of associated finance, technology and capacity building.

Explicit efforts to transition to zero-carbon societies: The Initiative was conceived and originates in the context of the international climate negotiations under UNFCCC. While all goals, objectives, principles and focus areas are justified from an energy and development point of view alone, the climate dimension adds an equally important rationale for the Initiative.



1.4 LDC REEEI IMPLEMENTATION APPROACH

The LDC REEEI seeks to drive transformative change across sectors. Focus shall be on policy and programmatic approaches with wide-ranging impact rather than on specific renewable energy installation projects on the ground. The Initiative is not a funding scheme.

In concrete terms, the LDC REEEI simultaneously functions across the **strategic, technical/policy** and **partnership** dimensions: and at the **international, national** and **local** levels. Different constellations of actors will contribute to the Initiative by engaging at one or several combinations of these dimensions and levels. The approaches to be undertaken by the Initiative include:

The strategic dimension

The LDC REEEI functions through its strategic dimension by creating the conditions for implementation of technical work, policies and access to resources. It does so:

At the international level across LDCs

- Applying the LDC REEEI **strategic framework**, agreed by all LDCs as a common platform to direct and accelerate efforts on renewable energy and energy efficiency. The visions, goals and principles, as well as the concrete actions outlined in the Framework can inspire, be adopted, and be used by any country, institution, or individual anywhere.
- Providing a tool for **common bargaining and negotiation power** by LDCs vis-à-vis other countries, international funding institutions, the Green Climate Fund, and other relevant organisations. Through the ongoing work and continuous coordination across LDCs, common positions are agreed, and the political leverage of the LDC Group maximized. Positions and proposals can be advanced under the LDC REEEI banner in international fora.

At the national level

- Increasing **awareness** of the possibilities and needs to increase renewable sources of energy. Using the LDC REEEI framework as a reference to facilitate national policy debates and discourse.
- **Empowering** policy-makers, legislators and stakeholders who are advancing reforms and decisions in line with the goals and principles of the LDC REEEI.
- Enabling the rapid sharing of best practices, **fore-runner examples** and peer pressure from other LDCs to inspire and challenge national policy-making to move further and faster.

At the local level

- Empowering **local governments, civil society, communities** and other actors to take political action and keep national governments accountable in line with the vision, goals and principles of LDC REEEI.



The technical and policy dimension

The LDC REEEI functions through its technical dimension by strengthening LDCs capacity to formulate technical solutions, plans, policies and engagement approaches that are essential for reaching the vision and goals. It does so:

At the international level across LDCs

- Developing a platform for the provision and exchange of knowledge across LDCs through **mapping, sharing of best practice and mistakes** constitute a major part of the LDC REEEI benefits. These exchanges can be facilitated by the LDC REEEI Secretariat but also directly by other actors and initiatives associated with the LDC REEEI.
- Providing training, **capacity building efforts and exchanges** across LDCs enhances cost-effectiveness, harness synergies and foster strong inter-LDC networks. These efforts can be initiated and implemented by the LDC REEEI Secretariat or any other LDC REEEI related actor.
- Fostering **joint development and innovation** of new solutions and approaches across LDCs (initiated both by single actors or through the LDC REEEI Secretariat).

At the national level

Technical support work at the national level forms the backbone of the LDC REEEI. These efforts are not top-down or directed from LDC REEEI centrally, but rather devolved, bottom-up efforts that are rooted in the national contexts and aligned with and inspired by the LDC REEEI Framework and principles.

Some of this work is purely domestic, undertaken by LDC governments and/or national stakeholders. Other efforts are cooperative initiatives that involve external actors, including non-LDC partners where relevant.

This kind of technical work spans the LDC REEEI work areas and includes:

- Supporting **long-term planning and country-specific analysis/research** as a basis for revised and higher-ambition energy plans, Nationally Determined Contributions (NDCs) and SDG implementation.
- Enabling **concrete policy development and implementation** in individual LDCs through dedicated interaction and cooperation across stakeholders within and across the different activity areas.
- **Training and providing capacity mobilization/building** efforts at national level for key actors across sectors.
- **Mobilizing resources** from climate finance and other sources (see also section 4.8).

At the local level

- **Implementing solutions aligned with LDC REEEI work areas** through direct technical and practical interaction between local, national and/or external actors and communities, local governments and other local entities.

The partnership dimension

The LDC REEEI functions through its partnership dimension by fostering cooperative efforts between LDCs and a broad range of actors to boost the impact of the Initiative and strengthen the standing of LDCs. It does so by:

Partnerships between LDCs and others

- Establishing **formal partnerships** between the Initiative and other partners, including with AREI, south-south cooperation partners, the International Solar Alliance, UN bodies, international development partners and any other relevant partner.

Such partnerships may entail:

- Commitments to **align funding priorities** with the LDC REEEI framework's goals, objectives, principles and work areas.
- **Commitments to consult** with LDC REEEI before deciding on directions of activities that will have impact on LDCs.
- **Longer-term plans for collaboration and support** (e.g. LDC-specific funding and capacity building efforts, new provisions and new funds dedicated to LDCs etc).

Partnerships within and with individual LDCs

- Fostering **multi-stakeholder partnerships** within countries explicitly aligned with the LDC REEEI vision, goals and principles.
- Facilitating partnerships between **non-LDC entities or groups of institutions/consortia** and individual LDCs constitute a major aspect of the LDC REEEI approach.

Partnerships with local level actors

- Enabling **direct collaboration/partnerships between and with local entities** (communities, cooperatives, local governments, civil society organisations, local companies, public institutions, local banks, etc) aligned with LDC REEEI.



1.5 PIONEERS AND LDC SOLIDARITY

The LDC REEEI is premised on the understanding that transformative change happens by the power of example by fore-runners and trailblazers. Through pioneering work with LDCs who are ready to move immediately, the LDC REEEI will help drive change and build momentum. There will be a staged approach to the Initiative's work where some LDCs will be taking the lead.

Pioneering countries will be chosen through self-selection; the countries ready to act early should do so. The LDC REEEI constitutes an opportunity for early movers to take benefit of the political and facilitative platform that the Initiative offers.

Significantly, however, the Initiative is one of cooperation rather than competition. Countries that are running ahead will share and support other LDCs to initiate actions aligned with this Framework. These countries will also help to accelerate action by sharing their experiences including successes, failures and challenges.



1.6 CONTRIBUTING TO THE LDC REEEI

The LDC REEEI encourages formation of new consortia and distinct initiatives that align themselves with the LDC REEEI and subscribe to its goals and criteria. These independent consortia and initiatives can constitute a mix of LDC governments, civil society, academia, private sector as well as non-LDC actors such as non-profit institutes, UN entities and international development partners, in varying constellations. Substantial parts of the actions and activities outlined in this Framework will be pursued by these different partnerships/constellations of initiatives, which can have a focus on both distinct themes as well as on specific countries.

Each entity seeking recognition for its work in alignment with the LDC REEEI will need to subscribe to this Framework and its vision, goals and principles and show that their work is in alignment. Procedures and modalities for such assessment of LDC REEEI-alignment/partnership/compliance will be handled by the LDC REEEI Secretariat and Technical Expert Group.

1.7 FOCUS AREAS AND WORK PLANS

A set of eight focus areas guide and frame the activities that need to be undertaken in each LDC to deliver on the LDC REEEI visions, goals and principles.

The bottom-up approach of the LDC REEEI means that countries and the various constellations of partnerships will determine their priority focus and choice of detailed activities. The LDC REEEI serves as an overall strategic framework.

These focus areas shall be seen as repositories for a continuously growing and elaborate set of activities, based on real implementation experiences and learning on the ground. The LDC REEEI will constitute a resource centre where specific experiences, examples and lessons can be systematically gathered and made available for all LDCs. Countries and LDC-aligned constellations will be able to draw on this valuable source of LDC-specific and LDC-relevant options, to serve their prioritization and formulation of specific action plans. An overview of these focus areas is provided below.



Work area 1 – Mapping and monitoring

- » LDC-led mapping of experiences, activities and initiatives for enhancing LDC coordination
- » Mapping existing capacities and capabilities
- » Monitoring of LDC REEEI related activities within and across LDCs

Work area 2 – Knowledge, capacity mobilization and learning

- » Capacity mobilization and capacity building needs across stakeholders at all levels
- » LDC-relevant and endogenous innovation
- » Project development capability support
- » Strengthening of public institutions
- » South-South collaboration and mutual learning

Work area 3 – Planning and policy

- » Long-term planning methodology and implementation
- » Risk reduction through payment/other guarantee schemes
- » Productive sector oriented policies
- » Incentives, regulations, standards and policies to enable distributed and off-grid/mini-grid solutions (including measures such as a connection guarantee and no risk for developer with eventual grid connection)
- » Incentives, regulations, standards and policies to incentivize efficient use of energy from utilities, administrations and other public entities (e.g. schools, hospitals) as well as appliances.
- » Common standards and smart grid development
- » Support community energy and energy democracy
- » Resilience and domestic/LDC manufacturing capacity
- » Energy efficiency integrated in all policies, planning and capacity building

Work area 4 – Funding and financing

- » Assessments of needs for each LDC:
 - Public funding needs for enabling activities across all the work areas
 - Private and public financing made possible by enabling activities
- » On-going assessment of funding opportunities for LDCs
- » Equity and fair shares assessments for scaled up international public climate and development funding for LDCs
- » South-South cooperation and funding
- » Support for accessing existing climate finance

Work area 5: Multi-stakeholder engagement and people-centered/community energy

- » Multi-stakeholder engagement as core element of transformation across work areas
- » Identification, innovation and support for successful local, community led- and owned renewable energy solutions

Work area 6: Equity, women and social/environmental safeguards:

- » Equity as central element of successful transformation to renewable energy
- » Social and environmental safeguards
- » Technology assessment platforms
- » Women's rights and key role

Work area 7: NDCs and national development plans

- » Drawing on all other work areas to continuously revise and substantiate NDCs (conditional and non-conditional commitments) and national development plan in relation to renewable energy

Work area 8: Public awareness, communication and outreach

- » Inter-initiative communication and information sharing across stakeholders, including access to mapping database and repository of best practices
- » Outward-oriented communications, awareness raising and outreach strategies and schemes

1.8 FINANCING OF LDC REEEI ACTIVITIES

The success of LDC REEEI requires different kinds of funding.

The LDC REEEI formal structures (annual meetings of LDC Ministers, Secretariat and functions of the Technical Expert Group) require regular funding for their **administrative operations** (meetings, administration etc).

The LDC REEEI **Secretariat** requires funding to carry out **substantive work** such as monitoring/coordination of all LDC REEEI-related activities, workshops, studies and training, in alignment with this Framework and action plans to be elaborated by the Technical Expert Group.

The LDC REEEI shall have funds for **rapid, initial support** to new constellations and partnerships across all levels and dimensions as outlined above that are inspired by and aligned with the LDC REEEI. Such seed funds shall be made available in order to facilitate the initial work and the formulation of funding proposals to, for example, the Green Climate Fund.

Funds for specific LDCs to further develop supportive activities such as mapping, long-term planning, multi-stakeholder consultation processes, policy development, internal training, exchanges etc. aligned with the LDC REEEI will need to be mobilized specifically (i.e. these will not generally be channelled through the LDC REEEI formal structures, but rather straight to each LDC. The LDC REEEI (through its Secretariat and other partnering entities) will, however, play an important role in supporting the mobilization of such funding (which may include rapidly accessible readiness funds).

The LDC REEEI shall furthermore play an important role in supporting LDCs in their **mobilization of resources for ambitious interventions requiring large sums of money**, such as financing of incentives schemes, payment guarantees, concessional credit, nation-wide training programs etc.

Through political work at the cross-LDC level, the LDC REEEI may work to encourage funders to institute **dedicated resource allocations for LDC REEEI aligned efforts**.



The important role of climate finance

There exists a multitude of potential funding sources to drive the implementation of the LDC REEEI vision, goals and principles. These should all be explored. The Initiative recognizes, however, that international public climate finance must play a particularly important role for the funding of LDC REEEI aligned activities across all LDCs.

These funds are established as a recognition of the equity principles enshrined in the climate Convention as well as in the Paris Agreement, with the dedicated purpose to ensure that developing countries can take decisive action.

Under the UNFCCC, developed country Parties (Annex II Parties) shall provide financial resources to assist developing country Parties in implementing the Convention, through a Financial Mechanism established for this purpose.

Climate change finance for LDCs is provided through several multilateral channels, including instruments established by the Conference of Parties to the UNFCCC, multilateral development banks and regional channels.

Structural barriers and lack of capacity within LDCs mean that many of these sources of funding are so far under-utilized by LDCs. The LDC REEEI shall support LDCs to access these funds for their LDC REEEI-related work and, when demand escalates, make the case for replenishment and further capitalization of these funds in accordance with richer countries' fair share.

Key climate finance opportunities that the LDC REEEI shall support LDCs access include:

- » The **Global Environment Facility**, established in 1991, which serves as the financial mechanism for five environmental conventions, including the UNFCCC. The Green Environment Facility also manages two climate change funds established under the UNFCCC: the Special Climate Change Fund and the Least Developed Countries Fund.
- » The **Least Developed Countries Fund**, which supports a work program to assist LDCs in carrying out the preparation and implementation of National Adaptation Programmes of Action, which are country-driven strategies that identify the most immediate needs of LDCs to adapt to climate change.
- » The **Special Climate Change Fund**, which was established under the UNFCCC in 2001 to finance projects relating to: adaptation; technology transfer and capacity building; energy, transport, industry, agriculture, forestry and waste management; and economic diversification. This fund complements other funding mechanisms for the implementation of the Convention.
- » The **Adaptation Fund**, which was established under the Kyoto Protocol in 2001 and launched in 2007. It is administered by its own Adaptation Fund Board. The Adaptation Fund is financed through voluntary pledges as well as a levy of two per cent raised on the sale of Certified Emission Reductions under the Clean Development Mechanism. At COP23, the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement decided that the Adaptation Fund shall serve the Paris Agreement.
- » The **Green Climate Fund**, which was first proposed in 2009 at COP15 in Copenhagen, formally established at the COP16 in Cancún a year later as “an operating entity of the financial mechanism of the Convention under Article 11”, and launched at COP17 in Durban in 2011. The Green Climate Fund is governed by the Green Climate Fund Board and it is accountable to and functions under the guidance of the COP to support projects, programs, policies and other activities in developing country Parties using thematic funding windows.
- » The **Clean Technology Fund**, which is one of the Climate Investment Funds administered by the World Bank and operated in partnership with the regional development banks. It finances the deployment and transfer of low-carbon technologies that have substantial potential for long-term greenhouse gas emissions savings.
- » The **Strategic Climate Funds**, which is also operated under the umbrella of the Climate Investment Funds, constitutes the framework for three targeted programs: The Forest Investment Program, the Pilot Program for Climate Resilience and Scaling Up Renewable Energy in Low Income Countries Program.



1.9 EVALUATION AND EXPECTED RESULTS

To measure and ensure early success of the Initiative, a series of short-term indicators outline some of the achievements that should be attained by 2023 at the latest. The LDC REEEI Secretariat shall keep a monitoring framework that includes all LDCs, and will have the responsibility and mandate to engage with LDCs that need support to meet these targets.

Through various approaches the LDC REEEI shall ensure that by 2023:

- » All LDCs have a strong renewable energy component in their **NDC**;
- » All LDCs have a **focal point group**, with **delivery units** and a **multi-stakeholder platform** for sustainable energy providing ownership and oversight across government, with citizen representation;
- » All LDCs have an **energy plan** aligned with the LDC REEEI and targets based on robust long-term pathway analysis, with integrated analysis for on grid and decentralized solutions and targets for improving access for rural areas and disadvantaged regions;
- » All LDCs have high standards of **environmental and social safeguards** with gender-analysis informed approaches to ensure women, youth and disadvantaged groups are economically empowered through energy access; and
- » All LDCs have a **finance platform** and have prioritized challenges to increase investment and to access international public funds.

2 THE VISION

The LDC REEEI is premised on a long-term perspective of genuine participation, socio-economic equity and climate compatible development. The Initiative envisions a rapid paradigm shift in the global energy sector towards 100% renewable, participatory and equitable energy systems while providing electricity access to over 540 million people across LDCs who currently lack access.

Energy will play a crucial role in achieving LDCs' development aspirations. Renewable sources of energy from sun, wind, waves, biomass and geothermal will be harnessed everywhere, by every community, by many households, and by farmers, small businesses, hospitals, schools, universities, commercial buildings and factories, as well as in larger-scale power plants. Renewable energy will become a source of income for the

many, a way to empower communities, a tool for increasing resilience and breaking dependencies on other countries and big firms, an enabler of a flourishing of economic activity by local farms, local businesses and a functioning public sector.

Through dedicated efforts LDCs will work together and pioneer a model of energy and development that is in accord with what both people and the planet need. Hence, while economically poorest and particularly vulnerable, LDCs are taking global leadership.

The LDC REEEI articulates a dedication by LDCs to embark on transformative action, set their own course, and take charge of their own future. The LDC REEEI vision can be further elaborated through the following key features.



2.1 LONG-TERM PLANS FOR PEOPLE-CENTERED AND SUSTAINABLE WELL-BEING FOR ALL LDC CITIZENS

LDCs have high aspirations to become societies with well-being for all and recognize the importance of energy for this transformation.

The LDC REEEI is hence primarily about *development* and recognizes the need to engage in long-term planning towards fully renewable energy societies. Steps need to be initiated immediately to set the course, avoid costly lock-in of unsustainable practices, and build capacity for the coming generations. LDCs can envisage how renewable energy and energy storage systems may evolve over time to cater for all future energy needs in their countries – societies with developed environmentally sustainable industries and their whole populations thriving from universal access to sufficient energy.

This means taking a planning approach that is transformational rather than incremental and ad-hoc. The point is not to catch up with other developing countries and graduate from LDC status in the near term, but to go beyond this in envisaging where each country may find itself by, for example, 2050. Such approaches require new thinking, bold analysis and long-term planning for energy needs that may be more than twenty times larger than today, even with energy efficiency and effective avoidance of wasteful consumption in place.

By carefully formulating long-term plans with broad multi-stakeholder engagement from across society, LDCs can make strong arguments for international support in line with equity and fair shares. An important task for the LDC REEEI will be to support LDCs in evaluating and implementing the planning tools and approaches that best suit their national circumstances.

2.2 FOCUS ON PRODUCTIVE SECTORS

The LDC REEEI recognizes that energy is a fundamental requirement to drive productive sectors in both local and national contexts as well as in rural and urban areas. This means addressing the needs of agro-industries and enterprises of all scales – from micro, to small scale and mid-sizes, both in terms of quantity and quality of access – is fundamental for overcoming some of the development challenges the LDCs are facing. The role that industries and rural enterprises play in meeting their energy needs and that of their surrounding communities is one way to close the access and energy security gap.



Nearly 70% of the population in LDCs live in rural areas. As agriculture is the most dominant source of food, income and employment in rural areas, it has a direct impact on wellbeing of the rural population. Greater agricultural productivity and improved climate resilience can be realized through improvements in agricultural production such as agro-ecological practices, irrigation, improved agro-processing, more and better post-harvest and storage facilities, and stronger distribution and retail chains, all of which require energy (see figure 4). LDC farmers need more and better-quality energy, as well as access to a wider range of energy services across the agricultural value chain, if they are to increase their productivity and realize higher incomes. Some of these could involve using smaller electric powered agricultural machinery; adopting renewable energy technologies for pumping water, irrigation and refrigeration; and using biogas for process heat.

Agricultural producers cannot transition to a more energy intensive agricultural practice on their own. They need to work with governments, the private sector, research institutions and civil society.

In addition to the agriculture sector, a large number of micro, small scale and mid-size enterprises (MSME) constitute the main productive sectors in LDCs. Providing adequate and affordable energy services to this sector brings economy-wide benefits, and introducing labor saving energy services (for example, grain milling and water pumping) frees up people's (often women's) time, allowing them to increase and/or expand their productive activities in other areas that provide income. Clearly, MSMEs need access to modern energy services to function efficiently and profitably. Electricity is required to power tools, appliances, and productive equipment, and allow entrepreneurs to engage in and profit from the knowledge economy.

Beyond the MSME sector, LDCs have the late-comer advantage of avoiding many of the problems that bedevilled countries that industrialized rapidly. The LDC REEEI recognizes that the combination of robust energy efficiency and renewable energy packages offers new ways of powering industries, for even those with the most energy intensive demands.

2.3 A NEW, EFFICIENT & DISTRIBUTED ENERGY MODEL FOR THE FUTURE

The future energy systems will be increasingly diversified and distributed, with increasing numbers of actors as energy producers who will meet their own needs and sell their surplus to others – and import electricity when needed.



Energy efficiency is important in any discussion about high percentage of renewable energy content in an energy system. As demand for energy services grows in the LDCs, energy demand is likely to go up. This means that improving efficiency of energy services, and having a 'conservation' mindset, can reduce the aggregate amount of energy needed to meet growing demand. Potentially, this can reduce system costs as it means less renewable energy capacity needs to be installed to achieve the same share of a smaller overall demand. This brings enormous social innovation value as the act of engaging in active conservation creates a higher level of energy literacy by end-users.

This distributed nature of renewable energy production enables entirely new sets of actors to contribute as energy generators. Households, small-scale farmers, small and medium-sized enterprises, cooperatives large and small, community associations, public institutions such as schools, hospitals and government offices, as well as larger companies and utilities can all become producers of energy in this new system. This in turn enhances resilience, provides opportunities for income generation and boosts local economies, leading to locally adapted industrialization. This

co-existence of energy generation at different scales, ranging from households to mini-grids to large power plants will together cater for all energy needs, including heavy industry and large urban areas. With their flexibility, modularity and scalability, smaller, distributed projects can be initiated simultaneously – off-grid, micro/mini-grids and on-grid – with significantly reduced construction times as opposed to several years for large centralized installations. Beyond electricity, distributed non-electrified systems also provide heating, cooling, transportation and other needs locally. Similar to the mobile phone revolution, the LDCs can bypass the old infrastructure and leapfrog to solutions for the future.

A significant element of the LDC REEEI will be to help advance this profound change of mind-set and view of the energy systems of the future among both technicians and decision/policy-makers.

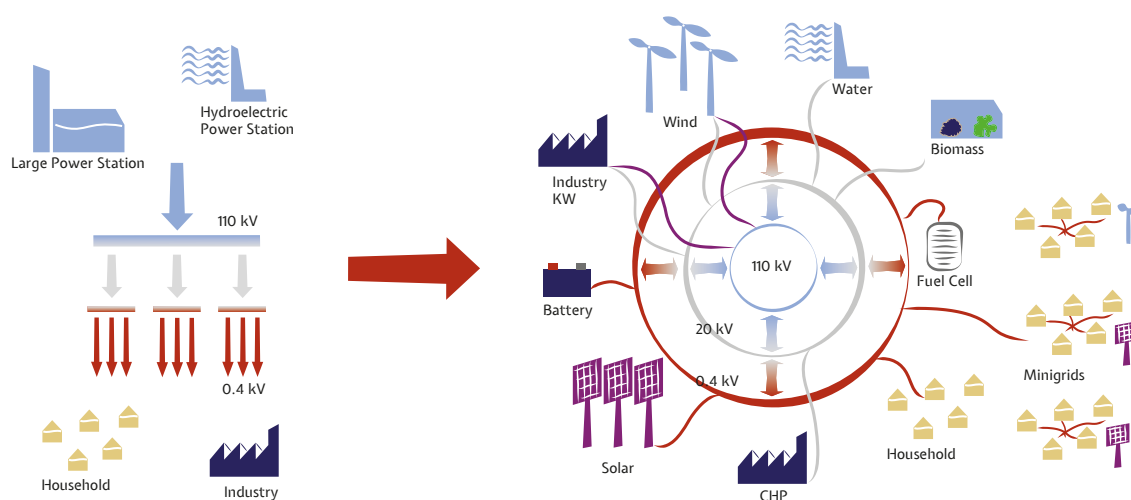


Figure 1: Illustration of the transition from centralized to distributed generation (Adapted from the South African Council for Scientific and Industrial Research - CSIR)

2.4 PEOPLE-CENTERED ENERGY: COMMUNITIES AND COOPERATIVES

For the majority of LDCs that lack sufficient access to energy services, the provision of energy at the community level is a high priority. Energy and electricity supply to schools, health clinics, and other public institutions that serve the common good are of enormous value. The LDC REEEI will specifically target such social services and have a clear and explicit community and people-focused orientation. The LDC REEEI highlights the promises of a diversity of solutions and forms of ownership and highlights the opportunities for LDCs charting new roads and challenging one-sided orthodoxy of neoliberal privatization. Community participation and the role of cooperatives carry significant promises for the advancement of the LDC REEEI vision. Cooperatives have historically played the key role in electrification of both the United States, Canada, and in European countries as well. Still today, significant portions of the energy production are carried out by cooperatives. For example, the breakthrough developments on wind energy in Denmark forty years ago were almost exclusively driven by locally owned, community-organized efforts, including crucial technological development.

The huge and rapidly expanding experiences globally from cooperative and community approaches to energy production show the many development and governance co-benefits they bring. Working together around energy is often a strong starting point for further engagement on other community matters, with people who handle energy matters together also becoming better equipped to engage on other common community matters such as organizing schools, social services and sound governance and participation procedures.

A Community Energy Cooperative in Cambodia

Established in 2005, Cambodia's Community Energy Cooperative (CEC) was the first rural energy cooperative in the country to successfully operate a locally owned power generation, transmission and distribution system. It was built on experience from a prior "Small Businesses and Livelihoods" project that emphasized community participation through the energy cooperative model. The CEC prioritized capacity development as a core strategy, combined with an innovative financial strategy to catalyze income-generating activities for sustainable livelihoods. "The project ran from January 2006 to June 2007 in the village of Anlong Tamey, which had over 290 non-electrified households. Key factors in the project's success included its financial sustainability and its ability to provide cost-effective energy. The project increased the capacity of the existing energy cooperative to link improvements in access to electricity with income-generation activities. This was achieved by expanding the membership in the cooperative to 160 new households, installing a new biomass gasification system, offering a tariff comparable with the current provincial subsidized rate (and half the rate of diesel-powered generators) and setting up a tree nursery. The model continued to work effectively even after the end of the project. The project successfully removed the barriers of access to affordable and reliable electricity. It also reduced greenhouse gas emissions and relieved pressure on local forests by using renewable biomass energy. The approximate costs for electrifying a household was US\$400. Based on the experience with the pilot project, it was recommended that the model be incorporated into Cambodia's rural energy strategy" (Source: International Labor Organization, 2013)



There is also a growing body of experiences from larger-scale cooperative efforts. Some of the larger energy cooperatives in Europe for example, are successfully involving tens of thousands of members. Examples from Latin America also show models of utility-scale wind farms owned by indigenous communities as a collective, with revenue directed to a trust fund that caters to the communities shared needs, as well as providing seed capital for enabling similar efforts by other communities (see box below). In the United States, states like New York have implemented policies aimed to engage communities in the development of projects (microgrids and stand-alone energy systems) that would lead to cost reduction, clean energy promotion, and reliability and resiliency inclusion into the electric grid.

There is a rapidly growing trajectory towards elaborated forms of community ownership and energy cooperatives around the world that LDCs can benefit from tapping into. The LDC REEEI can accelerate the spread and local adaptation of the most successful models by providing platforms for sharing and interaction.

Indigenous renewable energy at utility scale

One example of utility-scale community power is the Yansa model. This effort provides support to local, indigenous communities to deliberate their community values and how people-owned energy can advance the social, cultural, economic and environmental goals of the community. Building on this, a community wind power company is formed which sets up a trust fund with the purpose of advancing these goals through the use of revenue from the renewable energy project. These energy projects are ambitious, utility-scale wind or solar PV projects that will produce much more energy than the community needs itself. The excess generation will be fed to the national grid and generate revenue.

The community is deeply involved in and directs every step of the project development process, ensuring the social, economic and environmental risks often associated with larger projects are avoided. This makes the project resilient to the common risks of delay and escalating costs that commercial projects often face from local resistance when land-rights and community rights are not respected. Due to the low risk and explicit social values for the common good, they are attractive to impact investors at the construction stage, and to institutional investors such as pensions funds at the refinancing stage.

In addition to the purpose of strengthening community development and control of their resources, the model also has an innovative, built-in mechanism to help replicate and support other communities to do the same. This transformative element is enabled by the community sharing their experiences and providing training, as well as providing half of the revenue to a second trust fund that is explicitly catered to help other communities get started. The model hence has a built-in potential to not only replicate, but exponentially expand community owned energy and hence overall generation capacity in the country.

Conducive government policies, standards and regulations (for example the need to ensure communities' right to feed electricity into the national grid) are key to enable these kinds of schemes. Through the LDC REEEI, examples of how this can be done can be effectively shared across LDCs.



3 THE CONTEXT

At the core, the LDC REEEI is about energy for people-centered development. Its main objective is to support LDCs in addressing social well-being without adding the burden on ecosystems and the climate. It recognizes the fundamental importance of energy for development, and how LDCs, as all countries, can significantly ramp up the deployment of renewable sources of energy and energy efficiency measures over the coming years and decades.

The LDC REEEI sits in a context of multiple, high-profile political declarations and efforts such as the Paris Agreement on Climate Change, the 2030 Agenda for Sustainable Development, the Addis Ababa Action Agenda on development financing, the Istanbul Programme of Action for LDCs, and many regional efforts such as the Africa Renewable Energy Initiative.

WHAT ARE LEAST DEVELOPED COUNTRIES?

The United Nations designates 47 countries as Least Developed Countries (LDCs).

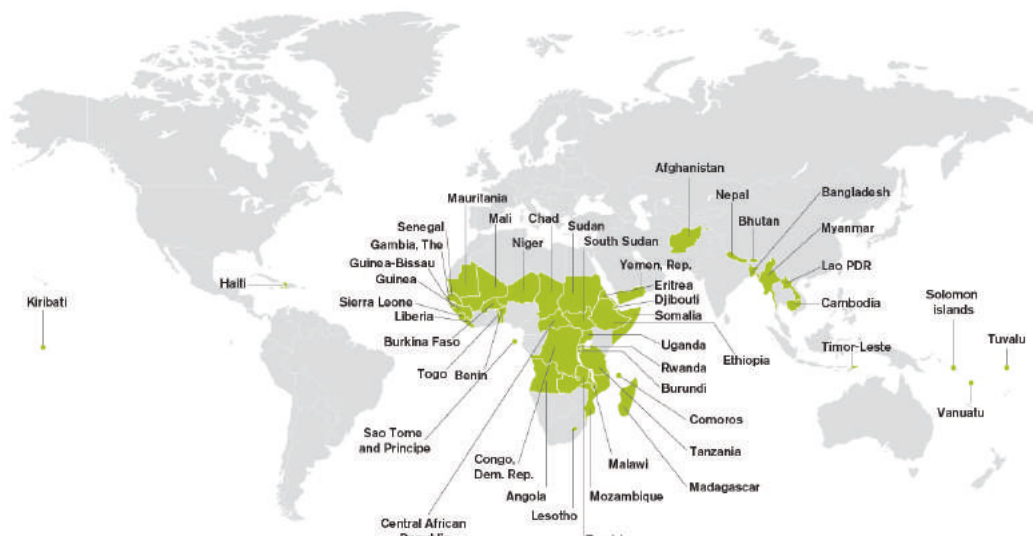
The United Nations Economic and Social Council reviews the list of LDCs every three years, in the light of recommendations by the Committee for Development Policy, which uses the following three criteria by the CDP to determine LDC status:

- » **Per capita income** (gross national income per capita)
- » **Human assets** (indicators of nutrition, health, school enrolment and literacy), and
- » **Economic vulnerability** (indicators of natural and trade-related shocks, physical and economic exposure to shocks, smallness and remoteness).

By periodically identifying LDCs and highlighting their structural problems, the United Nations gives a strong signal to the international community of the need for special concessions in support of LDCs, including benefits in:

- » **Development financing**, notably grants and loans from donors and financial institutions
- » **Multilateral trading**, such as preferential market access and special treatments, and
- » **Technical assistance**, notably toward trade mainstreaming (Enhanced Integrated Framework)

Five countries have graduated from LDC status: Botswana in 1994, Cape Verde in 2007, Maldives in 2011, Samoa in 2014 and Equatorial Guinea in 2017.



3.1 DEVELOPMENT CONTEXT, THE ISTANBUL AGENDA, AND THE SDGs

The overall economic situation of the LDCs is characterized by fragility and uncertainty as they are highly dependent on external economic conditions, commodity prices, financial flows and investment in natural resource projects and infrastructure. Recent improvements in GDP of more than five per cent per year in some countries are yet to translate to real improvements in quality of life of most citizens across the LDCs. The average GDP per capita in LDCs remains below US\$1,000, compared to US\$15,000 globally, with high proportions of people in extreme poverty. In terms of basic infrastructure and services, 22% of children in LDCs do not attend the primary education system, and barely a quarter of the rural population has access to basic sanitation services. Structural challenges continue to hamper significant progress in economic and social development. This includes a lack of infrastructure and public services, political instability and institutional deficiencies, and vulnerability to shocks from commodity revenue.



The LDCs are highly dependent on agriculture, both as a direct source of local food, a major source of employment and as a significant contributor to GDP. As agriculture still employs the largest share of the population in most LDCs, the development of this sector is crucial, in particular advancement of agro-ecological practices that ensure sustainability, healthy soils, and resilience to both economic and climate-related disturbances. In addition, agriculture faces tremendous challenges from the impacts of extreme weather events and climate change.

In 2011, at the Fourth United Nations Conference on LDCs in Istanbul, Member States agreed on the Istanbul Programme of Action (2011-2020). The Programme aims to overcome the structural challenges faced by the LDCs, to eradicate poverty, achieve internationally agreed development goals, and enable half of the countries to graduate out of this category by 2020. More specifically the national policies of LDCs and international support measures set as the objectives for the decade ahead to:

- » achieve sustained, equitable and inclusive economic growth in LDCs, by strengthening their productive capacity in all sectors through structural transformation;
- » build human capacities by fostering sustained, equitable and inclusive human and social development, gender equality and the empowerment of women;
- » reduce LDCs vulnerability to economic, natural and environmental shocks and disasters, including climate change, and enhance their ability to meet these and other challenges through strengthening their resilience;
- » ensure enhanced financial resources and their effective use for the development of LDCs, including through domestic resource mobilization, official development assistance, external debt relief, foreign direct investment and remittances; and
- » enhance good governance at all levels.

The Istanbul Programme of Action recognizes that multiple crises have created new instabilities and vulnerabilities in the global economy. Effectively countering these challenges requires structural transformation of LDC development strategies with enhanced, resilient domestic productive capacity and diversification and strengthening of endogenous development paths. While progress towards reaching these goals has been mixed, the conclusions and objectives of Istanbul Programme of Action remain relevant.

In September 2015, governments meeting at the United Nations in New York agreed on seventeen Sustainable Development Goals (SDGs) and associated targets that define global development priorities and provide an aspirational narrative on the desired future for human development globally. This new set of international development goals covers objectives such as poverty eradication, avoidance of child mortality, inclusive growth, gender equality, and sustainable land-use. In recognition of the importance of energy to achieving the targets, governments adopted specific SDGs relevant to energy and climate change.

The SDG 7 on energy aims to close the energy access gap and “ensure access to affordable, reliable, sustainable and modern energy for all” through a combination of national action and international cooperation. As a practical matter, this implies significantly increasing the share of renewable energy in the national and global energy mix and doubling the annual rate of improvement of energy efficiency. These energy ambitions are compatible with SDG 13 on climate change.

There is a significant overlap of the goals and targets of the Istanbul Programme of Action with the SDG targets. The Istanbul Programme of Action is relevant to the LDCs given that it speaks directly to the problems faced by LDCs and their priorities and contributes towards achieving the SDGs.

3.2 ENERGY AND DEVELOPMENT CONTEXT

Although most LDCs are endowed with significant energy resources, the majority of their people, productive sectors, and development efforts suffer from energy deficits. Over 60% of people in the LDCs do not have access to electricity, with over 80% of rural households lacking access.

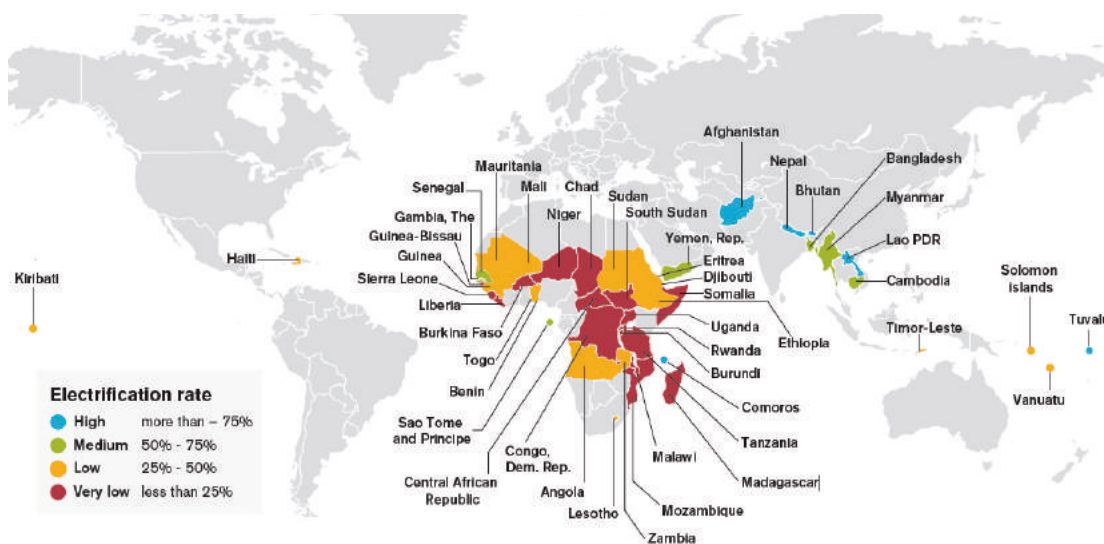


Figure 2: Electrification rate in LDCs (%), SEA4ALL_2014

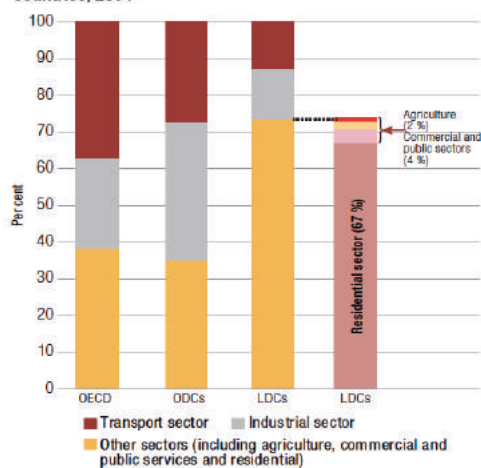
Increased access to energy has the potential to vastly improve the lives and livelihoods of populations. In particular, access to electricity has direct positive impacts on education, communication, the possibility to cook in more sustainable and healthy ways, improved health services and numerous other social benefits. The LDC REEEI regards basic essential energy services (lighting, adequate level of comfort, clean drinking water, clean and adequate cooking energy, transportation and communication needs, entertainment, etc.) as a human right, which should be available on demand and delivered through the most efficient and affordable energy systems.

For many LDCs, energy systems have a ‘dual nature’, where the traditional and modern energy systems co-exist side-by-side. The ‘traditional’ energy system covers most households, who typically depend on wood and charcoal for cooking, candles or kerosene for lighting, and human or animal labor for agriculture and transport. Supply is dominated by the informal sector, often outside the purview of the state. The ‘modern’ energy system, when available, supplies electricity and modern fuels, using off-the-shelf appliances.

Common challenges in the power sector across many LDCs include low generation capacity and low efficiency that often lead to high costs and tariffs and lack the necessary linkages to economic activities. Low-income communities also face many barriers to accessing modern energy. This is often related to the fact that either the service is not available locally or it is unaffordable. Connection to either mini-grids or national grids does not automatically mean access. Affordability, sufficient generation capacity and reliability of service are additional prerequisites.

With large parts of their populations lacking access to sufficient energy, among LDCs there has unsurprisingly been a general bias towards the household level, with too little attention to either the productive or social services sectors. Too often, rural electrification strategies are narrowly focused on minimum access and lighting. While household access to electricity remains important, this approach in itself is unlikely to deliver self-reinforcing development outcomes.

Total final energy consumption by sector, LDCs, ODCs and OECD countries, 2014



Source: IEA (2016b); UN DESA (2016b).

Figure 3: Total final energy consumption by sector, LDCs, ODCs and OECD countries, 2014. Figure by UNCTAD, LDC Report 2017.

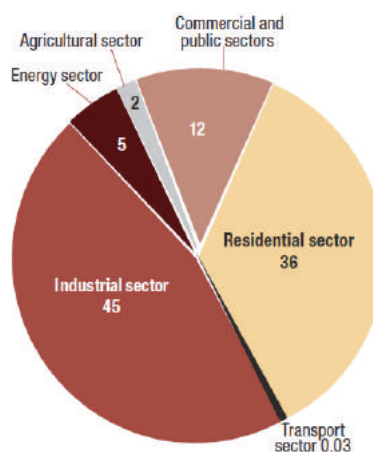


Figure 4: Total final electricity consumption per sector in LDCs, 2014. Figure by UNCTAD, LDC Report 2017.

Indeed, all the evidence shows that countries that have successfully implemented universal access (including developed countries) have done so on the back of robust energy programs for their productive sectors. Energy is needed to enable, for example, local small-scale farmers to increase their productivity and manage their produce more effectively, such as more effective storage, processing and transport of products to local markets. Small and medium sized enterprises consistently list access to energy as the primary bottleneck to advancing their businesses.

Energy access is also crucial for the development and expansion of public social services, which are essential for any meaningful development of societies. Health clinics, schools, public administration and any other government services require access to reliable, high-quality electricity to function properly and gradually expand social and welfare services to citizens.

The correlation between even a modest increase in energy access and human development for countries at low levels of energy access is indeed evident, as illustrated in the correlation between the Human Development Index and per-capita energy use (figure 5). At high levels of energy use there is however no such correlation.

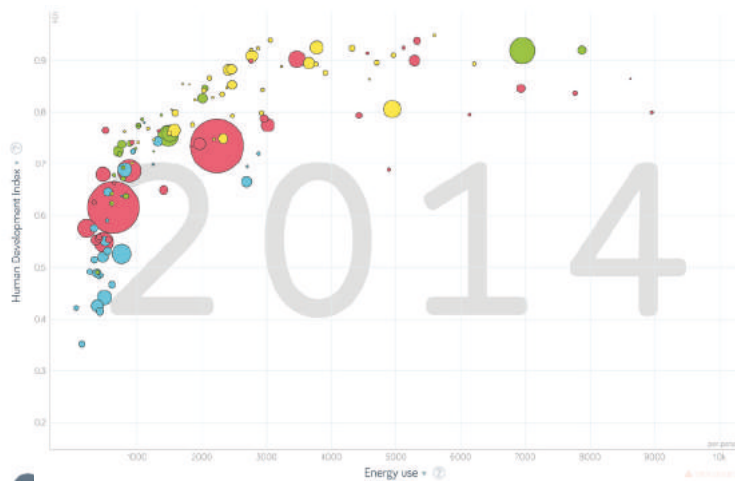


Figure 5: At low per capita energy use, even small increases in access to energy has significant impact on well-being. At high per capita energy use, there is no such correlation (legend: blue - Africa, green - the Americas, red - Asia, yellow - Europe). Figure by Gapminder: <https://tinyurl.com/y7dpcejp>

Thus, while the majority of citizens in LDCs need to increase their energy use significantly to power basic living services and their economic activities, the wealthy in both LDCs and the rest of the world needs to switch to modern renewable sources of energy and maximize energy efficiency to decrease their use in absolute terms. This is critical if the world is to have a chance of limiting global temperature to 1.5°C, compared to pre-industrial levels, to prevent the most severe impacts of climate change.

To make this vision a reality, energy strategies must be pursued across ministries and be integrated into broader development strategies, with rural and urban development, economic activities, and industrial and agricultural practices taken into account. This in turn requires different approaches, including grid and decentralized approaches, and must be underpinned by sound science, technology, financial and innovation policies and frameworks. Renewable energy sources offer a huge opportunity for initiating such strategies that align national development objectives, the Istanbul Programme of Action, SDGs, and the Paris Agreement goals.

3.3 ENERGY AND CLIMATE CONTEXT

Climate change poses a major threat to sustainable development. Although the LDCs are low emitters of greenhouse gases, they are especially vulnerable to the adverse impacts of climate change with the least capacity to withstand these impacts.



Climate change brings more intense and frequent events such as heat waves, flooding, land erosion, drought, salinity intrusion and tropical storms. Together these impacts threaten lives and livelihoods across LDCs. For example, food insecurity and malnutrition are increased through decreased crop yields, loss of livestock and altered fisheries; water resources become increasingly scarce in some LDCs; homes and infrastructure are destroyed; and health problems are exacerbated as diseases become more prevalent and risks to vulnerable populations are magnified. The Paris Agreement explicitly recognizes the special circumstances of the LDCs.

For LDCs, global decisive action on climate change must hence be a top priority. Fortunately, this situation also offers opportunity for LDCs to re-orient their energy and development trajectories to what is good for both climate and development, before getting locked into unsustainable and costly systems. LDCs have the benefit of being ‘late-comers’ and can pursue zero-carbon pathways that are sensitive to people’s needs. The choice of technology will vary from one context to another and distributed renewable energy systems could see a significant expansion as a viable approach that combines development, climate and economic benefits.

LDCs can take strong and international leadership with collective, decisive action towards rapidly increasing the share of modern renewable energy in their energy mix, as articulated in this Framework, to set examples and exert moral pressure on those emerging economies and developed countries that are slow to take action. In the longer run, the avoided emissions associated with cleaner development pathways and foregoing the fossil-fuel based transition can help countries move to resilient energy systems that are compatible with their resource realities. Furthermore, LDCs can lead the way of innovation and deployment of distributed energy resources. Worldwide, countries are seeking ways to provide reliable and resilient power to isolated communities and to provide essential services such as health and security.



While advances in clean technologies and the associated drop in the price of renewables are already making low carbon pathways economically and technically feasible, equity and international collaboration will be key factors to enable LDCs to make this transition. Indeed, equity is ingrained at the core of the UNFCCC. Under the UNFCCC, the international community recognizes that all countries need to take action, but that they have ‘common but differentiated responsibilities and respective capabilities’ relating both to their historical contribution to the problem and their capability to act.

Every country has a fair share obligation to mitigate and adapt regardless of external support. Large historical emitters with high capacity (wealth and incomes) must move to zero-carbon

societies in the short-term by taking steps to reduce their consumption levels and move towards low carbon technologies at home. They must also enable emissions reductions beyond what is physically possible to achieve in their own countries by providing finance, technology, and capacity building to support poorer countries to further reduce and avoid future emissions as part of the climate compatible agenda outlined in this Framework. This has nothing to do with aid – it is an operationalization of the principles of common but differentiated responsibilities and respective capabilities and fair shares.

The Paris Agreement provides that all countries shall present NDCs with a view to strengthening the global response to the threat of climate change, including by “Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change.”

These NDCs are dynamic and are supposed to be increasingly refined and strengthened in ambition.¹ Most LDCs have submitted their initial set of NDCs, and most of these include specific renewable energy provisions. Currently these NDCs differ considerably across LDCs, both in terms of level of elaboration, ambition, technology choices, and whether the commitments are conditional on international climate finance.

The LDC REEEI constitutes a means for LDCs to collectively support each other in refining these NDCs with both conditional and non-conditional provisions in line with fair shares. The Initiative shall help create a basis for analyzing, planning and formulating national strategies and financing platforms to increase ambition in updating NDCs over time, supported by solid plans and strategies for how to get there. The LDC REEEI recognizes that multiple sources of financing exist, but that the internationally agreed public climate finance avenues should constitute a major route to obtaining the necessary means of implementation.



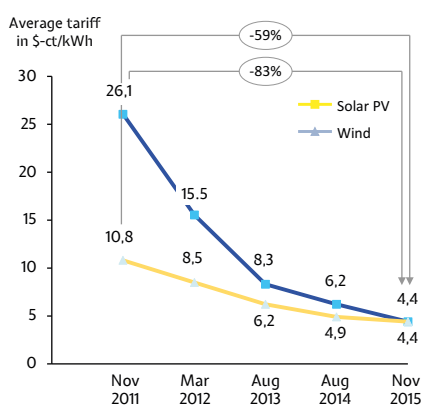
¹ The Paris Agreement states that “Each Party’s successive nationally determined contribution will represent a progression beyond the Party’s then current nationally determined contribution and reflect its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.”

3.4 THE ECONOMICS OF RENEWABLE ENERGY

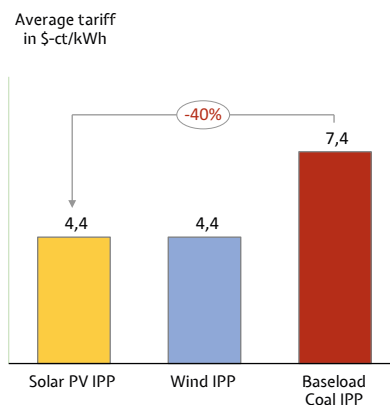
The world is rapidly moving into a new energy future. The costs of renewables have dropped significantly and are now generally cheaper than conventional fossil fuels, with a majority of new energy infrastructure investments already going to renewables. In the period between 2011 and 2015, costs for solar PV decreased by 80% and wind by 60%. The reductions continue, and it is estimated that costs for solar PV can reduce a further 50% from today's costs. As an example, costs for new-build wind and solar PV in South Africa are now 4€ct/kWh, while for new coal and nuclear power costs are 6-8 €ct/kWh. This means that renewables are now 40% cheaper than coal. Solar and wind in the most sunny and windy places are down to 3 €ct/kWh. Also, energy storage system costs have declined. Particularly, the price of lithium-ion batteries has dropped around 70% in the last ten years.

New wind/solar PV 40% cheaper than new coal

Significant cost reductions ...



... have made new solar PV & wind power 40% cheaper than new coal in South Africa today



Notes: Exchange rate of 14 USD/ZAR assumed
Sources: South African Department of Energy IPP Office's publications on results of IPP Bid Windows; IPP Office on Bid Window 4 expedited; StatsSA on CPI; CSIR analysis

LDCs thus find themselves in a most fortunate circumstance given that only a fraction of the energy infrastructure that is needed in LDCs is yet built. They can take full advantage of “being late” – they can jumpstart their renewable energy revolution when it is already cheap, and they have not sunk large sums of resources on expensive, conventional energy infrastructure. Renewable energy hence makes sense from a purely economic perspective, notwithstanding the development and climate benefits. It is important, however, to understand the particular economics of renewables in order to ensure their potential is indeed maximized. Contrary to fossil fuels, there are no fuel costs associated with the use of renewable energy sources, except for biomass. Instead, much of the costs are in the upfront investment in the physical infrastructure. Any developer, whether a community, farmer, company or utility, needs to know that they are likely to generate income from the installation over its lifetime, enabling the initial expenditure to be paid back. Even when cheaper over the installations' lifetime, there are risks involved in upfront investments that need to be addressed through policies, incentives and guarantees so that renewables can be scaled-up to meet their full potential.

While costs for renewables are down, installations in remote areas are still relatively more expensive. While the modular, flexible, and scalable nature of renewables (particularly solar PV) make them well suited for rural settings, their costs may still be out of reach for people with limited financial resources. The LDC REEEI will need to successfully address these challenges.

4 INSTITUTIONAL ARRANGEMENTS

The LDC REEEI received a formal mandate from LDC Ministers at the LDC Ministerial Conference held in September 2016 in Kinshasa, and was officially launched at COP22 in Marrakech later that year. At the LDCs Ministerial Conference held in October 2017 in Addis Ababa, Ministers:

Recognise that the global uptake of renewable energy and energy efficient technology needs to happen more rapidly and that developing countries need greater financial and technical support to reap the benefits of these technologies in the context of low emission sustainable development;

Welcome progress on, and remain committed to taking forward, the LDC Renewable Energy and Energy Efficiency Initiative for Sustainable Development and urge the global community to support the LDCs in implementing this Initiative;

Taking the LDC Initiative forward will require a governance structure ensuring political oversight by Ministers, technical engagement by LDC and international experts, and support by a light secretariat and appropriate budgetary resources.

4.1 POLITICAL LEVEL

At the political level, the Initiative will remain **accountable to all LDC Ministers, and will operate under the guidance and supervision of a Steering Committee** of LDC Ministers or their representatives comprising the countries involved in the Initiative, with participation by partners and stakeholders, as appropriate. The Committee can meet annually on the sidelines of LDC Ministerial meetings and will be responsible, among other things, for confirming the Initiative's documentation, work plan and budget and appointing its Coordinator at the technical level.

4.2 TECHNICAL LEVEL

At the technical level, the Initiative's Coordinator will convene a **Technical Expert Group** comprising LDCs and international experts in renewable energy and related areas, to play a leadership role in developing, operationalizing and implementing the Initiative in practice. This will include technical experts appointed by participating countries, as well as technical experts drawn from partners and organizations with relevant expertise. This group will continue to operate within the context of the LDC Group, and will underpin the preparation of the Initiative's documentation, work plan and budget, and overseeing activities to support implementation of the Initiative, under the guidance of its Coordinator and with the assistance of its Secretariat.

4.3 SECRETARIAT SUPPORT

Activities at the political and technical level will be supported by a lean **secretariat function connected with the existing LDC Secretariat**, to ensure the most effective use of scarce resources and alignment with other LDC activities. A dedicated staff member (or members) will be supported by others working off-location on a virtual basis to deliver support services on a flexible and an as-needed basis. The Secretariat will operate under the guidance of the Coordinator who will report to the Steering Committee. The Initiative will operate in a decentralized manner seeking to build on the work of other relevant international and regional initiatives and organizations with a view towards strengthening the voice and leadership of the LDCs on issues of renewable energy, energy access and efficiency, and sustainable development.



Photo credits:

Cover page: Mwangi Kirubi; p.5: Asian Development Bank; p.7: DFID; P.9 Craig Mayhew and Robert Simmon NASA GSFC; p.10: Andrew Nash; p.11: sandeepachetan.com; p.12: 100% campaign; p.13: Global Environment Facility; p.15: UN Environment; : p17: Asian Development Bank; p18: Mwangi Kirubi; p.19: UN Environment; p.20: UN Environment; p.22: WorldFish; p.23: Lance Cheung; p.25: Julia Koefender; p.28: UN Photo/Logan Abassi; p.29: Abbie Trayler-Smith/ Panos Pictures/Department for International Development; p.30: Rob Goodier/Engineering for Change; p.33: Albert Gonzalez Farran, UNAMID.

Photos used under creative commons Attribution-Non Commercial 2.0 licensing: <https://creativecommons.org/licenses/by-nc/2.0/>

