



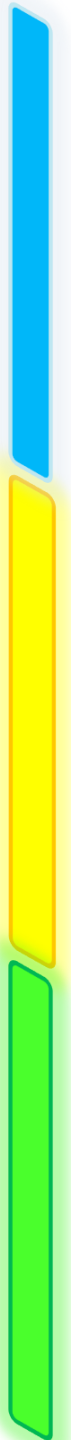
SUSTAINABLE
ENERGY FOR ALL

**High-level summary
for 02nd 12 2015**



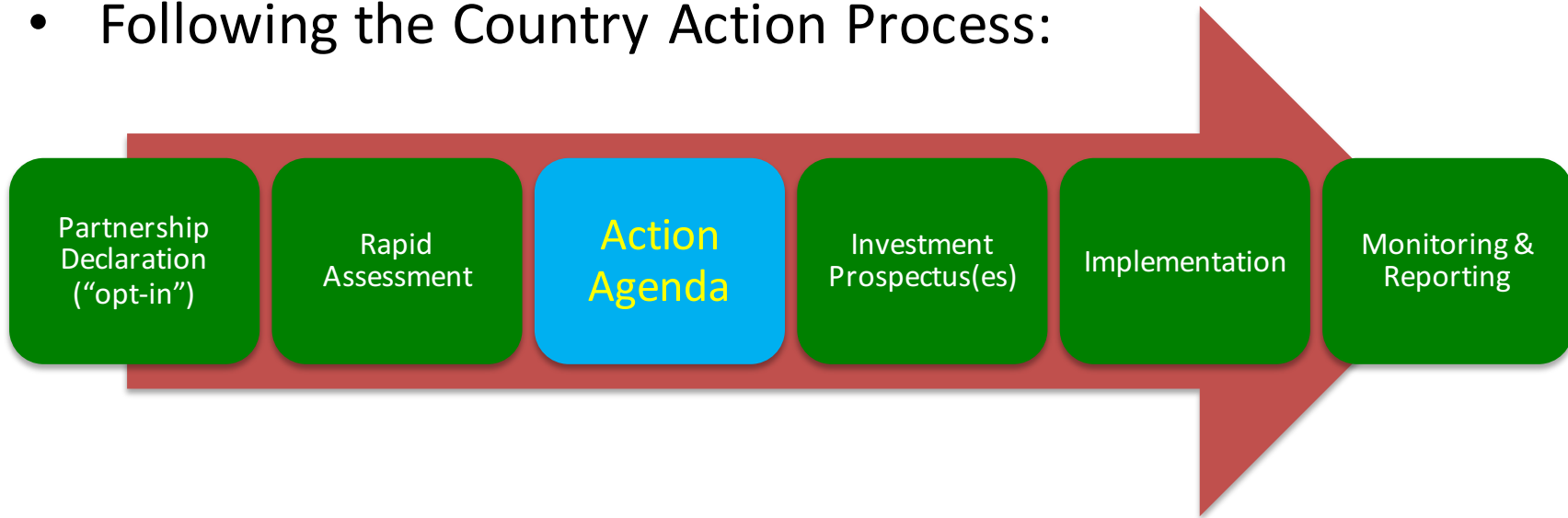
Contents

- **Current Status**
- **Overview of SE4All**
- **Headline targets & cost implications**
- **Detailed sector pathways & actions to achieve targets**
- **Next steps**



Status

- Following the Country Action Process:



Consultation process and next steps for Action Agenda



consultations

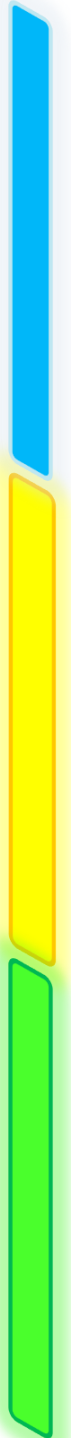
- ✓ Technical Working Group
- ✓ Inter-ministerial workshop
- ✓ Sector Working Group
 - ❖ Action Agenda (AA) final draft ready
 - ❖ Cabinet Paper developed

Next Steps

- Investment Prospectus developed and implemented

SE4All Pillars

- Ensure universal **access** to modern energy services
 - Double the global rate of improvement in **energy efficiency**
 - Double the share of **renewable energy** in the global energy mix
- Nexus issues (health, water, food, gender)



Contents of the SE4All Action Agenda

	Energy access		Electricity Generation (incl Renewables)	Energy Efficiency	Nexus issues (health, water, food, gender)
	Biomass / clean cooking	Electricity			
Targets to 2030	✓	✓	✓	✓	✓
Pathways to reach targets	✓	✓	✓	✓	✓
Priority action areas	✓	✓	✓	✓	✓
Investment costs	✓	✓	✓	✓	✓



High Level Targets & Cost implications

Headline SE4All targets

Sector	Target
Access to clean and sustainable cooking	<ol style="list-style-type: none">1. To close the gap (currently about 20%) between production and consumption of biomass to make it a sustainable source of energy2. To supply a growing and urbanising population with clean secure supplies of biomass for cooking, requiring:<ol style="list-style-type: none">a. 100% access to much more efficient cookstoves than currently usedb. Reduction in losses from charcoal by improving charcoal production and partially replacing charcoal with biomass pelletsc. Increasing production by improving forestry management3. To ensure that the efficient cookstove solutions noted above address health issues by significantly reducing indoor air pollution
Access to electricity	<ol style="list-style-type: none">1. To achieve 100% electricity access by 2030 in both urban and rural areas through a mix of on-grid and off-grid solutions2. Progress to higher quality and quantity of electricity over time, with >50% of the population having tier 3-5 access by 2030.
Renewables	<ol style="list-style-type: none">1. Exceed the global SE4All target (26%) of renewable energy as a percentage of the primary energy supply2. Exceed the global SE4All target (44%) of renewable electricity generation as a percentage of total electricity generation
Energy efficiency	<ol style="list-style-type: none">1. At least double the efficiency of biomass energy use2. Extend current rates of electrical efficiency improvement to 2030



Cost Estimates to achieve targets

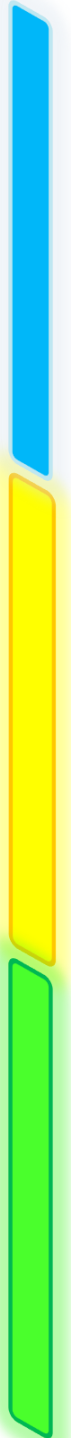
SE4All Pillar	Type	Annualised capital costs by 2030 (\$m/year)	Total costs including O&M, & fuel by 2030 (\$m/year)
Access to clean cooking		150	270
Access to electricity:	Grid extension	170-190	175-220
	Off-grid access ¹	50-90	55-100
On-grid elec. generation	Total	250-470	730-780
of which:	Renewables	170-410	440-610
Energy efficiency ²		15	15
Total		675-875 (average 775)	1290-1340 (average 1320)

Expenditure is 7.5% of GDP in 2030 if Rwanda grows at 6% over this time period. This is high by international standards. Levels of 3-5% would be more affordable. O&M and fuel costs fall within this range. Upfront capital will need to be subsidised.

^[1] Assumed to be from renewable energy sources

^[2] Only includes costed energy efficiency actions up to 2020.

DETAILED PATHWAYS & ACTIONS TO REACH TARGETS

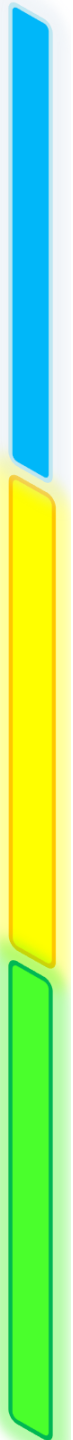


BIOMASS PATHWAYS & ACTIONS



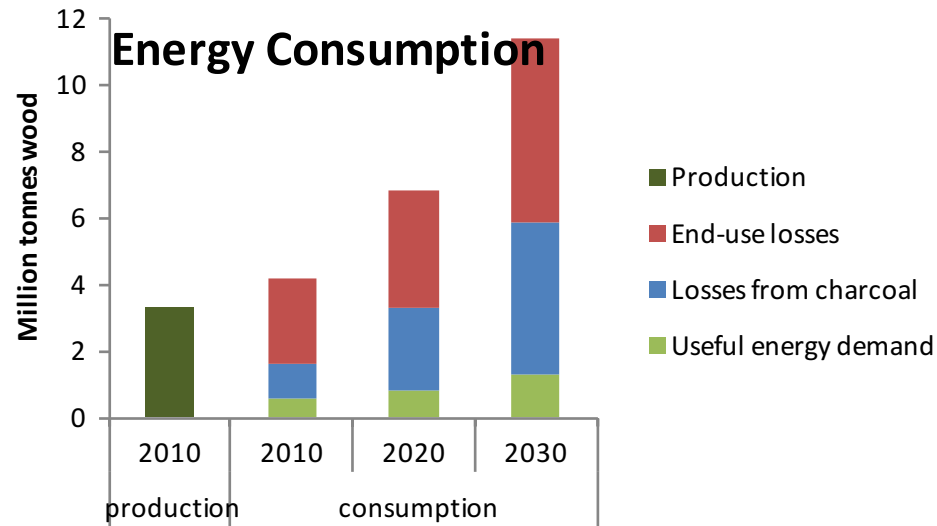
Biomass – Key Messages

1. Biomass is a huge (potentially renewable) energy resource
 - Current consumption 4 million tonnes wood per year
 - Equivalent to more than 1.5 million tonnes of oil
 - This amount of energy would generate more than 650MW if it was used for power generation
2. Wood use is greater than wood production, so is unsustainable
 - Wood production 3.3 mt, consumption 4.2mt
 - Population growth and urbanisation will make the imbalance worse unless action is taken, threatening the security of supply of this vital energy resource
3. Production and consumption of wood can be brought into balance to make biomass a sustainable, renewable energy resource
 - Massively improve efficiency of cookstoves
 - Reduce share of charcoal, and improve efficiency of charcoal production
 - Increase production through improved forestry and agro-forestry management

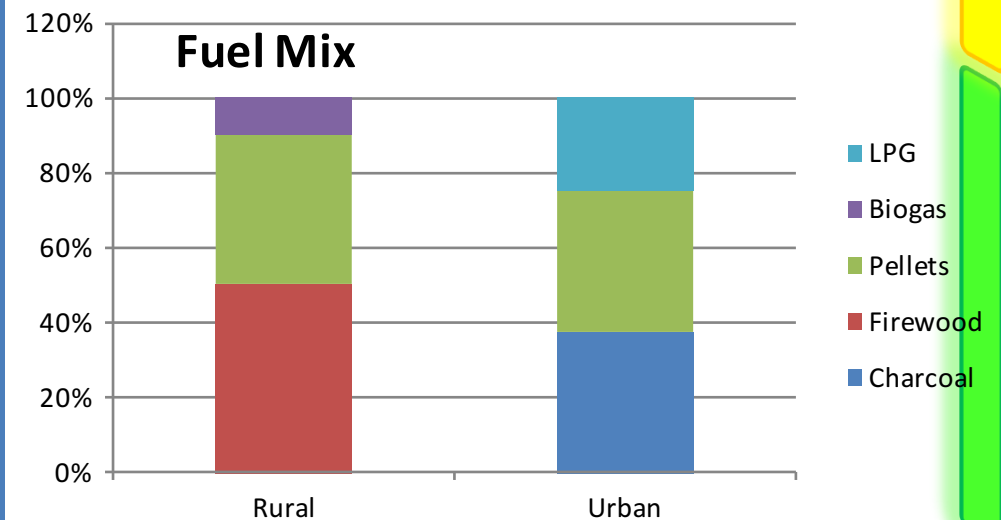
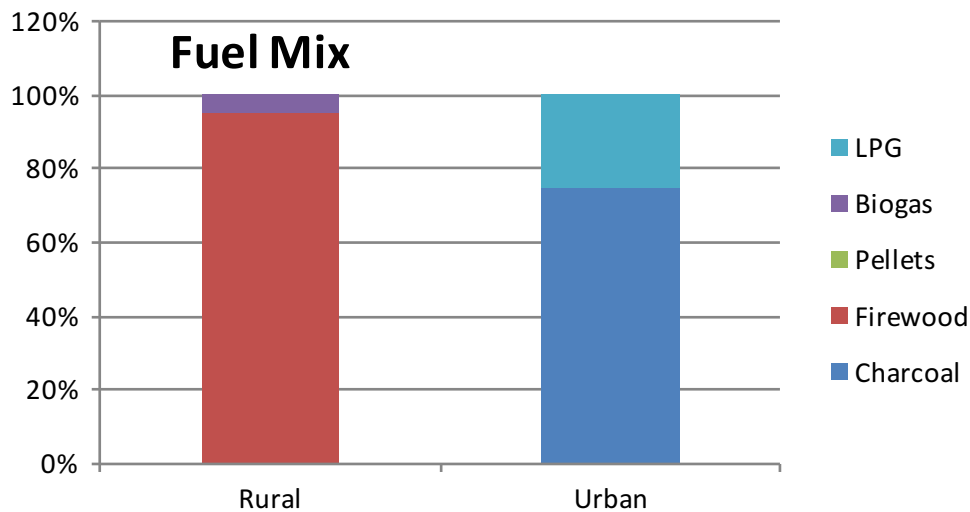
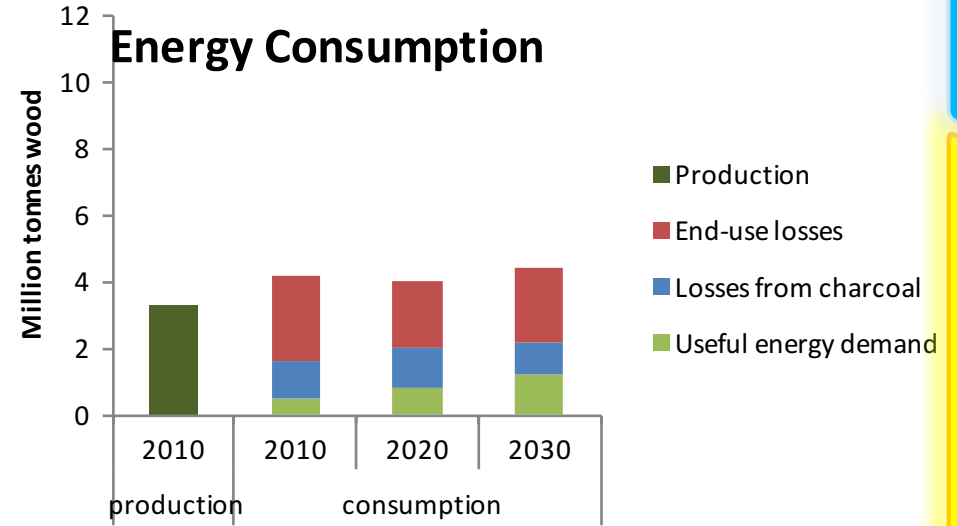


Scenarios for Cooking Fuels

Baseline Scenario – current technologies



Efficient (sustainable) Scenario



Efficient cookstoves

- Very large efficiency savings are possible
- Cookstove standards are being developed by ISO according to different 'tier' levels
- Performance judged by efficiency **and by level of emissions**
- Significant health benefits from higher-tier stoves
- Top-performing stoves may require biomass pellets rather than raw wood to get reliable and controllable burn rate

Proposed ISO Tier	Illustrative stove type	Efficiency	Energy savings rel. to Tier 0
Tier 0	3-stone fire	<15%	0%
Tier 1	ICS	>15%	23%
Tier 2	Rocket stove	>25%	>40%
Tier 3	Forced draft	>35%	>57%
Tier 4	LPG / advanced biomass	>45%	>67%

Sustainable Pathways 1: End-use Efficiency

	2020 Target	2030 Target
<p>Progressively move towards higher performance biomass cookstoves.</p> <p>[currently 40% Tier 0, 60% Tier 1]</p>	<p>Tier 0: 0 % Tier 1: 40% Tier 2: 30% Tier 3: 20% Tier 4: 10%</p> <p>Phase out use of unimproved cooking techniques. Establish supply chains and measurable growth in markets for Tier 2-4 stoves.</p> <p>This leads to around 40% wood savings relative to current technology.</p>	<p>Tier 0: 0% Tier 1: 10% Tier 2: 20% Tier 3: 30% Tier 4: 40%</p> <p>Establish Tier 3-4 as the main cooking techniques, with progressively higher standards applied over time.</p> <p>This mix of stoves would save about more than 60% of wood consumption compared to current technology.</p>



Sustainable Pathways 2: Charcoal Production Efficiency

	2020 Target	2030 Target
Substantially reduce share of charcoal in urban cooking mix [over 90% currently]	<p>60% of urban cooking from charcoal</p> <p>Assumes that 13% would come from LPG, 27% from biomass pellets</p>	<p><40% of urban cooking from charcoal</p> <p>Assumes 25% of would come from LPG, with the remainder of urban cooking being shared equally between charcoal and biomass pellets.</p>
Improve yield of charcoal production [current yield 11% by weight]	<p>15% yield by weight</p> <p>Requires 25% production from improved techniques (at 18% yield), 5% state-of-the-art techniques (at 29% yield)</p>	<p>18% yield by weight</p> <p>Requires 30% production from improved techniques, 25% state-of-the-art techniques</p>
Aim for certification of sustainability	25% certified 'green'	90% certified 'green'

Sustainable Pathways 3: Increase wood production

	2020 Target	2030 Target
Increase productivity of smallholder plantations	<p>12.4 t/ha/yr</p> <p>Increase from 2009 base of 9.5t/ha/yr. Based on SMP/WISDOM AME scenario.</p> <p>10% increase in forest cover</p> <p>4.65 mt dry wood production</p>	<p>15 t/ha/yr</p> <p>Based on experiences in other SSA countries and lower end of the technical potential 15-30 t/ha/yr identified in National Forest Policy.</p> <p>5.6 mt dry wood equiv.</p>



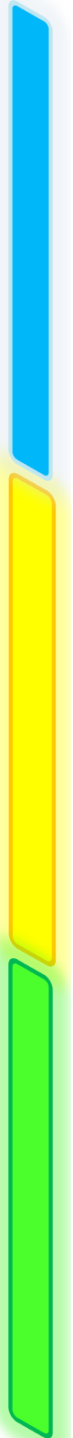
Actions: Biomass (1 of 2)

Issue	Institution	Action
Biomass Strategy	MININFRA, MINIRENA, MINAGRI, Min. Health	Update data and 2009 BEST strategy
		Review of institutional arrangements and inter-ministerial capacity needs for implementing Biomass strategy
		Incorporate gender impact assessments into existing tools
Actions on cookstoves	MININFRA, Ministry of Health, MINECOFIN	Review of subsidy design to avoid perverse subsidies and encourage migration towards higher performing stoves.
	RBS	Create testing & certification facilities, with staff and training
	MININFRA, RBS, EDCL, Local Gov.	Phase in standards and certification for cookstoves to shift the market from towards Tier 2-4 models
	MININFRA, RBS, MINICOM	Support manufacturing of higher quality stoves (Tier 2-4). Facilitating access to finance, funding for R&D.
		Reduce / remove import duties on equipment and materials required for high quality manufacturing
	MINECOFIN, MININFRA	Enable provision of credit lines to financial service providers targeted at small businesses involved in the biomass sector
		Assess ways in which GoR can maximise income from carbon finance
	MININFRA, EDCL	Develop National clean cooking database
		Gather data & monitor
EDCL, Local Gov.	Sensitization workshops and training seminars including the latest technology	

Actions: Biomass (2 of 2)

Issue	Institution	Action
Charcoal Sector Actions	MINECOFIN, Local Gov., MININFRA	Charcoal tax reform design study
		Replace patchwork local tax system for charcoal with single national rate (10%), collected locally, with funds put towards verification & enforcement mechanisms
		Consider increasing taxation rates on charcoal over the longer term to help achieve transition away from this fuel
		Consider viability of imposing productions standards to achieve 'green charcoal'
	Local Gov., MININFRA, MINIRENA	Develop an explicit charcoal exit strategy and action plan with benchmarks, targets & timelines, coupled with alternative livelihood programs for informal charcoalers
		Support in establishment of cooperative and move to "green certificate" system. Include organisation, training & workshops
Local gov., MININFRA	Design training program for charcoal professionals	
	Local level training programs and sensitization workshops	
Promote alternative biomass fuels	MININFRA, MINECOFIN	Harmonise taxes (VAT) on alternatives to charcoal. Consider favourable tax regime for alternative to promote transition away from charcoal
		Support experimental development of biomass pellet supply chain including pilot studies in 1 or 2 districts and further develop national strategy
Biogas programme and technology review	MININFRA, RBS	Needs assessment and market segment study to inform subsidy design
		Strategy including end-user financing action plan
		Convene Energy Standards Committee, and develop subsequent guidelines
Wood production	MINIRENA, NRNA, Local Gov.	Review effectiveness of revised permitting system to avoid inefficient / illegal production methods.
		Develop a national inventory of current and potential plantation productivity
		Improve management of private and government plantations
		Consider pros and cons of de-regulating wood supply for smaller producers
		Consider how forest management plans align with potential for REDD+ carbon financing opportunities

ELECTRICITY ACCESS PATHWAYS & ACTIONS



Defining Access

World Bank multi-tier approach

Definition of Access for
the Action Agenda: Tier-
2 to Tier-5

		Tier-0	Tier-1	Tier-2	Tier-3	Tier-4	Tier-5	
Attributes	1. Peak capacity	Power	No Electricity access	V. Low Power Min 5 W	Low Power Min 50 W	Medium Power Min 200 W	High power Min 800 W	V.High Power Min 2 kW
		Daily consumption		Min 20 Wh	Min 270 Wh	Min 1.0 KWh	Min 3.4 KWh	Min 8.2 KWh
	2. Duration	Hours per day	< 4 hrs	Min 4 hrs	Min 8 hrs	Min 16 hrs	Min 23 hrs	
		Hours per evening	< 2 hrs	Min 2 hrs	Min 2 hrs	Min 4 hrs	Min 4 hrs	
	3. Reliability		-	-	-	Max 3 disruptions per day	Max 7 disruptions per week	Max 3 disruptions per week of total duration < 2 hours

Household Electricity Access Pathways

Scenario A: 22% off-grid by 2020 (in line with ESSP)
 no off-grid in urban areas
 33% off-grid access for rural areas by 2020
 Approx constant share of off-grid through to 2030 (35%)

A	Total				Rural				Urban			
	2010	2018	2020	2030	2010	2018	2020	2030	2010	2018	2020	2030
On-grid	13%	48%	54%	80%	4%	30%	36%	65%	40%	85%	89%	100%
Off-grid	0%	23%	22%	20%	0%	33%	33%	35%	0%	0%	0%	0%
TOTAL	13%	70%	76%	100%	4%	63%	69%	100%	40%	85%	89%	100%

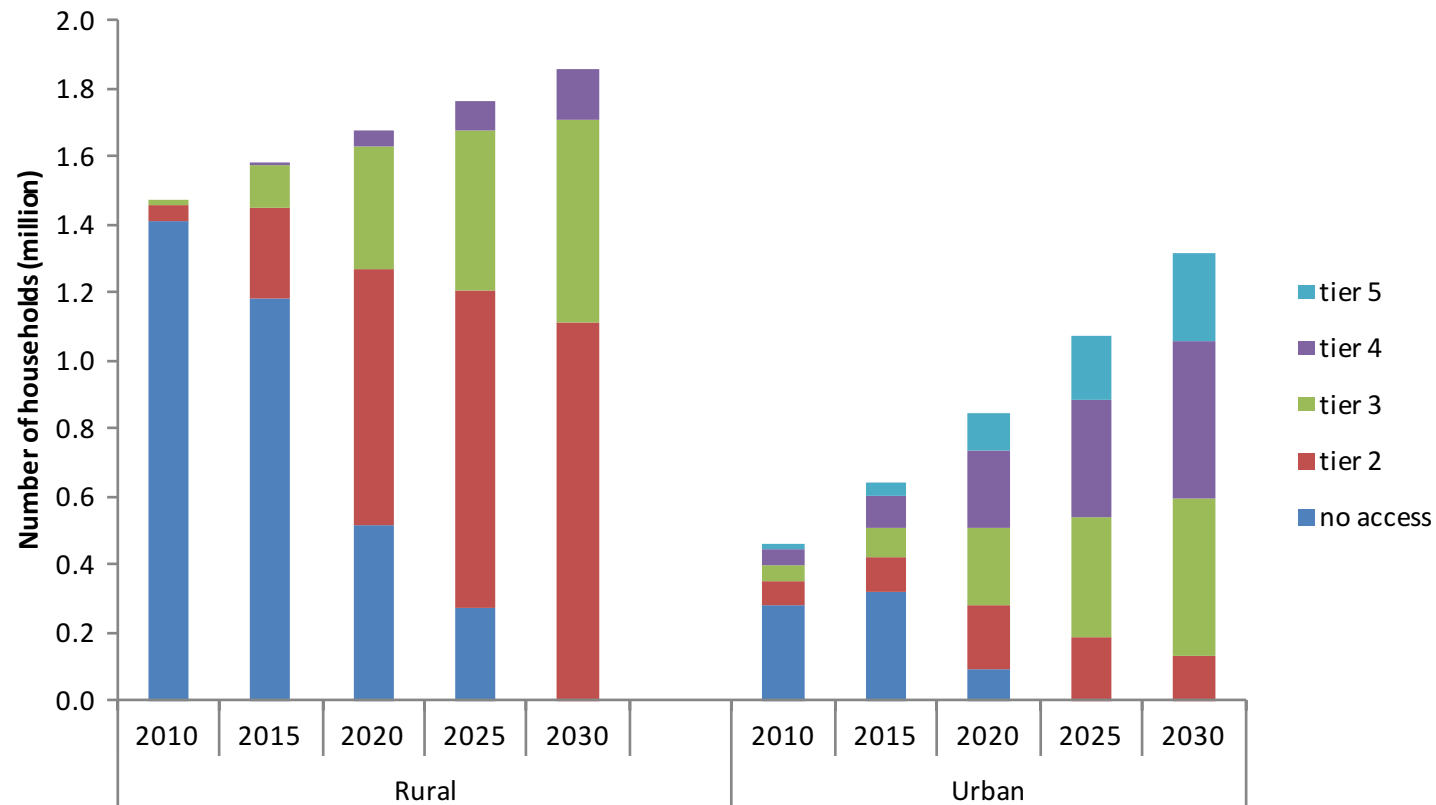
Scenario B: 22% off-grid by 2020 (in line with ESSP)
 no off-grid in urban areas
 33% off-grid access for rural areas by 2020
 Declining share of off-grid through to 2030 (20%)
 Declining number of households with off-grid between 2020-2030

B	Total				Rural				Urban			
	2010	2018	2020	2030	2010	2018	2020	2030	2010	2018	2020	2030
On-grid	13%	48%	56%	88%	4%	30%	39%	80%	40%	85%	89%	100%
Off-grid	0%	23%	20%	12%	0%	33%	31%	20%	0%	0%	0%	0%
TOTAL	13%	70%	76%	100%	4%	63%	69%	100%	40%	85%	89%	100%



Electricity access tier levels

- Increasing access to higher tier levels – consumption per household increases by 4% once they have connected



Industrial, commercial and productive uses

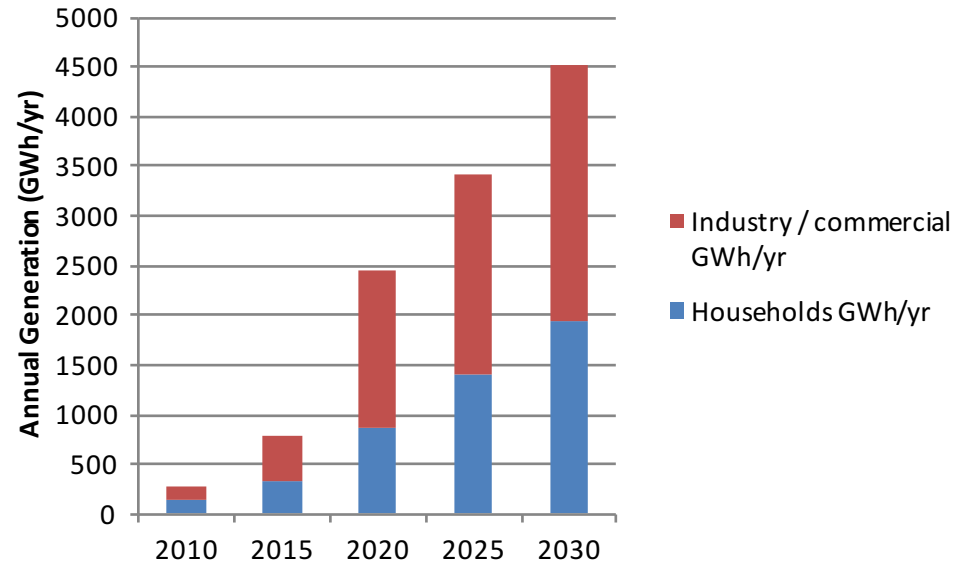
- For 2018, take projections from ESSP

MW peak demand	2013	2018 (projected)
Cement	15.0	15.0
Steel	10.0	26.0
Industrial Park		32.0
Large Commercial		22.5
Mines		55.2
Irrigation	1.6	25.0
Tea		54.6
TOTAL MW	26.6	230.3

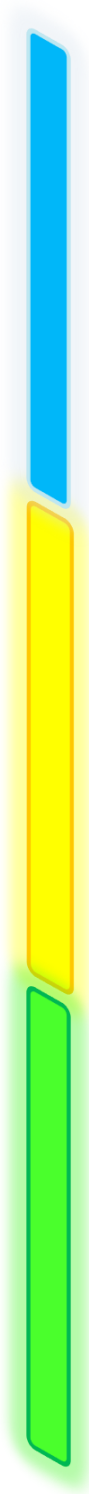
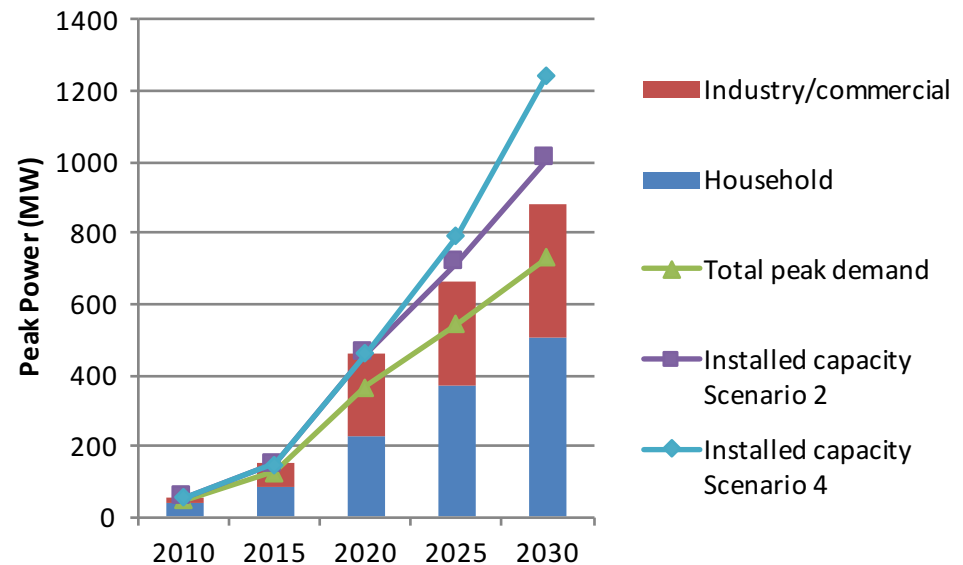
- Beyond 2018, assume 4% annual growth in baseline scenarios
- Energy efficient scenario 3% annual growth

Implied Growth in Electricity Demand

Annual electricity generation
(GWh/yr)



Peak Power (MW)



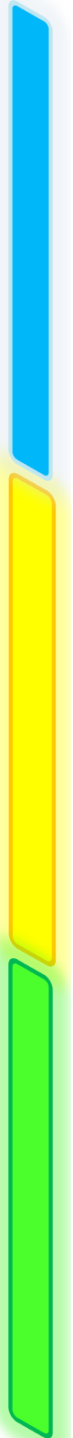
Actions: Electricity Access (1 of 2)

Issue	Institution	Action
Develop off-grid sector	MININFRA, MINICOFIN	Establishment of a Rwandan Energy Development Fund (REDF).
On and off-grid harmonisation	EUCL, eSWAP	Update of on-grid electrification plan
		Publish 3-yr grid development plan
		Harmonisation of off-grid plans with EARP-II
		Publish 3-yr off-grid plan
		Identify long-term saturation levels of grid access, to allow efficient planning of off-grid solutions
		Work with development partners to increase the time over which there is forward visibility over funding pipeline for grid extension
On-grid development	EUCL	Incorporate gender impact assessment into existing tools
		Develop an O&M and grid replacement strategy with detailed costing
Tariff review	RURA, MININFRA	Integrate environmental criteria into route-selection process
Off-grid strategy	MININFRA	Regular review, to include forecasts on consumption growth, demographic & urbanisation trends, strengthening coordination and inputs from MININFRA and planning tools
		Develop & approve strategy
	MININFRA, MINECOFIN	Implementation & develop national off-grid database
		Elaboration of the Rwanda Energy Development Fund

Actions: Electricity Access (2 of 2)

Issue	Institution	Action
Regulatory environment for off-grid	RURA, MININFRA	Develop legal and regulatory environment alongside and informed by the off-grid strategy
Productive user prioritization	EARP, MINICOM	Electrification plan to reflect priorities
		Close monitoring & annual reviews of productive user prioritization
Public services connections	REG, MININFRA	Implementation of school and hospital electricity access projects
		Analysis of EARP expansion
		Development of rigorous feasibility studies for schools and hospitals including off-grid options
		For off-grid schools & health centres, ensure adequate funds for O&M, delegate budgets to local authorities
Innovative approaches to scaling up off-grid	MININFRA	Develop pilot concept
		Undertake pilot projects. Apply for climate finance, carry out awareness campaigns & evaluate ()
Small-scale off-grid distributors	RURA, MININFRA, MINECOFIN	Revision of licensing framework
		Analyse eventual inclusion under REFIT with grid expansion
		Hybrid system comparative analysis
	Cost-benefit analysis of fiscal policy measures such as reducing VAT & import taxes on renewable energy equipment.	
	MININFRA	Vocational training for local entrepreneurs and professionals who want to develop their activities in the energy sector
Financial partnerships	MININFRA, REG	Collaboration with local financial institutions to develop mechanisms to scale up access to finance

ELECTRICITY GENERATION PATHWAYS & ACTIONS



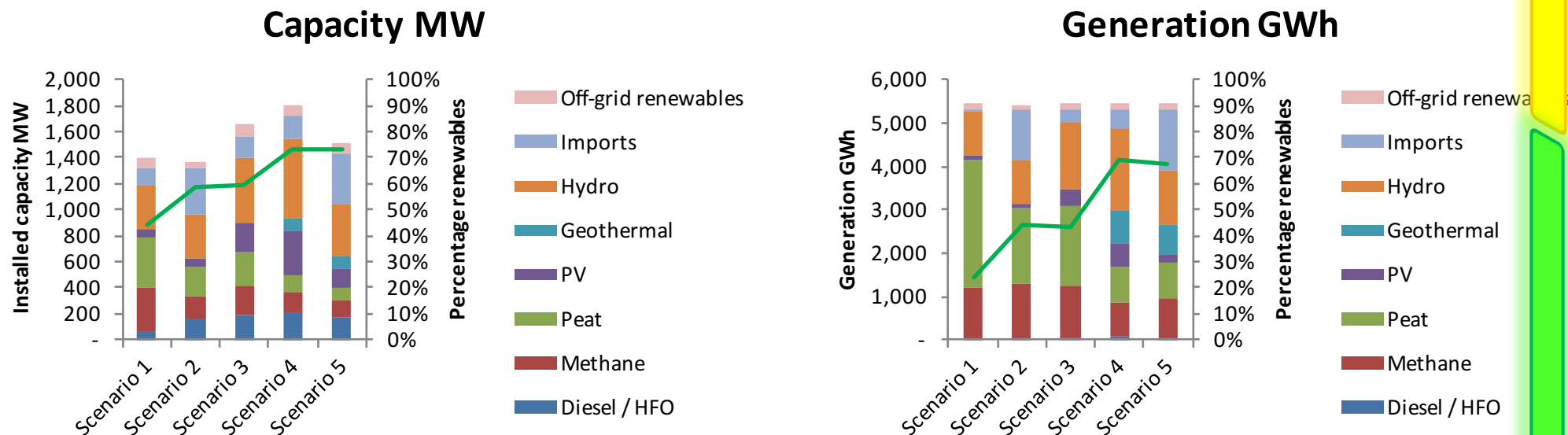
Renewable Energy Scenarios

Scenario	name	RE share of capacity / generation	Assumptions by 2030
1	Base case: Extended thermal plant	43% / 47%	Growth in the share of peat and methane continues after 2020. Imports restricted to 10% of capacity mix (130 MW). The remainder of the generation mixture of hydro, solar and some diesel for peaking.
2	"Current mix"	58% / 71%	The percentage capacity mix planned for 2018 stays the same until 2030. 57% of renewable energy, including 27% imports, 25% hydro and 5% PV.
3	"Domestic renewables"	58% / 63%	Same share of renewables as Scenario 2, but less reliance on imports (10%) of capacity. Additional renewables from domestic resources.
4	"Domestic renewables – high"	73% / 86%	Renewable sources increased to 72%. Imports 10%, hydro increases to 36%, solar 20%, geothermal 6%. The remainder of generation is thermal .
5	"Imported renewables – high"	73% / 70%	Same share of renewables as Scenario 4, but higher level of 27% imports (as per Scenario 2).

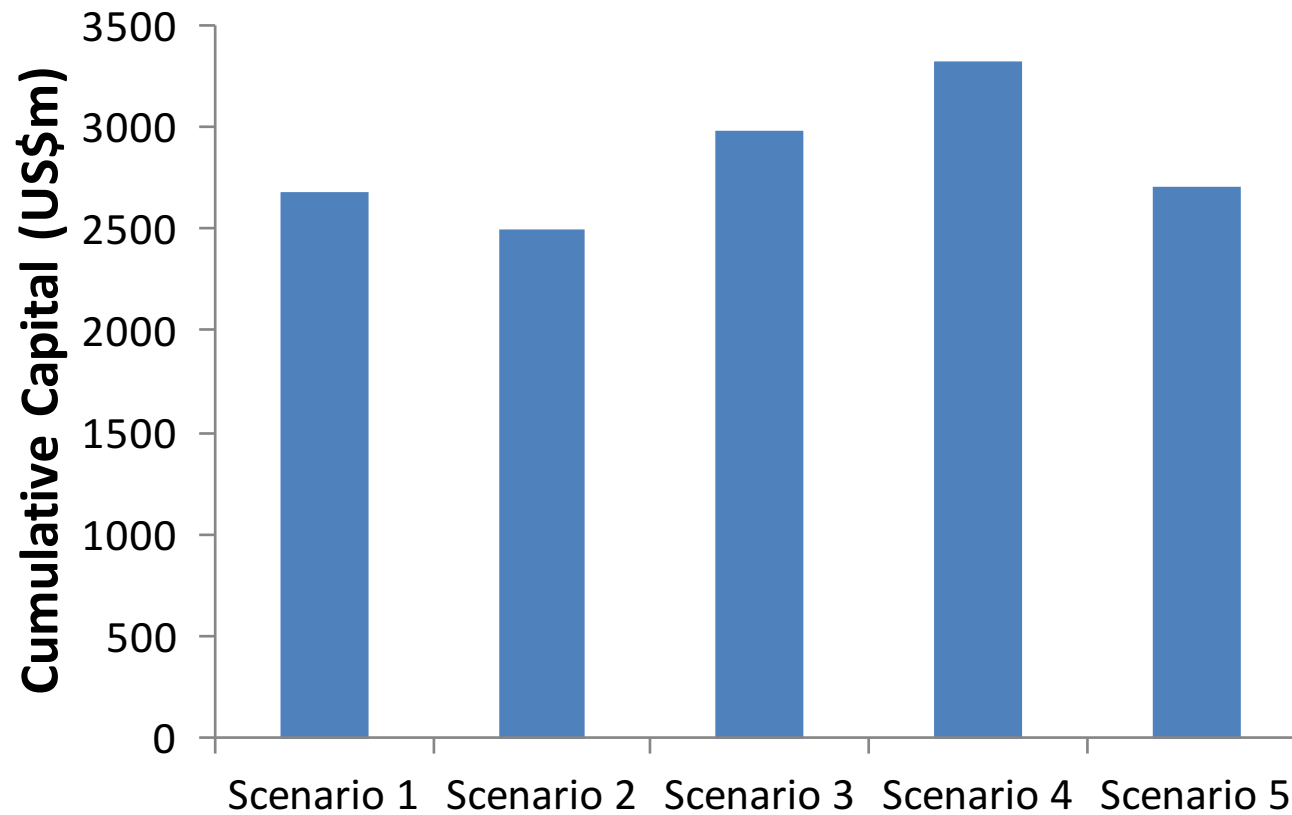
Renewable Energy Scenarios

Renewable capacity illustrated through different scenarios:

- Capacity mix up to 2020 fixed by ESSP plans
- 2030 scenarios vary what is built after 2020
- Imports counted as renewables
- Peat & methane not counted as renewables

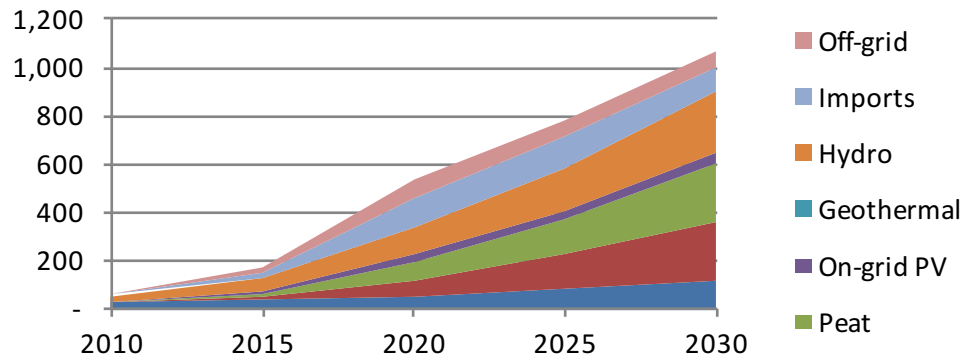


Cumulative capital costs by 2030



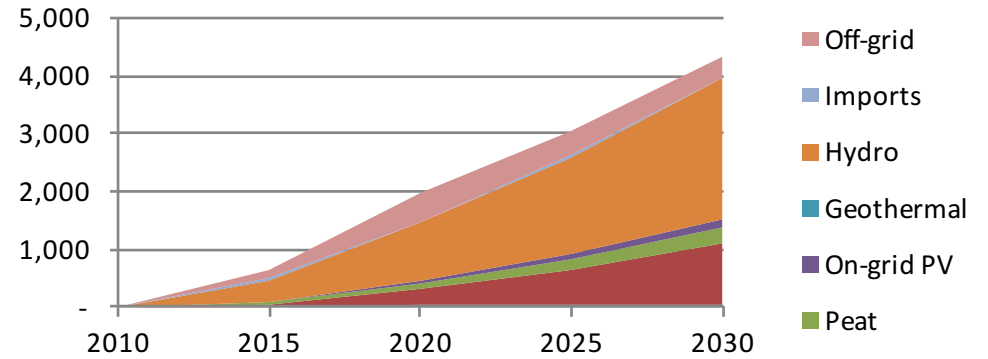
CAPACITY (MW)

Scenario 1: Capacity MW

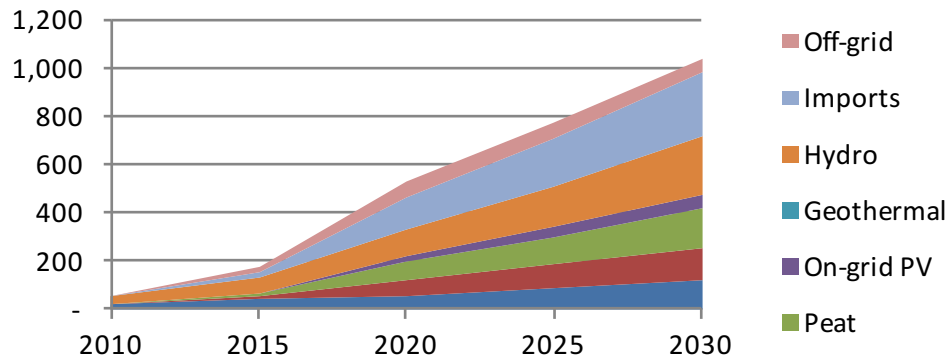


CAPITAL COSTS (\$M)

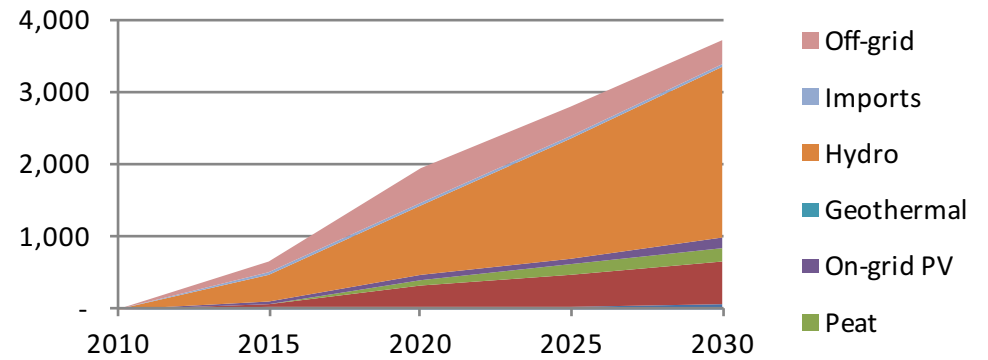
Scenario 1: Total capital cost \$m



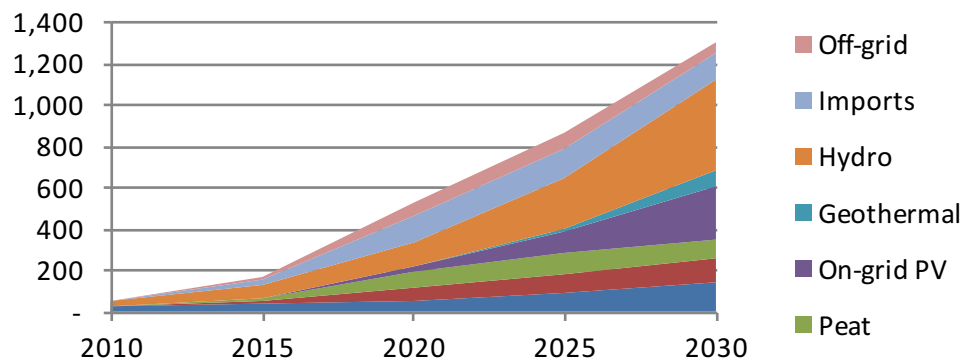
Scenario 2: Capacity MW



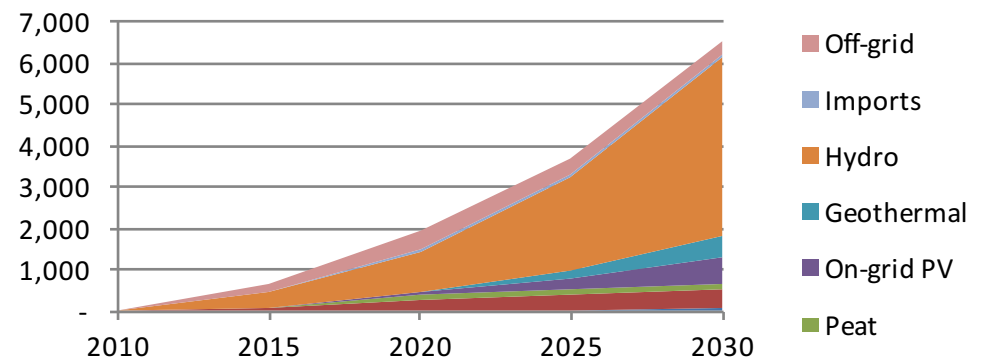
Scenario 2A: Total capital cost \$m



Scenario 4: Capacity MW

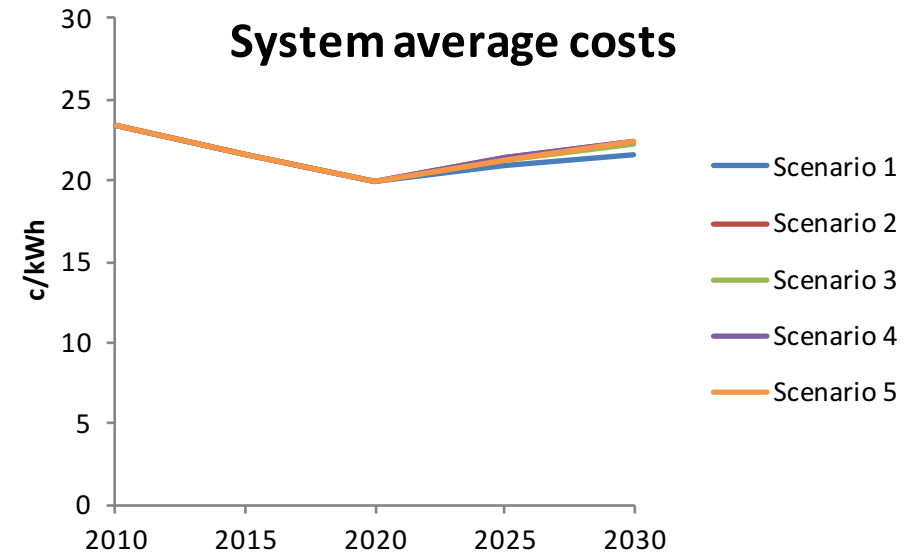


Scenario 4: Total capital cost (\$m)

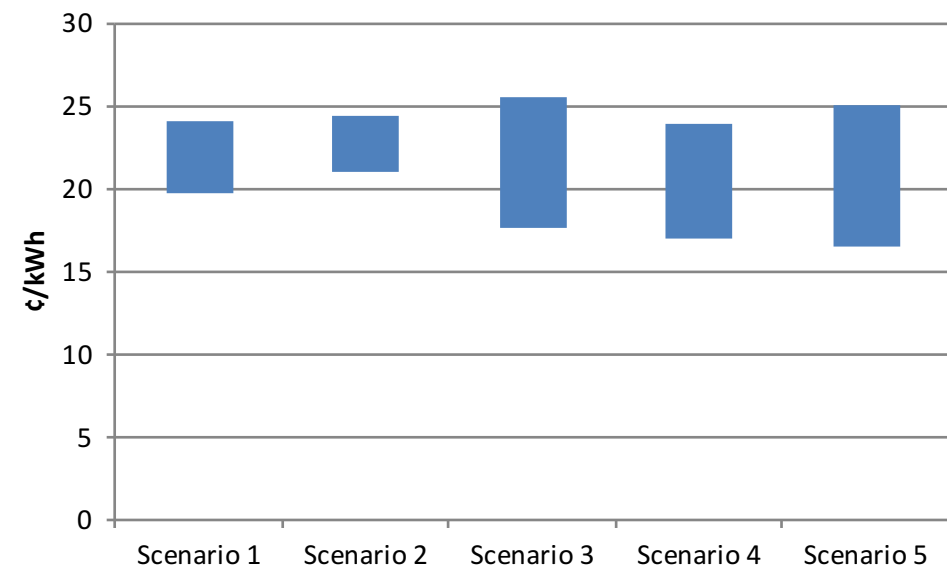


Total system cost per unit (on-grid) including industry & commercial

Cost variation over time for
different scenarios

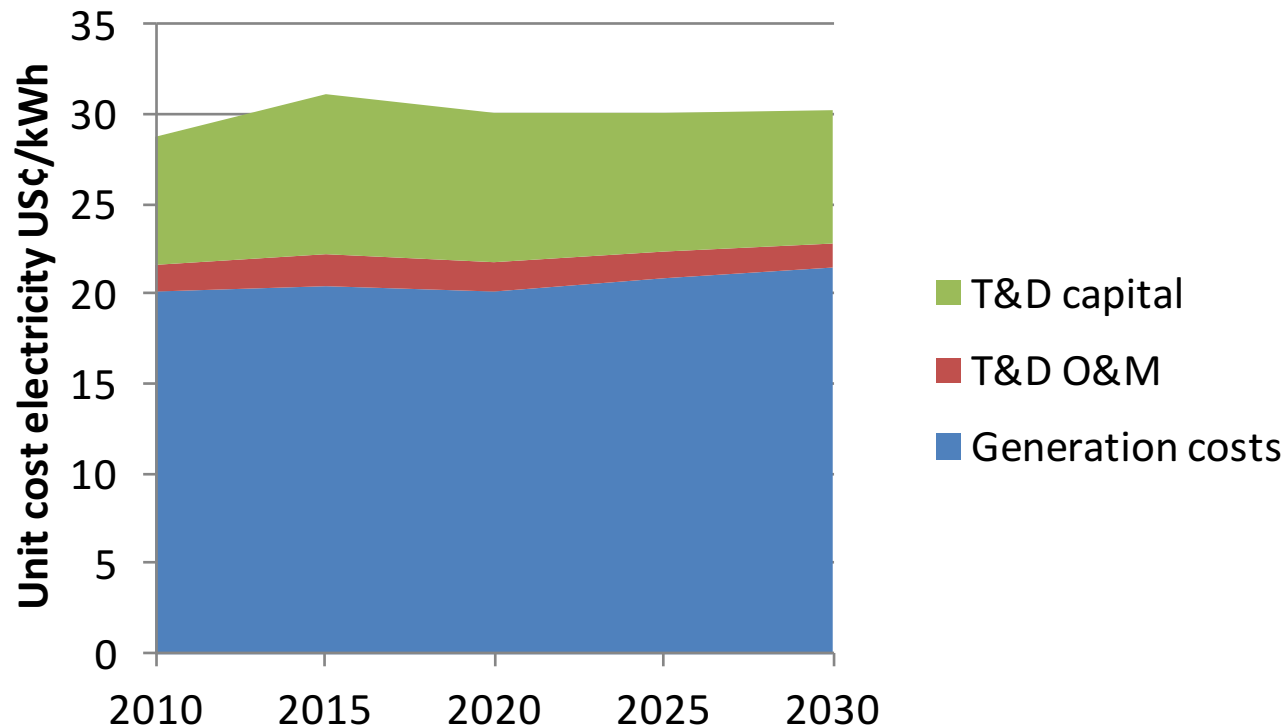


Cost uncertainty in 2030
depending on the scenario



Average unit costs for households (urban and rural)

- Household costs are higher than system average costs because of the higher transmission & distribution (T&D) costs
- Fixed costs of T&D divided by relatively low consumption per household leads to high unit costs
- All capital costs considered 6% interest rates
- Not all of this T&D cost would need to be factored into the household tariff immediately if it is partly grant funded



Actions: Electricity Generation (1 of 3)

Issue	Institution	Action
Electricity Generation planning	REG	Dedicated planning unit established
		Demand survey and forecast undertaken
		-Integrate all studies and plans into a National Power Master Plan. -Annual reviews undertaken. -Align with EAPP Master Plan
		Monitor energy-environment data, and integrate into the energy sector's information management system (including regional projects)
	MININFRA, REG	Review of institutional arrangements and capacity needs for implementing strategy including REG reform
		Prepare and implement LCPDP
		Annual update of LCPDP as part of overall planning exercise
		Boost MININFRA strategic long-term planning capacity by developing in-house models & analytical capacity
		Make transparent how trade-offs between cost, carbon intensity, diversification etc. will be decided
		Integrate robustness into the design of infrastructure to cope with climate change & variability
		Manage technology uncertainty & risk by maintaining flexible and adaptive planning and policy framework
		Increase technical capacity of key institutions (MININFRA, RURA, REG) to deal with the more complex generation plant
		Reduce carbon intensity: annual grid mission calculation exercise and update and extend forecasts

Actions: Electricity Generation (2 of 3)

Issue	Institution	Action
Feasibility Studies	REG	Develop Peat resource assessment
		Peat Strategy Action Plan
		Incorporate SEA on Rwanda's wetland habitats into Peat Strategy
		Further geothermal studies
		Methane action plan
Manage environmental impacts	REMA, MININFRA	Avoid environmentally sensitive areas when siting energy installations
		Integrate environmental criteria into site selection process
		Develop an energy sector land-use plan to reduce competition and clarify where to locate infrastructure
		Additional studies as and when required e.g. regional hydro, wide ranging Methane study
Timely maintenance	EUCL	Full plan of power plant maintenance and grid network developed
Cost-reflective tariff	RURA, MININFRA, EUCL, MINECOFIN	Ability to pay assessment, and new methodology adopted
		Annual review of tariffs.
		Targets industries approved
Regional Integration	MININFRA	Development of Action Plan to operationalise import opportunities
		Implementation of Action Plan
REFIT	RURA, MININFRA	Draft standardised PPAs for REFIT
		Expand REFIT coverage of clean energy resources
Autonomous generation	MININFRA	Research on optimal system integration and simplified regulation developed. Conduct study on systems impact.
		Pilot projects to test impact and develop legal framework for net metering

Actions: Electricity Generation (3 of 3)

Issue	Institution	Action
Financing & contracting	REG, MININFRA, REMA	Review contract design to assess suitable risk-sharing agreements
		Ensure contracts allow a move away from the use of diesel and HFO as baseload generation sources.
		Complete a stand-alone ESIA for all projects, incorporating mitigation measures and cumulative impacts
		Highlight environmental management requirements included in tender evaluation criteria, and ensure financial bids reflect these in budget.
		Integrate environmental criteria into the licensing process
Private sector support	MININFRA	Enable transmission connections to be forward paid by energy developers
		Operational guidelines for the provision of access roads, including mechanisms for private sector procurement and reimbursement of access road costs
		Streamline investment promotion processes for IPPs
		Empower local enterprises to engage in energy sector deals
		Reduce barriers to importing critical items of equipment for energy sector including for the private sector

ENERGY EFFICIENCY – PATHWAYS & ACTIONS



Energy Efficiency: Key Messages

- If 'energy for all' is to be sustainable and affordable, then energy efficiency needs to be massively improved:
 - Cookstoves
 - Electricity efficiency
 - Energy consumption growth needs to be about half the rate of GDP growth to make electricity systems affordable in the long-run
 - e.g. 6% GDP growth, 3% energy growth

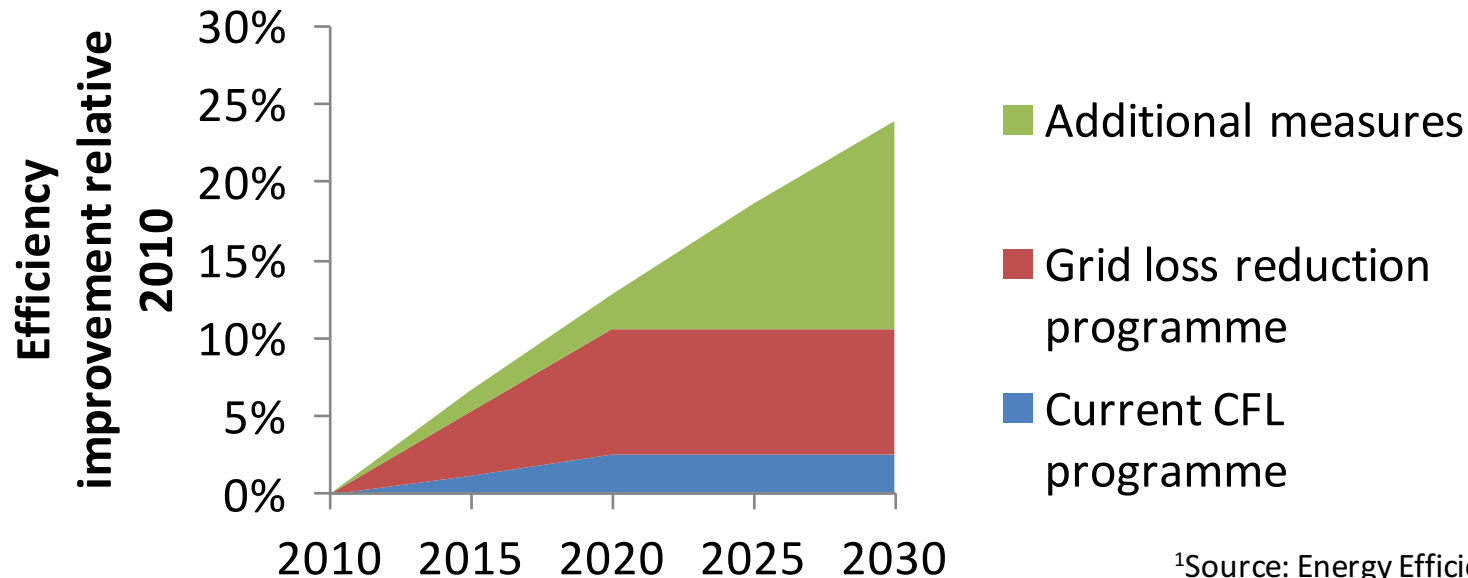


Targets for energy efficiency

1. Biomass for cooking: Double energy efficiency

		2009	2020	2030
Biomass energy	'000 toe	1605	1632	1891
Useful energy demand	% rel to 2009	100%	159%	262%
Efficiency	rel to 2009	1.0	1.6	2.3

2. Electricity efficiency: Extend energy savings rate up to 2030¹

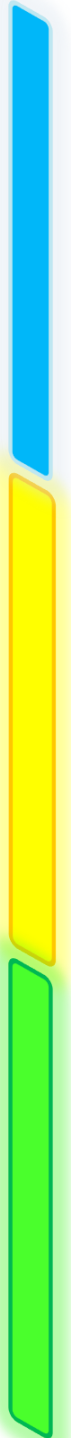


¹Source: Energy Efficiency, a compelling global resource. McKinsey

Actions: Energy Efficiency

Issue	Institution	Action
Grid Loss Reduction Plan (GLRP)	REG	Implement Phase I of GLRP
		Implement Phase II of GLRP
		Installation of smart meters on distribution transformers
Establish Dedicated EE/DSM Unit	REG, MININFRA	Develop staffing and business plan and establish EE/ DSM Unit
		Conduct detailed energy end-use surveys
		Behavioural change campaigns, investigate bulk procurement and distribution of efficient lighting, assess viability of incentives (retrofit subsidies)
		Move beyond compact fluorescent lamps to promote LEDs instead.
Industry Energy Audits	MININFRA, RSB	Develop strategy, business model for EE revolving fund
		Develop benchmarks and adopt minimum energy performance standards
Green procurement	RPPA & REMA	Develop new guidelines, legislation & pilot
EAC–Wide Standards and Labelling	RSB	Standards Development; Raise Funds for Implementation
		Pilot implementation of new standards
EE Strategy and Law	MININFRA	Develop Strategy. Develop and submit Energy Efficiency Law for approval
Buildings	RHA & RURA	Revise Building Code
		Enforce Codes
Solar hot water	REG, MININFRA	Carry out a market survey of hot water use and projections
		Carry out the recommendations of the SWH programme mid-term review

NEXUS TARGETS



Nexus Issue	Issue	Target
Health	Indoor air quality from cooking.	All households to be at Tier 3 or above air quality standards
Water	Coordination of water planning.	Hydro plant fully integrated into IWRM plans by 2020 for domestic use, energy, agriculture, and industry. Multi-use schemes routinely considered in project planning.
	Vulnerability of hydro supplies to climate change impacts	By 2020, all hydropower and multi-use schemes fully assessed for climate vulnerabilities and adaptation measures identified and costed. By 2030, majority of schemes have risk-mitigation strategies implemented.
Food	Land-use competition	Beyond 2020, no net expansion of land use for forestry or other energy production to avoid further conflict with food security objectives.
	Energy consumption for irrigation	Water irrigation is planned to increase significantly, and solar PV powered pumps should be routinely considered as the way to provide energy for such systems. Such technologies can help improve resilience to climate change.
Women	Time spent on biomass collection	Halve the amount of time by women in rural areas spent collecting firewood by 2030.
	Quality of cooking options	Involve women in the selection of technologies (e.g., cook stoves) and in the selection of relevant research topics in support of the SE4All targets.
	Training	Provide relevant training to women (e.g., on better water management or water storage for energy purposes, including for biogas installations, improved cookstoves etc.
	Employment	Involve women as actors in the value chain for marketing the stoves as energy entrepreneurs

THANK YOU!

