

## Regulatory Indicators for Sustainable Energy (RISE) 2016 Country Data - Bolivia

### Energy Efficiency

Indicator	Score
National energy efficiency planning	33.33
Energy efficiency entities	71.43
Information provided to consumers about electricity usage	56.94
EE incentives from electricity rate structures	55.56
Incentives & mandates: large consumers	22.22
Incentives & mandates: public sector	0
Incentives & mandates: utilities	50
Financing mechanisms for energy efficiency	83.33
Minimum energy efficiency performance standards	16.67
Energy labeling systems	50
Building energy codes	0
Carbon Pricing	0
<b>Total</b>	<b>36.62</b>

### Renewable Energy

Indicator	Score
Legal framework for renewable energy	100
Planning for renewable energy expansion	68
Incentives and regulatory support for renewable energy	75
Attributes of financial and regulatory incentives	67
Network connection and pricing	47
Counterparty risk	29
Carbon pricing and monitoring	0
<b>Total</b>	<b>55.14</b>

## Regulatory Indicators for Sustainable Energy (RISE)

**Overall Score**

**30.59**

### Energy Efficiency

National energy efficiency planning	Score	33.33
Is there legislation or a national action plan that aims to increase EE?		Yes
Name of EE legislation or action plan		Law 3. Framework Law on Mother Earth and Comprehensive Development for Good Living. ; Strategic Plan for Energy Saving and Energy Efficiency by the Viceministry of Energy Development.
Is there an energy efficiency goal or target at the national level?		No
National target details		Targets are expected to be included in the Strategic Plan for Energy Saving and Energy Efficiency, but the Plan is under review and is not publicly available
Is there a target for the residential sector?		No
Target details		Tentatively 29.4 % in energy savings in relation to a business as usual (BAU) scenario by 2030
Does the target have a milestone or deadline?		No
Is there a commercial services sector target?		No
Target details		No estimate available at this point. To be determined as part of the

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	plan review / approval.
Does the target have a milestone or deadline?	No
Is there an industrial sector target?	No
Target details	Tentatively 19.5 % in energy savings in relation to a BAU Scenario by 2030.
Does the target have a milestone or deadline?	No
Is there a power sector target?	No
Target details	No estimate available at this point. This is to be determined as part of the plan review / approval.
Does the target have a milestone or deadline?	No

Energy efficiency entities	Score	71.43
Are there governmental and/or independent bodies dedicated to setting EE strategy?	Yes	
Name of entity	VMDE	
Are there governmental and/or independent bodies dedicated to setting EE standards?	Yes	
Name of entity	IBNORCA	
Are there governmental and/or independent bodies dedicated to regulating EE activities of energy suppliers?	No	
Name of entity	CNDC	
Are there governmental and/or independent bodies dedicated to	Yes	

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regulating EE activities of energy consumers?	
Name of entity	CNDC
Are there governmental and/or independent bodies dedicated to certifying compliance with equipment EE standards?	Yes
Name of entity	IBNORCA
Are there governmental and/or independent bodies dedicated to certifying compliance with building EE standards?	Yes
Name of entity	GBC Bolivia
Are there governmental and/or independent bodies dedicated to selecting and/or approving third party auditors tasked with certifying EE standards?	No
Name of entity	GBC / IBNORCA

<b>Information provided to consumers about electricity usage</b>	<b>Score</b>	<b>56.94</b>
Residential customers		
Is it mandatory for utilities to provide reports of their energy usage, in a bill or by other means?	Yes	
Commercial customers		
Is it mandatory for utilities to provide reports of their energy usage, in a bill or by other means?	Yes	
Industrial customers		
Is it mandatory for utilities to provide reports of their energy usage, in a bill or by other means?	Yes	
Residential customers		

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At what intervals do customers receive these reports (times per year)?	12
Do the reports include the price levels customers pay for energy usage?	Yes
Commercial customers	
At what intervals do customers receive these reports (times per year)?	12
Do the reports include the price levels customers pay for energy usage?	No
Industrial customers	
At what intervals do customers receive these reports (times per year)?	12
Do the reports include the price levels customers pay for energy usage?	No
Does the regulator track utilities' compliance with laws for providing energy usage information to customers?	Yes
Residential customers	
Do customers receive a bill or report which compares them to other users in the same region and/or usage class?	No
Method of comparison	N/A
Commercial customers	
Do customers receive a bill or report which compares them to other users in the same region and/or usage class?	No
Method of comparison	N/A
Industrial customers	

## Regulatory Indicators for Sustainable Energy (RISE)

Do customers receive a bill or report which compares them to other users in the same region and/or usage class?	No
Method of comparison	N/A
Residential customers	
Do customers receive a bill or report that shows their energy usage compared to previous bills or reports over time?	Yes
Commercial customers	
Do customers receive a bill or report that shows their energy usage compared to previous bills or reports over time?	Yes
Industrial customers	
Do customers receive a bill or report that shows their energy usage compared to previous bills or reports over time?	Yes
All customers	
Can customers access real time feedback on energy usage (for either prepaid or post-paid systems)?	No
Do customers have the ability to manage energy usage levels remotely (through apps or other technology mediums that can track real time usage)?	No

<b>EE incentives from electricity rate structures</b>	<b>Score</b>	<b>55.56</b>
Residential customers		
Are customers charged a flat fee (per connection)?	Yes	
Are customers charged constant block rates?	No	
Are customers charged declining block rates?	No	

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Are customers charged increasing block rates?	Yes
Commercial customers	
Are customers charged a flat fee (per connection)?	Yes
Are customers charged constant block rates?	No
Are customers charged declining block rates?	No
Are customers charged increasing block rates?	Yes
Industrial customers	
Are customers charged a flat fee (per connection)?	Yes
Are customers charged constant block rates?	No
Are customers charged declining block rates?	No
Are customers charged increasing block rates?	Yes
Residential customers	
Do customers pay energy charges (per kWh)?	Yes
Do customers pay demand charges (per kW)?	No
Do customers pay reactive power charges (per kVAR)?	No
Commercial customers	
Do customers pay energy charges (per kWh)?	Yes
Do customers pay demand charges (per kW)?	Yes
Do customers pay reactive power charges (per kVAR)?	No
Industrial customers	

## Regulatory Indicators for Sustainable Energy (RISE)

Do customers pay energy charges (per kWh)?	Yes
Do customers pay demand charges (per kW)?	Yes
Do customers pay reactive power charges (per kVAR)?	No
Residential customers	
Are customers charged based on real-time pricing?	No
Are customers charged based on variable peak pricing?	No
Are customers charged based on critical peak pricing?	No
Are tariffs adjusted according to seasons?	No
Do customers pay according to time-of-day electricity use or receive peak-time rebates?	No
Commercial customers	
Are customers charged based on real-time pricing?	No
Are customers charged based on variable peak pricing?	No
Are customers charged based on critical peak pricing?	No
Are tariffs adjusted according to seasons?	No
Do customers pay according to time-of-day electricity use or receive peak-time rebates?	No
Industrial customers	
Are customers charged based on real-time pricing?	No
Are customers charged based on variable peak pricing?	No
Are customers charged based on critical peak pricing?	No



## Regulatory Indicators for Sustainable Energy (RISE)

Are tariffs adjusted according to seasons?	No
Do customers pay according to time-of-day electricity use or receive peak-time rebates?	No

Incentives & mandates: large consumers	Score	22.22
What is the threshold for classifying large consumers?	> 50 kW of Energy demand	
Large consumer EE mandate/incentive regulations		
Is it required for the consumption and/or savings of large-scale energy users to be tracked and documented on a regular basis?	No	
Are efficiency targets mandated for large consumers?	No	
Details	0	
Are energy audits mandated for large consumers?	No	
Are energy efficiency progress reports mandated for large consumers?	No	
Interval of reports	0	
Are energy-management systems mandated for large consumers?	No	
Details	0	
Are there penalties in place for non-compliance with regulatory obligations for large consumers?	No	
Is there a measurement and verification program in place?	No	
Is verification done by a third party?	No	

## Regulatory Indicators for Sustainable Energy (RISE)

Are there financial incentives for large consumers to invest in energy efficiency?	No
Details	0
Are there tax incentives for large consumers to invest in energy efficiency?	No
Are there other incentives for large consumers to invest in energy efficiency?	No
Details	0
Is there a program to publicly recognize large-scale users that have achieved significant energy savings measures?	Yes
Are energy savings and/or financial savings publicized?	Yes
Does the program offer assistance (from a government or independent entity) to large-scale users to identify energy savings investments opportunities?	No
Primary Energy Consumption (MJ - latest GTF data from 2012)	356429.19

<b>Incentives &amp; mandates: public sector</b>	<b>Score</b>	<b>0</b>
Are there binding energy savings obligations for public buildings?	No	
Are energy savings from efficiency activities at public buildings tracked (either in-house or by a third party)?	No	
Are there binding energy savings obligations for other public facilities (may include water supply, wastewater services, municipal solid waste, street lighting, transportation, and heat supply)?	No	
Are energy savings from efficiency activities at other public facilities tracked?	No	

## Regulatory Indicators for Sustainable Energy (RISE)

Is there a specific policy or mandated guidelines for public procurement of energy-efficient products and services?	No
Public procurement guidelines for EE	
Do public budgeting regulations and practices allow public entities to retain energy savings?	No
Public budgeting regulations for EE	

Incentives & mandates: utilities	Score	50
Name of utility energy efficiency regulation program		
Electricity generation		
Are utilities required to carry out energy efficiency activities in this area?	No	
Details		There is no specific requirement beyond the plans of the government to use more efficient combined cycle turbines within its national Electric Expansion Plan (TRENT 6 DEL) focusing on heat rate enhancements and cost savings per KWh.
Are energy savings or other target indicators measured to track performance in meeting EE requirements?	No	
Are the requirements measured/validated by an independent third party?	No	
Are there penalties in place for non-compliance with EE requirements?	No	
Are there mandates or incentives for new and/or brownfield co-generation?	No	

## Regulatory Indicators for Sustainable Energy (RISE)

Transmission & distribution	
Are utilities required to carry out energy efficiency activities in this area?	No
Details	There is no specific requirement but the natural expansion of the grid comes with efficiency in energy transport in low, medium, and high voltages.
Are energy savings or other target indicators measured to track performance in meeting EE requirements?	No
Are the requirements measured/validated by an independent third party?	No
Are there penalties in place for non-compliance with EE requirements?	No
Demand-side management -	
Are utilities required to carry out energy efficiency activities in this area?	No
Details	No specific requirement established.
Are energy savings or other target indicators measured to track performance in meeting EE requirements?	No
Are the requirements measured/validated by an independent third party?	No
Are there penalties in place for non-compliance with EE requirements?	No
Is there a demand-side management department within the selected utility?	Yes

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Do utilities provide customers incentives for demand response, such as peak-time rebates?	Yes
Is there public budget funding available for utilities to recover costs associated with or revenue lost from mandated energy efficiency activities?	Yes
Is there compensation for revenue losses via a tracking account available for utilities to recover costs associated with or revenue lost from mandated energy efficiency activities?	No
Are these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure?	No
Are these available as government-driven financing mechanisms?	No
Are there credit lines available for utilities to recover costs associated with or revenue lost from mandated energy efficiency activities?	Yes
Are these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure?	No
Are these available as government-driven financing mechanisms?	Yes
Are there partial risk guarantees available for utilities to recover costs associated with or revenue lost from mandated energy efficiency activities?	No
Are these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure?	No
Are these available as government-driven financing mechanisms?	No
Is there program cost recovery available for utilities to recover costs associated with or revenue lost from mandated energy efficiency activities?	No

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Are these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure?	No
Are these available as government-driven financing mechanisms?	No
Is there ESCO financing available for utilities to recover costs associated with or revenue lost from mandated energy efficiency activities?	Yes
Are these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure?	Yes
Are these available as government-driven financing mechanisms?	No
Is there on-bill financing/re-payment available for utilities to recover costs associated with or revenue lost from mandated energy efficiency activities?	No
Are these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure?	No
Are these available as government-driven financing mechanisms?	No
Are there any other financing mechanisms available for utilities to recover costs associated with or revenue lost from mandated energy efficiency activities?	0
Are these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure?	No
Are these available as government-driven financing mechanisms?	No

**Financing mechanisms for energy efficiency**

**Score**

**83.33**

## Regulatory Indicators for Sustainable Energy (RISE)

Residential sector	
Are there tax incentives available for energy efficiency investments?	No
Are there discounted "green" mortgages available for energy efficiency investments?	No
Is on-bill financing/re-payment available for energy efficiency investments?	No
Are credit lines available for energy efficiency investments?	Yes
Are energy services agreements or ESCOs available for energy efficiency investments?	No
Are green bonds available for energy efficiency investments?	No
Is vendor credit and/or leasing available for energy efficiency investments?	No
Are partial risk guarantees available for energy efficiency investments?	No
Are there any other financing mechanisms available for energy efficiency investments?	Yes
Are these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure?	No
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Are these available as government-driven financing mechanisms?	No
Details	Voluntary audits
Are these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure?	Yes
Are these available as government-driven financing mechanisms?	Yes
Commercial services sector	
Are there tax incentives available for energy efficiency investments?	No
Are there discounted "green" mortgages available for energy efficiency investments?	No
Is on-bill financing/re-payment available for energy efficiency investments?	No
Are credit lines available for energy efficiency investments?	



## Regulatory Indicators for Sustainable Energy (RISE)

Are energy services agreements or ESCOs available for energy efficiency investments?	Yes
Are green bonds available for energy efficiency investments?	No
Is vendor credit and/or leasing available for energy efficiency investments?	No
Are partial risk guarantees available for energy efficiency investments?	No
Are there any other financing mechanisms available for energy efficiency investments?	Yes
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Are these available as government-driven financing mechanisms?	No
Details	Voluntary audits
Are these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure?	Yes
Are these available as government-driven financing mechanisms?	Yes
Industrial sector	
Are there tax incentives available for energy efficiency investments?	No
Are there discounted "green" mortgages available for energy efficiency investments?	No
Is on-bill financing/re-payment available for energy efficiency investments?	No
Are credit lines available for energy efficiency investments?	Yes

## Regulatory Indicators for Sustainable Energy (RISE)

Are energy services agreements or ESCOs available for energy efficiency investments?	Yes
Are green bonds available for energy efficiency investments?	No
Is vendor credit and/or leasing available for energy efficiency investments?	No
Are partial risk guarantees available for energy efficiency investments?	No
Are there any other financing mechanisms available for energy efficiency investments?	Yes
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Are these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure?	No
Are these available as government-driven financing mechanisms?	No
Details	Voluntary audits
Are these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure?	Yes
Are these available as government-driven financing mechanisms?	Yes

Minimum energy efficiency performance standards	Score	16.67
EE standards regulations		
Refrigerators		
Have minimum energy performance standards been adopted?	No	
Details of standards		N/A

## Regulatory Indicators for Sustainable Energy (RISE)

Is there a verification program in place?	No
Is it carried out by a third party?	No
Is there a penalty for non-compliance with energy efficiency standards?	No
Are the standards based on external/international standards?	Yes
Air conditioners	
Have minimum energy performance standards been adopted?	No
Details of standards	N/A
Is there a verification program in place?	No
Is it carried out by a third party?	No
Is there a penalty for non-compliance with energy efficiency standards?	No
Are the standards based on external/international standards?	No
Lighting equipment	
Have minimum energy performance standards been adopted?	No
Details of standards	N/A
Is there a verification program in place?	No
Is it carried out by a third party?	No
Is there a penalty for non-compliance with energy efficiency standards?	No
Are the standards based on external/international standards?	Yes
Industrial electric motors	

## Regulatory Indicators for Sustainable Energy (RISE)

Have minimum energy performance standards been adopted?	No
Details of standards	0
Is there a verification program in place?	No
Is it carried out by a third party?	No
Is there a penalty for non-compliance with energy efficiency standards?	No
Are the standards based on external/international standards?	No
Other industrial equipment	
Have minimum energy performance standards been adopted?	No
Details of standards	0
Is there a verification program in place?	No
Is it carried out by a third party?	No
Is there a penalty for non-compliance with energy efficiency standards?	No
Are the standards based on external/international standards?	No
Light duty vehicles	
Have minimum energy performance standards been adopted?	Yes
Details of standards	GHG g/Km
Is there a verification program in place?	Yes
Is it carried out by a third party?	Yes
Is there a penalty for non-compliance with energy efficiency standards?	Yes

## Regulatory Indicators for Sustainable Energy (RISE)

Are the standards based on external/international standards?	No
Heavy duty vehicles	
Have minimum energy performance standards been adopted?	Yes
Details of standards	GHG g/Km
Is there a verification program in place?	Yes
Is it carried out by a third party?	Yes
Is there a penalty for non-compliance with energy efficiency standards?	Yes
Are the standards based on external/international standards?	No

<b>Energy labeling systems</b>	<b>Score</b>	<b>50</b>
Refrigerators		
Have energy efficiency labeling schemes been adopted?	Yes	
Is the labeling scheme mandatory?	Yes	
Is the labeling scheme based on external/international standards?	Yes	
Air conditioners		
Have energy efficiency labeling schemes been adopted?	Yes	
Is the labeling scheme mandatory?	Yes	
Is the labeling scheme based on external/international standards?	Yes	
Lighting equipment		

## Regulatory Indicators for Sustainable Energy (RISE)

Have energy efficiency labeling schemes been adopted?	Yes
Is the labeling scheme mandatory?	Yes
Is the labeling scheme based on external/international standards?	Yes
Industrial electric motors	
Have energy efficiency labeling schemes been adopted?	No
Is the labeling scheme mandatory?	No
Is the labeling scheme based on external/international standards?	No
Other industrial equipment	
Have energy efficiency labeling schemes been adopted?	No
Is the labeling scheme mandatory?	No
Is the labeling scheme based on external/international standards?	No
Light duty vehicles	
Have energy efficiency labeling schemes been adopted?	No
Is the labeling scheme mandatory?	No
Is the labeling scheme based on external/international standards?	No
Heavy duty vehicles	
Have energy efficiency labeling schemes been adopted?	No
Is the labeling scheme mandatory?	No



## Regulatory Indicators for Sustainable Energy (RISE)

Is the labeling scheme based on external/international standards?	No
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<b>Building energy codes</b>	<b>Score</b>	<b>0</b>
Are there energy efficiency codes for new residential buildings?	No	
Are there energy efficiency codes for new commercial buildings?	No	
Is the energy efficiency code for new residential buildings its own stand-alone, separate code or part of the overall building code?	No	
Is the energy efficiency code for new commercial buildings its own stand-alone, separate code or part of the overall building code?	No	
Is there any provision for regular updates to the code for new residential buildings?	No	
Is there any provision for regular updates to the code for new commercial buildings?	No	
EE building code regulations		
When was the code last updated for residential buildings?	N/A	
When was the code last updated for commercial buildings?	N/A	
Is there a system to ensure compliance with building energy efficiency codes?	No	
Is it carried out by a third party?	No	
Are renovated residential buildings required to meet a building energy code?	No	
Are renovated commercial buildings required to meet a building energy code?	No	

## Regulatory Indicators for Sustainable Energy (RISE)

Is the energy efficiency code for renovated residential buildings different from the code for new buildings?	No
Is the energy efficiency code for renovated commercial buildings different from the code for new buildings?	No
Is the energy efficiency code for renovated residential buildings its own stand-alone, separate code or part of the overall building code?	No
Is the energy efficiency code for renovated commercial buildings its own stand-alone, separate code or part of the overall building code?	No
Is there any provision for regular updates to the code for renovated residential buildings?	No
Is there any provision for regular updates to the code for renovated commercial buildings?	No
Is there a mandatory standardized rating or labeling system for the energy performance of existing buildings?	No
Is the labeling scheme or rating adopted from external standards?	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
Details	0
LEED incentives	No
Local program details	0

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<b>Carbon Pricing</b>	<b>Score</b>	<b>0</b>
Is there a carbon pricing mechanism in place?		No
For any carbon pricing mechanism (e.g. carbon tax, emission trading system), what is the portion of national GHG emissions covered)?		0
Is there a monitoring, reporting and verification system for greenhouse gas emissions in place?		No

## Renewable Energy

<b>Legal framework for renewable energy</b>	<b>Score</b>	<b>100</b>
Does a legal framework for renewable energy development exist?		Yes
Name of the Law		Law 1604 on Electric Power, 21 December 1994; Supreme Decree 2048, 2 July 2014; Ministerial Decision 004 of 2015 on the Supreme Decree 2048.
Is private sector ownership of renewable energy generation legally authorized?		Yes

<b>Planning for renewable energy expansion</b>	<b>Score</b>	<b>68</b>
Does an official renewable energy target exist?		Yes
Overall target		70% share of total electricity generation from hydropower sources and 4% share of "alternative" RE sources by 2025

## Regulatory Indicators for Sustainable Energy (RISE)

Solar target	4% share of the total energy produced from alternative energy sources
Wind target	4% share of the total energy produced from alternative energy sources
Hydro target	70% share of total energy production from hydro sources by 2025?????
Biomass target	4% share of the total energy produced from alternative energy sources
Geothermal target	4% share of the total energy produced from alternative energy sources
Does a renewable energy action plan or strategy to attain the target exist?	Yes
Name of the action plan	0
Does the plan or strategy define the amount of investment necessary to meet the RE target?	Yes
The amount of investment identified	0
Is there an institution responsible for tracking progress in renewable energy development?	Yes
Name of the institution	0
Does an electricity generation plan that includes renewable energy development exist?	Yes
Name of the generation plan	0
Is the expansion plan based on a probabilistic approach?	Yes

## Regulatory Indicators for Sustainable Energy (RISE)

Does the current transmission planning consider renewable energy scale-up?	Yes
Name of the transmission plan	0
Has the country conducted a variable renewable energy integration study?	No
Name of the integration study	0
Year of the integration study	NA
Does the country have sufficient resource abundance to warrant a solar resource atlas?	Yes
Does the government publish or endorse a solar resource atlas or other data on the abundance and quality of the resource?	No
Solar atlas is validated by at least 5 ground-based measurements taken for a period of at least a year;	No
Solar atlas has a spatial resolution of 5km or less;	No
Solar atlas is based on modeling inputs covering at least a 10 year period;	No
Solar atlas is accompanied by an explanation of the methodology and instrumentation	No
Has the country carried out strategic planning or produced zoning guidance to inform the commercial development of solar resources?	No
Has the solar resource planning or zoning guidance been undertaken as part of a strategic environmental and social assessment or equivalent process?	No
Are the solar resource planning or zoning guidance outputs publically available?	No
Does the country have sufficient resource abundance to warrant a wind resource atlas?	Yes

## Regulatory Indicators for Sustainable Energy (RISE)

Does the government publish or endorse a wind resource atlas or other data on the abundance and quality of the resource?	Yes
Wind atlas is validated by at least 5 ground-based measurements taken for a period of at least a year;	No
Wind atlas has a spatial resolution of 5km or less;	Yes
Wind atlas is based on modeling inputs covering at least a 10 year period;	Yes
Wind atlas is accompanied by an explanation of the methodology and instrumentation	No
Has the country carried out strategic planning or produced zoning guidance to inform the commercial development of wind resources?	No
Has the wind resource planning or zoning guidance been undertaken as part of a strategic environmental and social assessment or equivalent process?	No
Are the wind resource planning or zoning guidance outputs publically available?	No
Does the country have sufficient resource abundance to warrant a hydro resource atlas?	Yes
Does the country publish or endorse a national hydro resource map or atlas?	Yes
Hydro atlas is validated by ground-based water run-off data and/or site surveys from potential sites;	Yes
Hydro atlas is accompanied by an explanation of the methodology and instrumentation	No
Has the country carried out strategic planning or produced zoning guidance to inform the commercial development of hydro resources?	Yes
Has the hydro resource planning or zoning guidance been undertaken as part of a strategic environmental and social	No

## Regulatory Indicators for Sustainable Energy (RISE)

assessment or equivalent process?	
Are the hydro resource planning or zoning guidance outputs publically available?	No
Does the country have sufficient resource abundance to warrant a biomass resource atlas?	Yes
Does the country publish or endorse a national biomass resource map or atlas?	No
Biomass atlas is validated by ground-based survey or officially reported data;	No
Biomass atlas is accompanied by an explanation of the methodology and instrumentation.	No
Has the biomass resource planning or zoning guidance been undertaken as part of a strategic environmental and social assessment or equivalent process?	No
Are the biomass resource planning or zoning guidance outputs publically available?	No
Does the country have sufficient resource abundance to warrant a geothermal resource atlas?	Yes
Does the country publish or endorse a national geothermal resource map or atlas?	No
The governmentn has collected and recorded well data at potential geothermal sites?	No
Does the government publish a national geological map?	No
The government has supported surface exploration (geological; geochemical; temp; gradient) at potential sites?	No
The government has supported test drilling at at least one site (slim bore or full well)?	No
The government has supported the creation of a reservoir model at at least one site?	No

## Regulatory Indicators for Sustainable Energy (RISE)

Has the country carried out strategic geothermal resource planning or produced zoning guidance to inform the commercial development of the resource?	No
Has the geothermal resource planning or zoning guidance been undertaken as part of a strategic environmental and social assessment or equivalent process?	No
Are the geothermal resource planning or zoning guidance outputs publically available?	No

<b>Incentives and regulatory support for renewable energy</b>	<b>Score</b>	<b>75</b>
Is there at least one scheme to support renewable energy per unit of electricity generated? (e.g., feed-in tariff, competitive bidding/auction, mandates, generation premiums, production tax credits)?	Yes	
Feed-in tariff	No	
Feed-in tariff - Solar	No	
Feed-in tariff - Wind	No	
Feed-in tariff - Hydro	No	
Feed-in tariff - Biomass	No	
Feed-in tariff - Geothermal	No	
Government body in charge	NA	
Projects guaranteed off-take	No	
Solar Feed-in-tariff Price (\$ cents/kWh)		
Solar Feed-in-tariff Max. capacity (single)		



## Regulatory Indicators for Sustainable Energy (RISE)

Solar Feed-in-tariff Max. capacity (total)	
Solar Feed-in-tariff Closing date	
Wind Feed-in-tariff Price (\$ cents/kWh)	
Wind Feed-in-tariff Max. capacity (single)	
Wind Feed-in-tariff Max. capacity (total)	
Wind Feed-in-tariff Closing date	
Hydro Feed-in-tariff Price (\$ cents/kWh)	
Hydro Feed-in-tariff Max. capacity (single)	
Hydro Feed-in-tariff Max. capacity (total)	
Hydro Feed-in-tariff Closing date	
Biomass Feed-in-tariff Price (\$ cents/kWh)	
Biomass Feed-in-tariff Max. capacity (single)	
Biomass Feed-in-tariff Max. capacity (total)	
Biomass Feed-in-tariff Closing date	
Geothermal Feed-in-tariff Price (\$ cents/kWh)	
Geothermal Feed-in-tariff Max. capacity (single)	
Geothermal Feed-in-tariff Max. capacity (total)	
Geothermal Feed-in-tariff Closing date	
Competitive bidding	Yes
Auction 1 - Year	2012

## Regulatory Indicators for Sustainable Energy (RISE)

Auction 1 - Technology	Wind
Auction 1 - Project-specific tender and size (MW)	
Auction 1 - Auction for total and size (MW)	
Auction 1 - Standard PPA and Term	N/A
Auction 1 - Price ceiling	No
Auction 1 - Winning bid (\$ cents/kWh)	N/A
Auction 1 - Government body in charge	ENDE
Auction 2 - Year	2014
Auction 2 - Technology	Solar
Auction 2 - Project-specific tender and size (MW)	
Auction 2 - Auction for total and size (MW)	
Auction 2 - Standard PPA and Term	N/A
Auction 2 - Price ceiling	No
Auction 2 - Winning bid (\$ cents/kWh)	N/A
Auction 2 - Government body in charge	ENDE
Winning bid guaranteed off-take	Yes
Mandates	No
Generation premium	No
Production tax credit	No
Does the government offer other direct fiscal incentives for renewable energy (e.g. capital subsidies, grants or rebates,	Yes

## Regulatory Indicators for Sustainable Energy (RISE)

investment tax credits, tax reductions?)	
Investment tax credit	No
Accelerated depreciation	No
Reduction in import taxes	Yes
Reduction in sales tax or other taxes	No
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?	No
Are there mechanisms to compensate RE projects for lost generation due to certain curtailments after project commissioning?	No

<b>Attributes of financial and regulatory incentives</b>	<b>Score</b>	<b>67</b>
Is the market entry mechanism for private RE projects defined? (e.g. 1st come 1st served; tenders)		Yes
Details		0
Are projects subject to development timelines or milestones?		Yes
Are tariffs indexed (in part or in whole) to an international currency or to inflation?		Yes
If there is a guaranteed tariff, is there a mechanism to adjust the level of the tariff for new entrants (e.g., declination)?		N/A
If there is a guaranteed tariff, is there a mechanism to differentiate tariffs based on the size of the generation plant?		N/A

## Regulatory Indicators for Sustainable Energy (RISE)

If there is competitive bidding/auctions, are there provisions to ensure full and timely project completion (e.g., bid-bonds, project milestones, eligibility requirements)	N/A
If there is a renewable energy mandate, can it be met with tradable certificates (e.g., RECs, ROCs, TECs)?	N/A
Is the price subsidy/benefit implied by a renewable energy incentive program passed through in full or in part to the final electricity consumer?	Yes

<b>Network connection and pricing</b>	<b>Score</b>	<b>47</b>
Are there rules defining the allocation of connection costs?	Yes	
What is the type of the connection cost allocation policy (i.e. shallow/deep)?	Deep	
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)?	No	
Do the rules define the size and allocation of costs for transmission and distribution wheeling charges? (e.g., wheeling charges, locational pricing?)	N/A	
Do the rules consider customer type/size in determining eligibility for purchasing electricity from a third party?	N/A	
connection cost document	Law 1604 on Electric Power, 21 December 1994	
Does the country have a grid code that includes measures or standards addressing variable renewable energy?	No	
Is there more than one balancing area in the country?	Yes	
Are there rules for exchanging power between balancing areas that penalize variable renewable energy (e.g. through imbalance penalties)?	No	

## Regulatory Indicators for Sustainable Energy (RISE)

Are there provisions in the power exchange rules that allow for plant forecasting?	Yes
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Counterparty risk	Score	29
Does the government offer or allow backing of utility payments (e.g. through a letter of credit, escrow account, payment guarantee, or other)?	No	
Information disclosure	21	
Are the financial statements of the largest utility publicly available?	0	
Are the financial statements of the largest generation company publicly available?	Yes	
Are the financial statements of the largest transmission company publicly available?	Yes	
Are the financial statements of the largest distribution company publicly available?	No	
Are the financial statements of the largest retail electricity sales company publicly available?	No	
Are the following metrics published in a primary official document (by the utility, regulator or ministry and/or government)?	0	
Is the transmission loss rate published in a primary official document (by the utility, regulator or ministry and/or government)?	Yes	
Is the distribution loss rate published in a primary official document (by the utility, regulator or ministry and/or government)?	Yes	
Is the bill collection rate published in a primary official document (by the utility, regulator or ministry and/or government)?	No	

## Regulatory Indicators for Sustainable Energy (RISE)

Is the amount of electricity available for sale to end-users published in a primary official document (by the utility, regulator or ministry and/or government)?	Yes
Information Auditing	33
Financial statements independently audited?	0
Are the financial statements of the largest generation company audited?	Yes
Are the financial statements of the largest transmission company audited?	Yes
Are the financial statements of the largest distribution company audited?	Yes
Are the financial statements of the largest retail electricity sales company audited?	Yes
Monitoring Reliability	0
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 data reported to the regulatory body?	Yes
Are the data available to the public?	Yes
Name of the selected utility	DELAPAZ
data - 17.1. Current ratio (working capital ratio)	no data
data - 17.2 Debt Service Coverage Ratio	N/A
data - 17.3 Days payable outstanding	no data
data - 17.4 EBITDA margin	no data

## Regulatory Indicators for Sustainable Energy (RISE)

Current ratio (working capital ratio) of selected utility	0
Debt Service Coverage Ratio of selected utility	0
Days payable outstanding of selected utility	0
EBITDA margin of selected utility	0

<b>Carbon pricing and monitoring</b>	<b>Score</b>	<b>0</b>
Is there a carbon pricing mechanism in place?		No
For any carbon pricing mechanism (e.g. carbon tax, emission trading system), what is the portion of national GHG emissions covered)?		0%
Is there a monitoring, reporting and verification system for greenhouse gas emissions in place?		No