

# ENABLING POLICIES



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which African and Asian countries have an enabling environment for investment in energy access?

### QUICK FACTS

- Of the high-impact countries, only five provide widespread policy support for energy access. These include Bangladesh, India, Kenya, Tanzania and Uganda.
- Sub-Saharan Africa—the least electrified region with over 600 million people without electricity—has one of the least developed policy environments to support energy access. Ethiopia, Nigeria, and Sudan are three of the most populous energy deficit countries, with a total unserved population of 116 million people.
- Kenya, Tanzania and Uganda have put in place enabling policy and regulatory environments for energy access in the Sub-Saharan African region. Kenya aims to achieve universal access by 2020, and is focused on grid electrification. Attractive investment incentives and mini-grid standards have encouraged private sector engagement. Last mile connectivity (grid densification program) is funded through connection fee subsidies.
- India aims for universal access by 2019. Its electrification plan is regularly updated and monitored by the Rural Electrification Corporation Ltd. Central and the State Governments provide capital subsidies of up to 90 percent for grid extension, support connection fees, and set performance standards. The Remote Village Electrification Programme promotes mini-grids and supports capital costs for solar photovoltaic system facilities. Technical and quality standards are in place for mini-grids and stand-alone systems.

### CONTEXT

- Regulatory Indicators for Sustainable Energy (RISE) offers policy makers and investors detailed country-level insights on the policy and regulatory environment for sustainable energy across 111 countries globally.
- A number of countries in Sub-Saharan Africa and the Asia Pacific region received a high score for energy access on RISE but are not high-impact countries for electrification.
- RISE shows that policy frameworks for access are lagging behind, especially in populous countries of Sub-Saharan Africa and those with particularly low electrification rates.
- The top RISE scorers in energy access do well across all three possible energy supply solutions—grids, mini-grids, and stand-alone systems— suggesting they are being pursued not as substitutes but as complements. Countries in South Asia—specifically India and Bangladesh—are emerging as leaders in the access agenda with an innovative mix of grid and off-grid solutions.

### ADDITIONAL RESOURCES

[Regulatory Indicators for Sustainable Energy 2017](#)

[Global Tracking Framework 2017](#)

[State of Electricity Access Report 2017](#)

[SEforALL Africa Hub](#)

[SEforALL Asia-Pacific Hub](#)

[SEforALL Latin America and the Caribbean Hub](#)

[Clean Energy Mini-Grids HIO](#)

[International Energy Agency](#)

[The OPEC Fund for International Development](#)

[Regional Economic Commissions](#)

[GOGLA](#)

[ARE](#)

# ELECTRIFICATION



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which African and Asian countries have an enabling environment for investment in energy access?

### KEY

#### HIGH SCORE (100-67)

Most elements of a strong policy framework to support sustainable energy are in place

#### MEDIUM SCORE (66-34)

Significant opportunities exist to strengthen the policy framework

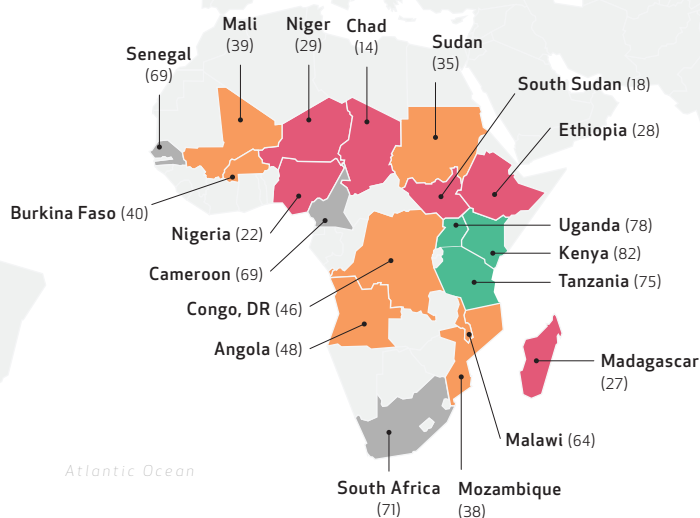
#### LOW SCORE (33-0)

Few or no elements of a supportive policy framework have been enacted

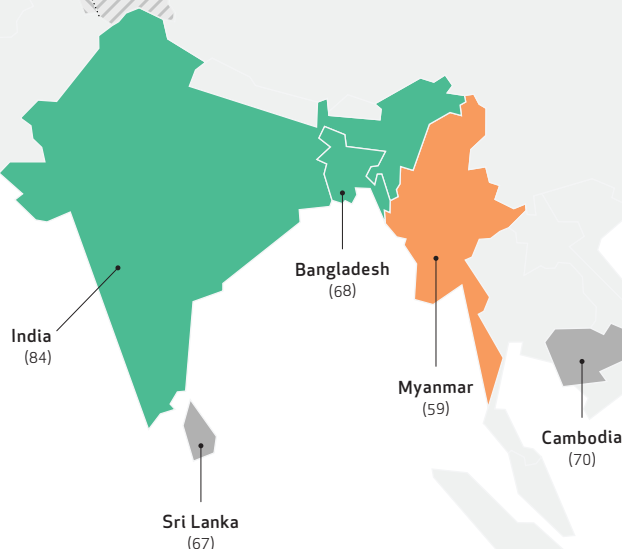
#### OTHER HIGH SCORES

Country received a high score on RISE but is not a high-impact country for electrification

### REGULATORY INDICATORS FOR SUSTAINABLE ENERGY (RISE) IN AFRICA, OVERALL ENERGY ACCESS SCORE



### REGULATORY INDICATORS FOR SUSTAINABLE ENERGY (RISE) IN ASIA, OVERALL ENERGY ACCESS SCORE



Notes: 1. Regulatory Indicators for Sustainable Energy (RISE) is a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy. 2. Korea, DPR is a high-impact country but it is not shown because there is no RISE data available. 3. The dotted line represents approximately the Line of Control in Jammu and Kashmir by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. 4. These maps were produced by SEforALL. They are based on the UN Map of the World, which can be found here: <http://www.un.org/Depts/Cartographic/map/profile/world.pdf>. The boundaries, colors, denominations and any other information shown on these maps do not imply, on the part of SEforALL, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.

Source: Regulatory Indicators for Sustainable Energy (RISE), World Bank Group, 2017. Data extracted from <http://rise.esmap.org/> on 06/23/2017.

# ENABLING POLICIES



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which countries have an enabling environment for investment in energy efficiency?

### QUICK FACTS

- In 2015, about three-quarters of the countries surveyed in Regulatory Indicators for Sustainable energy (RISE) had legislation or an action plan in place to pursue energy efficiency but only two-thirds had fixed precise targets.
- Barely a third of countries have made serious progress in labeling energy-efficient appliances—or establishing building energy codes for construction or minimum energy performance standards for industry.
- In over three-quarters of countries worldwide, the utility is not a creditworthy entity, and most likely unable to fund new investments from its own balance sheet.
- In a context of fast economic growth and sound nationwide electrification plan in the 1990s, Vietnam had successfully implemented load-shedding incentives in order to avoid a shortage of electrical capacity, in collaboration with the public utility as well as large consumers. Vietnam now scores the highest in the energy efficiency pillar among all developing countries.

### CONTEXT

- RISE offers policy makers and investors detailed country-level insights on the policy and regulatory environment for sustainable energy across 111 countries globally. It shines light on the need to attach greater political and policy priority to energy efficiency. Many countries have few or no policies in place to support energy efficiency.
- Energy security concerns among high income countries in the 1970s spurred efforts to address wasteful energy consumption. Most of those countries now have ambitious policies and incentivizing regulatory environments in place. Leading scorers among developing countries are in Central Asia, in compliance with ambition levels of the EU Energy Efficiency Directive.
- China started introducing energy efficiency measures in the 1980s to minimize energy imports as the economy expanded rapidly. Ambitious targets were set in its 12th Five Year Plan. The Thousand Companies Energy Conservation Action Plan mandates large energy users to conduct energy audits and report regularly. A mandatory labeling system covers products such as refrigerators, air conditioners, lighting equipment and industrial electric motors. Tax incentives, green bonds, and energy service contracts have been important drivers or consumers.
- RISE suggests an important role for utilities in meeting efficiency, as well as access, objectives because of utilities' in-depth knowledge of electricity consumers' habits and because of their own power consumption. Yet only half of RISE countries require their utilities to undertake energy efficiency measures. There is a clear correlation between scoring well on the utilities indicator and scoring well across the board on all other energy efficiency indicators.
- Since the 2011 Arab Spring, Egypt, Iran, Jordan, Morocco, and Tunisia have undertaken major energy subsidy reforms so as to reduce their fuel dependency and are beginning to let stronger price signals incentivize energy savings.

### ADDITIONAL RESOURCES

[Global Tracking Framework 2017](#)

[Regulatory Indicators for Sustainable Energy 2017](#)

[Copenhagen Centre on Energy Efficiency](#)

[SEforALL Africa Hub](#)

[SEforALL Asia-Pacific Hub](#)

[SEforALL Latin America and the Caribbean Hub](#)

[Appliances and Equipment Accelerator](#)

[Building Efficiency Accelerator](#)

[District Energy Accelerator](#)

[Lighting Accelerator](#)

[Transport and Motor Vehicle Fuel Efficiency Accelerator](#)

[Industrial Energy Efficiency Accelerator](#)

[International Energy Agency](#)

[Energy Efficiency Facilitating Hub \(ECCJ\)](#)

[Regional Economic Commissions](#)

Source: International Energy Agency (IEA) and the World Bank. 2017. "Progress Towards Sustainable Energy: Global Tracking Framework 2017" (April), World Bank, Washington, DC.

# ENERGY EFFICIENCY



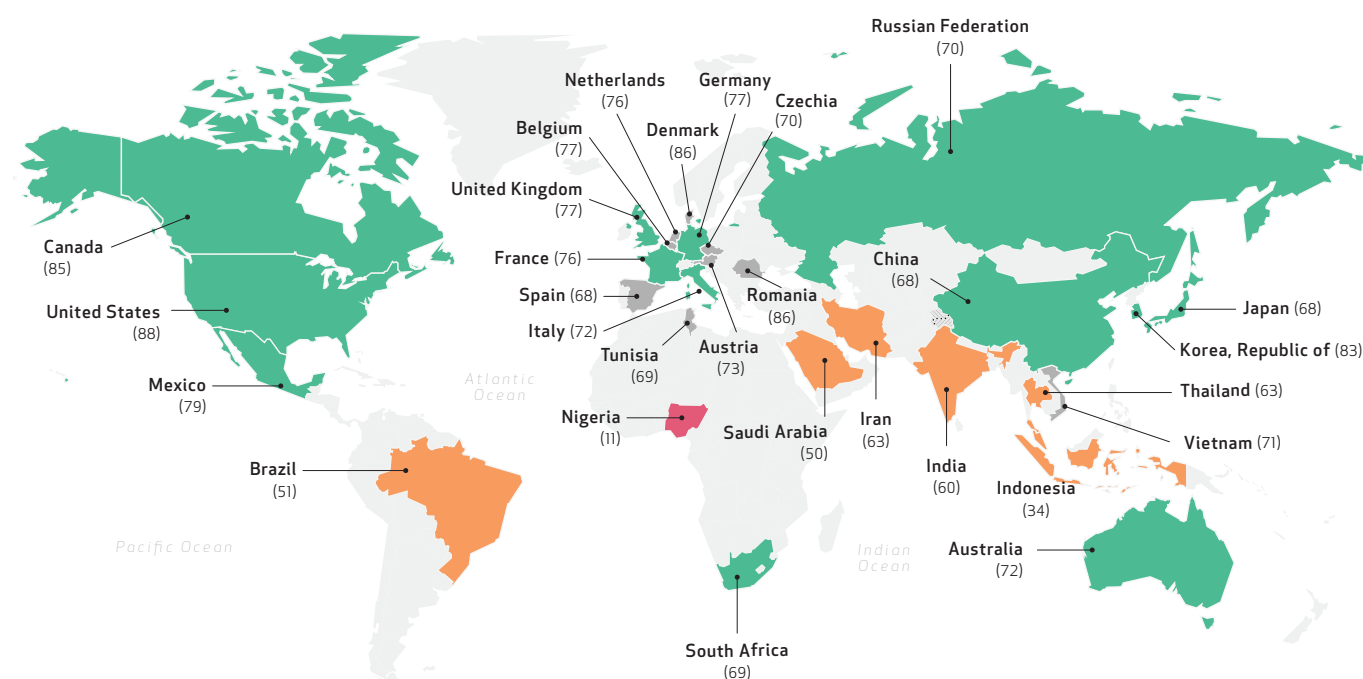
## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which countries have an enabling environment for investment in energy efficiency?

KEY	HIGH SCORE (100-67)	MEDIUM SCORE (66-34)	LOW SCORE (33-0)	OTHER HIGH SCORES
	Most elements of a strong policy framework to support sustainable energy are in place	Significant opportunities exist to strengthen the policy framework	Few or no elements of a supportive policy framework have been enacted	Country received a high score on RISE but is not a high-impact country for energy efficiency

## REGULATORY INDICATORS FOR SUSTAINABLE ENERGY (RISE), OVERALL ENERGY EFFICIENCY SCORE



Notes: 1. Regulatory Indicators for Sustainable Energy (RISE) is a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy. 2. The dotted line represents approximately the Line of Control in Jammu and Kashmir by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. 3. This map was produced by SEforALL. It is based on the UN Map of the World, which can be found here: <http://www.un.org/Depts/Cartographic/map/profile/world.pdf>. The boundaries, colors, denominations and any other information shown on this map does not imply, on the part of SEforALL, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries.

Sources: Regulatory Indicators for Sustainable Energy (RISE), World Bank Group, 2017. Data extracted from <http://rise.esmap.org/> on 06/23/2017.

# ENABLING POLICIES



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which countries have an enabling environment for investment in renewable energy?

### QUICK FACTS

- Globally, three quarters of countries covered by Regulatory Indicators for Sustainable Energy (RISE) have adopted legislation and strategic plans and assigned responsible institutions to achieve those targets. Almost all countries have a renewable energy target.
- Where wind and solar power account for at least 5 percent of total electricity generated in 2014, more than 80 percent of countries globally have completed a grid integration study to understand how to bring variable renewable energy into the grid.
- The average permitting time for a renewable energy project for the 111 countries covered by RISE is about 500 days. Small-scale, grid-connected, solar and wind projects usually benefit from quicker procedures.
- In 2015, India announced an ambitious goal to increase its renewable power capacity fivefold in seven years. Of this increase, 57 percent would be solar power and 34 percent wind power.
- China's Renewable Energy Law (2005) set ambitious renewable energy targets underpinned with clear strategies and investment plans. The target for non-fossil fuel energy is 15 percent of national total energy consumption by 2020. There are technology-specific targets for solar power, wind power, hydropower and geothermal energy. Investment incentives and feed-in tariffs are in place for wind and solar power.
- Twenty-three countries have a carbon pricing mechanism in place to accompany the deployment of renewable energy. This includes 15 countries that subscribe to the European Union's Emission Trading Scheme (EU-ETS), a key tool to meet EU climate and energy targets. Australia and Turkey are the only countries that have introduced mandatory reporting of greenhouse gas emissions by emitters while still considering the implementation of a carbon pricing mechanism.

### CONTEXT

- RISE offers policy makers and investors detailed country-level insights on the policy and regulatory environment for sustainable energy across 111 countries globally.
- 77 percent of the 111 countries covered by RISE do not have carbon pricing and monitoring schemes in place or require mandatory reporting of greenhouse gas emissions. Where carbon pricing mechanisms are in place they almost always form part of the policy framework for renewable energy and climate action, as reflected in countries' Nationally Determined Contributions.

### ADDITIONAL RESOURCES

[Regulatory Indicators for Sustainable Energy 2017](#)  
[Global Tracking Framework 2017](#)  
[International Renewable Energy Agency](#)  
[SEforALL Africa Hub](#)  
[SEforALL Asia-Pacific Hub](#)

[SEforALL Latin America and the Caribbean Hub](#)  
[International Energy Agency](#)  
[REN21](#)  
[Bloomberg New Energy Finance](#)

Sources: World Bank 2017. "Regulatory Indicators for Sustainable Energy. A Global Scoreboard for Policy-Makers", World Bank, Washington, DC. World Bank and Ecofys 2017.

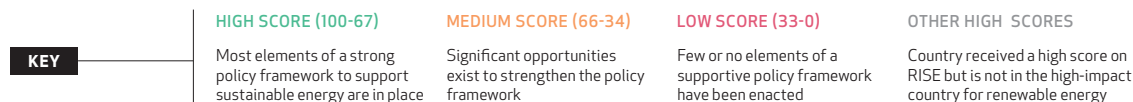
# RENEWABLE ENERGY



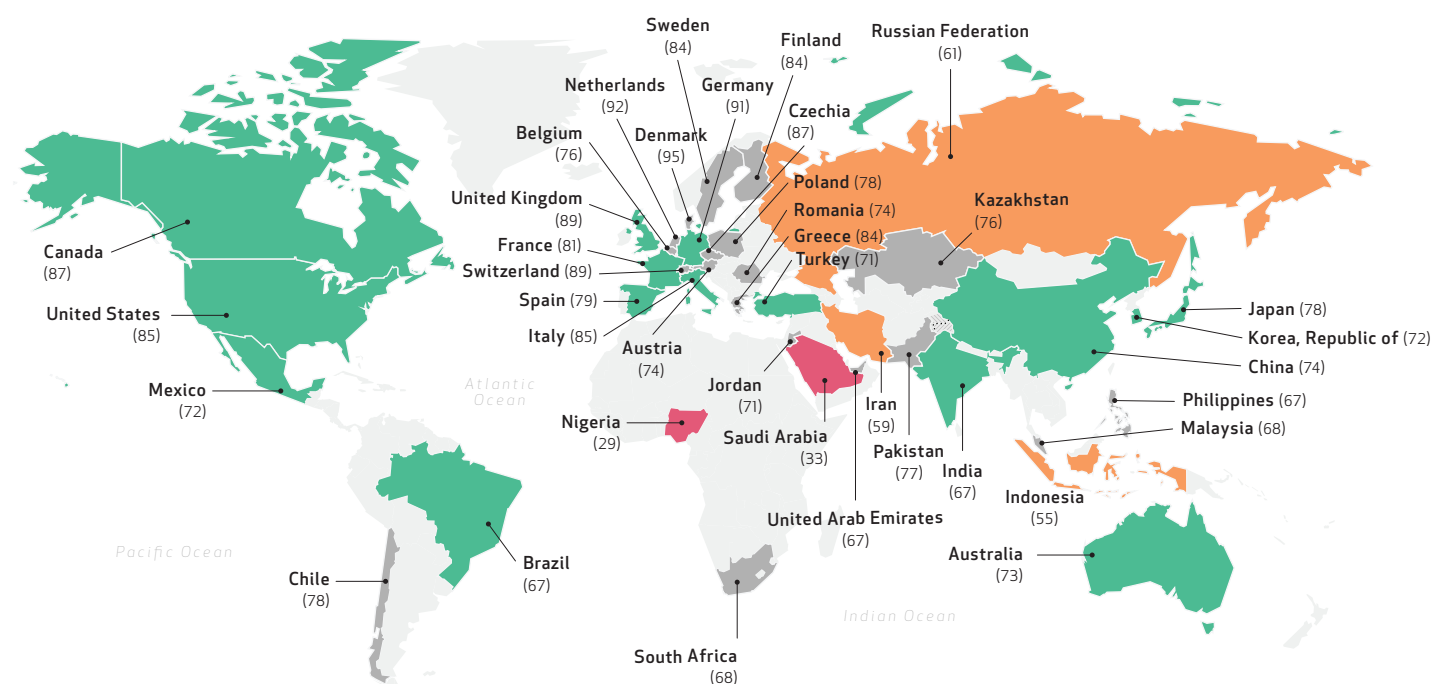
## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which high-impact countries have an enabling environment for investment in renewable energy?



## REGULATORY INDICATORS FOR SUSTAINABLE ENERGY (RISE), OVERALL RENEWABLE ENERGY SCORE



Notes: 1. Regulatory Indicators for Sustainable Energy (RISE) is a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy. 2. The dotted line represents approximately the Line of Control in Jammu and Kashmir by India and Pakistan. The final status of Jammu and Kashmir has not yet been agreed upon by the parties. 3. This map was produced by SEforALL. It is based on the UN Map of the World, which can be found here: <http://www.un.org/Depts/Cartographic/map/profile/world.pdf>. The boundaries, colors, denominations and any other information shown on this map does not imply, on the part of SEforALL, any judgment on the legal status of any territory or any endorsement or acceptance of such boundaries. Source: Regulatory Indicators for Sustainable Energy (RISE), World Bank Group, 2017. Data extracted from <http://rise.esmap.org/> on 06/23/2017.

# ENABLING POLICIES



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which countries have an enabling environment for investment in energy access?

### QUICK FACTS

- Of the high-impact countries, only five provide widespread policy support for energy access. These include Bangladesh, India, Kenya, Tanzania and Uganda.
- 70 percent of Africa's least electrified nations—with access rates below 20 percent—have barely begun to establish an enabling environment for access.
- Electrification plans that help define boundaries between utility and decentralized solutions are generally lacking. 45 percent of high-impact countries do not have electrification plans yet.
- In the Asia Pacific region, the policy framework for access to electricity is more favorable and this is reflected in access rates of 90.3 percent in 2014 compared to 37 percent in Sub-Saharan Africa. Countries in the Asia Pacific region score an average of 90 percent on the RISE policy environment indicating that most elements of a strong policy framework are in place, in contrast to 35 percent in Sub-Saharan Africa.

### CONTEXT

- Regulatory Indicators for Sustainable Energy (RISE) offers policy makers and investors detailed country-level insights on the policy and regulatory environment for sustainable energy across 111 countries globally.
- The top RISE scorers in energy access generally do well across all three possible energy supply solutions—grids, mini-grids and stand-alone systems—suggesting they are being pursued not as substitutes but as complements as part of comprehensive national energy access strategies.
- High scorers for RISE on access tend to do well across policies for grids, mini-grids, and stand-alone systems suggesting efforts are complementary. Countries like India and Bangladesh are emerging as leaders with an innovative mix of grid and off-grid solutions.
- Utilities play an important role in improving access but RISE shows that many utilities in the developing world are not creditworthy and struggle to make the investments needed to expand electricity networks to the unserved. Dedicated government budget lines to support electrification are often missing and improvements are needed in utility transparency and monitoring. This includes the collection, reporting to regulators and public availability of key information about utility financial and technical performance that can provide a basis for investors and developers to assess investment opportunities. By monitoring the reliability of electricity services utilities can also ensure the high operating efficiency and financial viability of their core business.
- The full cost of connecting to the grid, which varies from US\$22 in Bangladesh to US\$500 in several Sub-Saharan African countries, exceeds US\$100 in the vast majority of countries. The biggest driver of connection costs is capital investment for buying materials, including poles, cables, and transformers. Sub-Saharan Africa has the highest fees, in most cases because customers have to pay for electrical equipment (circuit breakers, meters, cables).

### ADDITIONAL RESOURCES

[Regulatory Indicators for Sustainable Energy 2017](#)  
[Global Tracking Framework 2017](#)  
[State of Electricity Access Report](#)  
[SEforALL Africa Hub](#)  
[SEforALL Asia-Pacific Hub](#)  
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[Clean Energy Mini-Grids HIO](#)  
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[GOGLA](#)  
[ARE](#)

Source: International Energy Agency (IEA) and the World Bank. 2017. "Progress Towards Sustainable Energy: Global Tracking Framework 2017" (April), World Bank, Washington, DC.

# ELECTRIFICATION



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which countries have an enabling environment for investment in energy access?

### REGULATORY INDICATORS FOR SUSTAINABLE ENERGY (RISE), BY ENERGY ACCESS INDICATOR

#### KEY

#### HIGH SCORE (100-67)

Most elements of a strong policy framework to support sustainable energy are in place

#### MEDIUM SCORE (66-34)

Significant opportunities exist to strengthen the policy framework

#### LOW SCORE (33-0)

Few or no elements of a supportive policy framework have been enacted



Notes: 1. Regulatory Indicators for Sustainable Energy (RISE) is a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy. 2. 'Electrification plan approved and monitored' refers to the existence and monitoring of officially approved electrification plans. 3. 'Quality of electrification plan' refers to the quality of officially approved electrification plans.

Source: Regulatory Indicators for Sustainable Energy (RISE), World Bank Group, 2017. Data extracted from <http://rise.esmap.org> on 06/23/2017.



# ENABLING POLICIES



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which countries have an enabling environment for investment in energy efficiency?

### QUICK FACTS

- Regulatory frameworks in the largest energy consumers in the world, measured in terms of primary energy consumption, tend to be more advanced than average as they have strong incentives to harness energy conservation measures.
- Countries scoring the highest on Regulatory Indicators for Sustainable Energy (RISE) energy efficiency indicators are not necessarily the wealthiest or those that have pursued energy efficiency policies the longest, as suggested by the example of Vietnam. However, Sub-Saharan African countries scored very low for all indicators.
- Among low-income countries, only Ethiopia, Haiti, Tanzania, and Uganda offer financing mechanisms for energy efficiency, with all four offering tax or duty incentives across sectors.

### CONTEXT

- RISE offers policy makers and investors detailed country-level insights on the policy and regulatory environment for sustainable energy across 111 countries globally.
- Most countries have integrated energy efficiency in their national energy strategies, have established basic institutions to promote energy efficiency and encourage consumers to use electricity more efficiently. However, more efforts are needed to inform customers on their electricity consumption habits and to regulate activities of energy consumers and suppliers.
- Financing mechanisms in place, including credit lines from banks, energy service agreements, and tax incentives, are distinctive policy elements for high-scoring countries. There is generally a strong relationship between wealth and deployment of energy efficiency financing mechanisms.
- There is considerable scope for energy savings through the deployment and enforcement of minimum energy performance standards, particularly for electrical appliances. Building energy codes, which require deep expertise to build and high level capacity among local governments to enforce, are also in place in top scoring, generally high-income, countries only.

### ADDITIONAL RESOURCES

[Regulatory Indicators for Sustainable Energy 2017](#)  
[Global Tracking Framework 2017](#)  
[Copenhagen Centre on Energy Efficiency](#)  
[SEforALL Africa Hub](#)  
[SEforALL Asia-Pacific Hub](#)  
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[Industrial Energy Efficiency Accelerator](#)  
[International Energy Agency](#)  
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[Regional Economic Commissions](#)

# ENERGY EFFICIENCY



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL energy efficiency objectives globally

Which countries have an enabling environment for investment in energy efficiency?

### REGULATORY INDICATORS FOR SUSTAINABLE ENERGY, BY ENERGY EFFICIENCY INDICATOR

#### KEY

#### HIGH SCORE (100-67)

Most elements of a strong policy framework to support sustainable energy are in place

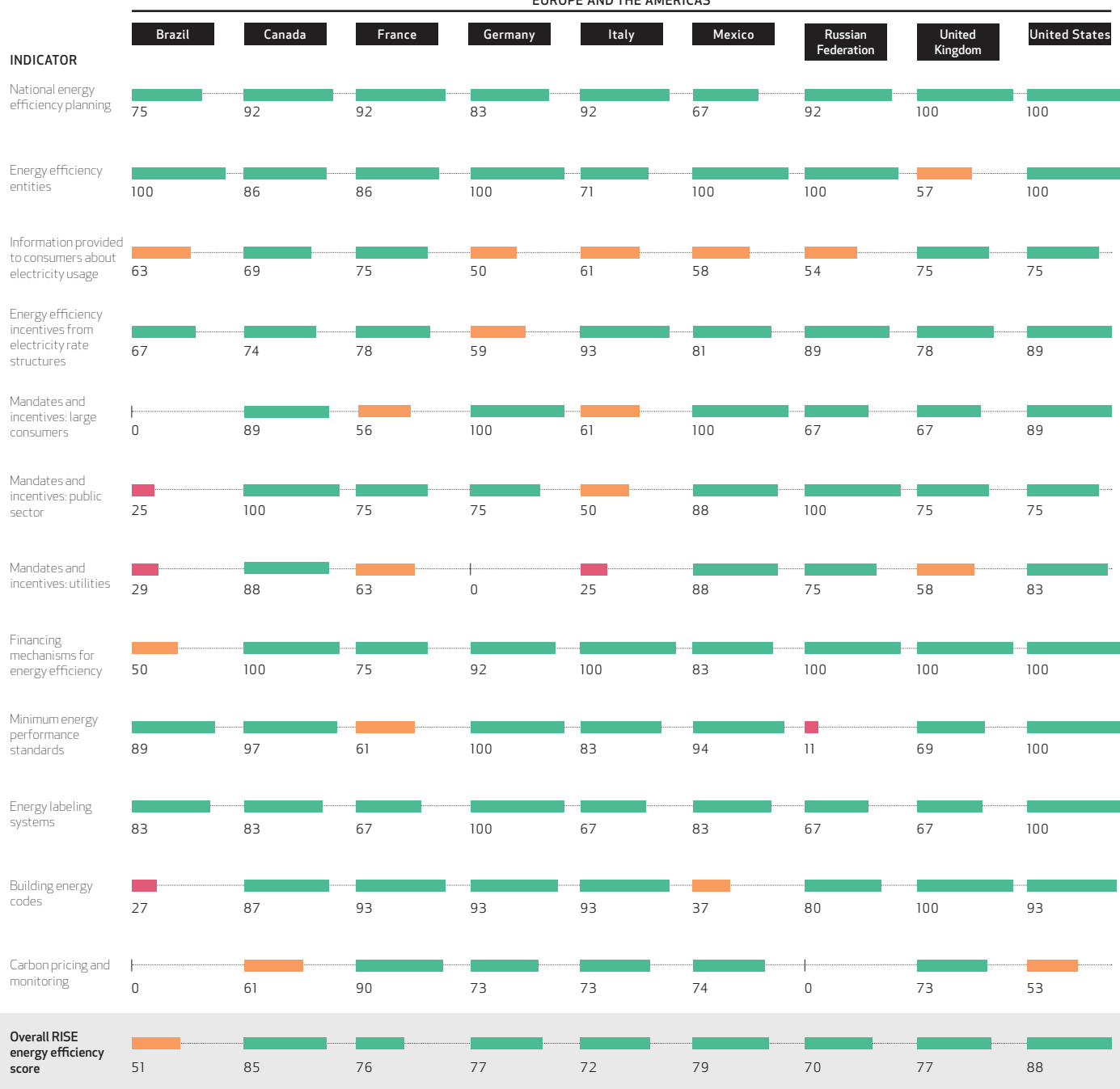
#### MEDIUM SCORE (66-34)

Significant opportunities exist to strengthen the policy framework

#### LOW SCORE (33-0)

Few or no elements of a supportive policy framework have been enacted

#### EUROPE AND THE AMERICAS



Note: Regulatory Indicators for Sustainable Energy (RISE) is a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy.

Source: Regulatory Indicators for Sustainable Energy (RISE), World Bank Group, 2017.

# ENERGY EFFICIENCY



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL energy efficiency objectives globally

Which countries have an enabling environment for investment in energy efficiency?

### REGULATORY INDICATORS FOR SUSTAINABLE ENERGY, BY ENERGY EFFICIENCY INDICATOR

#### KEY

#### HIGH SCORE (100-67)

Most elements of a strong policy framework to support sustainable energy are in place

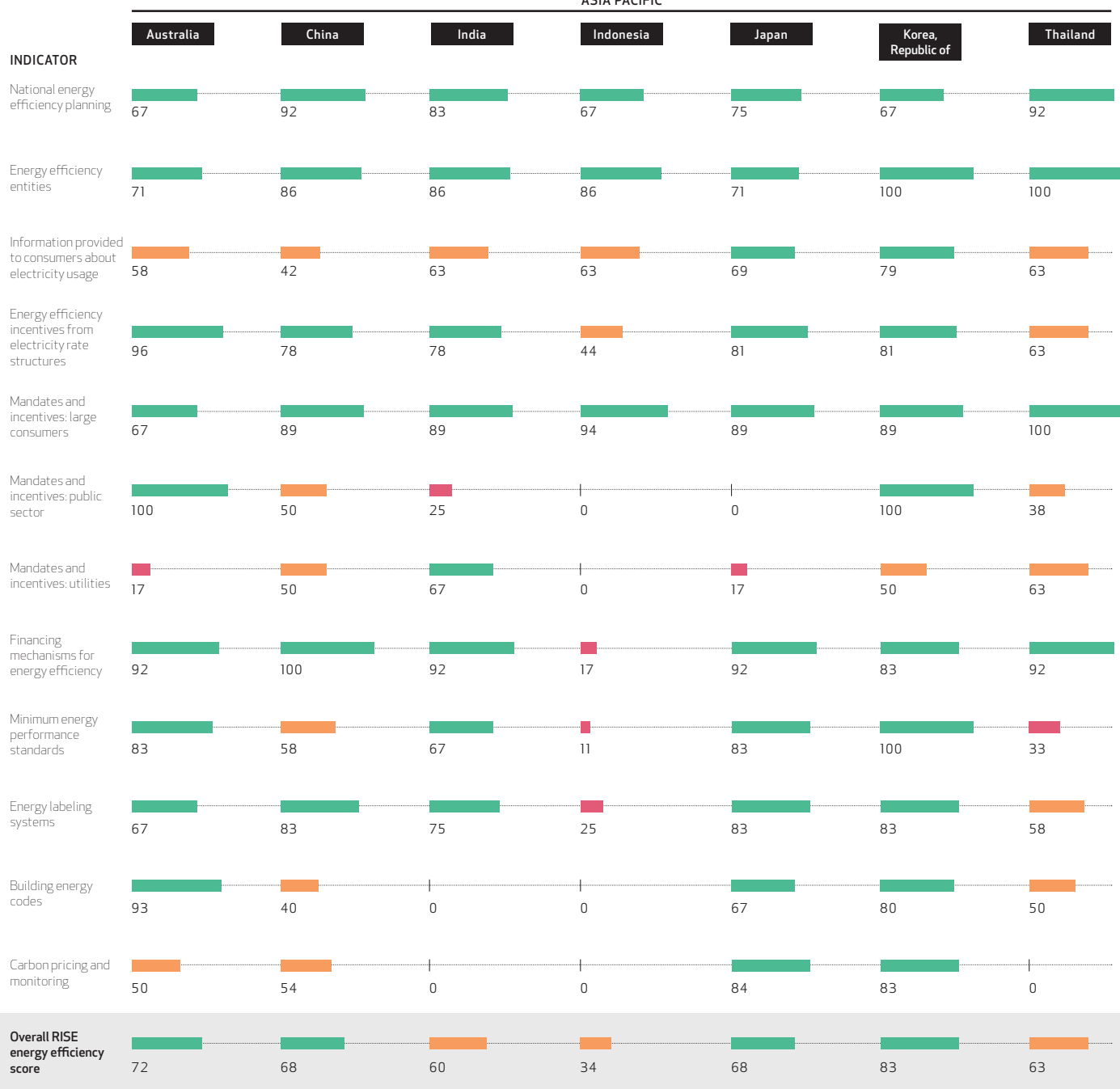
#### MEDIUM SCORE (66-34)

Significant opportunities exist to strengthen the policy framework

#### LOW SCORE (33-0)

Few or no elements of a supportive policy framework have been enacted

#### ASIA PACIFIC



Note: Regulatory Indicators for Sustainable Energy (RISE) is a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy.

Source: Regulatory Indicators for Sustainable Energy (RISE), World Bank Group, 2017.

# ENERGY EFFICIENCY



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL energy efficiency objectives globally

Which countries have an enabling environment for investment in energy efficiency?

### REGULATORY INDICATORS FOR SUSTAINABLE ENERGY, BY ENERGY EFFICIENCY INDICATOR

#### KEY

#### HIGH SCORE (100-67)

Most elements of a strong policy framework to support sustainable energy are in place

#### MEDIUM SCORE (66-34)

Significant opportunities exist to strengthen the policy framework

#### LOW SCORE (33-0)

Few or no elements of a supportive policy framework have been enacted

#### AFRICA AND THE MIDDLE EAST



Note: Regulatory Indicators for Sustainable Energy (RISE) is a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy.

Source: Regulatory Indicators for Sustainable Energy (RISE), World Bank Group, 2017.

# ENABLING POLICIES



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which countries have an enabling environment for investment in renewable energy?

### QUICK FACTS

- About three quarters of the 111 countries covered in Regulatory Indicators for Sustainable Energy (RISE) have adopted legislation and strategic plans governing the renewable energy sector and assigned responsible institutions to achieve them. However, primary legislation is less common in Sub-Saharan Africa, North Africa and the Middle East.
- While a strong enabling environment alone does not guarantee investment flows at scale, countries that have developed sizeable renewable energy capacity (above 100 MW) tend to have stronger legislation in place.
- Thirty eight percent of countries covered by RISE have conducted an integration study to understand how to bring variable renewable energy into the grid. Germany, the United States, Spain and the United Kingdom feature some of the most advanced renewable energy integration frameworks.
- The number of procedures necessary to set up a grid-connected renewable energy facility ranges from two in the Netherlands to 17 in the Russian Federation.

### CONTEXT

- RISE offers policy makers and investors detailed country-level insights on the policy and regulatory environment for sustainable energy across 111 countries globally.
- Many important elements of policy support for renewable energy are common across all regions and incomes, including renewable energy targets and action plans, primary legislation and legal private ownership of generation, and financial and regulatory incentives like feed-in tariffs or competitive tenders.
- Technically sophisticated studies, such as those needed to evaluate the integration of variable renewable energy capacity in the grid, are becoming more important as the share of renewable capacity grows in the power mix.

### ADDITIONAL RESOURCES

[Regulatory Indicators for Sustainable Energy 2017](#)

[Global Tracking Framework 2017](#)

[SEforALL Africa Hub](#)

[SEforALL Asia-Pacific Hub](#)

[SEforALL Latin America and the Caribbean Hub](#)

[International Renewable Energy Agency](#)

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[REN21](#)

[Bloomberg New Energy Finance](#)

# RENEWABLE ENERGY

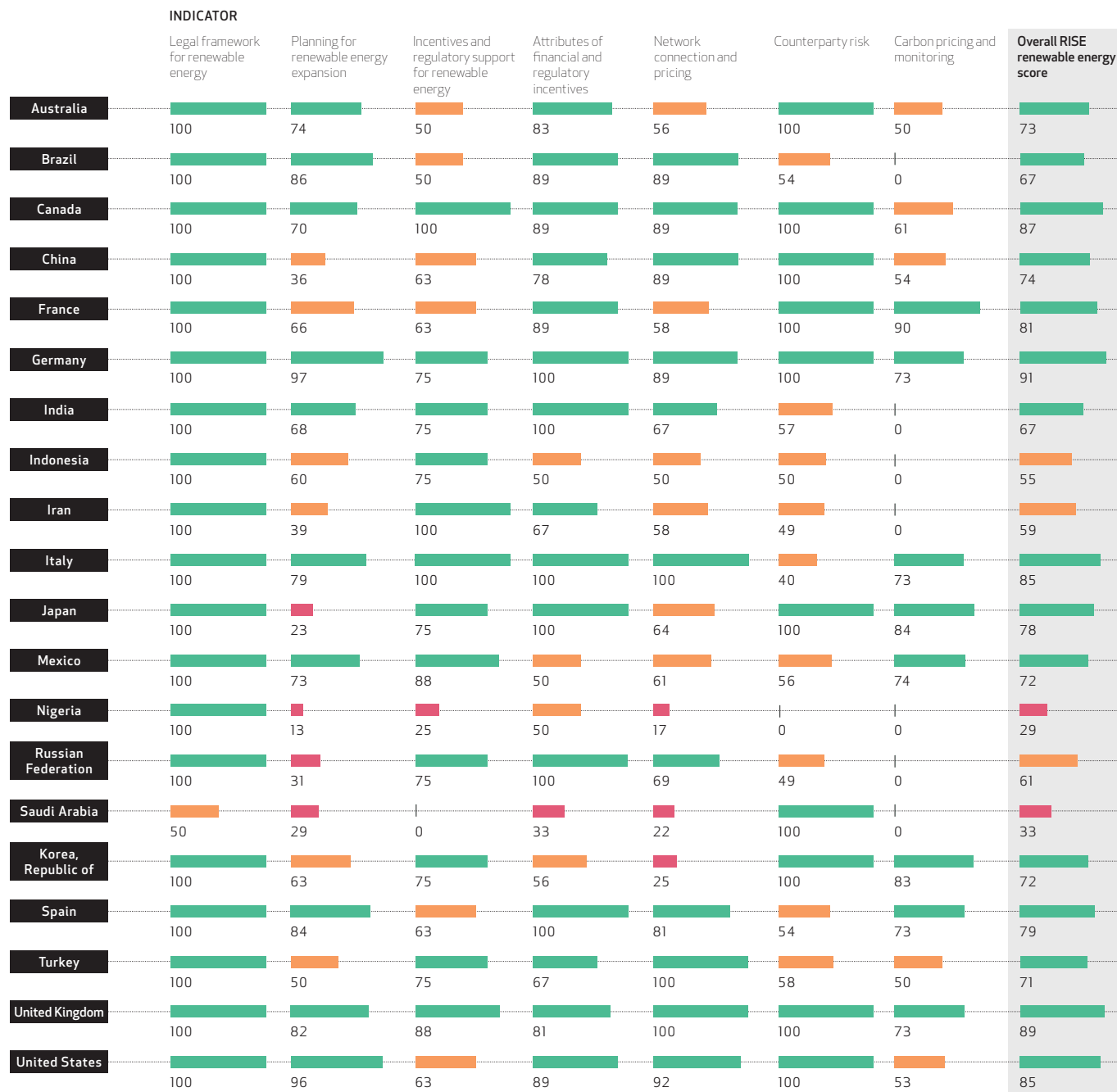


## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which countries have an enabling environment for investment in renewable energy?

### REGULATORY INDICATORS FOR SUSTAINABLE ENERGY (RISE), BY RENEWABLE ENERGY INDICATOR



Note: Regulatory Indicators for Sustainable Energy (RISE) is a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy.

Source: Regulatory Indicators for Sustainable Energy (RISE), World Bank Group, 2017. Data extracted from <http://rise.esmap.org/> on 06/23/2017.

# DOING BUSINESS



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which countries have an enabling environment for investment in energy access?

### QUICK FACTS

- Of the world's 20 countries with the largest number of people without electricity, only five - Bangladesh, India, Kenya, Tanzania and Uganda - provide comprehensive policy support for energy access according to the Regulatory Indicators for Sustainable Energy (RISE).
- Sub-Saharan Africa—the least electrified region with over 600 million people without electricity in 2014—has one of the least developed policy environments to support energy access. This includes, for example, Ethiopia, Nigeria and Sudan, three countries with a consumed unserved population of 116 million in 2014.
- Kenya received a high score for energy access in RISE and showed one of the most notable improvements in performance on Doing Business indicators in 2015/16. Kenya streamlined the process of getting electricity by introducing a geographic information system that allows the utility to provide price quotes to customers without conducting a site visit. This reduced the time and interactions needed to obtain an electricity connection as well as its cost. Attractive investment incentives and mini-grid standards have also encouraged private sector engagement.
- In India in 2015/16 the utility in Delhi streamlined the connection process for new commercial electricity connections: the time needed to connect commercial consumers to electricity was reduced from 138 days in 2013/14, to 45 days in 2015/16. Connection costs were also reduced from 846 percent of income per capita in 2013/14 to 187 percent in 2015/16.

### CONTEXT

- RISE offers policy makers and investors detailed country-level insights on the policy and regulatory environment for sustainable energy across 111 countries globally.
- To enable private sector businesses to start, operate and expand their activities, and eventually deliver clean, affordable and reliable energy, an enabling business environment is required. Doing Business ranks economies from 1-190. A high ease of doing business ranking means the regulatory environment is more conducive to the starting and operation of a local firm.
- By looking at how countries perform on RISE and Doing Business, it is possible to get a sense of where progress is needed on the enabling environments to support energy access and energy market development.
- Those high-impact countries that score in the upper range on RISE tend to also rank higher on Doing Business, however progress is still needed on the regulatory environment for businesses.

### ADDITIONAL RESOURCES

[Global Tracking Framework 2017](#)

[Regulatory Indicators for Sustainable Energy 2017](#)

[Doing Business 2017](#)

[State of Electricity Access Report](#)

[SEforALL Africa Hub](#)

[SEforALL Asia-Pacific Hub](#)

[SEforALL Latin America and the Caribbean Hub](#)

[Clean Energy Mini-Grids HIO](#)

[International Energy Agency](#)

[The OPEC Fund for International Development](#)

[Regional Economic Commissions](#)

[GOGLA](#)

[ARE](#)

# ELECTRIFICATION



## HIGH-IMPACT COUNTRIES

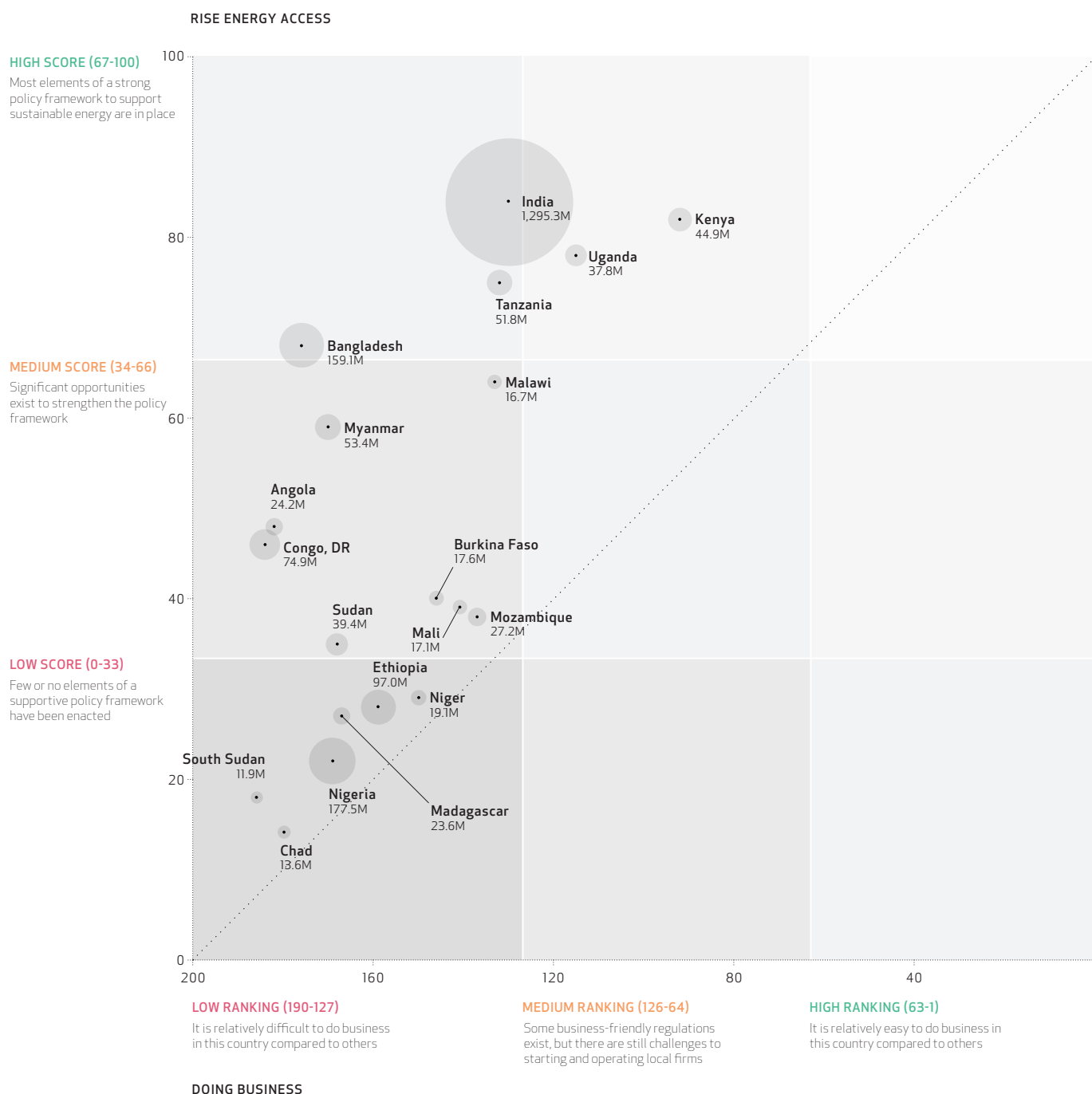
Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which countries have an enabling environment for investment in energy access?

## REGULATORY INDICATORS FOR SUSTAINABLE ENERGY AND DOING BUSINESS RANKING

### KEY

Population, 2014 values (relative to countries shown)



Notes: 1. No data available for Korea, DPR. 2. Regulatory Indicators for Sustainable Energy (RISE) is a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy. 3. Doing Business is a relative ranking of 190 economies based on the regulatory environment. It does this by sorting the aggregate scores of 11 topics, each consisting of several indicators, giving equal weight to each topic. Sources: Regulatory Indicators for Sustainable Energy (RISE), World Bank Group, 2017. "Doing Business 2017: Equal Opportunity for All", <http://www.doingbusiness.org/rankings>, 2017. Data extracted from <http://rise.esmap.org/> on 06/23/2017. World Development Indicators, World Bank Group, 2014. Data extracted from [http://data.worldbank.org/indicator/SP.POP.TOTL?end=2014&name\\_desc=false&view=chart](http://data.worldbank.org/indicator/SP.POP.TOTL?end=2014&name_desc=false&view=chart) on 06/20/2017.



# DOING BUSINESS



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which countries have an enabling environment for investment in energy efficiency?

### QUICK FACTS

- Some of the most energy intensive economies, including Canada, China, the Russian Federation, South Africa or the United States, are now harnessing energy efficiency measures with enabling regulatory environments and favorable business environments.
- Doing Business rankings suggest that Europe and Central Asia have consistently been the regions with the highest average number of reforms per economy; the region is now close to having the same good practices in place as the OECD high-income economies.
- Despite significant progress realized for business development in Indonesia in recent years, notably due to the introduction of regulatory initiatives to improve overall power reliability, the regulatory environment still lacks energy efficiency standards, building codes or mandates for the public sector and utilities.

### CONTEXT

- Regulatory Indicators for Sustainable Energy (RISE) offers policy makers and investors detailed country-level insights on the policy and regulatory environment for sustainable energy across 111 countries globally while Doing Business measures aspects of regulation that enable or prevent private sector businesses from starting, operating and expanding.
- Dedicated entities are the necessary building blocks for governments to develop and implement energy efficiency measures, and encourage the private sector engagement. Minimum energy performance standards, appliance labels and building codes are prime candidates for near-term action. Other policy elements are also important but remain often neglected: sectoral-targeted policies for large consumers, the public sector and utilities as well as the development of financing mechanisms.
- The top twenty high-impact countries for energy efficiency show a strong correlation between a high overall RISE Energy Efficiency score and a high ranking on the Ease of Doing Business. Nigeria received its lowest RISE score in Energy Efficiency at 11, with low scores in 11 out of 12 efficiency indicators. Nigeria was ranked 169 out of 190 countries in Doing Business, making improvements in 2015/16 in starting a business and getting credit.

### ADDITIONAL RESOURCES

[Global Tracking Framework 2017](#)

[Regulatory Indicators for Sustainable Energy 2017](#)

[Doing Business 2017](#)

[Copenhagen Centre on Energy Efficiency](#)

[SEforALL Africa Hub](#)

[SEforALL Asia-Pacific Hub](#)

[SEforALL Latin America and the Caribbean Hub](#)

[Appliances and Equipment Accelerator](#)

[Building Efficiency Accelerator](#)

[District Energy Accelerator](#)

[Lighting Accelerator](#)

[Transport and Motor Vehicle Fuel Efficiency Accelerator](#)

[Industrial Energy Efficiency Accelerator](#)

[International Energy Agency](#)

[Energy Efficiency Facilitating Hub \(ECCJ\)](#)

[Regional Economic Commissions](#)

# ENERGY EFFICIENCY

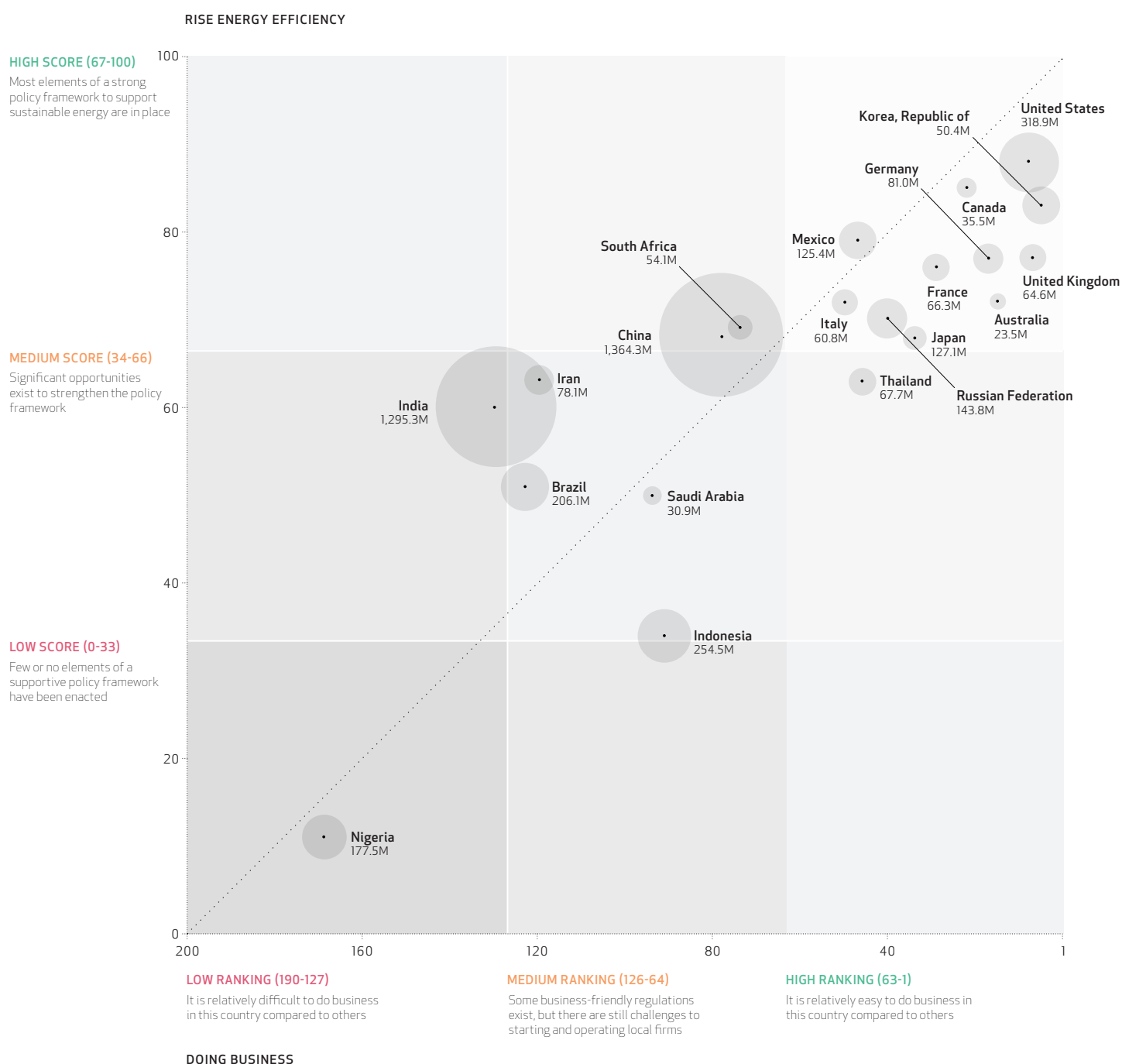


## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which high-impact countries have an enabling environment for investment in energy efficiency?

## REGULATORY INDICATORS FOR SUSTAINABLE ENERGY (RISE) AND DOING BUSINESS RANKING



Notes: 1. Regulatory Indicators for Sustainable Energy (RISE) is a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy. 2. Doing Business is a relative ranking of 190 economies based on the regulatory environment. It does this by sorting the aggregate scores of 11 topics, each consisting of several indicators, giving equal weight to each topic. Sources: Regulatory Indicators for Sustainable Energy (RISE), World Bank Group, 2017. "Doing Business 2017: Equal Opportunity for All", <http://www.doingbusiness.org/rankings>, 2017. Data extracted from <http://rise.esmap.org/> on 06/23/2017. World Development Indicators, World Bank Group, 2014. Data extracted from [http://data.worldbank.org/indicator/SP.POP.TOTL?end=2014&name\\_desc=false&view=chart](http://data.worldbank.org/indicator/SP.POP.TOTL?end=2014&name_desc=false&view=chart) on 06/20/2017.

# DOING BUSINESS



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which countries have an enabling environment for investment in renewable energy?

### QUICK FACTS

- The six top-performing high-impact countries for renewable energy in Regulatory Indicators for Sustainable Energy (RISE) – including Germany, the United Kingdom, France, Spain, Japan and South Korea - also score highly for reliable power supplies and transparent electricity tariffs.
- Doing Business' Getting Electricity indicator highlights the Republic of Korea for the fast process – 3 procedures and 18 days - to get access to a quality electricity services.
- With strong policies and regulatory incentives, as well as a plentiful and skilled labor force across the full supply chain, China has invested more in renewable energy than any other country in the world, according to RISE. Over 2010–15, investment renewable energy investment - for solar, wind, geothermal, small hydropower, and biomass - reached \$377 billion, more than the next two countries combined, the United States and Germany.

### CONTEXT

- RISE offers policymakers and investors detailed country-level insight on the policy and regulatory environment for sustainable energy across 111 countries globally.
- Doing Business measures aspects of regulation that enable or prevent private sector businesses from starting, operating and expanding. It ranks economies from 1-190 based on the regulatory environment by sorting aggregate scores on 10 topics and giving equal weight to each topic.
- Doing Business' Getting Electricity indicator highlights the importance of a reliable power supply and transparent tariffs structures to support effective business activity and the deployment of renewable energy at scale.
- The high renewable energy penetration rates observed in high-impact countries such as Germany, the United Kingdom, Spain or Australia, generally result from a combination of favorable policy, regulatory and business environments.
- Doing Business's Getting Electricity indicators shows that India, Indonesia and Kenya improved the administrative processes needed to get a connection to an electricity network while also reducing the cost of connection. Further effort is needed to mitigate the risks of payment delays or defaults, reduce delays for obtaining construction permits, and meet domestic renewable targets in a timely manner.

### ADDITIONAL RESOURCES

[Regulatory Indicators for Sustainable Energy 2017](#)

[Global Tracking Framework 2017](#)

[Doing Business 2017](#)

[SEforALL Africa Hub](#)

[SEforALL Asia-Pacific Hub](#)

[SEforALL Latin America and the Caribbean Hub](#)

[International Renewable Energy Agency](#)

[International Energy Agency](#)

[REN21](#)

[Bloomberg New Energy Finance](#)

# RENEWABLE ENERGY

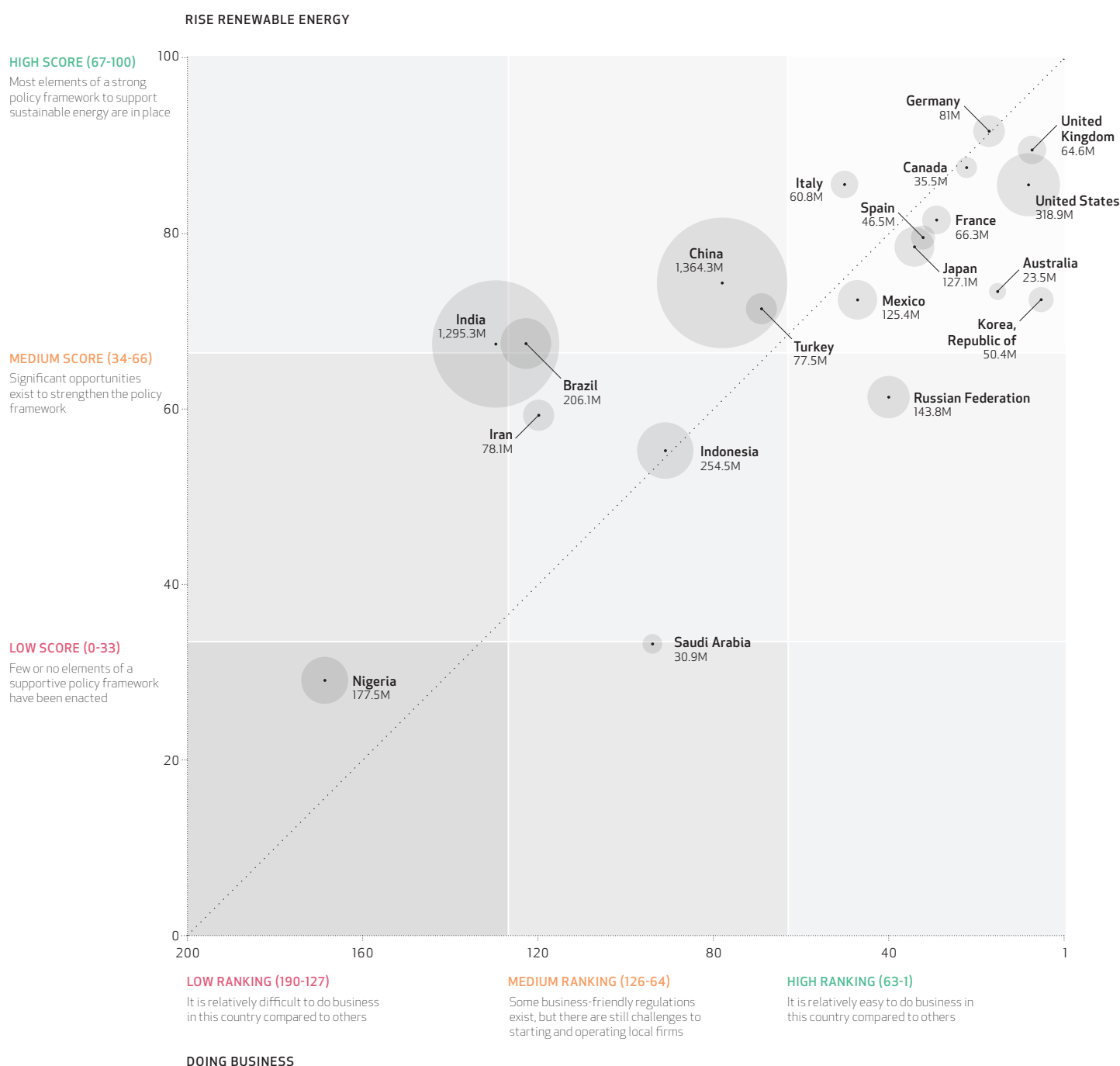


## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which high-impact countries have an enabling environment for investment in renewable energy?

## REGULATORY INDICATORS FOR SUSTAINABLE ENERGY (RISE) AND DOING BUSINESS



Notes: 1. Regulatory Indicators for Sustainable Energy (RISE) is a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy. 2. Doing Business is a relative ranking of 190 economies based on the regulatory environment. It does this by sorting the aggregate scores of 11 topics, each consisting of several indicators, giving equal weight to each topic. Sources: Regulatory Indicators for Sustainable Energy (RISE), World Bank Group, 2017. Doing Business, <http://www.doingbusiness.org/rankings>, 2017. Data extracted from <http://rise.esmap.org/> on 06/23/2017. World Development Indicators, World Bank Group, 2014. Data extracted from [http://data.worldbank.org/indicator/SP.POP.TOTL?end=2014&name\\_desc=false&view=chart](http://data.worldbank.org/indicator/SP.POP.TOTL?end=2014&name_desc=false&view=chart) on 06/20/2017.

# ENABLING POLICIES



## HIGH-IMPACT COUNTRIES

Countries whose efforts are critical to the achievement of SEforALL objectives globally

Which high-impact countries have an enabling environment for investment in energy efficiency and renewable energy?

### QUICK FACTS

- More than three-quarters of all countries covered by Regulatory Indicators for Sustainable Energy (RISE) score well on the legal framework for renewable energy, compared to 9 percent that score well on having energy efficiency mandates and incentives for utilities in place.
- High performers on RISE's energy efficiency indicator often have strong regulations in place to support renewable energy deployment. However, the average RISE score for energy efficiency is more than ten percentage points below that for renewable energy.
- Official renewable energy targets have become nearly universal, with some form of public commitment in 93 percent of countries covered by the RISE indicators.
- Most of the world's largest energy consumers score in the top tier of the RISE renewable energy indicator indicating strong policy frameworks are in place.

### CONTEXT

- RISE offers policy makers and investors detailed country-level insights on the policy and regulatory environment for sustainable energy across 111 countries globally.
- RISE shines a light on the need to attach greater political and policy priority to energy efficiency. With the exception of the highest income countries, many countries have few or no policies in place to support the adoption of ambitious energy efficiency measures. In contrast, RISE highlights strong progress and broad uptake in advancing renewables policy across many countries.
- Among the countries where wind and solar power account for at least 5 percent of total electricity generated in 2014, more than 80 percent have completed a grid integration study to understand how to integrate variable renewable energy.
- India and China together represent more than a third of the global population. Driven in part by clean air imperatives and low-carbon development ambitions they both have high scores on RISE for renewable energy and energy efficiency. China's 13th Five-Year Plan sets a 15 percent target of non-fossil energy as a share of total final energy consumption by 2020, and a 15 percent reduction in energy intensity compared to 2015 levels. India has placed energy conservation at the heart of its development strategy through multiple initiatives such as "Unnat Jeevan By Affordable LEDs and Appliances for All", the world's largest zero-subsidy LED bulb program for domestic consumers.

### ADDITIONAL RESOURCES

[Regulatory Indicators for Sustainable Energy 2017](#)

[Global Tracking Framework 2017](#)

[State of Electricity Access Report](#)

[SEforALL Africa Hub](#)

[SEforALL Asia-Pacific Hub](#)

[SEforALL Latin America and the Caribbean Hub](#)

[International Renewable Energy Agency](#)

[Copenhagen Centre on Energy Efficiency](#)

[Appliances and Equipment Accelerator](#)

[Building Efficiency Accelerator](#)

[District Energy Accelerator](#)

[Lighting Accelerator](#)

[Transport and Motor Vehicle Fuel Efficiency Accelerator](#)

[Industrial Energy Efficiency Accelerator](#)

[International Energy Agency](#)

[Energy Efficiency Facilitating Hub \(ECCJ\)](#)

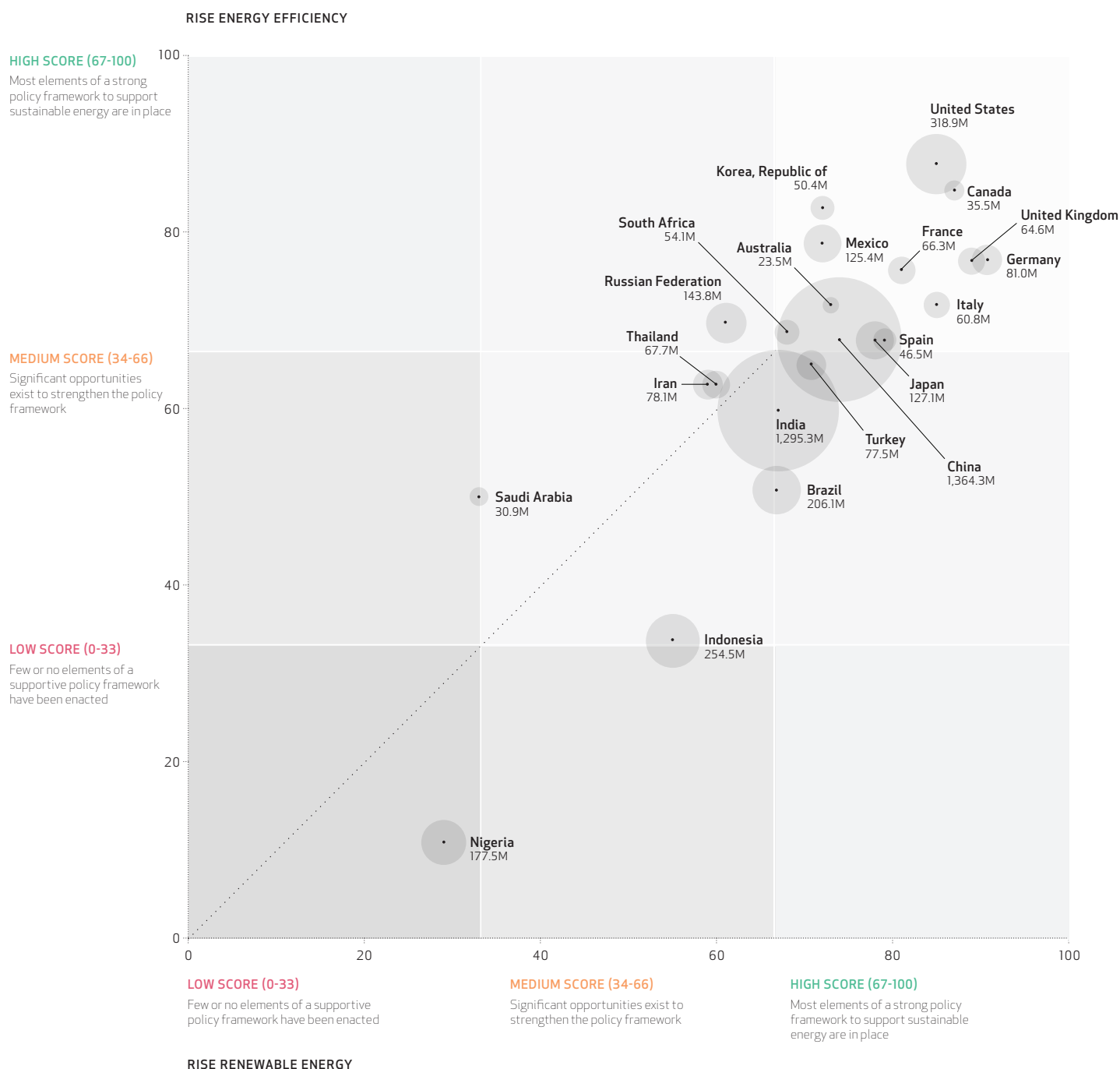
[Regional Economic Commissions](#)

## Which high-impact countries have an enabling environment for investment in energy efficiency and renewable energy?

### REGULATORY INDICATORS FOR SUSTAINABLE ENERGY (RISE) FOR ENERGY EFFICIENCY AND RENEWABLE ENERGY

#### KEY

Population, 2014 values (relative to countries shown)



Note: Regulatory Indicators for Sustainable Energy (RISE) is a suite of indicators that assesses the legal and regulatory environment for investment in sustainable energy.

Source: Regulatory Indicators for Sustainable Energy (RISE), World Bank Group, 2017. Data extracted from <http://rise.esmap.org/> on 06/23/2017. World Development Indicators, World Bank Group, 2014. Data Extracted from [http://data.worldbank.org/indicator/SP.POP.TOTL?end=2014&name\\_desc=false&view=chart](http://data.worldbank.org/indicator/SP.POP.TOTL?end=2014&name_desc=false&view=chart) on 06/20/2017.