

## THEME REPORT ON ENERGY ACCESS

TOWARDS THE ACHIEVEMENT OF SDG 7 AND NET-ZERO EMISSIONS

EXECUTIVE SUMMARY

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## PRIORITY RECOMMENDATIONS

Universal access to affordable, reliable, and modern energy services by 2030 (SDG 7.1) is a prerequisite and a catalyst for improving the living and working conditions of all the world's people, especially the poorest and most vulnerable populations who lack any modern energy services. Universal access to energy is integral to the transition to an inclusive, just, sustainable, secure, and net-zero-emissions energy system in line with the Paris Climate Agreement. Universal access will sustain the transition and will, in turn, be sustained by it.

SDG 7.1 will not be achieved, however, if today's slow pace of electrification and clean cooking deployment continues. Progress must be greatly accelerated through the shift to a system-level paradigm that not only embraces greater commitment and innovation but also challenges the habitual ways in which energy-access policy and investments are directed.

Significantly increasing the pace of electrification and clean cooking expansion efforts is an urgent matter. The electricity access rate, in access-deficit countries, **must increase from 82% in 2019 to 94% by 2025 to achieve 100% access by 2030.** This means a yearly gain of two percentage points, or electrification being brought to about 150 million people between now and 2025. This represents a 33% increase: an extra 0.5 percentage points or additional 40 million people per year over the current rate of progress.

The clean cooking access rate in access-deficit countries **must increase from 66% in 2019 to 82% by 2025 to achieve 100% by 2030**, meaning a yearly gain of 3.0 percentage age points or about 230 million people. This represents a 66% increase, an extra 1.2 percentage points, or an additional 90 million people per year over the current rate of progress.

The paradigm shift to achieve this increased pace will be realized by acting on the following **strategic recommendations**:

### **RECOMMENDATION 1**

Align energy policy and investment with energy transition pathways that accomplish universal access to electricity and clean cooking by 2030. In a joint global effort, this means we must provide access to electricity to 759 million people who currently have no electricity and also access to clean cooking solutions for 2.6 billion people who currently depend on traditional polluting cookstoves and fuels, at the same time as undertaking energy transitions towards a net-neutral energy system by 2050. Achieving universal access to sustainable, reliable, affordable, and modern energy must also be an integral part of the just energy transition and be embedded in countries' climate commitments

and their strategies and actions for net-zero-energy systems Countries should find ways of reorienting fossil fuel and other inefficient subsidies that encourage wasteful consumption of energy into smart subsidies for clean energy access, in particular towards poor and vulnerable households and community health and education facilities.

### **RECOMMENDATION 2**

**Prioritize and coordinate political commitments and financing to accelerate access to clean cooking, building synergies with electrification efforts.** National governments should integrate cooking energy demand into energy planning and strategy development. A transition to universal access to clean cooking will not be a quick fix, but will build on least-cost, best-fit approaches that reflect local people's needs, health risks, abilities to pay for services, and local market conditions; this transition should also take into account food security, gender, climate, and safety considerations. Unprecedented financial and analytical resources must be mobilized to build the enabling ecosystem. In the same vein, decentralized energy solutions and access to life-changing appliances should be included in energy planning and strategy development. There is an urgent need for end-user subsidies to bridge the affordability gap. Both the clean cooking and electricity sectors need to continue to improve their enabling ecosystems, including their policy and regulatory frameworks.<sup>1</sup> Clean cooking, in particular, will require more in terms of targeted efforts and financial support and innovation.

### **RECOMMENDATION 3**

Position universal access to energy as a key enabler and driver of inclusive, sustainable, and resilient economic recovery and growth and as an integral part of the transition to a just net-zero-emissions energy system. Energy-access planning must be fully integrated with broader development priorities to achieve unprecedented synergies and opportunities with respect to all the other Sustainable Development Goals (SDGs as noted below) as part of a broad-based political commitment and shift in fundamental assumptions related to energy access. The impacts of the lack of clean cooking and electricity access are often the greatest in countries experiencing fragility, conflict, and violence. Development partners should prioritize support for the least-developed countries (LDCs) and countries suffering fragility, conflict, and violence (FCV).

### **RECOMMENDATION 4**

**Put people at the centre of efforts to deliver universal energy.** Both clean cooking and electricity access initiatives must be designed based on (a variety of) human needs, user practices and preferences, and consumer affordability levels, taking into account diverse cultural (national and local), and socio-economic contexts. Communities should be seen not only as beneficiaries but also as co-creators of future energy systems. People-centred energy access approaches will need to include a social safety net to deliver modern energy services to people who cannot afford the full cost of access to clean cooking and electricity.

### **RECOMMENDATION 5**

The 'last mile' of energy access must become the 'first mile' to be tackled. Half of the population without access to electricity live in countries experiencing fragility and conflict, where lack of access to clean cooking and electricity disproportionately affects low-income and vulnerable populations and women and girls. Further progress in accelerating energy access cannot be achieved without significantly increasing rates of access to electricity and clean cooking among the remote, poorest, and most vulnerable population segments, including displacement-affected communities. Creative, context-sensitive solutions are needed to unleash sustainable energy access expansion efforts that

are truly inclusive and that not only meet the specific needs and situations of vulnerable populations, but also support their capacity to overcome energy poverty and their prospects of making progress in doing so. As the gap in finance needed to provide energy access in the LDCs is vast, there is an urgent need for increasing funding for energy access, and delivering on climate finance pledges, allocated to LDCs which can have a direct impact on accelerating poverty eradication and as a key enabler for sustainable development.

### **RECOMMENDATION 6**

Support enterprises with innovative, cost-effective, and scalable energy- access business models so that delivery of clean cooking and electricity solutions can be accelerated to households, businesses, and community facilities. Unlocking the potential of enterprises with innovative and pioneering mechanisms and supporting them to reach homes and businesses on the 'last mile' will enable scaling up. The private sector, thanks to its ability to innovate, can play a key role in driving energy access, and this is particularly so for poor and rural communities. The private sector can help with the creation of new public-private partnerships to address affordability constraints and the high costs of reaching rural customers in the most efficient ways possible.

### **RECOMMENDATION 7**

Accelerate the advancement of knowledge exchange, capacity-building, partnership-building, and innovation. Human capital will be essential to drive universal access to energy. Governments, development partners, and service providers should support local academic and training institutions by investing in capacity- and skills-building for all levels of participants in sustainable energy access–expansion efforts. These will include policymakers and technicians, the promotion of local entrepreneurship, and the particular targeting of women and youth. Such investments in human development should, in turn, drive further innovation in technology, business models, financing, policy, and market enablers to accelerate the pace of energy-access expansion.

### **RECOMMENDATION 8**

Improve the availability and quality of open-source, verifiable energy information and data pertinent to national, subnational, and local contexts. Both end-user and supply-side data are necessary for understanding consumers' needs—namely, what interventions will likely be effective in accelerating access—and also for tracking progress correspondingly. Household surveys should be improved to provide more-nuanced data on energy access that will also enable more accurate insights into the most critical aspects of energy access, such as reliability, quality, affordability, and convenience, as well as greater insights into electricity use and cooking practices, including fuel/stove stacking for clean cooking. For example, a recommended survey question module on energy could be inserted into regular household surveys, following the Multi-Tier Framework (MTF) approach, to complement the existing binary data.

This **paradigm shift** should be supported by the following **key building blocks** (as summarized in the Results and Action Matrix below):

- 1. reinforced enabling policy and regulatory frameworks to attract investment
- 2. enhanced socio-economic inclusiveness of energy access
- 3. aligned costs, reliability, quality, and affordability of energy services
- 4. catalysed, harnessed, and redirected energy-access financing

# **RESULTS AND ACTIONS MATRIX**

PRIORITY RESULTS	PRIORITY ACTION AREAS (UP TO 5 SPECIFIC	(UP TO 3 PRI	(AS APPLIC)			
(UP TO 5 RESULTS TO BE ACHIEVED AT MOST)	MEASURES TO REALIZE EACH PRIORITY RESULT)	Public	Private	Civil Society	International organisations	2025
Reinforced enabling policy and regulatory frameworks to attract investment:	<ol> <li>Position universal and gender-responsive access to energy as a key enabler and driver of inclusive, sustainable, and resilient economic recovery and growth and as an integral part of the transition to a just net-zero-emissions energy system; elevate clean cooking in both international and national priority settings.</li> <li>Adopt national clean cooking and electrification strategies, charting comprehensive, realistic, integrated, inclusive, and resilient pathways towards achieving SDG 7 universal-access targets for households, public institutions, and productive uses.</li> </ol>	<ul> <li>Elevate gender- responsive energy access among key priorities in national development strategies and assign champions for inter-sectoral coordination, especially for clean cooking.</li> <li>Adopt clean cooking and electrification strategies and plans, charting comprehensive, realistic, integrated, inclusive, and resilient pathways towards achieving SDG7 universal access targets.</li> </ul>	<ul> <li>Industry associations and private sector to participate in consultations and dialogue with the government on electrification and clean- cooking strategies, plans, policies, and regulations.</li> <li>Private sector to form and support well-functioning renewable energy associations in energy access-deficit countries.</li> <li>Enact policy and regulatory frameworks that empower and incentivize (i) private-sector investments and innovations in energy</li> </ul>	<ul> <li>Build national and international coalitions and leverage multi stakeholder partnerships and platforms.</li> <li>channel information on the needs and aspirations of communities in the process of formulating strategies, plans, policies, and regulations.</li> <li>Participate in the design and implementation of action plans.</li> <li>Monitor government compliance with energy -access strategies and plans, and engage in</li> </ul>	<ul> <li>Elevate the priority of clean cooking, including building national and international coalitions and leveraging multi-stakeholder partnerships and platforms.</li> <li>Increase technical assistance to governments for best practices for gender-responsive clean cooking and electrification planning, policies, regulations, and reporting systems, including trade rules and fiscal exemptions for clean cooking and distributed renewable energy products and components.</li> </ul>	<ol> <li>100% of access-deficit countries have an advanced framewor for clean-cooking strategies.</li> <li>100% of access-deficit countries have an advanced framewor for electrification strategies.</li> <li>100% of access-deficit countries have an advanced framewor for mini-grid and stand-alone system</li> <li>100% of utilities in energy access-defice countries are considered moderately creditworthy.</li> </ol>

### MILESTONES ABLE, AND NUMERICALLY/MEASURABLE TO THE EXTENT POSSIBLE)

### 2030

Universal access to sustainable, affordable, reliable, and modern vork energy services.

Towards 2050

Universal access to sustainable, affordable, reliable, and modern energy services, consistent with and contributing to net-zero-emissions target.

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<b>PRIORITY RESULTS</b> (UP TO 5 RESULTS	PRIORITY ACTION AREAS (UP TO 5 SPECIFIC MEASURES TO REALIZE EACH PRIORITY RESULT)	(U	P TO 3 PRIMARY ROL	<b>.DER ACTIONS</b> ES AND RESPONSIBILIT .KEHOLDER)	<b>MILESTONES</b> (AS APPLICABLE, AND NUMERICALLY MEASURABLE TO THE EXTENT POSSIBLE)			
TO BE ACHIEVED AT MOST)		Public	Private	Civil Society and Communities	International and Regional Institutions	2025	2030	Towards 2050
	Strategies to be backed up by least-cost, best-fit plans relying on mix of technologies and user-centred implementation and business models that leverage grid, mini-grid and off-grid, and varied clean cooking technologies and fuels; specification of tiers of service to be delivered, ensuring that all population gets access to at least basic energy services in the shortest time-frame possible, while addressing affordability constraints. 3. Enact, implement, and enforce comprehensive enabling policy and regulatory frameworks for both clean cooking and electricity access, including incentivizing and empowering private sector to continue to innovate in the energy-access delivery and to reach scale, in particular, in the clean cooking and distributed renewable-energy (DRE)	access, and (ii) the national electricity utilities to improve their technical and financial performance to enable sustainable energy access expansion.	<ul> <li>Private sector to support innovations in energy access delivery.</li> </ul>	the planning, collection, and monitoring of verified data on energy access.	<ul> <li>Provide geospatial modelling tools and data, and support access to innovative platforms to promote evidence-based, data-driven decision-making, and to support efficiency and transparency of public-funding programs.</li> </ul>	5. Energy access countries achieve on average RISE score above 67 for both electricity and clean cooking, reflecting advanced status of the policy and regulatory framework.		

PRIORITY RESULTS	PRIORITY ACTION AREAS (UP TO 5 SPECIFIC	(UI	P TO 3 PRIMARY ROL	L <b>DER ACTIONS</b> LES AND RESPONSIBILI <sup>-</sup> AKEHOLDER)	TIES	(AS APPLIC
(UP TO 5 RESULTS TO BE ACHIEVED AT MOST)	MEASURES TO REALIZE EACH PRIORITY RESULT)	Public	Private	Civil Society and Communities	International and Regional Institutions	2025
	4. Incentivize sustainable grid expansion and reliable and affordable grid electricity services by empowering and incentivizing the national electricity utilities to improve their technical and financial performance through cost-effective tariffs, reducing losses, digitizing their networks, supporting investments in lower-cost, climate-friendly generation, and promoting innovative financing models and partnerships.					
	<b>5.</b> Integrate inputs and promote dialogue with civil society organizations and industry associations to reflect views from communities/vulnerable groups and private sector, respectively, in the national strategy formulation and planning, and in policy and regulatory setting.					

### **MILESTONES** CABLE, AND NUMERICALLY MEASURABLE TO THE EXTENT POSSIBLE)

2030

PRIORITY RESULTS	PRIORITY ACTION AREAS (UP TO 5 SPECIFIC MEASURES TO REALIZE EACH PRIORITY RESULT)	(UF	<b>STAKEHOLD</b> P TO 3 PRIMARY ROLES PER STAK	S AND RESPONSIBILIT	IES	<b>MILESTONES</b> (AS APPLICABLE, AND NUMERICALLY MEASURABLE TO THE EXTENT POSSIBLE)			
(UP TO 5 RESULTS TO BE ACHIEVED AT MOST)		Public	Private	Civil Society and Communities	International and Regional Institutions	2025	2030	Towards 2050	
Enhanced socio-economic inclusiveness of energy access	<ol> <li>Increase inclusiveness of national clean-cooking and electrification strategies and programs by integrating support for poor, remote, and vulnerable households (including displaced persons and host communities) through (i) promoting and prioritizing support for business models focused on the last-mile service delivery, and (ii) closing the affordability gap, through provision of user financing and through design, demonstration, and scale up of sustainable, efficient, and targeted end-user subsidies, particularly for off-grid solar and clean cooking sectors.</li> <li>Enhance gender equality in energy- access interventions, adopting gender-transformative strategies, disseminating and applying emerging good practices and instruments to enhance the role of women in the energy sector as beneficiaries,</li> </ol>	<ul> <li>Make national clean cooking and electrification strategies more inclusive, by specifically integrating:         <ul> <li>(i) affordability support for poor and vulnerable households,</li> <li>(ii) targeted support for displaced persons and host communities,</li> <li>(iii) gender-transformative strategies,</li> <li>(iv) productive uses and energy-efficient cooling,</li> <li>(v) electrification of healthcare, schools, and other key communities.</li> </ul> </li> <li>Reorient fossil fuel and inefficient and/or mistargeted subsidies to enable both supply and end-user subsidies for poor, remote, and vulnerable households and for electrification of healthcare facilities and schools with</li> </ul>	<ul> <li>Both service providers and private financiers) to unleash its potential for innovation to devise cost-effective and user-centric approaches for servicing the remote, poor, and vulnerable populations with both clean cooking and electricity, including appliances, such as for electric cooking, cooling and productive uses.</li> <li>(Both service providers and private financiers) to participate in and co-create new implementation approaches for electrification of public institutions, focusing on sustainable, long-term service delivery.</li> <li>Service providers to enhance their gender strategies to increase female employment in energy-access industries, support female entrepreneurs, and invest in training and skills development, particularly for women and youth.</li> </ul>	<ul> <li>Advocate for the needs of the poor and vulnerable populations so that these are well understood by governments and financiers.</li> <li>Engage with communities to increase awareness, education, and trust in information sources on clean cooking and electricity benefits to allow people to make informed choices.</li> <li>Assist women, youth, slum dwellers, rural inhabitants, migrants, and displaced people in claiming and carrying out their rightful roles in the planning, decision-making, investment, entrepreneurial, and operational tasks needed to deliver access to modern energy services in their communities and beyond.</li> </ul>	<ul> <li>Strengthen the focus on least-developed and FCV countries, including support to host governments to address energy poverty in displacement settings -Develop, demonstrate, and provide financing for scaling up sustainable, efficient and targeted end user subsidies, and integrate specific financing and TA windows for local businesses, last mile distributor, non-profits, community organizations serving remote, poor and vulnerable.</li> <li>Enhance the impacts of energy-access programs and projects by integrating support for productive uses, sustainable business models for healthcare, schools, and other public institutions and community services, promoting energy-efficient appliances, especially for cooling and electric cooking,</li> </ul>	<ol> <li>100% of access- deficit countries have an advanced framework for integrated national plans/programs, including productive uses, public institutions, and support for poor and vulnerable households.</li> <li>2. 25 off-grid solar markets and 25 access-deficit countries with end-user subsidy programs for off-grid solar and other last mile delivery, including clean cooking.</li> <li>50% of women among entrepreneurs and employed in the energy access sector, and 50% increased productivity of women farmers and business owners, as a result of productive uses of electricity.</li> <li>100% of countries in conditions of fragility, conflict and violence enact enabling policy and regulatory.</li> </ol>	Universal access to sustainable, affordable, reliable, and modern energy services.	Universal access to sustainable, affordable, reliable and modern energy services, consistent with and contributing to net-zeroemissions target.	

<b>PRIORITY RESULTS</b> (UP TO 5 RESULTS	PRIORITY ACTION AREAS (UP TO 5 SPECIFIC MEASURES TO	(UP T	O 3 PRIMARY RO	LDER ACTIONS LES AND RESPONSIBILI AKEHOLDER)	TIES		MILESTONES , AND NUMERICALLY HE EXTENT POSSIBI	
TO BE ACHIEVED AT MOST)	REALIZE EACH PRIORITY RESULT)	Public	Private	Civil Society and Communities	International and Regional Institutions	2025	2030	Towards 2050
	employees, and entrepreneurs, and increasing women's voices in decision-making. <b>3.</b> Address energy poverty of populations living in conditions of fragility, conflict, and violence, with particular reference to displaced persons and host communities, by, among other things, (i) improving enabling environment and scaling up both public and private financing in FCV and LDC countries, (ii) establishing and implementing dedicated energy-access programmes for displaced persons and their host communities; (iii) including displaced persons in national energy-access plans of host countries and supporting them in achieving the goals of these programmes; and (iv) supporting innovations and providing knowledge exchange on successful business models.	respect to both clean cooking and electricity. • Keep improving policy and regulatory frameworks, in particular for countries in FCV contexts, to enable innovations and partnerships in the last mile service delivery and attract both public and private investments; and to invest in skill development, particularly for women and youth.			supporting synergies between electrification and clean cooking, and deploying gender-transformative strategies.	frameworks to reach an advanced status in RISE (67 or above on average). 5. 76% of schools and 69% healthcare facilities with sustainable and reliable electricity.		

PRIORITY RESULTS	PRIORITY ACTION AREAS (UP TO 5 SPECIFIC MEASURES TO	(UF	P TO 3 PRIMARY ROL	LDER ACTIONS LES AND RESPONSIBILI <sup>-</sup> AKEHOLDER)	TIES	(AS APPLI
(UP TO 5 RESULTS TO BE ACHIEVED AT MOST)	REALIZE EACH PRIORITY RESULT)	Public	Private	Civil Society and Communities	International and Regional Institutions	2025
	<ul> <li>4. Increase access to appliances, in particular, energy-efficient cooling to enhance climate resilience and to launch and enhance systematic efforts to stimulate the productive use of electricity to improve livelihoods: to achieve this, include design and implementation of marketing interventions, technical assistance for business development, market linkages, provision of user financing for appliances, e.g., through microfinance, PAYG models, and on-bill financing, as well as performance monitoring mechanisms and cross-sectoral coordination (in particular with agriculture).</li> <li>5. Accelerate investments in electrification of healthcare facilities and schools and other essential public and community services, such as clean water supply, by integrating them into national electrification planning, and engaging with financiers and service</li> </ul>					

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<b>PRIORITY RESULTS</b> (UP TO 5 RESULTS	PRIORITY ACTION AREAS (UP TO 5 SPECIFIC MEASURES TO	(UF	P TO 3 PRIMARY ROLE	<b>DER ACTIONS</b> S AND RESPONSIBILIT (EHOLDER)	TIES	<b>MILESTONES</b> (AS APPLICABLE, AND NUMERICALLY MEASURABLE TO THE EXTENT POSSIBLE)			
TO BE ACHIEVED AT MOST)	REALIZE EACH PRIORITY RESULT)	Public	Private	Civil Society and Communities	International and Regional Institutions	2025	2030	Towards 2050	
	providers to develop and demonstrate sustainable and scalable service-oriented models, including ones for replacing diesel back-up systems for grid-connected facilities, electrifying facilities with stand-alone off-grid solutions and integrating these with mini-grids.								
Aligned costs, reliability, quality, and affordability of energy services	1. Drive innovations both in technologies and business models (including through innovation accelerators, R&D, technology transfer, seed funding for piloting and commercialization, geospatial analysis for electrification planning, clustering of distributed renewable-energy sites into viable portfolios, distribution network design, and demand-stimulation and productive-use promotion) in order to reduce costs of clean-cooking technologies and fuels, distributed renewable-energy technologies, and grid expansion.	<ul> <li>Prioritize national grid reliability and sustainability as a pre-condition for, or parallel track to, grid densification and expansion, and create incentives for more user-centric service delivery.</li> <li>Create incentives for continued innovations in technologies and business models and improve intersectoral coordination with digital and financial sectors, in order to improve ecosystem for expanding digital-enabled business models, such as PAYG, in the off-grid solar sector and beyond, including for clean cooking</li> </ul>	<ul> <li>Drive innovations in technologies and business models for DRE and clean cooking, with the aim of further reducing costs, increasing affordability and support last mile delivery, and drive impacts, such as through promotion of productive uses.</li> <li>Invest in R&amp;D, supporting technology transfer for clean cooking solutions</li> <li>Support collaboration and innovative partnerships, e.g. between electricity and clean cooking sector, between international and local service providers,</li> </ul>	<ul> <li>Community engagement to ascertain local users' needs, health risks, abilities to pay for services, and local market conditions.</li> <li>Advocate for greater adoption for user-centred approaches by all service providers, including national utilities, DRE and clean-cooking companies.</li> <li>Assist in the process of knowledge exchange, skills building, and technology transfer to ensure inclusion of communities and small-scale service- providers</li> </ul>	<ul> <li>Assist in promoting user-centred innovation to drive down costs and improve performance and local maintainability of clean cooking solutions, including e.g. through setting up a technological innovation accelerator (for R&amp;D and technology transfer) and user insight lab (to capture user data and insights).</li> <li>Help governments to identify and deploy sustainable-electri- fication business models, for a variety of institutional arrangements and contexts (e.g., from fully private sector-</li> </ul>	<ol> <li>Average unit tariff from grid supply is USD 0.08 per kilowatt-hour and the consumer price of 40 kWh of mini-grid is 10 USD.</li> <li>The average MTF tier of grid electricity is tier 4, and mini-grid service uptime is 97</li> <li>20 access-deficit countries use PAYG or other digitally enabled user finance, and 6.7 million new customers purchasing off-grid solar through PAYG or other digitally-enabled user finance per year.</li> <li>50% of access-deficit countries has quality verified off-grid</li> </ol>	Universal access to sustainable, affordable, reliable, and modern energy services.	Universal access to sustainable, affordable, reliable and modern energy services, consistent with and contributing to net-zero-emissions target.	

<b>PRIORITY RESULTS</b> (UP TO 5 RESULTS	PRIORITY ACTION AREAS (UP TO 5 SPECIFIC MEASURES TO	(UF	P TO 3 PRIMARY ROLE	<b>DER ACTIONS</b> ES AND RESPONSIBILI KEHOLDER)	TIES	<b>MILESTONES</b> (AS APPLICABLE, AND NUMERICALLY MEASURABLE TO THE EXTENT POSSIBLE)			
TO BE ACHIEVED AT MOST)	REALIZE EACH PRIORITY RESULT)	Public	Private	Civil Society and Communities	International and Regional Institutions	2025	2030	Toward 2050	
	<ul> <li>2. Advance user-centred and gender-transformative approaches in clean cooking and DRE business models, including for access to energy- efficient cooking, cooling, productive and other appliances, in order to improve service delivery and thereby achieve long-term business sustainability and scalability. Incentivize national utilities to adopt more customer-centric approaches, including through innovative partnerships, demand-stimulation, support for appliances and productive uses, so as to improve service delivery and increase revenue generation.</li> <li>3. Prioritize reliability of grid services by investing in strengthening transmission and distribution systems, sustainable generation, loss reduction, digitization of networks, and improving overall utilities' technical, commercial, and</li> </ul>	<ul> <li>Adopt, implement and enforce standards for clean cooking stoves and fuels and for off-grid solar products, following international best practices.</li> </ul>	with other sectors, such as agriculture, in between national utilities and DRE companies etc.		<ul> <li>led, market-based approaches to public– private partnerships to programs led by the national utility), and help bring down costs by supporting innovations in geospatial planning, clustering of DRE sites to build viable portfolios, and distribution network designs.</li> <li>Support development and implementation of robust international quality assurance system (e.g. Verasol for off-grid solar and its expansion to appliances), and development and adoption of international standards (and their localization for clean cooking).</li> </ul>	systems on the market (in Tier 1 product category). 5. At least 30 access-deficit countries have adopted standards and labelling for clean cooking technologies and fuels, and at least 45 access-deficit countries have adopted off-grid solar international standards.			

<b>PRIORITY RESULTS</b> (UP TO 5 RESULTS	PRIORITY ACTION AREAS (UP TO 5 SPECIFIC MEASURES TO	(UI	P TO 3 PRIMARY ROL	L <b>DER ACTIONS</b> .ES AND RESPONSIBILI <sup>-</sup> AKEHOLDER)	TIES	(AS APPLI
TO BE ACHIEVED AT MOST)	REALIZE EACH PRIORITY RESULT)	Public	Private	Civil Society and Communities	International and Regional Institutions	2025
	financial performance, including through innovative partnerships and private sector engagement. Invest in continued innovations in technologies and operations of mini-grids, to demonstrate mini-grid ability to deliver highly reliable services at affordable costs at scale.					
	4. Improve ecosystem for expanding digital-enabled business models, such as PAYG (allowing households to access off-grid solar and clean cooking technologies, fuels and appliances through user financing) including through improving intersectoral coordination with the digital and financial sectors, and expanding digital enablement.					
	<b>5.</b> Increase quality of clean-cooking and off-grid solar products available in local markets, by supporting quality- assurance activities, including adopting and implementing national standards for cooking					

### **MILESTONES** ICABLE, AND NUMERICALLY MEASURABLE TO THE EXTENT POSSIBLE)

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	PRIORITY ACTION AREAS (UP TO 5 SPECIFIC MEASURES TO	(UF	P TO 3 PRIMARY ROLE	<b>ER ACTIONS</b> S AND RESPONSIBILIT EHOLDER)	IES	<b>MILESTONES</b> (AS APPLICABLE, AND NUMERICALLY MEASURABLE TO THE EXTENT POSSIBLE)		
(UP TO 5 RESULTS TO BE ACHIEVED AT MOST)	REALIZE EACH PRIORITY RESULT)	Public	Private	Civil Society and Communities	International and Regional Institutions	2025	2030	Towards 2050
	fuels and stoves (such as localization of international standards and labelling), and international quality standards for off-grid solar products, and also by supporting quality assurance for energy-efficient appliances, including those used for cooling and electric cooking.							
Catalysed, harnessed, and redirected energy access financing	<ol> <li>Scale up availability, diversity, and volume of public and private financing for clean-cooking projects and technical assistance, developing product and business-model innovations, increasing RBF/performance-based payments, enhancing risk-sharing mechanisms to attract more investors, and integrating clean cooking with electrification goals.</li> <li>Increase the annual financing flow to electricity access, while significantly increasing the share of public and private financing for the DRE technologies (mini-grid and off-grid</li> </ol>	<ul> <li>Reorient fossil fuel and other inefficient subsides that encourage wasteful consumption of energy in favour of both demand- and supply-side support for sustainable energy access expansion, especially regarding access to clean cooking, electrification of poor, remote, and vulnerable households, and providing reliable electricity to healthcare facilities and schools.</li> <li>Integrate financial support – accessible to all, including women and youth— for energy access in the COVID-19 recovery packages.</li> </ul>	<ul> <li>Private-sector financiers to work closely with development partners and service providers to develop comprehensive financing packages that leverage public and private financing (e.g. through innovative risk mitigation instruments) in order to scale up private sector investments in energy access – attract more investments in early stage equity, including for local companies, and engage local commercial banks to provide local currency debt.</li> </ul>	<ul> <li>Make knowledge on available financing available in a gender-responsive manners.</li> <li>Raise awareness of public and private stakeholder s on the importance of gender-responsive financing.</li> <li>Support awareness and monitor transparency in implementation of pro-poor schemes such as social safety nets for energy access.</li> </ul>	<ul> <li>Dramatically increase financing of energy access, especially for clean cooking and DRE solutions, including scaling up of proven instruments, in particular, RBF, and stepping up financial innovations to leverage commercial financing, including local commercial banks, while reducing risk aversion for financing innovative DRE and clean cooking start-ups and create targeted financing schemes for local entrepreneurs (including women and youth).</li> <li>Reassess electricity funding priorities to ensure that they are</li> </ul>	<ol> <li>USD 25 billion annual financing flow to clean cooking (public/private.)</li> <li>USD 35 billion annual financing flow to electricity of which USD 10 billion for mini-grids.</li> <li>Mobilize annual USD 1.1 billion investments in equity and to off-grid solar companies and USD 0.34 billion to bridge affordability gap for at least Tier 1 off-grid system.</li> <li>Impact bond market created for energy access, including clean cooking.</li> </ol>	Universal access to sustainable, affordable, reliable, and modern energy services.	Universal access to sustainable, affordable, reliable and modern energy services, consistent with and contributing to net-zero-emissions target.

<b>PRIORITY RESULTS</b> (UP TO 5 RESULTS	PRIORITY ACTION AREAS (UP TO 5 SPECIFIC MEASURES TO	(L	JP TO 3 PRIMARY ROLE	ER ACTIONS S AND RESPONSIBILI EHOLDER)	TIES	<b>MILESTONES</b> (AS APPLICABLE, AND NUMERICALLY MEASURABLE TO THE EXTENT POSSIBLE)			
TO BE ACHIEVED AT MOST)	REALIZE EACH PRIORITY RESULT)	Public	Private	Civil Society and Communities	International and Regional Institutions	2025	2030	Towards 2050	
	<ul> <li>solar) in line with their share in least- cost geospatial modelling, including for pre-electrification.</li> <li>3. Construct and scale up comprehensive, innovative, and gender-responsive financial packages that consist of equity, debt, and grants; including scaling up proven instruments, such as results-based financing (RBF), and supporting further financial innovation, such as new guarantees, and securitization credit-management instruments focused on risk mitigation to leverage private-sector investments, including leveraging lending from local commercial banks.</li> <li>4. Scale up digitally enabled and gender-responsive consumer financing schemes, such as PAYG, on-bill financing, and other innovations to make electricity connections/systems and appliances more affordable, and mobilize</li> </ul>	<ul> <li>Increase public finance flows – accessible to all, including women and youth – for catalysing energy access investments and create gender-responsive social safety nets for energy access.</li> </ul>	<ul> <li>Clean cooking and energy access companies must accelerate their path to profitability to attract private sector investments.</li> </ul>		consistent with country energy-access strategies and plans, net-zero-emissions targets and market reforms that reduce burdens on struggling utilities, while prioritizing funding for LCD and FCV countries. • To develop global impact bond market for energy access and support financial innovations to channel gender-responsive end-user financing and end-user subsidies, including using innovative, digitally enabled platforms.	5. 50% of the annual financing flows to clean cooking and electricity access should be directed to the Least Developed Countries (LDCs).			

PRIORITY RESULTS	PRIORITY ACTION AREAS (UP TO 5 SPECIFIC	(UI	(AS APPLIC			
(UP TO 5 RESULTS TO BE ACHIEVED AT MOST)	MEASURES TO REALIZE EACH PRIORITY RESULT)	Public	Private	Civil Society and Communities	International and Regional Institutions	2025
	public funding to reach the poorest consumers who are unable to afford clean cooking and electricity services, such as through social safety nets for energy access and creating an impact bond market for energy access, including clean cooking					
	<b>5.</b> Prioritize public and private investments in energy access in LDC and FCV countries					

### ENDNOTE

### **MILESTONES** CABLE, AND NUMERICALLY MEASURABLE TO THE EXTENT POSSIBLE)

2030

<sup>&</sup>lt;sup>1</sup> The RISE score is used here as a proxy of progress, given that it encompasses a wide range of indicators summarizing key elements of the policy and regulatory frameworks in grid, mini-grid, off-grid solar, as well as clean cooking segments. The average RISE score for energy access-deficit countries will need to increase from the current 37 for clean cooking and 53 for electricity (moderately developed frameworks) to 67 or above (advanced frameworks). (ESMAP, 2020a)

For further information, please contact: Division for Sustainable Development Goals Department of Economic and Social Affairs United Nations https://sustainabledevelopment.un.org/contact Email: salame1@un.org



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