

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

Energy Efficiency

| Indicator | Score |
|---|-------|
| National energy efficiency planning | 66.67 |
| Energy efficiency entities | 85.71 |
| Information provided to consumers about electricity usage | 62.5 |
| EE incentives from electricity rate structures | 66.67 |
| Incentives & mandates: large consumers | 61.11 |
| Incentives & mandates: public sector | 25 |
| Incentives & mandates: utilities | 70.83 |
| Financing mechanisms for energy efficiency | 83.33 |
| Minimum energy efficiency performance standards | 66.67 |
| Energy labeling systems | 66.67 |
| Building energy codes | 0 |
| Carbon Pricing | 0 |
| Total | 54.6 |

Renewable Energy

| Indicator | Score |
|--|-------|
| Legal framework for renewable energy | 100 |
| Planning for renewable energy expansion | 77 |
| Incentives and regulatory support for renewable energy | 50 |
| Attributes of financial and regulatory incentives | 28 |
| Network connection and pricing | 67 |
| Counterparty risk | 17 |
| Carbon pricing and monitoring | 0 |
| Total | 48.43 |

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Overall Score

34.34

Energy Efficiency

| National energy efficiency planning | Score | 66.67 |
|--|-------|---|
| Is there legislation or a national action plan that aims to increase EE? | | Yes |
| Name of EE legislation or action plan | | Ministry of Electricity and Renewable Energy Institutional Strategic Plan 214-217 214 |
| Is there an energy efficiency goal or target at the national level? | | Yes |
| National target details | | The overall goal is 1448 GWh/y (2017) with a 2012 baseline of 667 GWh/y (unconsumed energy accumulated by implementing energy saving measures). |
| Is there a target for the residential sector? | | No |
| Target details | | N/A |
| Does the target have a milestone or deadline? | | No |
| Is there a commercial services sector target? | | No |
| Target details | | N/A |
| Does the target have a milestone or deadline? | | No |
| Is there an industrial sector target? | | No |
| Target details | | N/A |
| Does the target have a milestone or deadline? | | No |

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|---|-----|
| Is there a power sector target? | No |
| Target details | N/A |
| Does the target have a milestone or deadline? | No |

| Energy efficiency entities | Score | 85.71 |
|--|--|-------|
| Are there governmental and/or independent bodies dedicated to setting EE strategy? | Yes | |
| Name of entity | Ministerio de Electricidad y Energía Renovable (Ministry of Electricity and Renewable Energy (MEER)) | |
| Are there governmental and/or independent bodies dedicated to setting EE standards? | Yes | |
| Name of entity | Agencia de Regulación y Control (Regulation and Control Agency of the Ministry of Electricity and Renewable Energy, ARCONEL) | |
| Are there governmental and/or independent bodies dedicated to regulating EE activities of energy suppliers? | No | |
| Name of entity | ARCONEL | |
| Are there governmental and/or independent bodies dedicated to regulating EE activities of energy consumers? | Yes | |
| Name of entity | ARCONEL | |
| Are there governmental and/or independent bodies dedicated to certifying compliance with equipment EE standards? | Yes | |

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|--|---|
| Name of entity | Servicio Ecuatoriano De Normalizacion (Ecuadorian Service for Standardization (INEN)) |
| Are there governmental and/or independent bodies dedicated to certifying compliance with building EE standards? | No |
| Name of entity | INEN |
| 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 | Organismo de Acreditacion Ecuatoriano (Ecuadorian Audit Authority (OAE)) |

| Information provided to consumers about electricity usage | Score | 62.5 |
|--|-------|------|
| 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 | | |
| At what intervals do customers receive these reports (times per year)? | 12 | |

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|---|-----|
| 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? | Yes |
| 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? | Yes |
| 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 | |
| Do customers receive a bill or report which compares them to other users in the same region and/or usage class? | No |

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|---|-----|
| 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 |

| EE incentives from electricity rate structures | Score | 66.67 |
|---|--------------|--------------|
| Residential customers | | |
| Are customers charged a flat fee (per connection)? | No | |
| Are customers charged constant block rates? | No | |
| Are customers charged declining block rates? | No | |
| Are customers charged increasing block rates? | Yes | |

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|---|-----|
| Commercial customers | |
| Are customers charged a flat fee (per connection)? | No |
| Are customers charged constant block rates? | No |
| Are customers charged declining block rates? | Yes |
| Are customers charged increasing block rates? | No |
| Industrial customers | |
| Are customers charged a flat fee (per connection)? | No |
| Are customers charged constant block rates? | No |
| Are customers charged declining block rates? | Yes |
| Are customers charged increasing block rates? | No |
| Residential 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 |
| 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 | |
| Do customers pay energy charges (per kWh)? | Yes |

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| | |
|---|-----|
| 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? | Yes |
| Are customers charged based on variable peak pricing? | No |
| Are customers charged based on critical peak pricing? | No |
| Are tariffs adjusted according to seasons? | Yes |
| 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? | Yes |
| 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? | Yes |
| 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? | Yes |
| Are tariffs adjusted according to seasons? | Yes |

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| | |
|---|-----|
| Do customers pay according to time-of-day electricity use or receive peak-time rebates? | Yes |
|---|-----|

| Incentives & mandates: large consumers | Score | 61.11 |
|--|-------|---|
| What is the threshold for classifying large consumers? | | Large-scale energy users are defined as those having a monthly power demand of greater than 650 kW during the previous 6 months and an annual consumption greater than 4,500 MWh during the last 12 months. |
| 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? | | Yes |
| Are efficiency targets mandated for large consumers? | | No |
| Details | | N/A |
| Are energy audits mandated for large consumers? | | No |
| Are energy efficiency progress reports mandated for large consumers? | | No |
| Interval of reports | | N/A |
| Are energy-management systems mandated for large consumers? | | No |
| Details | | N/A |
| Are there penalties in place for non-compliance with regulatory obligations for large consumers? | | No |

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|--|-----------|
| Is there a measurement and verification program in place? | No |
| Is verification done by a third party? | No |
| Are there financial incentives for large consumers to invest in energy efficiency? | No |
| Details | N/A |
| 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? | Yes |
| Details | 0 |
| Is there a program to publicly recognize large-scale users that have achieved significant energy savings measures? | No |
| 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) | 603752.01 |

| Incentives & mandates: public sector | Score | 25 |
|--|--------------|-----------|
| 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 | |

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|---|---|
| Are energy savings from efficiency activities at other public facilities tracked? | No |
| Is there a specific policy or mandated guidelines for public procurement of energy-efficient products and services? | Yes |
| Public procurement guidelines for EE | Ecuador National Service of Public Procurement (SERCOP), Manual of Good Practices in the Public Procurement for Development 215 |
| Do public budgeting regulations and practices allow public entities to retain energy savings? | No |
| Public budgeting regulations for EE | |

| Incentives & mandates: utilities | Score | 70.83 |
|---|--------------|--------------|
| Name of utility energy efficiency regulation program | | |
| Electricity generation | | |
| Are utilities required to carry out energy efficiency activities in this area? | No | |
| Details | | N/A |
| 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 | |

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|---|-----|
| Transmission & distribution | |
| Are utilities required to carry out energy efficiency activities in this area? | Yes |
| Details | N/A |
| 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 there penalties in place for non-compliance with EE requirements? | Yes |
| Demand-side management - | |
| Are utilities required to carry out energy efficiency activities in this area? | Yes |
| Details | N/A |
| 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 there penalties in place for non-compliance with EE requirements? | No |
| Is there a demand-side management department within the selected utility? | No |
| Do utilities provide customers incentives for demand response, such as peak-time rebates? | No |
| Is there public budget funding available for utilities to recover costs associated with or revenue lost from mandated energy efficiency activities? | Yes |

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|--|-----|
| 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? | No |
| 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 |
| 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 |

Regulatory Indicators for Sustainable Energy (RISE)

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|---|-----|
| Is there ESCO financing 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 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? | N/A |
| 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 |
|---|-------|-------|
| Residential sector | | |
| Are there tax incentives available for energy efficiency investments? | Yes | |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|-----|
| 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 |
| Are these available as government-driven financing mechanisms? | No |
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Regulatory Indicators for Sustainable Energy (RISE)

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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 | There is a program Named "Programa para la Renovación de Equipos de Consumo Energético Ineficiente (Program for the Substitution of Devices with Inefficient Energetic Usage (RENOVA))" supported by the Government that finances the substitution of an old refrigerator by a new one rated with "Efficiency A", a program to substitute gas stoves by induction stoves, and a program to substitute regular light bulbs by highly efficient ones. |
| 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 |
| Commercial services sector | |
| Are there tax incentives available for energy efficiency investments? | Yes |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|-----|
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| Are partial risk guarantees available for energy efficiency investments? | No |
| Are there any other financing mechanisms available for energy efficiency investments? | No |
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Regulatory Indicators for Sustainable Energy (RISE)

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| Are these available as government-driven financing mechanisms? | No |
| Details | <p>There is a program Named "Programa para la Renovación de Equipos de Consumo Energético Ineficiente (Program for the Substitution of Devices with Inefficient Energetic Usage (RENOVA))" supported by the Government that finances the substitution of an old refrigerator by a new one rated with "Efficiency A", a program to substitute gas stoves by induction stoves, and a program to substitute</p> |

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| | regular light bulbs by highly efficient ones. |
|---|---|
| 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 |
| Industrial sector | |
| Are there tax incentives available for energy efficiency investments? | Yes |
| 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? | 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 |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|-----|
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| Are these available as government-driven financing mechanisms? | No |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|---|
| Details | There is a program Named "Programa para la Renovación de Equipos de Consumo Energético Ineficiente (Program for the Substitution of Devices with Inefficient Energetic Usage (RENOVA))" supported by the Government that finances the substitution of an old refrigerator by a new one rated with "Efficiency A", a program to substitute gas stoves by induction stoves, and a program to substitute regular light bulbs by highly efficient ones. |
| 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 |

| Minimum energy efficiency performance standards | Score | 66.67 |
|---|-------|--|
| EE standards regulations | | Energia Plan de Normalizacion y Etiquetado |
| Refrigerators | | |
| Have minimum energy performance standards been adopted? | Yes | |
| Details of standards | | Class A; kw/h per year. |
| Is there a verification program in place? | Yes | |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|---|
| 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? | Yes |
| Air conditioners | |
| Have minimum energy performance standards been adopted? | Yes |
| Details of standards | Class E; Ratio of thermal power to electrical power |
| 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? | Yes |
| Lighting equipment | |
| Have minimum energy performance standards been adopted? | Yes |
| Details of standards | Class G; lm/W. |
| 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? | Yes |
| Industrial electric motors | |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|--|
| Have minimum energy performance standards been adopted? | Yes |
| Details of standards | Ratio of output (mechanical) power to input (electrical) power. The minima are 43% (single phase motors) or 68% (three phase motors) |
| 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? | Yes |
| Other industrial 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? | No |
| Light duty vehicles | |
| Have minimum energy performance standards been adopted? | No |
| Details of standards | N/A |
| Is there a verification program in place? | No |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|-----|
| 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 |
| Heavy duty vehicles | |
| 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 |

| Energy labeling systems | Score | 66.67 |
|---|--------------|--------------|
| 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 | |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|-----|
| Is the labeling scheme based on external/international standards? | Yes |
| Lighting equipment | |
| 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? | Yes |
| Is the labeling scheme mandatory? | Yes |
| Is the labeling scheme based on external/international standards? | Yes |
| 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 | |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|----|
| Have energy efficiency labeling schemes been adopted? | No |
| Is the labeling scheme mandatory? | No |
| Is the labeling scheme based on external/international standards? | No |

| Building energy codes | Score | 0 |
|--|---|----------|
| 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 | Ecuador Ecuatorian Service for Standardization (INEN) Ecuadorian Standard (NTE) 256:29 Energy Efficiency in Buildings | |
| 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 | |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|----|
| Is it carried out by a third party? | No |
| Are renovated residential buildings required to meet a building energy codee? | No |
| Are renovated commercial buildings required to meet a building energy code? | No |
| 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 | No |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|--|-----|
| of new building stocks that must be LEED certified)? | |
| Details | N/A |
| LEED incentives | No |
| Local program details | N/A |

| Carbon Pricing | Score | 0 |
|--|--------------|----------|
| 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

| Legal framework for renewable energy | Score | 100 |
|--|--------------|---|
| Does a legal framework for renewable energy development exist? | | Yes |
| Name of the Law | | Organic Law of the Public Service of Electric Energy 2015 |
| Is private sector ownership of renewable energy generation legally authorized? | | Yes |

| Planning for renewable energy expansion | Score | 77 |
|---|--------------|-----------|
| Does an official renewable energy target exist? | | Yes |

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| | |
|--|---|
| Overall target | Cumulative installed capacity of 8,741.5 MW (principally hydroenergy) or 60% of the installed capacity based on RE by 2017, from a 2012 RE baseline of 5,518.7 MW (representing 43.1% of the installed capacity). |
| Solar target | |
| Wind target | |
| Hydro target | |
| Biomass target | |
| Geothermal target | |
| 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)

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| 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? | Yes |
| Solar atlas is validated by at least 5 ground-based measurements taken for a period of at least a year; | Yes |
| Solar atlas has a spatial resolution of 5km or less; | Yes |
| Solar atlas is based on modeling inputs covering at least a 10 year period; | Yes |
| Solar atlas is accompanied by an explanation of the methodology and instrumentation | Yes |
| 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? | No |

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; | Yes |
| 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 | Yes |
| 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? | No |
| Hydro atlas is validated by ground-based water run-off data and/or site surveys from potential sites; | No |
| 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? | No |
| Does the country publish or endorse a national biomass resource map or atlas? | Yes |
| Biomass atlas is validated by ground-based survey or officially reported data; | Yes |
| Biomass atlas is accompanied by an explanation of the methodology and instrumentation. | Yes |
| 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 |

| Incentives and regulatory support for renewable energy | Score | 50 |
|---|---|----|
| 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 | Yes | |
| Feed-in tariff - Solar | Yes | |
| Feed-in tariff - Wind | Yes | |
| Feed-in tariff - Hydro | Yes | |
| Feed-in tariff - Biomass | Yes | |
| Feed-in tariff - Geothermal | Yes | |
| Government body in charge | Operador Nacional de Electricidad (National Electricity Operator (CENACE)). | |
| Projects guaranteed off-take | Yes | |
| Solar Feed-in-tariff Price (\$ cents/kWh) | 12 | |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|--|--|
| Solar Feed-in-tariff Max. capacity (single) | NA |
| Solar Feed-in-tariff Max. capacity (total) | NA |
| Solar Feed-in-tariff Closing date | 42735 |
| Wind Feed-in-tariff Price (\$ cents/kWh) | 2 |
| Wind Feed-in-tariff Max. capacity (single) | NA |
| Wind Feed-in-tariff Max. capacity (total) | NA |
| Wind Feed-in-tariff Closing date | 42735 |
| Hydro Feed-in-tariff Price (\$ cents/kWh) | 7 |
| Hydro Feed-in-tariff Max. capacity (single) | depending of the guaranteed price level, 10, 30, and 50MW under the state well-being plan (see above). |
| Hydro Feed-in-tariff Max. capacity (total) | NA |
| Hydro Feed-in-tariff Closing date | 42735 |
| Biomass Feed-in-tariff Price (\$ cents/kWh) | 10 |
| Biomass Feed-in-tariff Max. capacity (single) | NA |
| Biomass Feed-in-tariff Max. capacity (total) | 100 MW |
| Biomass Feed-in-tariff Closing date | 42735 |
| Geothermal Feed-in-tariff Price (\$ cents/kWh) | 3 |
| Geothermal Feed-in-tariff Max. capacity (single) | NA |
| Geothermal Feed-in-tariff Max. capacity (total) | NA |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|-------|
| Geothermal Feed-in-tariff Closing date | 42735 |
| Competitive bidding | No |
| Auction 1 - Year | NA |
| Auction 1 - Technology | NA |
| Auction 1 - Project-specific tender and size (MW) | NA |
| Auction 1 - Auction for total and size (MW) | NA |
| Auction 1 - Standard PPA and Term | NA |
| Auction 1 - Price ceiling | No |
| Auction 1 - Winning bid (\$ cents/kWh) | NA |
| Auction 1 - Government body in charge | NA |
| Auction 2 - Year | NA |
| Auction 2 - Technology | NA |
| Auction 2 - Project-specific tender and size (MW) | NA |
| Auction 2 - Auction for total and size (MW) | NA |
| Auction 2 - Standard PPA and Term | NA |
| Auction 2 - Price ceiling | No |
| Auction 2 - Winning bid (\$ cents/kWh) | NA |
| Auction 2 - Government body in charge | NA |
| Winning bid guaranteed off-take | No |
| Mandates | No |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|--|-----|
| 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, investment tax credits, tax reductions?) | No |
| Investment tax credit | No |
| Accelerated depreciation | No |
| Reduction in import taxes | No |
| 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 |

| Attributes of financial and regulatory incentives | Score | 28 |
|--|--------------|-----------|
| 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? | No | |
| Are tariffs indexed (in part or in whole) to an international currency or to inflation? | No | |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|-----|
| If there is a guaranteed tariff, is there a mechanism to adjust the level of the tariff for new entrants (e.g., declination)? | No |
| If there is a guaranteed tariff, is there a mechanism to differentiate tariffs based on the size of the generation plant? | Yes |
| 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? | No |

| Network connection and pricing | Score | 67 |
|--|--------------|---|
| Are there rules defining the allocation of connection costs? | Yes | |
| What is the type of the connection cost allocation policy (i.e. shallow/deep)? | Shallow | |
| 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 transmission and distribution wheeling charges? (e.g., wheeling charges, locational pricing?) | Yes | |
| Do the rules consider customer type/size in determining eligibility for purchasing electricity from a third party? | Yes | |
| connection cost document | | Self-generators Participation in the Electricity Sector - Regulation No. CONELEC - 001/14 |

Regulatory Indicators for Sustainable Energy (RISE)

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|--|-----|
| 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? | No |
| Are there rules for exchanging power between balancing areas that penalize variable renewable energy (e.g. through imbalance penalties)? | N/A |
| Are there provisions in the power exchange rules that allow for plant forecasting? | N/A |

| Counterparty risk | Score | 17 |
|--|-------|----|
| 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 | 17 | |
| Are the financial statements of the largest utility publicly available? | 0 | |
| Are the financial statements of the largest generation company publicly available? | No | |
| Are the financial statements of the largest transmission company publicly available? | No | |
| 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 | Yes | |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|--|-------------------------|
| government)? | |
| 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)? | Yes |
| 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 | 0 |
| Financial statements independently audited? | 0 |
| Are the financial statements of the largest generation company audited? | No |
| Are the financial statements of the largest transmission company audited? | No |
| Are the financial statements of the largest distribution company audited? | No |
| Are the financial statements of the largest retail electricity sales company audited? | No |
| 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 | Empresa Electrica Quito |

Regulatory Indicators for Sustainable Energy (RISE)

| | |
|---|---------|
| 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 |
| 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 |

| Carbon pricing and monitoring | Score | 0 |
|--|--------------|----------|
| 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 |