



### SDG7 Energy Compact of Rwanda

A next Decade Action Agenda to advance SDG7 on sustainable energy for all, in line with the goals of the Paris Agreement on Climate Change

#### SECTION 1: AMBITION

##### 1.1. Ambitions to achieve SDG7 by 2030. [ Please select all that apply, and make sure to state the baseline of each target]

(Member States targets could be based on their NDCs, energy policies, national five-year plans etc. targets for companies/organizations could be based on their corporate strategy)

**7.1.** By 2030, ensure universal access to affordable, reliable and modern energy services.

**Rwanda commits to achieve access to Modern Energy Cooking** to 80% of the rural population and 50% of the urban population by 2030

#### Background:

The Multi-tier framework highlights that the proportion of population with primary reliance on clean fuels and technologies in Rwanda is currently at 30.4% of which over 77% of Rwandan households relying on firewood for cooking closely followed by 17.5% of households relying on cooking with charcoal, 4.2% of households using gas, the remaining households use crop waste and crop residues.

#### Target(s):

Through the recently approved Nationally Determined Contributions(NDCs) the Government committed to the following:

1. At least 80% of the rural population phase out open fires by accessing modern efficient or alternative cleaner fuels and cooking stoves technologies
1. At least 50% of the urban population use modern efficient cook stoves or cleaner cooking fuels, such as LPG, pellets, briquettes, electricity or green charcoal
2. Reduce institutions' demand of wood biomass for cooking and heating through supporting and encouraging institutions to use alternative improved cooking technologies with emphasis on Electricity, LPG and Green Charcoal
3. Reduce the consumption of wood for charcoal by improving the efficiency of charcoal production and its value chain
4. Increase supply of woody biomass through improved sustainable management of woody biomass resources and agroforestry promotion

**Time frame:** 2021 - 2030

#### Context for the ambition(s):

Decreasing the use of cooking and heating with unsustainable biomass and charcoal is a key priority for the Government of Rwanda (GoR) to reach a balance between the supply and demand of biomass by 2030. Rwanda primary energy use is dominated by biomass, which accounts for around 86% of the total energy mix (National Institute of Statistics of Rwanda, 2018). Over 80% of Rwandan households use wood for their cooking fuel, followed by charcoal, crop waste, gas or biogas. According to a recent study, the monthly average firewood consumption of a typical household for cooking ranges between 234 and 248 kg (MININFRA, 2020). Reliance on traditional energy for cooking represents a major challenge particularly in urban areas where there is heavy reliance on charcoal to meet household cooking needs. In Kigali, for example, the wood requirement for cooking is double compared to the Eastern, Western and Southern provinces

	<p>combined and this is because households mostly cook with charcoal (Stockholm Environment Institute, 2020). The Ministry of Environment (MOE) announced that a ban on charcoal in Kigali and in secondary cities is foreseen in the near future.</p> <p>The GoR seeks to increase the use of LPG to an adoption rate of 30% as an alternative to charcoal by 2024 (ESSP) and places Kigali at the center of this transitions. However, only over 6 percent of the population uses LPG for cooking (MININFRA, 2020). According to the LPG Masterplan for Rwanda, LPG penetration could reach 30% by 2030 if business as usual continues with cautious optimism (i.e. if households and institutions gradually shift to LPG and Electricity). The growth of LPG uptake would be led by Kigali (about 86% projected penetration in 2030, up from 45% today), then the secondary cities<sup>1</sup> (57%, up from 9%). In conjunction with LPG Master Plan, the GoR seeks to promote technologies and build capacity to reduce losses from charcoal production (e.g. green charcoal) and promote alternatives such as biomass pellet while raising awareness on these alternative options to its population.</p> <p>As for the rural population, a priority to replace open fires and traditional stoves for improved ones will be pursued. By promoting affordable improved cook stoves and raising awareness on better cooking practices, the GoR aims to halve households’ biomass consumption for cooking by 2024 and therefore achieve the main goal outlined in the Biomass Energy Strategy (BEST). One of goals set by MoE’s the National Determined Contribution (NDC) is the “dissemination of modern efficient cook stoves to 80% of the rural population and 50% of the urban population by 2030, achieving a more sustainable balance between supply and demand of biomass and reducing firewood and fossil energy consumption for cooking.” It is equally important to forge synergies with stakeholders in the environment and forestry sectors to increase and maintain forest cover to 30%. The aim of synergies across sectors is to ensure sustainable exploitation of biomass by 2024 (NST-1) and improve both forestry management and incentives for small producers to increase forest productivity.</p>
<input type="checkbox"/> <b>7.2.</b> By 2030, increase substantially the share of renewable energy in the global energy mix.	<p>Target(s):</p> <p>Time frame:</p> <p>Context for the ambition(s):</p>
<input type="checkbox"/> <b>7.3.</b> By 2030, double the global rate of improvement in energy efficiency.	<p>Target(s):</p> <p>Time frame:</p> <p>Context for the ambition(s):</p>
<input type="checkbox"/> <b>7.a.</b> By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil-fuel technology, and promote investment in energy infrastructure and clean energy technology.	<p>Target(s):</p> <p>Time frame:</p> <p>Context for the ambition(s):</p>
<input type="checkbox"/> <b>7.b.</b> By 2030, expand infrastructure and upgrade technology for supplying modern and sustainable energy services for all in developing countries, in particular least developed countries, small island developing States, and land-locked	<p>Target(s):</p> <p>Time frame:</p> <p>Context for the ambition(s):</p>

<sup>1</sup> Secondary cities (include note on SCs)

developing countries, in accordance with their respective programs of support.

**1.2. Other ambitions in support of SDG7 by 2030 and net-zero emissions by 2050. [Please describe below e.g., coal phase out or reforming fossil fuel subsidies etc.]**

Target(s):

Time frame:

Context for the ambition(s):

**SECTION 2: ACTIONS TO ACHIEVE THE AMBITION**

**2.1. Please add at least one key action for each of the elaborated ambition(s) from section 1. [Please add rows as needed].**

<i>Action 1</i>	<i>Start and end date</i>
<p><i>Ensure availability and accessibility to alternative biomass based fuels (pellets, briquettes, green charcoal) through the development of a sustainable crop residues value chain (producers, traders, suppliers)</i></p> <p><i>Promote improved charcoal production technologies aiming to substitute current low-efficiency technologies and reduce pressure over natural forests</i></p> <p><i>Scale availability alternative sustainable cooking fuels (sustainably produced charcoal, briquettes, pellets, LPG, electricity) at affordable prices for domestic consumers)</i></p>	<i>Ongoing - 2030</i>
<p><i>Action 2</i></p> <p><i>Scale up availability of affordable efficient cook stoves (e.g. briquettes and pellets stoves, LPG stoves, electric cookers, electric pressure cookers etc.), that can serve the needs and purchasing power of different market segments (e.g. Ubudehe)</i></p>	<i>Ongoing - 2030</i>
<p><i>Action 3</i></p> <p><i>Ensure availability of LPG, natural gas and Biogas in sufficient quantities at affordable prices for industrial and domestic uses</i></p>	<i>Ongoing - 2030</i>
<p><i>Action 4</i></p> <p><i>Carry out targeted community education measures by all stakeholders to push for transition and access to energy efficient cooking solutions and alternative FUEL OPTIONS</i></p>	<i>Ongoing - 2030</i>
<p><i>Action 5</i></p> <p><i>Engage private sector and development partners to promote innovation and R&amp;D efforts in the cooking sector and improve and scale production of existing and new cooking stoves technologies, and fuels</i></p>	<i>Ongoing - 2030</i>
<p><i>Action 6</i></p>	<i>Ongoing - 2030</i>

Harmonize and establish sustainable subsidy financing for ICS through carbon credit market and encourage and support the banking sector, investors and private sector to enhance access to financing mechanisms (aimed at both consumers, companies and fuel producers))	
<i>Action 7</i> Harmonize national standards with international standards around testing and quality control of cook stoves and cooking fuels that use electricity, LPG, pellets and green charcoal	<i>Ongoing - 2030</i>
<i>Action 8</i> Coordinate policy implementation efforts with relevant stakeholders (e.g. MoE, Ministry of Health, Ministry of Education, REMA, etc.) for environmental sustainability (e.g. forest landscape restoration, climate action, access to finance, research and development, standardization of cleaner cooking solution))	<i>Ongoing - 2030</i>
<i>Action 9</i> Facilitate a platform for periodic exchanges and set-up monitoring and reporting to encourage engagement from development partners and more stakeholders involved in manufacturing and distribution of cooking fuels and technologies.	<i>Ongoing - 2030</i>
<i>Action 10</i> Fundraising and implementation of the LPG Masterplan	<i>Ongoing - 2030</i>
<i>Action 11</i> Provide capacity-building opportunities to producers, distributors/importers and cooperatives active in the cooking sector	<i>Ongoing - 2030</i>
<i>Action 12</i> Develop data platforms, online repositories and reporting systems to track actions and energy access in the cooking sector	<i>Ongoing - 2030</i>
<i>Action 13</i> Conduct feasibility studies to explore opportunities in fuels and cooking technologies	<i>Ongoing - 2030</i>
<i>Action 14</i> Advocate for customs, excise and VAT waivers on locally produced and imported fuels and cooking technologies (equipment needed to scale up local production of fuels/stoves) to boost private sector commitments and participation in the sector development	<i>Ongoing –2024</i>

### SECTION 3: OUTCOMES

3.1. Please add at least one measurable and time-based outcome for **each** of the actions from section 2. *[Please add rows as needed].*

<i>Outcomes</i>	<i>Date</i>
<ul style="list-style-type: none"> <li>80% of rural Population phases out open fires through access to efficient or alternative clean cooking technologies</li> </ul>	2030
<ul style="list-style-type: none"> <li>50% of the urban population adopts efficient cooking technologies, modern energy cooking technologies and uses modern cooking services and more sustainable cooking fuels</li> </ul>	2030
<ul style="list-style-type: none"> <li>At least 50% of institutions (e.g. schools, tea factories, prisons, restaurants) use efficient or alternative heating and cooking technologies</li> </ul>	2030
<ul style="list-style-type: none"> <li>Reach balance between supply and demand of biomass and reducing firewood energy consumption for cooking</li> </ul>	2030

<ul style="list-style-type: none"> <li>• Maintain forest cover to 30% and ensure their sustainable exploitation</li> <li>• Cases of health issues related to indoor air pollution as a result of cooking indoors decreases significantly</li> </ul>	2030
<i>Interim Outcomes (from projects)</i> <ul style="list-style-type: none"> <li>• Additional 500,000 improved biomass cook stoves disseminated through a market-based approach (ReCIC Project implemented by EnDev)</li> <li>• Additional 300,000 improved cook stoves disseminated using innovative financial support mechanism to provide improved and alternative clean cooking solutions with at least 2 burners to low income households;</li> </ul>	2025

## SECTION 4: REQUIRED RESOURCES AND SUPPORT

4.1. Please specify required finance and investments for **each** of the actions in section 2.

Investment needs:

Targets	Budget Needs to meet targets 2022 - 2024 (USD\$)	Budget Needs to meet targets 2024-2030 (USD\$)	Additional TA support needed
1. At least 80% of the rural population phases out open fires by accessing efficient or alternative biomass cooking technologies 2. At least 50% of the urban population uses efficient cook stoves or cleaner cooking fuels, such as LPG, pellets, briquettes or green charcoal 3. Reduce the consumption of wood for charcoal making by improving the efficiency of charcoal value chain 4. Reducing the institutional consumers' demand of wood biomass for cooking and heating	118 786 000 USD	350 315 500 USD	<ul style="list-style-type: none"> <li>• Capacity building in various cooking energy technologies</li> <li>• Capacity building for testing lab</li> <li>• TA support</li> <li>• Experienced personnel (seconded experts in ministries or other relevant government institution in the biomass sector)</li> <li>• Strengthen coordination, capacity building, monitoring and evaluation</li> <li>• Online platform to track progress of modern cooking energy access</li> </ul>
5. Increase supply of woody biomass through improved sustainable management of wood biomass resources and agroforestry promotion	73 723 000 USD	205 617 500	<ul style="list-style-type: none"> <li>• Strengthen coordination, capacity building, monitoring and evaluation</li> <li>• TA support</li> </ul>
<b>Total Budget</b>	192,509,000	555,933,000	
10% contingency	19,251,000	55,593,000	
<b>Grand Total Budget</b>	<b>211,760,000</b>	<b>611,526,000</b>	

4.2. [For countries only] In case support is required for the actions in section 2, please select from below and describe the required support and specify for which action.

*[Examples of support for Member States could include: Access to low-cost affordable debt through strategic de-risking instruments, capacity building in data collection; development of integrated energy plans and energy transition pathways; technical assistance, etc.]*

<input checked="" type="checkbox"/> Financing	Description World Bank EAQIP 3a/b
<input type="checkbox"/> In-Kind contribution	Description
<input checked="" type="checkbox"/> Technical Support	Description Energizing Development (EnDev/GIZ) "Reducing the climate impact of cooking through improved cooking energy systems" action (RECIC Action) Enabel-IUCN DESIRA project Fund and Agriculture Organization of the United Nations (FAO) "Energy Smart Food Programme" and Bioenergy and Food Security Assessment TCP Project
<input type="checkbox"/> Other/Please specify	Description

## SECTION 5: IMPACT

5.1. Countries planned for implementation including number of people potentially impacted.

According to the National Institute of Statistics of Rwanda, the population of Rwanda is predicted to reach to 16.3 million people by 2030. This energy compact will have positive impact on the lives of at least 13 million Rwandans. By achieving these targets, Rwandans will improve their quality of life at the household level in many levels: 1) safety (e.g. burns sustained whilst cooking, gender-based violence or physical aggression during fuel sourcing), 2) time gains (from sourcing fuels and cooking), 3) finances (e.g. job creations, savings, reduction of poverty levels), 4) health (over 3.8million deaths annually are caused directly or indirectly by cooking indoors or with dirty fuels). "Households 'transition to modern cooking energy services will significantly reduce GHG emissions, increase forest restoration, reduce land degradation

By promoting awareness campaigns, quality control measures and harmonizing standards, at least 80% of the population will phase out indefinitely three-stones by adopting first improved cook stoves in the short term, as a transitional approach to reduce the demand of unsustainable wood fuel towards the usage of alternative and modern cooking solutions. Moreover, 50% of the urban population will be encouraged to shift to cleaner fuels, such as LPG/LPG, electricity and high efficient biomass technologies like pellets and briquettes through targeted subsidies and awareness campaigns.

5.2. Alignment with the 2030 Agenda for Sustainable Development – Please describe how **each** of the actions from section 2 impact advancing the SDGs by 2030.

*[up to 500 words, please upload supporting strategy documents as needed]*

This energy compact is focusing specifically to clean and transitional cooking systems in Rwanda which responds directly to 8 (SDG 1, 2, 3, 4, 5, 7, 8, 11, 13) out of the 17 SDGs:

By Supporting the production of alternative fuels and stoves will increase the availability of affordable options and thus enhancing the plethora of cook stoves and fuels options that respond to the market segments' needs, this energy compact is ensuring that no one is left behind in Rwanda. The following list in indicate how each action is advancing the impact on the SDGs by 2030:

Action 1 responds to SDGs 1, 2, 3, 5, 7, 8, 11, 13

Action 2 responds to SDGs 1, 2, 3, 7, 8, 11, 13
Action 3 responds to SDGs 1, 2, 3, 7, 8, 11, 13
Action 4 responds to SDGs 1, 2, 3, 4,7
Action 5 responds to SDGs 7, 8, 11, 13
Action 6 responds to SDGs 7, 8, 11, 13
Action 7 responds to SDGs 7, 11, 13, 15
Action 8 responds SDGs 7, 11, 13,15
Action 9 responds SDGs 7, 11, 13, 15
Action 10 responds SDGs 7, 11, 13,15
Action 11 responds to SDGs 1, 4,5,7, 8, 11, 13
Action 12 responds SDGs 7, 11, 13, 15
Action 13 responds SDGs 7, 11, 13, 15
Action 14 responds SDGs 7, 6, 13

5.3. Alignment with Paris Agreement and net-zero by 2050 - Please describe how **each** of the actions from section 2 align with the Paris Agreement and national NDCs (if applicable) and support the net-zero emissions by 2050.

*[up to 500 words, please upload supporting strategy documents as needed]*

The ambition outlined on this energy compact echoes the NDC submitted by GoR to UNFCCC within the Framework of the Paris Agreement.

## SECTION 6: MONITORING AND REPORTING

6.1. Please describe how you intend to track the progress of the proposed outcomes in section 3. Please also describe if you intend to use other existing reporting frameworks to track progress on the proposed outcomes.

The GoR through the National Institute of Statistics of Rwanda conducts periodic household survey every three years, which provides status on different indicators published in the Integrated Household Living Conditions Survey (EICV) report. The Government also has established stakeholder forums commonly known as the Sector Working Groups (SWG) where they engage in policy dialogue and ensure ownership, accountability and transparency of national medium term development strategies, implementation and monitoring process of the set targets. The accountability and transparency is reflected the Joint Sector Review (JSR) report which presents the status of the sector and catch-up plans if needed. Discussions are actively held with stakeholders to encourage improvement as well as emphasis on lessons learned to ensure future success.

The objectives of the JSR is:

- To assess progress in achieving sector objectives with focus on Fiscal Year (FY) targets against the medium term strategic plan indicator (NST1) indicators selected sector performance indicators and their corresponding policy actions. This also include discussion on catch up plans for areas lagging.
- To highlight priority areas for the following fiscal years that to inform the planning and budgeting process for projects and institutions in the sector.
- To provide latest implementation status on SDGs indicators already monitored by sectors and to highlight plans for monitoring the additional SDG indicators applicable to Rwanda.

MININFRA has foreseen the development of a data platform as a potential tool for reporting progress of this compact.

JSR provides latest information on previous fiscal years where available on indicators and targets for both NST1 indicators, critical projects and the Sector performance indicators. The sectors score progress on indicators/targets based on the scoring grid below:

=>100% achievement	> 90% achievement	50-90% achievement	<50% achievement	N/A
Achieved	On-Track	On-Watch	Lagging behind	Not due for reporting/or not available

## SECTION 7: GUIDING PRINCIPLES CHECKLIST

Please use the checklist below to validate that the proposed Energy Compact is aligned with the guiding principles.

**I. Stepping up ambition and accelerating action** - Increase contribution of and accelerate the implementation of the SDG7 targets in support of the 2030 Agenda for Sustainable Development for Paris Agreement

*I.1. Does the Energy Compact strengthen and/or add a target, commitment, policy, action related to SDG7 and its linkages to the other SDGs that results in a higher cumulative impact compared to existing frameworks?*

Yes  No

*I.2. Does the Energy Compact increase the geographical and/or sectoral coverage of SDG7 related efforts?*  Yes  No

*I.3. Does the Energy Compact consider inclusion of key priority issues towards achieving SDG7 by 2030 and the net-zero emission goal of the Paris Agreement by 2050 - as defined by latest global analysis and data including the outcome of the Technical Working Groups?*  Yes  No

**II. Alignment with the 2030 agenda on Sustainable Development Goals** – Ensure coherence and alignment with SDG implementation plans and strategies by 2030 as well as national development plans and priorities.

*II.1. Has the Energy Compact considered enabling actions of SDG7 to reach the other sustainable development goals by 2030?*  Yes  No



II.2. Does the Energy Compact align with national, sectoral, and/or sub-national sustainable development strategies/plans, including SDG implementation plans/roadmaps? Yes No

II.3. Has the Energy Compact considered a timeframe in line with the Decade of Action? Yes No

**III. Alignment with Paris Agreement and net-zero by 2050** - Ensure coherence and alignment with the Nationally Determined Contributions, long term net zero emission strategies.

III.1. Has the Energy Compact considered a timeframe in line with the net-zero goal of the Paris Agreement by 2050? Yes No

III.2. Has the Energy Compact considered energy-related targets and information in the updated/enhanced NDCs? Yes No

III.3. Has the Energy Compact considered alignment with reaching the net-zero emissions goal set by many countries by 2050? Yes No

**IV. Leaving no one behind, strengthening inclusion, interlinkages, and synergies** - Enabling the achievement of SDGs and just transition by reflecting interlinkages with other SDGs.

IV.1. Does the Energy Compact include socio-economic impacts of measures being considered? Yes No

IV.2. Does the Energy Compact identify steps towards an inclusive, just energy transition? Yes No

IV.3. Does the Energy Compact consider measures that address the needs of the most vulnerable groups (e.g. those impacted the most by energy transitions, lack of energy access)? Yes No

**V. Feasibility and Robustness** - Commitments and measures are technically sound, feasible, and verifiable based a set of objectives with specific performance indicators, baselines, targets and data sources as needed.

V.1. Is the information included in the Energy Compact based on updated quality data and sectoral assessments, with clear and transparent methodologies related to the proposed measures? Yes No

V.2. Has the Energy Compact considered inclusion of a set of SMART (specific, measurable, achievable, resource-based and time based) objectives? Yes No

V.3. Has the Energy Compact considered issues related to means of implementation to ensure feasibility of measures proposed (e.g. cost and financing strategy, technical assistant needs and partnerships, policy and regulatory gaps, data and technology)? Yes No

**SECTION 8: ENERGY COMPACT GENERAL INFORMATION**

8.1. Title/name of the Energy Compact

Rwanda's Energy Compact

8.2. Lead entity name (for joint Energy Compacts please list all parties and include, in parenthesis, its entity type, using entity type from below)

Ministry of Infrastructure and Ministry of Environment

8.3. Lead entity type

Government

Local/Regional Government

Multilateral body /Intergovernmental Organization

Non-Governmental Organization (NGO)

Civil Society organization/Youth

Academic Institution /Scientific Community

Private Sector

Philanthropic Organization

Other relevant actor

#### 8.4. Contact Information

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Energy Directorate

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#### 8.5. Please select the geographical coverage of the Energy Compact

Africa  Asia and Pacific  Europe  Latin America and Caribbean  North America  West Asia  Global

#### 8.6. Please select the Energy Compact thematic focus area(s)

Energy Access  Energy Transition  Enabling SDGs through inclusive just Energy Transitions  Innovation, Technology and Data  Finance and Investment.

### SECTION 9: ADDITIONAL INFORMATION (IF REQUIRED)

Please provide additional website link(s) on your Energy Compact, which may contain relevant key documents, photos, short video clips etc.

- <https://www.mininfra.gov.rw/digital-transformation-1-1>
- <https://www.environment.gov.rw/>