

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

### Energy Access

| Indicator  | Score |
|--|-------|
| Existence and monitoring of officially approved electrification plan | 0     |
| Scope of officially approved electrification plan                    | 0     |
| Framework for grid electrification                                   | 33.33 |
| Framework for minigrids  | 78.33 |
| Framework for stand-alone systems                                    | 22.22 |
| Consumer affordability of electricity                                | 50    |
| Utility Transparency and Monitoring                                  | 33.33 |
| Utility Creditworthiness   | 0     |
| <b>Total</b>   | 27.15 |

### Energy Efficiency

| Indicator   | Score |
|---|-------|
| National energy efficiency planning                       | 75    |
| Energy efficiency entities                                | 14.29 |
| Information provided to consumers about electricity usage | 37.5  |
| EE incentives from electricity rate structures            | 72.22 |
| Incentives & mandates: large consumers                    | 0     |
| Incentives & mandates: public sector                      | 0     |
| Incentives & mandates: utilities                          | 0     |
| Financing mechanisms for energy efficiency                | 0     |
| Minimum energy efficiency performance standards           | 0     |
| Energy labeling systems                                   | 0     |
| Building energy codes                                     | 0     |
| Carbon Pricing  | 0     |
| <b>Total</b>  | 16.58 |

## Regulatory Indicators for Sustainable Energy (RISE)

### Renewable Energy

| Indicator  | Score        |
|--|--------------|
| Legal framework for renewable energy                   | 100          |
| Planning for renewable energy expansion                | 40           |
| Incentives and regulatory support for renewable energy | 50           |
| Attributes of financial and regulatory incentives      | 11           |
| Network connection and pricing                         | 0            |
| Counterparty risk                                      | 44           |
| Carbon pricing and monitoring                          | 0            |
| <b>Total</b>   | <b>35</b>    |
| <b>Overall Score</b>                                   | <b>26.24</b> |

### Energy Access

| Existence and monitoring of officially approved electrification plan                            | Score |
|---|-------|
| Is there an officially approved national electrification plan?                                  | No    |
| If not, is there a draft electrification plan that has been prepared but not yet been approved? | No    |
| Name of the electrification plan  | 0     |
| Are the electrification plan and the updates publicly available?                                | No    |
| When was the last update of the electrification plan?   | 0     |
| Is there an institution responsible for tracking progress of the plan?                          | No    |
| Name of the tracking institution  | 0     |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |    |
|---|----|
| Is there a timeframe defined in the electrification plan? | No |
|---|----|

| Scope of officially approved electrification plan  | Score | 0  |
|--|-------|----|
| Does the plan target a service level (e.g., power availability, number of guaranteed hours of power supply, etc.)? |       | No |
| Details on service level target  |       | 0  |
| Does the electrification plan include both grid and off-grid?  |       | No |
| Does the plan include community facilities?  |       | No |
| Does the plan include productive use?  |       | 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 | 33.33                              |
|---|-------|------------------------------------|
| 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                                |
| Are there capital subsidies paid to the utilities to provide distribution systems to rural areas/villages?  |       | Yes                                |
| Details on funding support for grid electrification   |       | National Fund of Electricity (FNE) |
| 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? |       | No                                 |
| Details on mechanisms to support the payment of connection fees   |       | 0                                  |

## Regulatory Indicators for Sustainable Energy (RISE)

|  |    |
|--|----|
| Does the government specify standards of performance on reliability along with new connections (e.g., number of guaranteed hours per day, etc.)? | No |
|--|----|

| Framework for minigrids   | Score                                     | 78.33 |
|---|---|-------|
| Are minigrids legally allowed to operate in the country?  | Yes                                       |       |
| Name and date of the regulation for minigrids   | Law #98-032 on power sector reform - 1998 |       |
| Can minigrids be owned and operated by private operators?   | Yes                                       |       |
| Do regulations clarify what will occur when the interconnected grid reaches a mini-grid?  | Yes                                       |       |
| To convert from a power producer to a power distributor that buys electricity from the interconnected grid and resells to its local customers | Yes                                       |       |
| To sell electricity to the interconnected grid operator and no longer sell electricity to retail customers                                    | Yes                                       |       |
| To sell its distribution grid to the interconnected grid operator and receive compensation for the sale of the asset                          | No  |       |
| Other   | No  |       |
| Do the regulations detail procedures for consumers to get connected to minigrids?   | No  |       |
| Do the regulations differ by size of minigrids?   | Yes                                       |       |
| Are mini-grid operators legally allowed to charge a different tariff from the national tariff?  | Yes                                       |       |
| Is there a retail electricity tariff schedule for minigrids?  | No  |       |
| Examples of minigrid tariffs  | 0   |       |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |  |
|---|--|
| Name of the regulation on minigrid tariffs  | Law 98-032 on the electricity sector reform (Title II) |
| Are there publicly funded mechanisms to secure viability gap funding for operators? | No   |
| Do subsidies exist for minigrids?   | Yes  |
| Details on subsidies for minigrids  | N/A  |
| Name of the document referring to minigrid subsidies                                | Electricity Law 98-032                                 |
| Do subsidies exist for power generators?  | Yes  |
| Do subsidies exist for energy storage systems?                                      | Yes  |
| Do subsidies exist for distribution systems?  | No   |
| Do subsidies exist for monitoring systems?  | No   |
| Do subsidies exist for other equipment related to minigrids?                        | No   |
| Do duty exemptions exist for minigrid systems?                                      | Yes  |
| Details on duty exemptions for minigrids  | N/A  |
| Name of the document referring to mini-grid duty exemptions                         | 0  |
| Do duty exemptions exist for power generators?                                      | Yes  |
| Do duty exemptions exist for energy storage systems?                                | Yes  |
| Do duty exemptions exist for distribution systems?                                  | No   |
| Do duty exemptions exist for monitoring systems?                                    | No   |
| Do duty exemptions exist for other equipment related to minigrids?                  | No   |

## Regulatory Indicators for Sustainable Energy (RISE)

|  |     |
|--|-----|
| Do subsidies exist for stand-alone systems?                                  | No  |
| Do subsidies exist for solar modules?  | Yes |
| Do subsidies exist for batteries?  | Yes |
| Do subsidies exist for charge controllers?                                   | Yes |
| Do subsidies exist for power conditioning equipment?                         | No  |
| Do subsidies exist for safety equipment?                                     | No  |
| Do subsidies exist for other equipment related to stand-alone systems?       | No  |
| Details on subsidies for stand-alone systems                                 | 0   |
| Name of the document referring to subsidies for stand-alone systems          | 0   |
| Do duty exemptions exist for stand-alone systems?                            | No  |
| Details on duty exemptions for stand-alone systems                           | 0   |
| Name of the document referring to duty exemptions for stand-alone systems    | 0   |
| Do duty exemptions exist for solar modules?                                  | Yes |
| Do duty exemptions exist for batteries?                                      | Yes |
| Do duty exemptions exist for charge controllers?                             | Yes |
| Do duty exemptions exist for power conditioning equipment?                   | No  |
| Do duty exemptions exist for safety equipment?                               | No  |
| Do duty exemptions exist for other equipment related to stand-alone systems? | No  |

## Regulatory Indicators for Sustainable Energy (RISE)

|  |  |
|--|--|
| 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 stand-alone home systems? | No   |
| Are there specific market financing facilities available to support operators to develop stand-alone systems?                  | No   |
| Are there specific government financing facilities available to support operators to develop stand-alone systems?              | No   |
| Are there specific market financing facilities available to support consumers to purchase stand-alone standalone systems?      | No   |
| Are there specific government financing facilities available to support consumers to purchase stand-alone standalone systems?  | No   |
| Are there technical standards detailing the requirements for minigrids to connect the grid?                                    | Yes  |
| Are technical standards made publicly available?   | Yes  |
| Name of the document detailing technical standards   | Decree #60-294 (Decret n° 60-294 portant détermination des conditions techniques auxquelles doivent satisfaire les distributions d'énergie électrique) |
| Are there safety standards for minigrids?  | Yes  |
| Are these safety standards made publicly available?  | Yes  |
| Name of the document detailing safety standards  | Decree #60-294 (Decret n° 60-294 portant détermination des conditions techniques auxquelles doivent satisfaire les distributions d'énergie électrique) |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |     |
|---|-----|
| Does the government implement certification programs for minigrid installers?   | Yes |
| Does the government provide or endorse certification programs for one or more components or equipment required for minigrids? | No  |
| Has the government adopted international quality standards for stand-alone systems?   | No  |
| Name of the document detailing quality standards  | 0   |
| Has the government adopted international testing methods?   | No  |
| Does the regulation accept testing done elsewhere/in another country (vs in-country testing required)?                        | No  |
| Is there a governmental certified program for solar equipment installers?   | No  |
| Are there environmental regulations on the disposal of solar devices and standalone home system products or components?       | No  |
| Name of document detailing environmental regulations  | 0   |

| <b>Framework for stand-alone systems</b>  | <b>Score</b>           | <b>22.22</b> |
|---|------------------------|--------------|
| Are there publicly funded mechanisms to secure viability gap funding for operators? | No                     |              |
| Do subsidies exist for minigrids?   | Yes                    |              |
| Details on subsidies for minigrids  | N/A                    |              |
| Name of the document referring to minigrid subsidies                                | Electricity Law 98-032 |              |
| Do subsidies exist for power generators?  | Yes                    |              |
| Do subsidies exist for energy storage systems?                                      | Yes                    |              |



## Regulatory Indicators for Sustainable Energy (RISE)

|  |     |
|--|-----|
| Do subsidies exist for distribution systems?                           | No  |
| Do subsidies exist for monitoring systems?                             | No  |
| Do subsidies exist for other equipment related to minigrids?           | No  |
| Do duty exemptions exist for minigrid systems?                         | Yes |
| Details on duty exemptions for minigrids                               | N/A |
| Name of the document referring to mini-grid duty exemptions            | 0   |
| Do duty exemptions exist for power generators?                         | Yes |
| Do duty exemptions exist for energy storage systems?                   | Yes |
| Do duty exemptions exist for distribution systems?                     | No  |
| Do duty exemptions exist for monitoring systems?                       | No  |
| Do duty exemptions exist for other equipment related to minigrids?     | No  |
| Do subsidies exist for stand-alone systems?                            | No  |
| Do subsidies exist for solar modules?                                  | Yes |
| Do subsidies exist for batteries?                                      | Yes |
| Do subsidies exist for charge controllers?                             | Yes |
| Do subsidies exist for power conditioning equipment?                   | No  |
| Do subsidies exist for safety equipment?                               | No  |
| Do subsidies exist for other equipment related to stand-alone systems? | No  |
| Details on subsidies for stand-alone systems                           | 0   |

## Regulatory Indicators for Sustainable Energy (RISE)

|  |     |
|--|-----|
| Name of the document referring to subsidies for stand-alone systems  | 0   |
| Do duty exemptions exist for stand-alone systems?  | No  |
| Details on duty exemptions for stand-alone systems   | 0   |
| Name of the document referring to duty exemptions for stand-alone systems  | 0   |
| Do duty exemptions exist for solar modules?  | Yes |
| Do duty exemptions exist for batteries?  | Yes |
| Do duty exemptions exist for charge controllers?   | Yes |
| Do duty exemptions exist for power conditioning equipment?   | No  |
| Do duty exemptions exist for safety equipment?   | No  |
| Do duty exemptions exist for other equipment related to stand-alone systems?   | No  |
| 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 stand-alone home systems? | No  |
| Are there specific market financing facilities available to support operators to develop stand-alone systems?                  | No  |
| Are there specific government financing facilities available to support operators to develop stand-alone systems?              | No  |
| Are there specific market financing facilities available to support consumers to purchase stand-alone standalone systems?      | No  |
| Are there specific government financing facilities available to support consumers to purchase stand-alone standalone systems?  | No  |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |  |
|---|--|
| Are there technical standards detailing the requirements for minigrids to connect the grid?                                   | Yes  |
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| Are there safety standards for minigrids?   | Yes  |
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| Does the government implement certification programs for minigrid installers?   | Yes  |
| Does the government provide or endorse certification programs for one or more components or equipment required for minigrids? | No   |
| Has the government adopted international quality standards for stand-alone systems?   | No   |
| Name of the document detailing quality standards  | 0  |
| Has the government adopted international testing methods?   | No   |
| Does the regulation accept testing done elsewhere/in another country (vs in-country testing required)?                        | No   |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |    |
|---|----|
| Is there a governmental certified program for solar equipment installers?   | No |
| Are there environmental regulations on the disposal of solar devices and standalone home system products or components? | No |
| Name of document detailing environmental regulations  | 0  |
| Are there national programs which aim to develop stand-alone systems or support the development of stand-alone systems? | No |
| Details on the national program promoting stand-alone systems   | 0  |

| <b>Consumer affordability of electricity</b>  | <b>Score</b>   | <b>50</b> |
|---|--|-----------|
| What is the annual cost of subsistence consumption (30kWh/month) as a percentage of GNI per household of bottom 20 percent of population? | 15.63482613785%                                      |           |
| Tariff schedule / tariff structure taken into account   | Electricity tariff structure, Jirama, September 2015 |           |
| Is there a mechanism to support low-volume consumers such as cross-subsidization, social or lifeline tariff?                              | Yes  |           |

| <b>Utility Transparency and Monitoring</b>   | <b>Score</b> | <b>33.33</b> |
|--|--------------|--------------|
| 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?             | Yes          |              |
| Are the financial statements of the largest retail electricity sales company publicly available? | Yes          |              |

## Regulatory Indicators for Sustainable Energy (RISE)

|  |     |
|--|-----|
| 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  |
| 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)?                                  | 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 |
| Is the utility operating an incidence/outage recording system (or SCADA/EMS with such functionality)?  | No  |
| Is the utility measuring the SAIDI and SAIFI or any other measurements for service reliability?  | No  |
| Are the measurements reported to the regulatory body?  | No  |
| Are the measurements available to public?  | No  |

| <b>Utility Creditworthiness</b>                           | <b>Score</b> |
|---|--------------|
| Current ratio (working capital ratio) of selected utility | 0            |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |   |
|---|---|
| EBITDA margin of selected utility               | 0 |
| Debt service coverage ratio of selected utility | 0 |
| Days payable outstanding of selected utility    | 0 |

### Energy Efficiency

| <b>National energy efficiency planning</b>                               | <b>Score</b>   | <b>75</b> |
|--|--|-----------|
| Is there legislation or a national action plan that aims to increase EE? | Yes  |           |
| Name of EE legislation or action plan                                    | Executive Order 14 of 27 on a National Program for the Rational and Efficient Use of Energy. |           |
| Is there an energy efficiency goal or target at the national level?      | Yes  |           |
| Natonal target details   | 0  |           |
| Is there a target for the residential sector?                            | No   |           |
| Target details   | 0  |           |
| Does the target have a milestone or deadline?                            | No   |           |
| Is there a commercial servcies sector target?                            | No   |           |
| Target details   | 0  |           |
| Does the target have a milestone or deadline?                            | No   |           |
| Is there an industrial sector target?                                    | No   |           |
| Target details   | 0  |           |
| Does the target have a milestone or deadline?                            | No   |           |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |     |
|---|-----|
| Is there a power sector target?               | Yes |
| Target details                                | 0   |
| Does the target have a milestone or deadline? | No  |

| Energy efficiency entities   | Score                                  | 14.29 |
|--|--|-------|
| Are there governmental and/or independent bodies dedicated to setting EE strategy?                               | Yes                                    |       |
| Name of entity   | ORE ( office for Energy Regualational) |       |
| Are there governmental and/or independent bodies dedicated to setting EE standards?                              | No                                     |       |
| Name of entity   | ORE                                    |       |
| Are there governmental and/or independent bodies dedicated to regulating EE activities of energy suppliers?      | No                                     |       |
| Name of entity   | ORE                                    |       |
| Are there governmental and/or independent bodies dedicated to regulating EE activities of energy consumers?      | No                                     |       |
| Name of entity   | ORE                                    |       |
| Are there governmental and/or independent bodies dedicated to certifying compliance with equipment EE standards? | No                                     |       |
| Name of entity   | ORE                                    |       |
| Are there governmental and/or independent bodies dedicated to certifying compliance with building EE standards?  | No                                     |       |
| Name of entity   | ORE                                    |       |

## Regulatory Indicators for Sustainable Energy (RISE)

|  |     |
|--|-----|
| 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   | ORE |

| Information provided to consumers about electricity usage  | Score | 37.5 |
|--|-------|------|
| Residential customers  |       |      |
| Is it mandatory for utilities to provide reports of their energy usage, in a bill or by other means? | No    |      |
| Commercial customers   |       |      |
| Is it mandatory for utilities to provide reports of their energy usage, in a bill or by other means? | No    |      |
| Industrial customers   |       |      |
| Is it mandatory for utilities to provide reports of their energy usage, in a bill or by other means? | No    |      |
| Residential 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   |      |
| 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   |      |



## Regulatory Indicators for Sustainable Energy (RISE)

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

## Regulatory Indicators for Sustainable Energy (RISE)

|   |     |
|---|-----|
| 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>72.22</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           |              |
| 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                                  |              |              |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |     |
|---|-----|
| Are customers charged a flat fee (per connection)?    | Yes |
| Are customers charged constant block rates?           | Yes |
| 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)?             | 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 |
| Do customers pay demand charges (per kW)?             | Yes |
| Do customers pay reactive power charges (per kVAR)?   | Yes |
| 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  |

## 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  |
| 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?                                   | Yes |
| 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 | 0  |
|--|-------|----|
| What is the threshold for classifying large consumers?   |       | 0  |
| 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 |

## Regulatory Indicators for Sustainable Energy (RISE)

|  |    |
|--|----|
| 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 |
| 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? | No |
| Are energy savings and/or financial savings publicized?  | No |

## Regulatory Indicators for Sustainable Energy (RISE)

|  |       |
|--|-------|
| 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)  | 42890 |

| Incentives & mandates: public sector   | Score | 0 |
|--|-------|---|
| 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    |   |
| 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 | 0 |
|--|-------|---|
| Name of utility energy efficiency regulation program |       |   |
| Electricity generation                               |       |   |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |    |
|---|----|
| Are utilities required to carry out energy efficiency activities in this area?                          | No |
| Details   |    |
| 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 |
| Transmission & distribution   |    |
| Are utilities required to carry out energy efficiency activities in this area?                          | No |
| Details   |    |
| 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   | 0  |
| Are energy savings or other target indicators measured to track performance in meeting EE requirements? | No |

## Regulatory Indicators for Sustainable Energy (RISE)

|  |    |
|--|----|
| 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?                                  | No |
| 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?  | 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 partial risk guarantees available for utilities to recover costs associated with or revenue lost from mandated energy efficiency activities?                               | No |



## Regulatory Indicators for Sustainable Energy (RISE)

|   |    |
|---|----|
| 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 |
| 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? | 0  |

## Regulatory Indicators for Sustainable Energy (RISE)

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

| <b>Financing mechanisms for energy efficiency</b>   | <b>Score</b> | <b>0</b> |
|---|--------------|----------|
| 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?   | No           |          |
| 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           |          |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |    |
|---|----|
| Are these available as government-driven financing mechanisms?  | 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 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 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 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   |    |
| 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 |
| Commercial services sector  |    |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |    |
|---|----|
| 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?   | No |
| 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 |
| 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 these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure? | No |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |    |
|---|----|
| Are these available as government-driven financing mechanisms?  | 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 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 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 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   |    |
| 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   |    |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |    |
|---|----|
| 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?   | No |
| 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 |
| 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 these available as solely market-driven financing mechanisms without any direct government approval, subsidy, authorization or other mediation procedure? | No |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |    |
|---|----|
| Are these available as government-driven financing mechanisms?  | 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 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 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 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   |    |
| 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)

| Minimum energy efficiency performance standards                         | Score | 0  |
|---|-------|----|
| EE standards regulations  |       |    |
| Refrigerators   |       |    |
| 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 |
| Air conditioners  |       |    |
| 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 |
| Lighting equipment  |       |    |
| Have minimum energy performance standards been adopted?                 |       | No |
| Details of standards  |       | 0  |



## 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?            | No |
| Industrial electric motors  |    |
| 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   |    |

## 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 |
| Heavy duty vehicles   |    |
| 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 |

| <b>Energy labeling systems</b>                                    | <b>Score</b> | <b>0</b> |
|---|--------------|----------|
| Refrigerators   |              |          |
| Have energy efficiency labeling schemes been adopted?             | No           |          |
| Is the labeling scheme mandatory?                                 | No           |          |
| Is the labeling scheme based on external/international standards? | No           |          |

## Regulatory Indicators for Sustainable Energy (RISE)

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

## Regulatory Indicators for Sustainable Energy (RISE)

|   |    |
|---|----|
| 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 |
| Is the labeling scheme based on external/international standards? | No |

| <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?  | 0            |          |
| When was the code last updated for commercial buildings?   | 0            |          |

## Regulatory Indicators for Sustainable Energy (RISE)

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

## Regulatory Indicators for Sustainable Energy (RISE)

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

| <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  | LETTER OF ENERGY POLITICS |            |
| Is private sector ownership of renewable energy generation legally authorized? | Yes                       |            |

| <b>Planning for renewable energy expansion</b> | <b>Score</b> | <b>40</b> |
|--|--------------|-----------|
|--|--------------|-----------|

## Regulatory Indicators for Sustainable Energy (RISE)

|  |     |
|--|-----|
| Does an official renewable energy target exist?  | Yes |
| Overall target   |     |
| 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? | No  |
| Name of the institution  | 0   |
| Does an electricity generation plan that includes renewable energy development exist?      | No  |
| Name of the generation plan  | 0   |
| Is the expansion plan based on a probabilistic approach?                                   | N/A |
| Does the current transmission planning consider renewable energy scale-up?                 | Yes |
| Name of the transmission plan  | 0   |

## Regulatory Indicators for Sustainable Energy (RISE)

|  |     |
|--|-----|
| Has the country conducted a variable renewable energy integration study?   | No  |
| Name of the integration study  | 0   |
| Year of the integration study  |     |
| 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 |
| Does the government publish or endorse a wind resource atlas or other data on the abundance and quality of the resource?                             | No  |



## Regulatory Indicators for Sustainable Energy (RISE)

|  |     |
|--|-----|
| 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;  | No  |
| Wind atlas is based on modeling inputs covering at least a 10 year period;   | No  |
| 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  | Yes |
| 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 assessment or equivalent process? | Yes |

## Regulatory Indicators for Sustainable Energy (RISE)

|  |     |
|--|-----|
| Are the hydro resource planning or zoning guidance outputs publically available?   | Yes |
| 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?  | 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?  | No  |
| 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  |       | 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   |       |     |
| 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                                 |     |

## Regulatory Indicators for Sustainable Energy (RISE)

|   |     |
|---|-----|
| Auction 1 - Technology  |     |
| Auction 1 - Project-specific tender and size (MW)   |     |
| Auction 1 - Auction for total and size (MW)   |     |
| Auction 1 - Standard PPA and Term   |     |
| Auction 1 - Price ceiling   | No  |
| Auction 1 - Winning bid (\$ cents/kWh)  |     |
| Auction 1 - Government body in charge   |     |
| Auction 2 - Year  |     |
| Auction 2 - Technology  |     |
| Auction 2 - Project-specific tender and size (MW)   |     |
| Auction 2 - Auction for total and size (MW)   |     |
| Auction 2 - Standard PPA and Term   |     |
| Auction 2 - Price ceiling   | No  |
| Auction 2 - Winning bid (\$ cents/kWh)  |     |
| Auction 2 - Government body in charge   |     |
| Winning bid guaranteed off-take   | No  |
| 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?   | No  |
| Do RE projects receive priority in dispatch?  | No  |
| 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>11</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?  | No           |           |
| Are tariffs indexed (in part or in whole) to an international currency or to inflation?                                       | No           |           |
| 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?                           | N/A |

| <b>Network connection and pricing</b>  | <b>Score</b> | <b>0</b> |
|--|--------------|----------|
| Are there rules defining the allocation of connection costs?   | No           |          |
| What is the type of the connection cost allocation policy (i.e. shallow/deep)?   | N/A          |          |
| 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?)               | No           |          |
| Do the rules consider customer type/size in determining eligibility for purchasing electricity from a third party?   | No           |          |
| connection cost document   | 0            |          |
| 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          |          |

## Regulatory Indicators for Sustainable Energy (RISE)

|  |     |
|--|-----|
| Are there provisions in the power exchange rules that allow for plant forecasting? | N/A |
|--|-----|

| <b>Counterparty risk</b>   | <b>Score</b> | <b>44</b> |
|--|--------------|-----------|
| Does the government offer or allow backing of utility payments (e.g. through a letter of credit, escrow account, payment guarantee, or other)? |              | Yes       |
| Information disclosure   |              | 33        |
| 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?   |              | Yes       |
| Are the financial statements of the largest retail electricity sales company publicly available?   |              | Yes       |
| 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)?                |              | Yes       |



## 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   | 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)?  | No     |
| Is the utility measuring the SAIDI and SAIFI or any other measurements for service reliability?  | No     |
| Are the data reported to the regulatory body?  | No     |
| Are the data available to the public?  | No     |
| Name of the selected utility   | JIRAMA |
| data - 17.1. Current ratio (working capital ratio)   | 0      |
| data - 17.2 Debt Service Coverage Ratio  | -8     |
| data - 17.3 Days payable outstanding   | 602    |
| data - 17.4 EBITDA margin  | 0      |

## 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       |