



Thematic Fiche no. 1

Selected Indicators for Projects Financed by the ACP-EU Energy Facility

All projects financed with support from the Energy Facility have set up a Logical Framework (LogFrame) matrix, to show in a schematic form the project intervention logic. The LogFrame shows how the intended objectives can be met and what the expected results of the intervention are. The actual achievement of these results and objectives can be measured by indicators.

A number of the LogFrame matrices in the existing projects under the Energy Facility contain indicators of achievement which are not very practical to measure and do not make a clear correlation between the result and the measure adopted. This in turn does not allow the project or external monitors or evaluators to verify with relative ease whether the project is achieving its goals or whether the overall performance of the Energy Facility's projects is meeting expectations.

The present paper presents one way of establishing useful indicators.

Why use indicators in an Energy Facility project?

- To measure whether the project is meeting its objectives and expected results
- To measure how different projects contribute to the overall objectives of the Energy Facility

A Brief Introduction to Indicators

Indicators need to show us in a simple way whether the expected outputs (direct results), outcomes (purpose¹) or impact (overall objective) are being reached, as shown in the diagram below.

Typical Structure of a LogFrame Matrix²

Project Description	Indicators	Source of Verification	Assumptions
Overall Objective – The project’s contribution to policy or programme objectives (impact)	How the OO is to be measured including Quantity, Quality, Time	How will the information be collected, when and by whom?	
Purpose – Direct benefits to the target group(s)	How the Purpose is to be measured including Quantity, Quality, Time	As above	If the Purpose is achieved, what assumptions must hold true to achieve the OO?
Results – Tangible products or services delivered by the project	How the results are to be measured including Quantity, Quality, Time	As above	If Results are achieved, what assumptions must hold true to achieve the Purpose?
Activities – Tasks that have to be undertaken to deliver the desired results			If Activities are completed, what assumptions must hold true to deliver the results?
			Preconditions - need to be met before resources are committed and activities initiated

The guiding principle when using indicators should be to collect the minimum information required to assist managers and assessors to determine whether the objectives are or have been achieved. Nevertheless it is often difficult to establish good indicators. Some examples of some problematic indicators often used are:

Indicators to which the activity does not contribute - the indicator may be reached, but it has nothing to do with the result of the activity.

- E.g. an expected result like the extension of the electricity grid is not measured by “Population growth rate decreases by x% per year”

¹ Purpose is also often named Specific Objective

² Source: Guidelines – Project Cycle Management – p. 58. See link at the end of this fiche.

Indicators where no baseline or target has been set –we do not know what the status at the outset was, and we do not know the point at which the intended objective is considered to have been reached.

- E.g. “% of people who have access to energy services”. What was the starting point, where do we want to be – and when?

Indicator of activity versus indicator of result - indicators at the level of a Result should not be a summary of what has been stated at the Activity level, but should describe the measurable consequence of activity implementation.

- E.g. if a result is “strengthened capacity of villagers involved in the field of renewable energy” a suggested indicator like “one capacity building workshop held per village within the target area” would be a repetition of the activity. However, it is important to know what came out of the workshop so a more precise indicator could be: "After the workshop 60% of participants can describe and demonstrate 4 skills they have learned to use the new renewable energy technologies"

Too many indicators - it is better to have a few indicators for a given output/ outcome as it could be burdensome to gather the necessary information.

Indicators where it is too difficult / costly to verify the anticipated result

- E.g. if it would be required to undertake a costly survey to get the data

The indicator is not SMART (specific, measurable, achievable, relevant and time-bound).

Examples of Imprecise Indicators

Objective	Indicator	Problem
Improve access to modern and affordable energy services and sources for poor rural and peri-urban households while ensuring environmental sustainability	Number of households using modern and affordable energy-saving stoves and energy-saving cooking methods/techniques	When is the objective achieved? How much does the number have to increase by to be considered a success? What is the target and what is the baseline? How is "modern" and "affordable" defined?
	Level of appreciation of project initiatives by local authorities in order to improve the socio-economic conditions of the population	How is the level of appreciation measured? What is considered to be an improvement in socio-economic conditions and of which population?
	% of people who have access to energy services, before and after the action.	It is positive that it is foreseen to compare before and after the action BUT no target has been set for the percentage.

SMART Indicators

To the extent possible, indicators should be “SMART”, that is **S**pecific, **M**easurable, **A**vailable, **R**elevant and **T**ime-bound. Many definitions of the expression SMART exist; here we use that of the Project Cycle Management Guidelines (PCM)³.

- **Specific** to the objective it is supposed to measure – the indicators should reflect the exact objectives and nothing else.
- **Measurable** (either quantitatively or qualitatively). If the indicator involves a calculation, such as a percentage, the source of the data required to calculate the indicator should be clearly defined so that two different persons measuring the same indicator find the same result. Develop **feasible** targets for each indicator
 - Targets at the end of the project.
 - Annual targets are useful although they are not necessarily a linear function of the end target. The time taken to start up a project should also be taken into consideration.
- **Available** and affordable. The cost of an exercise should be weighed up against the value which the indicator would add to the monitoring of progress. Where can you get information - outside sources / baseline?
- **Relevant** to the information needs of managers
- **Time-bound** – so we know when we can expect the objective/target to be achieved

Below please find some examples of establishing SMART indicators.

Example I

Objective: Food production expanded for purposes of sale and consumption of households

Concept: Saving time through access to electricity has enabled women to spend more time maintaining their own farms, increase and diversify their agricultural production and develop small trading operations in agricultural and fish products and prepared condiments. The increased possibilities for trading in their products imply that the women will go more often to neighbouring markets to sell their products.

Select an indicator: Number of visits to markets

Set goals:

- Define the quantity: An *increase of 1-2 to 5-6 per week* of the number of visits
- Define the target group: *... by women ...*
- Define the aim: *... to sell agricultural products ...*
- Define the place: *... on markets in nearby villages ...*
- Define the timing: *... 3 years after the start of the project ...*

SMART Indicator: Increase in the number of visits by women to markets in neighbouring villages from 1-2 to 5-6 per week to sell agricultural products three years after the start of the project.

³ “Guidelines - Project Cycle Management (PCM Guide) – see link at the end of the fiche.

Example II

Objective: Strengthened capacity of villagers involved in the field of renewable energy

Concept: The implementation and delivery of training workshops in villages will - through the use of examples, demonstration kits, presentations by participants in previous workshops, discussions and class-room training - increase the knowledge and skills among villagers on the concepts of renewable energy and how to use it

Select an indicator: Skills acquired by participants in training workshops

Set goals:

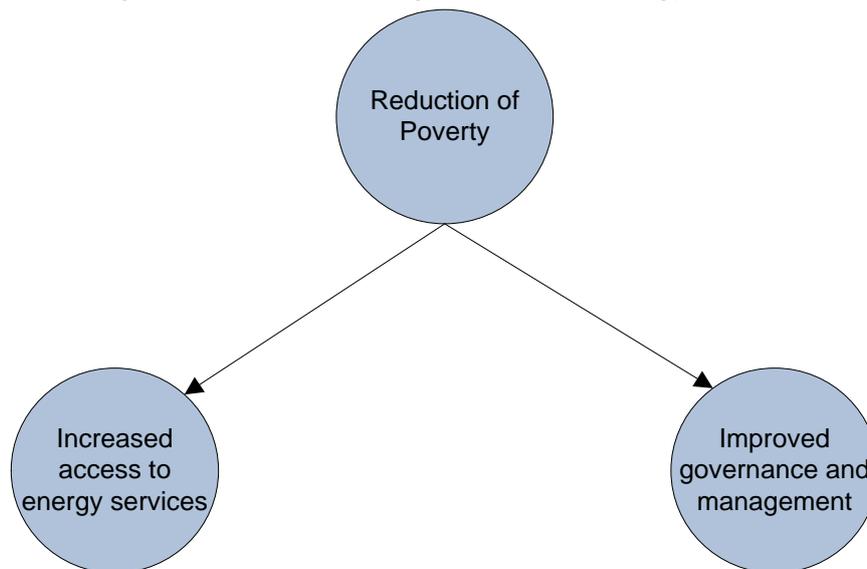
- Define the quantity: 60%
- Define the target group ... of participants...
- Define the aim: ... will be able to describe and demonstrate 4 new skills they have learned about using new renewable energy technologies ...
- Define the place: ... in their village ...
- Define the timing: ... at the end of the workshop ...

SMART Indicator: At the end of the workshop 60% of participants will be able to describe and demonstrate 4 skills they have learned to use the new technologies of renewable energy in their village.

Indicators that Measure the Achievement of Projects under the ACP-EU Energy Facility

The projects implemented under the Energy Facility have some common features regarding their overall objectives. In particular, the Facility's objectives (overall objective and project purpose) are:

- Reduction of poverty
- Increased access by the poor to energy services
- Improved governance and management in the energy sector



The monitoring of the projects must be carried out using common indicators to enable easy measurement of the overall impact of the Energy Facility. Similarly, it is useful to prevent large disparities between similar projects in terms of the indicators used in the project LogFrame, therefore enabling the Energy Facility to establish whether there are any models of best practice which produce marked results. However the projects will also have their own indicators allowing them to take into consideration the specificities of the project and its individual context.

The following suggested indicators are provided to facilitate the work of the project managers when choosing the relevant indicators for their projects. It is important to understand that not all the indicators suggested will be relevant to all projects, and it is up to the project manager and staff to determine which are the most appropriate. The inclusion of additional indicators is recommended in all cases in which the ones provided in this section do not suit the technology used by the project, or because the project managers found other indicators which are more S.M.A.R.T. in relation to their specific project.

All the projects under the ACP–EU Energy Facility will be requested to report regularly on a set of Key Impact Indicators either in an Excel spreadsheet⁴ or via our

⁴ The Key Impact Indicators Sheet can be downloaded from www.energyfacilitymonitoring.eu, under Publications

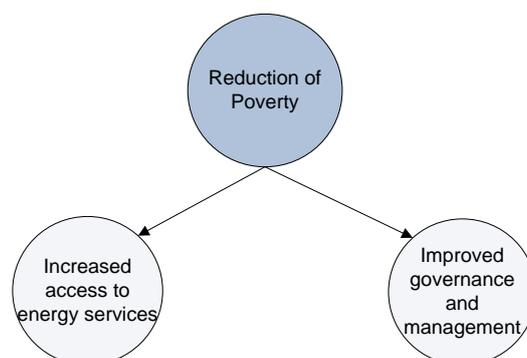
online submission form that is user-friendly. These are indicators which have been carefully selected and agreed according to the following criteria:

1. Relevance for each of the Energy Facility's purpose and expected results
2. Relevance for the projects' overall objective and project purpose
3. Consideration of already applied indicators for the projects' overall objectives and project purposes, according to the project LogFrames.

When indicators shall be established, we need to consider how we can measure impact with respect to:

- Improved welfare / livelihood?
- Improved access to energy services?
- Improved governance?

Contribution to Reduction of Poverty (Overall Objective Level)



The reduction of poverty concerns the ability for the rural and peri-urban poor to improve their livelihood and sustain a living. The access to energy can be an important factor in the effort towards the reduction of poverty by providing beneficiaries with the means by which to improve their income, education and health⁵.

The indicators which represent an improvement in livelihood have been divided into three categories - social, economic and environmental.

The first category, social, measures whether the overall health and education of the target beneficiaries has altered. These indicators are mainly based on the Millennium Development Goals to avoid that the public institutions who usually provide health and education services are not over-burdened.

The second category, economic, aims to measure whether increased access to electricity and energy services has contributed to improved economic welfare of the

⁵ Please refer to Thematic Fiche no. 2: "Modern Energy Access for the Promotion of Local Development"

target beneficiaries. This is measured in terms of reduction of energy costs, increase in operational businesses and employment opportunities in the area.

The third category, environmental, addresses whether the improved use of energy has reduced the negative effects on the environment associated with non-sustainable use of energy, most notably the prevalence of CO₂.

These three categories of indicators are included among the Key Impact Indicators on which the projects are requested to report on an annual basis.

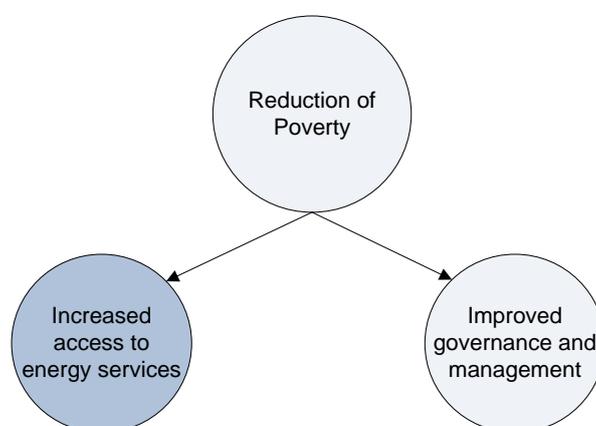
Selected key indicators measuring the impact on poverty reduction

Objectively Verifiable Indicator of Achievement	Operational Definition	Explanation
Social		
Health		
Prevalence of respiratory diseases	Percentage change in the occurrence of respiratory diseases reported by local health professionals, health clinics or other health institutions	This indicator reflects whether the welfare of the beneficiaries has been improved through the reduction of the use of open fires. This data should be maintained as standard by most health clinics and institutions.
Prevalence of water-related illnesses	Percentage change in reported cases of water-related illnesses (including diarrhoea)	This indicator reflects whether the welfare of the beneficiaries has been improved through the availability of potable water. This data should be maintained as standard by most health clinics and institutions.
Maternal mortality ratio	Proportion reduction of women who die during child birth or within 42 days after termination of pregnancy	Maternal mortality is one of the MDG indicators and demonstrates whether general standard of living has been improved enough to be able to access healthcare during child birth. The link to mortality is considered in terms of improved economic status to pay for care, but also the improved facilities offered (due to electricity). This data should be collected as a standard governmental statistic by health clinics and institutions.
Under-5 mortality rate	Proportion reduction of children who die before reaching the age of five	Under-5 mortality is also an MDG indicator and demonstrates whether general standard of living has been improved sufficiently to reduce susceptibility to disease or improve access to effective healthcare. This data should be collected as a standard

Objectively Verifiable Indicator of Achievement	Operational Definition	Explanation
		governmental statistic by health clinics and institutions.
Education		
School completion rate	Percentage increase of pupils completing primary/ secondary education having passed final examinations	As many of the Facility's projects aim to bring energy to schools, an indication of the impact of this is to establish how many more pupils are passing final examinations. This data should be available from schools.
Primary-secondary school transition rate	The increase in percentage of the school pupils transitioning from primary to secondary school	As an MDG, this indicator provides an idea of the proportion of children being able to attain the necessary examinations and afford to continue on to secondary education. As an MDG, most schools will collect this data as standard.
Economic		
Creation of new enterprises in the target areas as a verifiable result of project outputs	The percentage change in the establishment and operation of new enterprises in the geographical target area of the project	Have enterprises been created as a direct effect of the project? Introducing access to energy attracts small businesses to the area, thereby improving the economy and access to services. This data can be collected by the project through a survey of the target area. This data will need to be collected at baseline and annually to chart change.
Jobs created as a result of the increased access to energy and the ensuing economic	Ratio of jobs created to beneficiary population in the project area	Have jobs been created as a direct effect of the project? This may specifically be notable as a result of the new enterprises established. During the survey of the enterprises created, this data can also be collected. Do not include persons employed by the project. This data will need to be collected at baseline and annually to chart change.
Change in household income before and after project intervention	The percentage change in available household income before and after the project intervention	Poverty reduction is a key objective for the Energy Facility. The capability to earn an income indicates that the target population have a means by which to improve their quality of life. The data is best collected through a household survey. This data will need to be

Objectively Verifiable Indicator of Achievement	Operational Definition	Explanation
		collected at baseline and annually to chart change. Where a survey cannot be undertaken, case studies or a sample survey could be carried out.
Environmental		
CO ₂ emissions from energy production and use	Amount of CO ₂ emissions saved from reduction of consumption of fuels or change in technology	The reduction of CO ₂ is a global goal for the prevention of climate change. One should not be daunted by the perceived complexity of this indicator. A simple way of calculating this is to quantify, for example, how much wood or charcoal has been saved as a result of the projects interventions, or how many trees have been planted, and convert this into CO ₂ equivalent using official tables ⁶ .

Direct Benefits of Access to Modern Energy Services in Rural and Peri-Urban Areas (Project Purpose Level)



The Energy Facility aims to increase access to modern energy services, sustainable and affordable for rural and peri-urban poor, focusing on renewable energy solutions as well as energy efficiency measures.

Energy services refer to the services that energy and energy appliances provide. Such services include lighting, heating for cooking and space heating, power for transport, water pumping, grinding, and numerous other services that fuels,

⁶ <http://www.carbontrust.co.uk/cut-carbon-reduce-costs/calculate/carbon-footprinting/pages/conversion-factors.aspx>

electricity, and mechanical power make possible. Energy services are essential to both social and economic development.

The UN Millennium Project⁷, the action plan for the achievement of the Millennium Development Goals (MDGs) to which the EU subscribes, proposes some **results targets for energy services**, including the following:

For rural areas:

Provide access to modern energy services at the community level for all rural communities (in the form of electricity and mechanical power). This entails (1) reaching 100 percent access to electricity for all schools, clinics, hospitals, and community health centres, (2) reaching rural cooperatives, small businesses, and other community centres with adequate sources of electricity and mechanical power, and (3) the ability to meet basic household level electricity needs through community-level battery charging stations.

Suggested targets for urban and peri-urban areas:

Ensure reliable access to modern energy services (including electricity services and improved fuels and devices) in the urban and peri-urban areas, including access for all households and schools, hospitals, clinics, and community health centers.

Mechanical power is particularly important for MDGs 1, 2, 3, 5, and 7. Access to mechanical power for water pumping and transport, food milling, and agricultural processing has a particularly direct effect on freeing the time of women and children for human development. In rural areas where the electricity grid will be slow or unlikely to reach, decentralized mechanical power from conventional or renewable energy is extremely important to reduce poverty and increase economic options.

Selected key indicators measuring direct benefits of access to energy in rural and peri-urban areas

Objectively Verifiable Indicator of achievement	Operational Definition	Explanation
Access to energy services for public facilities and communities targeted by the project		
Health		
Hospitals and clinics/health posts with adequate annual electricity supply levels	Increased percentage of hospitals, clinics and health posts with adequate electricity capacity to power appropriate medical services.	Has the health facility enough electricity to run all the services it should? Adequate: Facilities with sufficient electricity to power essential medical services for the type of facility. This can be assessed by consulting staff.
Health institutions' cooking fuel expenses	Percentage of health institutions' cumulative annual budget saved as a result of a reduction in the consumption of cooking fuel	Assuming that the money saved by institutions is invested in providing better services, the project should consult staff for this information.

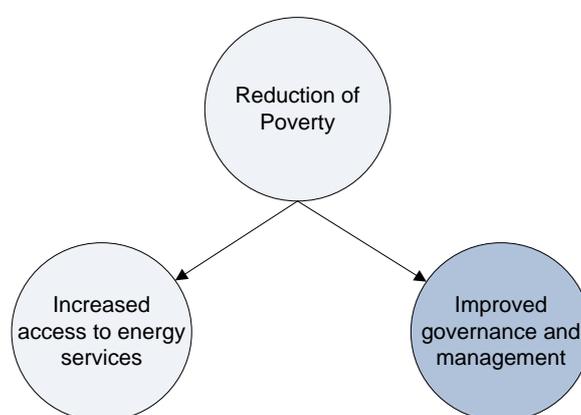
⁷ <http://www.unmillenniumproject.org/>

Objectively Verifiable Indicator of achievement	Operational Definition	Explanation
Education		
Educational institutions supplied with adequate annual electricity supply	Increased percentage of schools with adequate annual electricity supply levels	Has the school enough electricity to run additional services? Adequate: Sufficient electricity for after-dark lighting for student study, evening adult literacy classes and for teacher/ student accommodation. This can be assessed by consulting staff.
Education institutions' cooking fuel expenses	Percentage of schools' cumulative annual budget saved as a result of a reduction in the consumption of cooking fuel	Assuming that the money saved by institutions is invested in providing better services, the project should consult staff for this information.

Objectively Verifiable Indicator of achievement	Operational Definition	Explanation
Productive use of access to energy/ energy services in households in the project areas		
Proportion of households with access to reading light	Increased proportion of households with access to reading light (minimum of 50kWh per household per year)	How many more homes in the target area have a reading light for up to four hours of the day? Data can be collected using project monitoring information.
Amount of electricity available for consumption	Total annual energy output in kWh divided by number of households	To get an idea of the adequacy of the amount of energy available, data should be obtained from electricity distributors, project data and/ or household survey.
Time spent on collecting woodfuel	The average reduction in time spent by each household member to collect fuel per day	This is related to the MDG, which assumes that time spent collecting fuel could be used productively instead, thereby increasing income/ welfare.
Time spent on fetching water	Total average reduction in time spent by each household member to collect water per day	The acquired access to energy can power water pumps. The MDG assumes that time spent collecting water could be used productively instead, thereby increasing income/ welfare.
Productive use of water pumps	Increase in irrigated land area Percentage increase in animal stock	Whilst the availability of water is positive for health, it is useful to know how it is being put to productive use. Data can be obtained through survey of target area.
Beneficiaries with access to motorized mills and de-husking machines	The percentage change in beneficiaries with access to mills and de-husking machines in rural cooperatives, small businesses and other community centres in relation to total population	Mills and de-husking are not only an essential service but also an indication of development. Data can be obtained during a survey, perhaps combined with the survey to ascertain the number of new enterprises.
Energy service providers (including mobile phone charging, multi-functional platforms)	The percentage change of energy service providers including community centres in relation to total population by type (mobile phone charging, battery charging, multi-functional platforms).	The occurrence of energy services facilitates development, specifically by enabling the population to access services they cannot afford to purchase outright. Data can be collected through a survey.
Deforestation attributed to energy	Annual rate of deforestation attributed to energy use (in the	An indication of sustainable access to energy, this data can

Objectively Verifiable Indicator of achievement	Operational Definition	Explanation
use	project area)	be obtained from either the Forestry Department or can be measured by forest survey.
Share of household income spent on fuel and electricity	The percentage decrease in the share of household income spent on fuel and electricity	Have beneficiaries seen a decrease in their spending on energy? This data needs to be obtained through household survey of the target beneficiaries.

Direct Benefits of Governance and Management of Energy (Project Purpose Level)



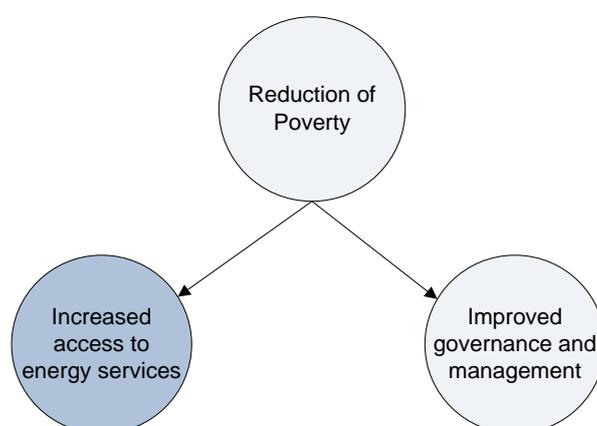
Many of the Energy Facility projects aim to improve governance and management of the energy sector. These projects to a large extent focus on capacity building efforts, for which a simple measure is the actual number of persons trained as well as the coverage of trained persons in the targeted institutions. From a wider perspective, there may be a positive impact on the inclusion of energy issues in the Poverty Reduction Strategy Papers (PRSPs) and Country Strategy Papers (CSPs), as an effect of project activities developing plans and strategies and establishing networks.

Selected key indicators measuring direct benefits of governance and management of energy

Objectively Verifiable Indicator of achievement	Operational Definition	Explanation
Institutional		
National strategy concerning the access to modern energy services for	Existence of a national strategy concerning the access to modern energy services for the poor passed and approved (resulting	The national strategy is the first step towards developing a comprehensive legal and regulatory framework. Its

Objectively Verifiable Indicator of achievement	Operational Definition	Explanation
the poor passed and approved (resulting from assistance and increased capacity)	from assistance and increased capacity)	existence can be discovered from the Ministry or Department of Energy.
Existence of national targets aimed at increasing the use of sustainable energy	Existence of national targets aimed at increasing the use of sustainable energy	As above
Regulatory		
Legal acts/policies concerning the access to modern energy services for the poor (created or revised) passed and approved	The number of legal acts/policies concerning the access to modern energy services for the poor (created or revised) passed and approved	The presence of legal acts indicates the extent to which the energy framework is in place. Data can be obtained from the Ministry or Department of Energy.
CDM projects approved by Designated National Authority (DNA)	Proportion of CDM projects approved by Designated National Authority (DNA) with an IRR equal to or greater than the defined minimum benchmark	The DNA's approval is a requirement for CDM projects. Data can be obtained from the DNA.
Financial		
Investments in modern energy	Increase in level of investments in modern energy technologies/ installations for target beneficiaries (loans and private investment)	Financial investment is an indication of a sound governance framework that investors can trust. Data can be obtained through financial institutions.

Tangible Products and Services of Access to Modern Energy Services in Rural and Peri-Urban Areas (Results Level)



The tangible products of access to energy are the results of the efforts and inputs of the Energy Facility projects. This includes, for example, the adoption of energy efficient stoves, the access to potable water and the use of modern energy sources.

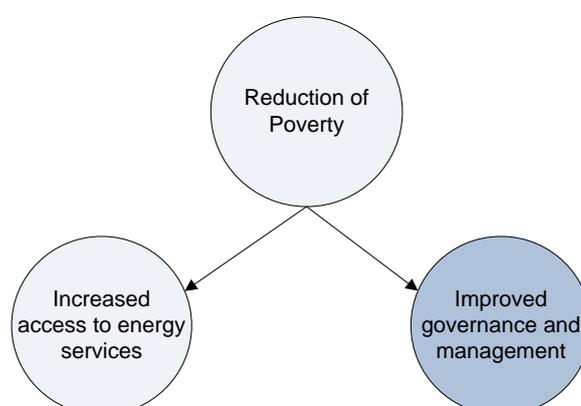
The Energy Facility is interested to know the common sources of energy used in target areas. The Facility seeks to differentiate between “modern”, “unimproved solid” and kerosene. **Modern energy sources** are either improved fossil fuels, such as Liquid Petroleum Gas (LPG), biochar or briquettes, or renewable energy sources. **Unimproved solid** fuels are the more traditional sources of energy, such as wood, charcoal and dung. The reason for the particular attention to kerosene is both because it is the most common but inefficient source of light for the rural poor and because it is a hazardous liquid that causes many burns.

Selected key indicators measuring direct benefits of access to energy in rural and peri-urban areas

Objectively Verifiable Indicator of achievement	Operational Definition	Explanation
Overall Access		
Annual energy output produced from sustainable energy sources	Increase in annual energy output produced from sustainable energy sources (electricity and thermal)	General energy output data is available from electricity distributors, project data and survey.
Beneficiaries with secure access to grid electricity	Proportion of beneficiaries with secure access to grid electricity relative to the total population	Grid electricity data is available from the distributor.
Beneficiaries with secure access to non-grid electricity	Proportion of beneficiaries with secure access to non-grid electricity relative to the total	Non-grid data is more challenging to come by but can be assessed by surveys of the target area.

	population	
Household Access		
Access to modern energy fuels as the primary source of lighting, heating or cooking	Proportion of the target population with access to modern energy fuels as the primary source of lighting, heating or cooking	Knowledge of the energy source and use is a requirement for the Facility. This data should be available at baseline and updated annually. Modern: Liquid Petroleum Gas (LPG), natural gas, improved biomass (e.g. biogas, briquettes), renewables, and electricity (Source: UNIDO)
Prevalence of use of solid fuels as the primary source of domestic energy heating or cooking	Proportion of beneficiaries using unimproved solid fuels as the primary source of domestic energy heating or cooking	As above. Unimproved solid: biomass (wood, charcoal, crop residues and dung) and coal (Source: UN MDG Definition of Indicators)
Prevalence of use of kerosene (paraffin) as the primary source of domestic energy for lighting	Proportion of the beneficiaries using kerosene as the primary source of domestic energy for lighting	As above.
Access to water pumps as a result of project activities	Proportion of beneficiaries with access to water pumps as a result of project activities	When assessing a suitable site for the installation of the pump, this is presumably assessed. The actual beneficiaries should be assessed.
Access to improved cooking facilities, by target group	Proportion of beneficiaries with access to improved cooking facilities, by target group	As many projects are aiming to introduce more efficient tools for energy extraction, thereby reducing the need for fuel, the prevalence of the efficient tools should be assessed. This can be obtained through project data or survey and should include households, public institutions and private companies, etc.
Reduction in woodfuel consumed for cooking/ heating	Percentage decrease in woodfuel consumed for cooking/ heating	As a result of the activities related to the indicator above, the decrease in woodfuel will facilitate the calculation of the reduction in CO ₂ . The decrease can be estimated from the number of efficient stoves sold and average reduction in fuel necessary.

Tangible Products and Services of Governance and Management of Energy (Results Level)



Tangible products and services related to governance are difficult to define as governance is a cross-cutting principle which is not very tangible in itself. However, there are several proxies which can be used which indicate an improvement in the energy governance. These are:

- Institutional frameworks and capacity building,
- Documentation and supporting position papers,
- Investment confidence.

Selected key indicators measuring direct benefits of governance and management of energy

Objectively Verifiable Indicator of achievement	Operational Definition	Explanation
Institutional		
Establishment of a Designated Operational Entity (DOE) tasked with overseeing CDM initiatives	Establishment of a Designated Operational Entity (DOE) tasked with validating and verifying CDM initiatives	The DOE forms part of the required institutional structure for CDM projects. This indicates that the framework facilitates CDM.
Active natural resource management committees at village level, with equitable and transparent decision-making	The number of active natural resource management committees at village level, with equitable and transparent decision-making	This indicator shows the extent to which the project has contributed to the mobilisation of the community to drive positive change. Available from project data.
Officials in target institutions trained by the project	Proportion of officials in target institutions trained by the project in energy planning and management	Capacity building is a core component of governance initiatives. This indicator reflects the sustainability of the capacity building approach. Data is

Objectively Verifiable Indicator of achievement	Operational Definition	Explanation
		available from project data.
Planning tools, concerning the access to modern energy services for the poor	The number of planning tools (software, database or other technical tool) developed through the project, concerning the access to modern energy services for the poor	The use of planning tools is an indication as to how institutionalised governance is in the promotion of access to energy. This data can be obtained through consultation.
Studies/ publications/ events aiming to increase market transformation available publicly or within stakeholder institutions	The number of studies/publications/events aiming to increase market transformation available publicly or within stakeholder institutions	The sustainability of capacity building initiatives lies in the availability of knowledge. Studies, publications and events do not only have to originate from the project. Market transformation is the promotion of a self-sustaining energy efficiency market.
Trained technicians per renewable/ improved energy production unit installed	Ratio of trained technicians per renewable/improved energy production unit installed through the project (installation and/ or servicing support within 1 hour of the installation)	The proportion of technicians to installations is an indication of the availability of technical capacity to sustain the market. The ratio will naturally be lower for hydro installations than solar as the number of solar installations could be greater than hydro, therefore necessitating more technicians to service them. Available from project data.

Objectively Verifiable Indicator of achievement	Operational Definition	Explanation
Regulatory		
New policy, legislation and/ or regulation drafted concerning the access to modern energy services for the poor	The number of new policy, legislation and/ or regulation drafted concerning the access to modern energy services for the poor	Drafted policy, legislation and regulation as a result of project activities are the first steps to implementation (which would be the purpose of the project). Consultation with the Ministry or Department of Energy should be an effective means of ascertaining this data.
Financial		
Investments based on local potential and resources have been prioritised based on the planning tools	List of investments based on local potential and resources has been prioritised based on the planning tools	The planning tools enable informed decisions. Project data should include investments solicited from financial institutions, private sector or other partners based on this information.
Energy finance products available	The number of energy finance products available through financial institutions, Non-Governmental Organisations (NGOs) and Community-Based Organisations (CBOs).	The variety of products available through the mentioned institutions will need to be ascertained through a survey of relevant partners/ institutions. The greater the variety of options, the more opportunities the beneficiaries have to access finance.

The above indicators can measure the achievement of many of the projects financed under the Energy Facility. Many other indicators exist and can be used as well. The links below provide access to useful documentation on the establishment of indicators in general, and in energy projects more specifically.

Useful links

1. Project Cycle Management Guidelines (PCM Guide)
 - a. http://ec.europa.eu/europeaid/multimedia/publications/documents/tools/europeaid_adm_pcm_guidelines_2004_en.pdf [en]
 - b. http://ec.europa.eu/europeaid/multimedia/publications/documents/tools/europeaid_adm_pcm_guidelines_2004_fr.pdf [fr]
2. Official list of MDG indicators -
<http://mdgs.un.org/unsd/mdg/Host.aspx?Content=Indicators/OfficialList.htm> on
<http://mdgs.un.org/unsd/mdg/Home.aspx>
3. Energy Services for the Millennium Development Goals - The UN Millennium Project:
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5. capacity4dev website <http://capacity4dev.ec.europa.eu/> Monitoring activities: see "Guidelines on technical Cooperation", Chapter 6, "Monitoring, evaluation and quality assurance."
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Thematic Fiche No. 1 "Selected indicators for projects financed by the Energy Facility"

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