

Regulatory Indicators for Sustainable Energy (RISE) 2017 Country Data - India

Clean Cooking

Indicator	Score
Planning	100
Scope of planning	83
Standards and Labeling	48
Incentives and attributes	56
Total	71.75

Electricity Access

Indicator	Score
Existence and monitoring of officially approved electrification plan	94
Scope of officially approved electrification plan	50
Framework for grid electrification	67
Framework for minigrids	73
Framework for stand-alone systems	78
Consumer affordability of electricity	100
Utility Transparency and Monitoring	100
Utility Creditworthiness	2
Total	70.5

Energy Efficiency

Indicator	Score
National energy efficiency planning	83
Energy efficiency entities	99
Information provided to consumers about electricity usage	56
EE incentives from electricity rate structures	78

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Incentives & mandates: Industrial and Commercial End users	53
Incentives & mandates: public sector	20
Incentives & mandates: utilities	84
Financing mechanisms for energy efficiency	95
Minimum energy efficiency performance standards	72
Energy labeling systems	75
Building energy codes	15
Transport	33
Carbon Pricing and Monitoring	100
Total	66.38

Renewable Energy

Indicator	Score
Legal framework for renewable energy	100
Planning for renewable energy expansion	84
Incentives and regulatory support for renewable energy	95
Attributes of financial and regulatory incentives	92
Network connection and use	73
Counterparty risk	67
Carbon Pricing and Monitoring	100
Total	87.29

Overall Score	73.98
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Clean Cooking

Planning	Score	100
Does the government track household level data on cooking solutions?		Yes

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Is the data publicly available?	Yes
Is the data gender disaggregated?	Yes
Is there a national or regional plan to scale up access to clean cooking solutions, or is access to clean cooking solutions covered as a part of any other government plan (regardless of the sector)?	Yes
If not, is there a draft plan that has been prepared but not yet been approved?	No
If yes, when was the latest national plan officially approved?	1986
Has the plan gone through public consultation?	Yes
Have consultations taken the gender of participants into account?	Yes
Are there agencies dedicated to the following functions?	-
Setting clean cooking strategy/action plan	Yes
Setting, monitoring and enforcing standards for clean cooking solutions	Yes
Tracking access and adoption of clean cooking solutions	Yes

Scope of planning	Score	83
Does the plan take into account geographical and demographical considerations to prioritize the most vulnerable consumers?	Yes	
Does the plan include considerations and action items for involving women throughout the supply chain of clean cooking solutions?	Yes	
Is there a targeted awareness raising strategy to drive adoption of clean cooking solutions, such as any of the following	-	

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<p>Training programs for new stove technologies</p>	<p>Training programs have been sporadic and under many different programs targeting clean cooking. There is lack of clarity on adequacy and quality. Instances include: 1. Five per cent of the budget of Unnat Chulha Abhiyan (UCA) was dedicated to awareness generation around the positive aspects of using improved cookstoves and ill-health effects of traditional stoves. 2. For NBMMP, MNRE started in 2015 that it is supporting the state agencies across the country for taking up promotional activities through communication and publicity component. Targets for various training courses including for awareness / promotional activities are allocated annually to all the designated state agencies. They all conduct regular training programmes besides preparation of publicity material for wider dissemination of the NBMMP in the States. (http://www.cag.gov.in/sites/default/files/audit_report_files/Union_Civil_Performance_Renewable_Energy_Report_34_2015_chap_8.pdf) 3. Under the erstwhile NPIC in 1984,</p>
<p>Cooking competitions with stove technologies</p>	<p>Public innovation challenges have been held but only sporadically</p>

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Nationally-sponsored educational campaigns for new stove technologies	Several educational institutes like IISc Bangalore, IIT Bombay have courses on cookstove technology. However this is primarily for in-house students and researchers.
Private sector advertising campaigns for new stove technologies	Private sector companies like Envirofit
Partnerships with CSOs and community-based organizations	The government is promoting community cookstoves under the UCA program. Community cookstoves are mandated to be deployed for Midday Meals kitchens, Anganwadis (a type of rural mother and child care centre in India), tribal/Scheduled Caste/backward caste hostels, govt. and forest rest houses etc.
Other	GIZ and Global Alliance for Clean Cookstoves are supporting UCA in activities such as awareness creation, stakeholder capacity building
Details of other program	
Does the awareness strategy include targeted messages to both men and women?	Yes
Is there a last mile distribution strategy ³ in place for cooking fuels?	Yes
Is there a last mile distribution strategy in place for cooking	No

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technologies?

Standards and Labeling	Score	48
Are there standards for the following aspects of clean cooking solutions		-
Efficiency		Yes
Emissions		Yes
Safety		Yes
Have the standards been adopted from external standards or developed domestically?		Domestically developed
Is there a verification program in place for standards?		Yes
Does the program work with a standards testing facility or lab?		Yes
Does the stove testing facility or lab need to be accredited?		No
Have the standards been verified through field testing?		No
Have labeling schemes been adopted on clean cooking products for the following		-
Efficiency		No
Emissions		No

Incentives and attributes	Score	56
Are there specific financing facilities available to support suppliers/consumers to develop/purchase clean cooking solutions?		Yes

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Are there specific financing or subsidy programs for clean cooking solutions targeted to low income consumers?	Yes
Are there duty exemptions, tax benefits, and/or subsidies to support clean cooking solutions?	
Are there programs for commercial entities to invest in efficient, low-emission stoves? (time stamping) Please indicate the year in which each program was first made available	No

Electricity Access

Existence and monitoring of officially approved electrification plan	Score	94
Is there an officially approved national electrification plan?		Yes
Are the electrification plan and the updates publicly available?		Yes
Is there a requirement for periodic progress reports tracking progress towards the defined energy access target?		Yes
Does the reporting actually take place?		Yes
Are there institution(s) responsible for carrying out the following functions		-
Setting electrification strategy		Yes
Setting electrification milestones and deadlines		Yes
Coordinating generation, transmission, and distribution plans and their implementation		Yes
Reporting progress towards the defined energy access target/milestones with periodic reports		Yes
Is the electrification plan developed based on demand assessment?		Yes

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Were there any public consultations while developing the plan?	No
Is there a provision for the plan periodic evaluations?	Yes

Scope of officially approved electrification plan	Score	50
Does the plan target a service level (e.g., power availability, number of guaranteed hours of power supply, etc.)?	Yes	
Does the electrification plan include off-grid solutions (either/or both minigrids and standalone systems)?	Yes	
Does the plan include productive uses (e.g. agricultural, commercial, and industrial activities)?	Yes	
Does the plan include community facilities (e.g. health centers, schools, administrative buildings)?	Yes	
Does the plan include areas with informally settled people/groups?	No	
Does the plan specifically address the electricity access of female-headed households?	No	
Does the plan set up a specific target on female-headed households' electrification?	No	
Are there geospatial maps conveying the timeframe of planned grid extension?	No	
Are these geospatial maps made publicly available?	No	

Framework for grid electrification	Score	67
Does the government have a dedicated funding line or budget for electrification (e.g., funded national program, budget item, rural electrification fund to finance grid extension)?	Yes	

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Are there capital subsidies paid to the utilities to provide distribution systems to rural areas/villages?	Yes
Are there consumer financing mechanisms (i.e. utility loans, on bill financing, micro-loans etc.) and/or direct subsidies available to support the payment of connection fees by consumers?	Yes
Are there consumer financing mechanisms targeting specifically female headed households?	No
Are there consumer financing mechanisms targeting low-income households?	Yes
Does the government specify standards of performance on reliability (e.g. number of guaranteed hours per day, duration of the electricity, frequency of outages, SAIDI, SAIFI etc.)?	No
Is there a periodic reporting system in place to ensure standards compliance?	No

Framework for minigrids	Score	73
Are there programs which aim to develop minigrid systems or support the development of minigrids systems?	Yes	
Do the regulations clarify what will occur when the interconnected grid reaches a minigrid?.	No	
Are there national programs which aim to develop stand-alone systems or support the development of stand-alone systems?	Yes	
Are minigrids legally allowed to operate in the country?	Yes	
Can minigrids be owned and operated by private operators?	Yes	
Do the regulations detail procedures for consumers to get connected to minigrids?	No	
Do the regulations differ by size of minigrids?	No	

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Are mini-grid operators legally allowed to charge a different tariff from the national tariff?	Yes
Are there publicly funded mechanisms to secure viability gap funding for operators?	Yes
Are there duty exemptions and/or capital subsidies for minigrid systems and/or individual components?	Yes
Are there specific financing facilities (access to credit etc.) available to support operators?	No
Are there duty exemptions and/or subsidies to support standalone home systems?	Yes
Are there legal restrictions that limit the prices standalone home system retailers or service providers can charge?	No
Are there specific financing facilities available to support operators/consumers to develop/ purchase standalone home systems?	No
Are there technical standards detailing the requirements for minigrids to connect the grid?	Yes
Are technical standards made publicly available?	Yes
Are there safety standards for minigrids (e.g. overcurrent protection, system control etc.)?	Yes
Are these safety standards made publicly available?	Yes
Has the government adopted international quality standards for stand-alone systems?	Yes
Has the government adopted international testing methods or does it accept testing done in another country?	Yes
Are there environmental regulations on the disposal of solar devices and standalone home system products or components?	No

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Framework for stand-alone systems	Score	78
Are there programs which aim to develop minigrid systems or support the development of minigrids systems?		Yes
Do the regulations clarify what will occur when the interconnected grid reaches a minigrid?.		No
Are there national programs which aim to develop stand-alone systems or support the development of stand-alone systems?		Yes
Are there publicly funded mechanisms to secure viability gap funding for operators?		Yes
Are there duty exemptions and/or capital subsidies for minigrid systems and/or individual components?		Yes
Are there specific financing facilities (access to credit etc.) available to support operators?		No
Are there duty exemptions and/or subsidies to support standalone home systems?		Yes
Are there legal restrictions that limit the prices standalone home system retailers or service providers can charge?		No
Are there specific financing facilities available to support operators/consumers to develop/ purchase standalone home systems?		No
Are there technical standards detailing the requirements for minigrids to connect the grid?		Yes
Are technical standards made publicly available?		Yes
Are there safety standards for minigrids (e.g. overcurrent protection, system control etc.)?		Yes
Are these safety standards made publicly available?		Yes
Has the government adopted international quality standards for stand-alone systems?		Yes

Regulatory Indicators for Sustainable Energy (RISE)

Has the government adopted international testing methods or does it accept testing done in another country?	Yes
Are there environmental regulations on the disposal of solar devices and standalone home system products or components?	No

Consumer affordability of electricity	Score	100
What is the annual cost of subsistence consumption (30kWh/month) as a percentage of GNI per household of the bottom 20 percent income households of the population?		
How many months does it take for the consumer to pay the connection fee based on savings of the bottom 20 percent of population?		
Is there a mechanism to support low-volume consumers such as social or lifeline tariff?	Yes	

Utility Transparency and Monitoring	Score	100
Are the financial statements of the largest utility publicly available for each of the following	-	
Generation	Yes	
Transmission	Yes	
Distribution	Yes	
Retail sales	Yes	
If yes, are they audited by an independent auditor for each of the following	-	
Generation	Yes	

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Transmission	Yes
Distribution	Yes
Retail sales	Yes
Are the following metrics published in a primary official document (by the utility, regulator or ministry and/or government)?	-
Generation - Electricity available for sale to end-users	Yes
Transmission - Transmission loss rate	Yes
Distribution - Distribution loss rate	Yes
Retail Sales - Bill collection rate	Yes
Is the utility operating an incidence/outage recording system (or SCADA/EMS with such functionality)?	Yes
Is the utility measuring the SAIDI and SAIFI or any other measurements for service reliability?	Yes
Are the measurements reported to the regulatory body?	Yes
Are the measurements available to public?	Yes

Utility Creditworthiness	Score	2
No Data Found		

Energy Efficiency

National energy efficiency planning	Score	83
Is there legislation or a national action plan that aims to increase EE?	Yes	

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Is there an energy efficiency goal or target at the national level?	Yes
Are there targets defined for any of the following sectors?	-
Residential sector	Yes
Commercial services sector	Yes
Transport sector	No
Industrial sector	Yes
Power sector	Yes
Are targets derived from detailed analysis that is publicly available?	Yes
Is there a requirement for periodic progress reports tracking data related to the efficiency target(s)?	Yes

Energy efficiency entities	Score	99
Are there governmental and/or independent bodies that carry out formulation and implementation of EE strategy, policy and regulation for each of the roles listed below	-	
Setting EE strategy	Yes	
Setting EE standards	Yes	
Regulating EE activities of energy suppliers	Yes	
Regulating EE activities of energy consumers	Yes	
Certifying compliance with equipment EE standards	Yes	
Certifying compliance with building EE standards	Yes	

Regulatory Indicators for Sustainable Energy (RISE)

Selecting and/or approving third party auditors tasked with certifying EE standards	Yes
Are energy efficiency programs developed based on market analyses with plans open to public consultation and periodic evaluation?	Yes
Are there professional certification/accreditation programs mandated for any of the following energy efficiency activities	-
Energy auditing/energy management	Yes
Energy efficiency financing	Yes
Monitoring and verification of energy consumption/savings	Yes
Building energy efficiency construction/design	Yes
Other	No

Information provided to consumers about electricity usage	Score	56
Is it mandatory for the selected utility to provide the following customers with reports of their energy usage, in a bill or by other means for residential customers, commercial services customers, and industrial customers?		
Residential customers	Yes	
Commercial customers	Yes	
Industrial customers	Yes	
At what intervals do they receive these reports (times per year)?		
Residential customers		12
Commercial customers		12

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Industrial customers	12
Do the reports include the price levels customers pay for energy usage?	
Residential sector	Yes
Commercial sector	Yes
Industrial sector	Yes
Does the regulator track the utility's compliance with laws for providing energy usage information to customers?	Yes
Do customers receive a bill or report which compares them to other users in the same region and/or usage class?	-
Residential customers	No
Commercial customers	No
Industrial customers	No
Do customers receive a bill or report that shows their energy usage compared to previous bills or reports over time?	
Residential customers	Yes
Commercial customers	Yes
Industrial customers	Yes
Does the selected utility offer customers access real time feedback on energy usage (for either prepaid or post-paid systems)?	No
Does the selected utility offer customers the ability to manage energy usage levels remotely (through apps or other technology mediums that can track real time usage)	No

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EE incentives from electricity rate structures	Score	78
What types of electricity rate structure do the residential, commercial services, and industrial customers face?		-
Residential customers		-
Commercial customers		-
Industrial customers		-
Which of the following charges do electricity customers pay in the commercial services sector and industrial sector?		-
Commercial sector		-
Industrial sector		-
Are any of the following time-of-use (TOU) rate structures applied to the residential sector, commercial services sector, and industrial sector?		-
Residential sector		-
Commercial sector		-
Industrial sector		-

Incentives & mandates: Industrial and Commercial End users	Score	53
Are there any of the following energy-efficiency mandates for large energy users?		-
Targets (e.g. kWh savings or lower energy intensity or carbon dioxide reductions, etc.)		Yes
Mandatory audits		Yes

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Progress/tracking reports	Yes
Energy-management system (computer technologies to optimize energy use)	No
Are there penalties in place for non-compliance with regulatory obligations for EE?	Yes
Is there a requirement for periodic reporting of energy consumption in order to enforce and/or track progress of energy efficiency in large consumers' facilities?	Yes
Is there a measurement and verification program in place?	Yes
Are energy efficiency incentives in place for large-scale users?	No
Is there an energy efficiency mandate or incentive program for SMEs?	Yes
Is there a program to publicly recognize end users that have achieved significant energy savings measures?	Yes
Are energy savings and/or financial savings publicized?	No
Does the program offer assistance (from a government or independent entity) to end users to identify energy savings investments opportunities?	Yes

Incentives & mandates: public sector	Score	20
Are there binding energy savings obligations for public buildings and/or other public facilities (may include water supply, wastewater services, municipal solid waste, street lighting, transportation, and heat supply) ?		No
Is there a reporting mechanism to track and enforce energy savings in public sector facilities (either in-house or by a third party)?		No
Is there a specific policy or mandated guidelines for public procurement of energy-efficient products and services?		Yes

Regulatory Indicators for Sustainable Energy (RISE)

Are procurement guidelines updated periodically to reflect technological advances and best practices in energy efficient products and services?	Yes
Do public budgeting regulations and practices allow public entities to retain energy savings at the following levels?	No

Incentives & mandates: utilities	Score	84
Generation	-	
Are utilities required to carry out energy efficiency activities in this area?	Yes	
Are there penalties in place for non-compliance with EE requirements?	Yes	
Are energy savings or other target indicators measured to track performance in meeting EE requirements?	Yes	
Are the requirements measured/validated by an independent third party?	Yes	
Transmission and distribution networks	-	
Are utilities required to carry out energy efficiency activities in this area?	Yes	
Are there penalties in place for non-compliance with EE requirements?	Yes	
Are energy savings or other target indicators measured to track performance in meeting EE requirements?	Yes	
Are the requirements measured/validated by an independent third party?	No	
Demand-side management	-	

Regulatory Indicators for Sustainable Energy (RISE)

Are utilities required to carry out energy efficiency activities in this area?	Yes
Are there penalties in place for non-compliance with EE requirements?	Yes
Are energy savings or other target indicators measured to track performance in meeting EE requirements?	Yes
Are the requirements measured/validated by an independent third party?	No
Are any of the following mechanisms available for utilities to recover costs associated with or revenue lost from mandated energy efficiency activities in the residential, commercial, and/or industrial sectors	-
Public budget financing	Yes
Compensation for revenue losses from EE activities via a tracking account	No
Revolving funds and/or credit lines for EE activities	No
Partial risk guarantees	No
Program cost recovery	Yes
On-bill financing/pre-payment	Yes
Decoupling	No

Financing mechanisms for energy efficiency	Score	95
Are any of the following financing mechanisms for energy efficiency activities available in the (R) residential sector, (C) commercial services sector, and (I) industrial sector?	-	
Residential sector	-	

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Tax incentives	No
Discounted “green” mortgages	No
On-bill financing	Yes
Credit lines and/or revolving funds with banks for energy efficiency activities	No
Green or energy efficiency bonds	No
Energy services agreements (pay-for-performance contracts)	Yes
Vendor credit and/or leasing for energy efficiency activities	No
Partial risk guarantees	Yes
Commercial services sector	-
Tax incentives	Yes
Discounted “green” mortgages	No
On-bill financing	No
Credit lines and/or revolving funds with banks for energy efficiency activities	No
Green or energy efficiency bonds	Yes
Energy services agreements (pay-for-performance contracts)	Yes
Vendor credit and/or leasing for energy efficiency activities	No
Partial risk guarantees	Yes
Industrial sector	-
Tax incentives	Yes

Regulatory Indicators for Sustainable Energy (RISE)

Discounted "green" mortgages	No
On-bill financing	No
Credit lines and/or revolving funds with banks for energy efficiency activities	No
Green or energy efficiency bonds	Yes
Energy services agreements (pay-for-performance contracts)	Yes
Vendor credit and/or leasing for energy efficiency activities	No
Partial risk guarantees	Yes
How many financial and/or non-financial institutions offer financial products for energy efficiency investments in each sector?	-
Residential sector	-
Commercial sector	-
Industrial sector	-

Minimum energy efficiency performance standards	Score	72
Have minimum energy performance standards been adopted for the following product categories?	-	
Refrigerators	Yes	
Heating, ventilation and/or air conditioning (HVAC)	Yes	
Lighting equipment	Yes	
Industrial electric motors	No	

Regulatory Indicators for Sustainable Energy (RISE)

Other industrial equipment	Yes
Light vehicles (heavy duty transport vehicles were tracked but not included in the scoring)	Yes
Are there verification programs that include the following components for each product category	-
Refrigerators	-
Heating, ventilation and/or air conditioning (HVAC)	-
Lighting equipment	-
Industrial electric motors	-
Other industrial equipment	-
Light vehicles	-

Energy labeling systems	Score	75
Have energy efficiency labeling schemes been adopted for?	-	
Refrigerators	Yes	
HVAC	Yes	
Lighting equipment	Yes	
Industrial electric motors	Yes	
Other industrial equipment	Yes	
Transport vehicles	No	
Do the labeling schemes have the following components for each product category	-	

Regulatory Indicators for Sustainable Energy (RISE)

Refrigerators	-
HVAC	-
Lighting equipment	-
Industrial electric motors	-
Other industrial equipment	-
Transport vehicles	-

Building energy codes	Score	15
Are there energy efficiency codes for new residential buildings?	No	
Are there energy efficiency codes for new commercial buildings?	Yes	
Are the building energy efficiency standards required to be updated on a regular basis to reflect technological advances and changes in best practices for building energy efficiency in each sector	-	
Residential buildings	Yes	
Commercial buildings	Yes	
Is commission testing for energy efficiency required for final building acceptance documentation?	No	
Is there a requirement for periodic reporting to verify compliance with building energy efficiency requirements?	No	
Is verification carried out by a third party?	No	
Are renovated buildings required to meet a building energy code, in each sector	-	

Regulatory Indicators for Sustainable Energy (RISE)

Residential sector	No
Commercial sector	No
Are the building energy efficiency standards required to be updated on a regular basis to reflect technological advances and changes in best practices for building energy efficiency in each sector	-
Residential sector	No
Commercial sector	No
Is there a mandatory standardized rating or labeling system for the energy performance of existing buildings?	No
Are commercial and residential buildings required to disclose property energy usage at the point of sale or when leased?	No
Are large commercial and residential buildings required to disclose property energy usage annually?	No
Are there mandates or targets for new building stocks to achieve high quality energy efficiency certifications, such as LEED (Leadership in Energy & Environmental Design) (e.g. percentage of new building stocks that must be LEED certified)?	No

Transport	Score	33
Is there a national database or national reporting system to periodically track and report the following transport efficiency metrics	-	
Fuel per mile driven	No	
Average distance traveled per vehicle	No	
Distance traveled by public transit as a share of total passenger distance traveled	No	

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Vehicle miles traveled per capita	No
Other	No
Are there any mandate or incentive programs that support reduction of transport demands or shifts to more energy efficient modes of transport for personal use, such as	-
Regularly scheduled teleworking	No
Bicycle and/or other non-motorized schemes	No
Car sharing	No
Public transit subsidies for consumers	Yes
Congestion charges	No
Electric vehicle programs	Yes
Other	No
Is there a requirement for periodic reporting to verify compliance or progress of the program(s)?	No
Are there any mandate or incentive programs that support reduction of transport demands or shifts to more energy efficient modes of transport for commercial and/or industrial use, such as	-
Heavy duty vehicle fuel economy standards (data already collected in Indicator 10 can be scored here)	Yes
Freight rail mandatory fuel economy standards or efficiency incentives	No
Energy efficiency procurement standards or incentives for municipal rail and bus fleets	No
Efficient fuel switching mandate or incentive programs for commercial/industrial vehicle fleets	No

Regulatory Indicators for Sustainable Energy (RISE)

Other	No
Is there a requirement for periodic reporting to verify compliance or progress of the program(s)?	No

Carbon Pricing and Monitoring	Score	100
No Data Found		

Renewable Energy

Legal framework for renewable energy	Score	100
Does a legal framework for renewable energy development exist?		Yes
Does the legal framework allow private sector ownership of renewable energy generation?		Yes

Planning for renewable energy expansion	Score	84
Does an official renewable energy target exist?		Yes
Is the target legally binding?		Yes
Is the RE target linked to international commitments (eg. NDC or regional commitment)?		Yes
Is the target based on a transparent methodology?		Yes
Is there a renewable energy action plan or strategy to attain the target ?		Yes
Is there any provision for consultation with the public on the renewable plan?		Yes

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Is there an assessment of the role of renewables in electricity supply?	Yes
Is there a target for renewables in electricity?	Yes
Is there an assessment of the needs for heating and cooling in buildings and industry in the country and of how renewables can contribute?	Yes
Is there a specific target for renewables for heating and cooling?	Yes
Is there an assessment of the potential role for renewables in transport including biofuels and electrification?	Yes
Is there a specific target for renewables in transport?	Yes
Does the renewable plan or strategy estimate the amount of investment necessary to meet the RE target?	Yes
Is there an institution responsible for tracking progress in renewable energy development?	Yes
Is there any periodic reporting mechanism for renewable energy progress?	Yes
Is there a mechanism for adjusting the plan based on reporting of renewable energy deployment?	No
Is current policy environment conducive to renewable energy deployment?	Yes
Is generation and transmission planning integrated?	Yes
Is planning for dispatch included in the generation and transmission plan?	Yes
Is the generation plan based on a probabilistic approach?	No
Does the current transmission planning consider renewable energy scale-up?	Yes

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Does the government endorse and use the solar/wind resource maps and data applicable to their country that are available through the Global Solar Atlas / Global Wind Atlas, or have they published some other solar/wind resource map that conforms to best practice in the last five years?	Yes
Has the country carried out geospatial planning or produced zoning guidance to inform the commercial development of the RE resource?	No
Has the geospatial planning or zoning guidance been carried out according to best practice by	No

Incentives and regulatory support for renewable energy	Score	95
Does the country offer long term PPA's for renewable electricity production for large scale producers(e.g. via. feed-in-tariffs, PPA's awarded through auctions etc.)	Yes	
Does the country offer long term PPA's for renewable electricity production for small scale producers(e.g. via. feed-in-tariffs, PPA's awarded through auctions etc.)	Yes	
Does the government publish clear and practical guidance on what permissions are required to develop a RE electricity project?	Yes	
Does the government offer other direct fiscal incentives for renewable electricity (e.g. capital subsidies, grants or rebates, investment tax credits, tax reductions, production tax credits, FITs for large producers?)	Yes	
Does the country provide prioritized access to the grid for RE?	Yes	
Do RE projects receive priority in dispatch?	Yes	
Are there provisions to compensate seller if offtake infrastructure is not built in time?	Yes	
Are there mechanisms to compensate RE projects for lost generation due to certain curtailments after project	Yes	

Regulatory Indicators for Sustainable Energy (RISE)

commissioning?	
Is the compensation due because of curtailment actually given out.	No
Is there a biofuels blending mandate or other obligation to use biofuels?	Yes
Are there sustainability criteria which biofuels which contribute to the mandate must meet?	Yes
If there is a plan for producing biofuels in the country, has this included an assessment of sustainability impacts (e.g. against the GBEP Sustainability indicators) including an assessment of impacts on food security.	Yes
Is there at least one scheme to encourage use of electric/hybrid vehicles? (e.g. Tax benefit to consumers and manufacturers, etc.)	Yes
Are there any policies to encourage deployment of any renewable energy heating and cooling technologies?	Yes
Are there specific measures (financial support or promotion) designed to encourage the use of renewables in the heating and cooling sectors?	Yes
Are opportunities for renewable heat promoted alongside energy efficiency measures in buildings and/or industry?	Yes

Attributes of financial and regulatory incentives	Score	92
Is competition used to ensure large scale RE generation (projects >10MW) is cost competitive (e.g. through auctions for PPA's)?		Yes
Is there a schedule for future bids/auctions available for investors?		yes
Is there a pre-qualification process to select bidders?		yes
Are tariffs indexed (in part or in whole) to an international currency or to inflation?		Yes

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Are there provisions to ensure full and timely project completion (e.g. bid-bonds, project milestones)	Yes
Are projects awarded through auctions/bids online/on track to be online on stated date?	Yes
Have auctions/bids met stated target for installations?	No
Can small producers (residential, commercial rooftop PV, etc) connect to the grid?	Yes
Are contracts with fixed tariffs available for such producers?	Yes
Is there a schedule or clear rules (e.g. capacity based limits) for adjusting the tariff level over time?	Yes
Are different tariffs available for different technologies and sizes of the generation plant?	Yes
Is there a mechanism to control the capacity built under each tariff?	Yes
Are tariffs indexed (in part or in whole) to an international currency or to inflation?	Yes

Network connection and use	Score	73
Does the country have a grid code that clearly specifies connection procedures?	Yes	
Do the connection procedures meet international best practices?	Yes	
Does the grid code include measures or standards addressing variable renewable energy?	Yes	
Are there rules defining the allocation of connection costs?	Yes	
Is the type of the connection cost allocation policy considered shallow (grid operator pays for connection costs)?	Yes	

Regulatory Indicators for Sustainable Energy (RISE)

Are there rules that allow electricity customers to purchase power directly from a third party (i.e. an entity other than the designated utility in a service area)?	Yes
Do the rules define the size and allocation of costs for use of the transmission and distribution system (e.g. wheeling charges, locational pricing?)	Yes
Does the country carry out regular assessments of the flexibility of the electricity grid and the issues relating to renewables integration?	Yes
Can renewable energy projects sell into balancing/ancillary services?	Yes
Are there rules for exchanging power between balancing areas that penalize variable renewable energy, e.g. through imbalance penalties? (only scored in countries with multiple balancing areas)	Yes
Are there provisions in the power exchange rules that allow for plant forecasting? (only scored in countries with multiple balancing areas)	Yes
Does the country integrate high quality forecasting for any variable RE resources (either through subscription service or provided by national agencies) into their dispatch operations?	No
Are dispatch operations being carried out in real time?	Yes

Counterparty risk	Score	67
Are the following financial ratios of the counterparty deemed creditworthy?	-	
Current ratio	No	
EBITDA margin	No	
Debt service coverage ratio	No	

Regulatory Indicators for Sustainable Energy (RISE)

Days payable outstanding	No
Is the counterparty underwritten by a government guarantee or are there other mechanisms to ensure credit worthiness (e.g. through a letter of credit, escrow account, payment guarantee, or other)?	Yes
Are standard PPAs bankable?	Yes
Are the financial statements of the largest utility publicly available in the following categories?	-
Generation	Yes
Transmission	Yes
Distribution	Yes
Retail sales	Yes
If yes, are they audited by an independent auditor for the following categories of utilities?	-
Generation	Yes
Transmission	Yes
Distribution	Yes
Retail sales	Yes
Are the following metrics published in a primary official document (by the utility, regulator or ministry and/or government)?	-
Generation - Electricity available for sale to end-users	Yes
Transmission - Transmission loss rate	Yes
Distribution - Distribution loss rate	Yes

Regulatory Indicators for Sustainable Energy (RISE)

Retail Sales – Bill collection rate	Yes
Is the utility operating an incidence/outage recording system (or SCADA/EMS with such functionality)?	Yes
Is the utility measuring the SAIDI and SAIFI or any other measurements for service reliability?	Yes
Are the measurements reported to the regulatory body?	Yes
Are the measurements available to public?	Yes

Carbon Pricing and Monitoring	Score	100
No Data Found		