CROSSCUTTING

C1. The Price of Energy Paid by Customers

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS MATTERS TO INVESTORS	POTENTIAL DATA SOURCES
a Average retail price of electricity	Price of representative consumption for industrial and residential users.	Higher prices for energy make investments in energy efficiency more attractive, as the pay-back period is shortened. Additionally, higher retail energy prices typically allow energy suppliers to provide higher compensation for electricity from RE projects (remuneration), making investment in RE more attractive.	National Statistical Agencies, Ministries of Energy, World Bank publications
b Average retail price of gas and oil derivatives	Price of representative consumption for industrial and residential users.		
c Average retail price of district heating	Price of representative consumption for industrial and residential users.		
d Affordability of connection	Connection cost for consumers as a percentage of household income.	While higher prices of energy tend to strengthen investment opportunity in EE and RE, if the prices charged to low-income users is prohibitively high, energy access is diminished	
e Affordability of electricity	Representative subsistence consumption less than 5% of household income.		

PVT = This indicator is directly relevant to private sector decision making
*Should match SE4ALL definition of affordable energy

C2. Commercial Viability of Utilities (1/2)

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS MATTERS TO INVESTORS	POTENTIAL DATA SOURCES
a Cost-recovery of Transmission Company	Determine degree of cost-recovery of transmission company (see slide 7)	When tariffs are below full cost recovery, service providers will need a subsidy to make them whole, and avoid over-extending the system. This is particularly important for a RE project developers decision to invest in a country. If the developer does not trust the financial sustainability of the off-taker, they are less likely to invest in that country.	Review of transmission and distribution companies' annual reports
b Cost-recovery of Distribution Company	Determine degree of cost-recovery of distribution company (see slide 7)		
c Technical Losses	Determine technical losses, expressed as a percentage	These losses also detriment the ability of the utility to become cost-recoverable.	Survey with utility
d Commercial Losses	Determine commercial losses, expressed as a percentage		

C2. Commercial Viability of Utilities (2/2)

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH EXTENDED
a Cost-recovery of Transmission Company	Sliding Scale Never covers O&M and fuel costs → Covers O&M and fuel most of the time (except emergencies, droughts) → Covers O&M and fuel but only part of capital costs (Dep + ROA) → Fully covers O&M, fuel and capital costs
b Cost-recovery of Distribution Company	Sliding Scale Never covers O&M and fuel costs → Covers O&M and fuel most of the time (except emergencies, droughts) → Covers O&M and fuel but only part of capital costs (Dep + ROA) → Fully covers O&M, fuel and capital costs

C3. Fossil Fuel Subsidies

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT TO INVESTORS	
a Fossil Fuel Subsidies	Determine fossil fuel subsidy in $/unit of energy	When fossil fuels are subsidized, the degree to which renewable energy can compete with fossil fuel sources of energy is greatly diminished. Subsidizing fossil fuel also reduces the financial viability of investments in energy efficiency, as the cost of energy is lower.	Energy Architecture Index
b Carbon Tax	Determine carbon tax in $/unit of energy	Carbon taxes, when compliance is strong, have the opposite effect of fossil fuel subsidies, strengthening the market for energy efficiency and renewable energy.	Review of programs of the Ministry of Energy or equivalent

RENEWABLE ENERGY

1. Level of Financial, Economic and Fiscal Support for Renewable Energy

	SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY IS IT IMPORTANT?	POTENTIAL DATA SOURCES
a	Years of remuneration guaranteed to generator	Determine the number of years for which remuneration is available through PPAs/off-take agreements, financial incentives or other remuneration sources	A long period of guaranteed remuneration increases an investor's certainty that she will be able to recover her capital investment in the RE plant	Review of standard PPA agreements; survey of relevant utility staff; survey of transaction advisors familiar with the country
b	Value to generator of renewable energy capital cost subsidies	If offered, estimate the total value of economic, fiscal and financial subsidies provided by governments for RE capital costs	Capital cost subsidies for renewable energy can make projects more financially attractive to private investors	Review of financial incentive laws and regulations
c	Level of remuneration available to generator	Determine the total value of remuneration that would be paid per MWh of energy generated through power purchase agreements or feed-in-tariffs, or wholesale market prices	The level of remuneration available is an essential aspect of a project's financial viability that is under government control	Review of PPA agreements and FiT contracts; survey of relevant transmission company staff

2. Revenue Risk Facing Renewable Energy Projects (1/2)

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY IS IT IMPORTANT?	POTENTIAL DATA SOURCES
a The price paid for power purchased is contractually established for the duration of the power purchase contract	Determine whether or not the remuneration level for energy from a renewable energy project is established in a contract between a generator and the energy off-taker, and if this is defined for the duration of the power purchase contract	When remuneration levels are subject to unpredictable change (e.g. because they are pegged to fuel prices or system costs without price floors) creates revenue risk for RE projects	Review of standard PPAs, Feed-in Tariff contracts; survey of relevant distribution company staff; survey of transaction advisors familiar with the country
b Existence and type of cost recovery mechanism for renewable energy subsidies and incentives	Determine whether and what type of cost-recovery mechanism exists for RE subsidies/incentives. Tariff increases are scored highest, while direct transfers of funds from the government to the RE off-taker score lower. If direct transfers are in place to cover the cost of subsidies, determine if a country has defaulted on one of these in the energy sector in the past five years. If so, score it even lower	The existence of a sound cost-recovery mechanism for RE financial supports indicates that the government or utility is likely to disburse these supports to an RE project investor, which reduces investors' revenue risk. If direct transfer of funds from government is in place, a strong track record of successful direct transfers indicates future performance	Review of laws and regulations governing financial supports for renewable energy; review of press releases and news articles (to evaluate track record); survey of relevant distribution company staff; survey of transaction advisors familiar with the country
d Availability of sovereign risk guarantees for renewable energy projects	Determine whether or not the government has provided risk guarantees for at least 1 renewable energy project in the past 5 years	Government and MDB risk guarantees are important for RE projects in the developing world. The availability of sovereign risk guarantees is an indicator of the availability of MDB risk guarantees	Review of press releases and news articles; survey of transaction advisors familiar with the country

2. Revenue Risk for Renewable Energy Projects (2/2)

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY IS IT IMPORTANT?	POTENTIAL DATA SOURCES
e Percentage of remuneration for renewable energy that is from subsidy	Determine the percentage of total remuneration for a unit of RE production that is from subsidy. Calculate this by determining how much higher the remuneration level is for an RE project than the country's average generation tariff	If a large portion of RE project remuneration is from subsidies, then projects are more likely to become financially unviable if the subsidies disappear than if a smaller portion of a project's remuneration comes from subsidies	Review of laws and regulations governing financial supports for renewable energy; review of standard PPAs, Feed-in Tariff contracts; survey of transaction advisors familiar with the country
f Burden of renewable energy subsidies on government budgets	Determine the percentage of a country's public energy budget that was comprised of subsidies for renewable energy over the past five years	If this value is comparatively high, it will suggest that this might not be a sustainable or efficient level of subsidy for the country and taxpayers or ratepayers	Review of government budgets; review of laws and regulations governing renewable energy subsidies

3. Transparency of Subsidies for Renewable Energy Projects

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY IS IT IMPORTANT?	POTENTIAL DATA SOURCES
a. Whether the total amount of subsidy for renewable energy is specified in laws or policies	Determine whether or not the total amount of subsidy that will be available for renewable energy is specified in law or policy	Investors must have certainty about how much subsidy is available in total and when the subsidy might end before investing in a project whose financial viability is contingent on subsidy	Review of laws and regulations governing subsidies for renewable energy, review of Standardized Power Purchase Agreements and surveys with utility staff
b Duration of subsidies for renewable energy is specified	Determine if the time when subsidies for renewable energy will end is specified in law or policy		
c How often and when remuneration rates and incentives for RE can be modified by government is specified in laws, policies or regulations	Determine whether or not the times when renewable energy subsidy levels can be modified are specified in laws and regulations	If the times when and extent to which the government can alter remuneration rates and incentives for renewable energy are clearly specified, then investors can more adequately measure the risk that subsidies will be eliminated or changed unexpectedly	
d Whether the amount of adjustment that can be made to remuneration rates and incentives for renewable energy by government is identified in laws or regulations	Determine whether or not the extent to which government can adjust remuneration rates and incentives levels for renewable energy is specified in laws and regulations		

4. Quality of Transmission Framework for Renewable Energy Projects

	SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY IS IT IMPORTANT?	POTENTIAL DATA SOURCES
a	Which entities pay for each aspect of transmission interconnection for RE are defined in laws, regulations or rules	Determine whether or not the laws, regulations or published rules governing renewable energy project interconnection define who pays for 1) the enabling facilities (substation) 2) the transmission line to connect the plant to the grid and 3) necessary grid upgrades	Transparency into who will pay for different aspects of transmission interconnection and how much generators will be required to pay for transmission allows investors to understand this before making an investment, thus reducing their risk.	Review of laws, regulations and published rules on transmission interconnection, surveys of utility staff
b	The cost of transmission usage for renewable energy is defined	Determine whether or not the cost of transmission usage for renewable energy id defined in laws, regulations or published rules		
c	Transmission pricing for renewable energy is based on a transmission expansion plan	Determine whether or not a) a transmission expansion plan exists and b) whether or not transmission pricing for renewable energy is based on the transmission expansion plan	Linking transmission pricing to a transmission expansion plan is a best practice for minimizing transmission costs for generators as well as transmission providers.	Review of laws, regulations, published rules on transmission pricing, as well as transmission expansion plan documents, and surveys of utility staff
d	Rules exist that define how renewable energy sources will be operated on the power grid	Determine whether or not the power grid operator has established specific rules governing how renewable energy sources should be operated on the power grid	The existence of rules that govern how RE resources will be operated on the power grid suggests that a country has taken steps to prepare for integrating RE. This suggests that the transmission operator is less likely to be unable to take power from the generator.	Review of laws, regulations and rules for transmission system operation, surveys of utility staff

5. Ability of Power System to Integrate Intermittent Renewable Energy Sources

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY IS IT IMPORTANT?	POTENTIAL DATA SOURCES
a Quality of electricity supply (frequency of outages)	Determine the quality of electricity supply within a country by reviewing existing indicators that evaluate this	Frequent outages suggest an unstable grid, which suggests that integration of variable renewable energy sources will be difficult, and increases the risk that the system will not be able to accept energy from a renewable energy project	World Economic Forum Global Energy Architecture Index Quality of Electricity Supply Indicator
b Diversity of electricity supply	Determine the diversity of electricity generation sources used to supply electricity within the country by reviewing existing indicators that evaluate this	A more diverse electricity generation portfolio suggests that a country's power system will be better able to integrate variable renewable energy generation, and reduces the risk that the system will not be able to accept energy from a renewable energy project	Energy Sustainability Index Diversity of Electricity Generation Indicator

6. Ease of Siting and Permitting a Renewable Energy Project

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY IS IT IMPORTANT?	POTENTIAL DATA SOURCES
a Time and no. of procedures to get environmental permits for an RE project b Time and no. of procedures to get land use permits for an RE project c Time and no. of procedures to get resource use permits for an RE project d Time and no. of procedures to negotiate an off-take agreement for an RE project	Evaluate the number of days and the number of procedures necessary to obtain all environmental, land use, resource use permits and to negotiate an off-take agreement. Conduct this analysis for a standard set of renewable energy technologies of different sizes	Simple and fast administrative processes for permitting and siting renewable energy projects are often cited as the most important basic requirements of a successful enabling environment for renewable energy project development	Survey of federal, state and local environmental and site permitting staff; survey of utilities; survey of renewable energy transaction advisors familiar with a country

ENERGY ACCESS INDICATORS

1. Quality of electrification plan/strategy (1/2)

INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT	POTENTIAL DATA SOURCES
a National vision for electrification	Existence of a national vision or announced goal for the country	Long-term, integrated electrification planning can result in a more efficiently planned power grid.	Review of electrification plan/strategy documents
b Timeframe for Electrification Plan	Determine the timeframe of the national, rural and slum electrification plan/strategy. Electrification plans/strategies with longer timeframes will score higher		
c Electrification Plan Includes both Grid and Off-grid Planning	Determine whether or not there both grid and off-grid aspects of the electrification plan.		
d Cost-of-service Study is Updated Regularly	Year of last cost-of-service study. Countries with more recently updated studies will score higher.	Cost-of-service studies help agencies use resources efficiently. More regularly updated cost of service studies allow for more accurate planning.	

1. Quality of electrification plan/strategy (2/2)

INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT TO INVESTORS	POTENTIAL DATA SOURCES
e Presence of ring fenced financing for electrification plan	Determine whether or not the implementer has its own operating budget, and a specific budget for CAPEX required for rural electrification.	Ring-fenced financing helps to protect implementing agencies from political change.	Review of electrification plan/strategy documents

2. Affordability of Grid Access Provided by National or Regional Utility

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT TO INVESTORS	POTENTIAL DATA SOURCES
a Capital subsidies exist for cost of grid connection	Determine whether a capital subsidy exists for: •Utility to provide main line to village •Customer for last portion of connection.	Connecting rural customers is often not in the financial interest of service providers, particularly when these customers are on a lifeline tariff. Subsidies for connecting these customers decreases enables service providers to connect these users.	Survey with utility
b Subsidies for grid connection are output-based	Countries rated on a scale based on how many of the following criteria are met: 1. Subsidies are disbursed once connection is confirmed 2. Subsidies are delivered once connection is confirmed and reliable power has been available for set period (e.g. one week)	In order to encourage connection, at least some of the subsidy amount should be disbursed only after a connection is made. In order to encourage service providers to actually provide energy over that connection, part of the subsidy should be disbursed only after power supply has been confirmed.	Survey with utility
c Presence of IT platform for effective delivery of subsidies	Determine whether there is there an IT system in place for tracking tariff delivery.	When tariff subsidies are not tracked through some form of IT system, they are often used inefficiently.	

3. Quality of Regulation for Off-grid RE Developers (1/2)

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT TO INVESTORS	POTENTIAL DATA SOURCES
a Laws in place to allow mini-grids to operate	Determine whether laws are in place explicitly allowing mini-grids to function and outlining their rights.	When off-grid SPP's are supported through regulation and legal rights, it decreases the risk that these systems will be obselete once the primary grid expands access to their regions. It also increases the safety of these systems.	Survey with off-grid SPP's operating mini-grids
b Number of procedures to permit a mini-grid	Determine the procedures necessary for a RE developer to build and operate a mini-grid.	Generally speaking, independent power producers would prefer as little interaction with government as possible. However, regulation is necessary for safety standards and tariff levels, and can promote future compatibility with the grid. Large response times and administrative costs can however impede investment in off-grid SPP, thus regulatory processes should be streamlined and efficient.	

3. Quality of Regulation for Off-grid RE Developers (2/2)

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT	POTENTIAL DATA SOURCES
c Anticipatory regulation for connecting mini-grids to larger grid	Determine quality of the existing process for incorporating mini-grids into the larger grid. Scaled based on the presence of: 1. Safety, reliability, and voltage and frequency standards for mini-grids made publicly available 2. Mechanism to protect regulated mini-grids against expropriation (e.g. buyouts, termination payments, mini-grid conversion)	For investors in mini-grids, there is always the threat that the grid will expand to their region, and usurp their business. However, if mini-grid investors build their mini-grid with the same specifications as the grid, it can more easily be integrated if the grid expands to their region. Regulation can play a role in protecting RE developers and the mini-grids they operate from obsolescence when the grid expands to their region. Investors will be more likely to invest in mini-grids if this risk is mitigated through clear regulations for appropriation and anticipatory standards.	Survey with off-grid RE developers operating mini-grids
d Appropriate tariff regulation for off-grid RE Developers	Determine whether there is light handed tariff regulation for off-grid RE developers which allows them to: 1. Charge tariffs that may exceed the national tariff level 2. Cross-subsidize their retail tariffs (usually by charging businesses more than households). 3. Enter power sales contracts with businesses without requiring prior regulatory approval of contract terms.	Mini-grids in isolated areas with poor customers often cannot earn sufficient revenues when they are being paid lifeline tariffs. To ensure revenue is high enough that SPP's can recover their costs in isolated areas, it is often necessary to initially use lighter-handed regulation, with backstops as mini-grids become more established.	

4. Quality of Support for Off-grid RE Developers

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT TO INVESTORS	POTENTIAL DATA SOURCES
a Dedicated Source of Funding for RE mini-grid subsidies	Determine whether there is a defined source of funding with a clear revenue stream for RE mini-grid subsidies.	Funding for subsidies must be sustainable in order to attract investment in off-grid RE developers to expand access to new customers.	Survey with off-grid RE developers operating mini-grids
b Subsidies for Connecting Users to Mini-grids are Output-based	Determine whether subsidies are disbursed against milestones. These milestones can include: 1. Confirmation of connection 2. Confirmation of reliable power after some period of time (e.g. 1 month)	Ensuring that subsidies are output-based can increase efficiency of subsidies at providing quality connections	
c Existence of mechanism to encourage lowest subsidy per new connection	Least-cost or least-grant bidding for concession areas.	Without mechanisms in place to encourage low-costs for new connections, subsidies may be used inefficiently.	

5. Quality of Support for Off-grid Lighting and Home Solar Systems

	INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT	POTENTIAL DATA SOURCES
a	Customs duty exemption for solar lighting products and solar home systems	Determine whether there is a customs duty exemption for solar lighting products and home systems.	Solar home systems and lighting products offer quick and affordable means of bringing basic electricity supply to new customers. Governments can remove barriers to the entry of these products to the market by providing customs duty exemptions and subsidies for low-income customers.	Review of customs/duty exemptions. Survey with solar home system and lighting distributers in each country.
b	Subsidies in place for solar lighting products?	Determine whether the price in which they are sold in the market is the same price for which the government buys them		
c	Absence of subsidies for kerosene fuel	Determine whether subsidies are in place for kerosene fuel	Kerosene subsidies are often a deterrent for households to move from kerosene to solar lighting solutions	Review of existing government subsidy programs for fuels.

6. Getting a New Connection

INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT	POTENTIAL DATA SOURCES
a Cost and number of procedures to get a new connection	Measure the number of procedures and days necessary for a rural residential customer to get a new connection from the customer's perspective	Administrative hurdles can prevent customers from getting connections	Survey of service providers; survey of customers
b Number of procedures for getting financing for customer connections	Measure the number of procedures and days necessary for a rural residential customer to get financing for a new connection (whether from utility or from a third party lender)	Administrative hurdles can prevent customers from getting financing for new connections	Survey of service providers; survey of customers

ENERGY EFFICIENCY INDICATORS

Sectors Addressed by BEE Energy Efficiency Indicators

Buildings		Industry		Equipment		Transportation	
Residential	√	Energy consuming industry (e.g. factories)	√	Industrial and commercial equipment	√	Public	X
Commercial	√	Energy supply industry (e.g. utilities)	√	Appliances	√	Private	X
Public	√	Energy supply generation	√				

1. Price Signals (1/2)

SUB-INDICATOR	POSSIBLE MEASUREMENT APPROACH	WHY THIS IS IMPORTANT TO INVESTORS	POTENTIAL DATA SOURCES
a Price of Energy to End-user as Consumption Increases	Scaled based on propensity of inclining block rates. See following slide.	Some utilities use tariff structures in which energy prices are lower for higher levels of consumption. For large energy users this can create incentives for greater energy consumption, and disincentives for energy efficiency.	Review of laws and regulations governing energy pricing at the retail level. Review of pricing blocks and criteria for price levels.
b Economic Efficiency of End-user Price Subsidies	Scaled based on criteria for end-user price subsidies	Providing a low price for energy for low-income populations is necessary in many countries. However, in some countries, the criteria for paying the lowest bracket of energy prices is not strict enough to exclude portions of the population that are not low-income.	Review of incomes/capita and percentage of population living at poverty level. Survey with utility to determine the portion of population that pays the lowest price bracket for energy.

1. Price Signals (2/2)

SUB-INDICATOR	POSSIBLE MEASUREMENT APPROACH EXTENDED
a Price of Energy to End-user as Consumption Increases	Scale Declining block rates exist, are supported by existing regulation and represent >5% of utility's revenues Declining block rates exist under exceptional circumstances, and represent <5% of utility's revenues Declining block rates do not exist, for any customer category
b Economic Efficiency of End-user Price Subsidies	Scale End-user price subsidies exist for all residential customers including more than 150kWh/month) End-user price subsidies only exist for low-income customers (including more than 150kWh/month) End-user price subsidies exist for all customers less than 150kWh/month End-uiser subsidies exist only for low-income customers using less than 10 kWh/month

2. Utility Incentive Alignment (1/2)

INDICATOR	POSSIBLE MEASUREMENT APPROACH	WHY THIS IS IMPORTANT TO INVESTORS	POTENTIAL DATA SOURCES
a Linkage between revenues and profits	Scaled based on quality of mechanism in place for utilities to not lose profits from investment in demand side energy efficiency (see following slide).	When a utility's revenues are based on sale of energy, utilities lose revenue as demand side energy efficiency increases. However, when a mechanism is in place to prevent these profit losses from demand side EE, utilities may decide to invest in demand side EE.* When there is added incentive, such as a sharing of savings with utilities and customers, utilities will be more likely to meet and exceed EE mandates. When it is in their interest, utilities are in an excellent position to drive demand side energy efficiency.	Review of laws and regulations governing utilities. Review of revenue regulation for utilities.
b Financial incentives for utilities to exceed compliance requirements	Scaled based on quality of quality of incentive mechanism (see following slide).		

**Val R. Jensen, Aligning Utility Incentives with Investment in Energy Efficiency.*

3. Savings Mandates for Energy Suppliers

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT TO INVESTORS	POTENTIAL DATA SOURCES
a Binding savings obligations over time	Determine whether energy suppliers have binding savings obligations with penalties in place if obligations are not met.	Binding energy savings obligations build confidence in the business community with regard to the longevity of programs and incentives for energy efficiency. Rigor in M&V is essential both to track progress against mandates, as well as to lay groundwork for standard offer systems, which can further grow the market for EE materials and services. When M&V data is used in utility investment decisions, investments in both demand and supply side EE can be weighed appropriately against investments in supply.	Review of energy policy. Review of laws and regulation governing energy suppliers.
b Utilities tie M&V data back into resource plan	Determine whether M&V data on demand side energy efficiency is required to be used in energy suppliers resource plan to meet projected demand at least cost.		
c Standard offers/white certificates in place for utilities to buy "energy savings"	Determine whether there are standard offers in place for utilities to buy “energy savings” implemented by third parties or peak load reduction.		

M&V = Measurement and Verification

4. Savings Mandates for Energy Consumers

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT TO INVESTORS	POTENTIAL DATA SOURCES
a Binding savings obligation over time for government buildings	Determine whether public entities have binding energy savings obligations with penalties in place if obligations are not met. Determine whether benchmarking is required for public buildings to track energy savings and consumption.	Savings mandates applied directly to consumers, particularly those that can be held accountable via penalties (large users and government entities) can encourage investment in energy efficiency improvements. These mandates are most effective when matched with strong procurement processes for the public sector, and assistance to commercial and industrial users with how to achieve energy savings.	Review of energy policy governing savings obligations for public buildings and existing EE programs for commercial buildings. Review of history of blackouts.
b Binding savings obligation over time for large users (3MW +)	Determine whether large commercial and industrial users have binding savings obligations with penalties in place if obligations are not met.		
c Absence of rolling blackouts	If there has been an energy crisis in the last year, or power rationing has been implemented, determine whether rolling blackouts were used to reduce demand.	When power rationing is necessary, curtailing demand through mechanisms such as strong price signals is a more effective form of reducing demand than rolling blackouts. These mechanisms can also lead to longer term energy efficiency of consumers	

M&V = Measurement and Verification

5. EE Procurement in the Public Sector (1/2)

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT TO INVESTORS	POTENTIAL DATA SOURCES
a EE taken into account in the specification/award of materials and services	Scaled based on quality of public procurement of EE materials and services. 1. A voluntary EE product procurement process is in place 2. A mandatory EE product procurement process in place 3. A product specification process in place (labels, catalogues, least life-cycle cost, EE preferences, qualifying product database)	The public sector often represents the single largest purchaser of energy in a country.* When public entities are permitted and/or required to procure energy efficient products, markets for energy efficient products are more likely to flourish.	Review of laws and regulations governing public procurement of products.
b Allowance of savings retention for EE capital expenditures	Determine whether budgeting law has a provision for public entities to retain energy savings to pay back loans taken for energy efficiency improvements.	Allowing public entities to retain energy savings creates an incentive for public entities to procure energy efficient products. This attribute of budgeting law also makes it possible for public entities to engage in energy performance contracts, using energy savings to pay-off financing for energy efficiency retrofits.	Review of public budgeting law

**Public Procurement of Energy Efficiency Services: Lessons from International Experience. Directions in Development. Energy and Mining. Washington, D.C: World Bank : ESMAP/Energy Sector Management Assistance Program, 2010.*

5. EE Procurement in the Public Sector (2/2)

SUB-INDICATOR	PROPOSED MEASUREMENT APPROACH	WHY THIS IS IMPORTANT TO INVESTORS	POTENTIAL DATA SOURCES
c Allowance of multi-year energy efficiency contracts	Determine whether public entities can engage in multi-year contracts for energy performance contracts	Public budgets are usually renewed annually, making it difficult for public entities to engage in multi-year contracts. Energy performance contracts (EPC's), in which retained savings are used to finance capital for energy efficiency improvements, typically require multi-year contracts.	Review of budgeting law for public entities and provisions for multi-year contracts and EPC's

**Public Procurement of Energy Efficiency Services: Lessons from International Experience. Directions in Development. Energy and Mining. Washington, D.C: World Bank : ESMAP/Energy Sector Management Assistance Program, 2010.*