THE ITALIAN MULTI-STAKEHOLDER PLATFORM AND THE GUIDELINES FOR "ENERGY AND DEVELOPMENT"

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Abstract

In line with the national and international context, where energy emerges as a means for development, and not an end in itself, the definition of strategic objectives and implementing strategies for energy and development needs to be based on an inclusive and integrated approach including all the implications of energy on social, economic and environmental dimensions. Looking at the Italian perspective, the UNESCO Chair in Energy for Sustainable Development at the Department of Energy has launched a new initiative, by proposing the activation of a 'Multi-stakeholder Platform for Energy in Development', to define a first national pilot experience of multi-actors collaborations including institutional and private sectors, civil society, academic and research sectors. The overall objective of the Platform is to identify, formulate and validate energy intervention strategies in line with the SDG7. In May 2016, the Platform has started the elaboration of the 'Guidelines for projects in Energy & Development'. The guidelines contribute to define a national framework for planning energy projects in the development cooperation, referring to the best practices existing in the international framework.

Introduction

The last two years has represented a pivotal momentum engaged by the international community in the shift of the development paradigm and of the global agenda for the following decades. The Sustainable Development Goals, formally launched in September 2015 as one of the main asset of the UN 2030 Agenda, are intended to introduce a new comprehensive paradigm of development: a new asset for partnership, to overcome the difference between donors and recipients, where challenges find common and shared solutions. More specifically, the global challenges included in the Agenda are deeply interconnected and range from food to water, from energy to raw materials, from urban development to job creation, from disaster prevention to ocean preservation. Within this framework, energy comes to be crucial for sustainable development (Goal 7) and, therefore, an adequate and secure access to energy represents an instrumental right that should be granted both in developed and developing economies (Holden, Linnerud, and Banister 2017; United Nations 2012).
In line with the national and international context, where energy emerges as a means, and not an end in itself, the definition of strategic objectives and implementing strategies for energy and development, needs to be based on an inclusive and integrated approach including all the

implications of energy on social, economic and environmental dimensions. The intervention needs to match energy needs and appropriate energy resources, by improving the quantity and quality of energy supply, by promoting a combination of cleaner and more efficient fuels and adopting mainly (though not exclusively) renewable energies. This may then boost local socio-economic development and align national policies to the SDGs while giving to access to energy the right perspective (Colombo, Bologna, and Masera 2013).

On an Italian perspective, with the Law "General Rules Governing International Development Cooperation[1]", a new framework for the Italian cooperation sector has been opened, in which the role of cooperation represents a relevant element for the foreign affairs strategy. New experiences and competences coming from the academia, the research and private sector will join and enhance the traditional role of the organizations from the civil society and the territorial cooperation, and they are called to contribute with an increased proactive approach. Through the respective mission mandates, several opportunities to test public-private collaborations can be therefore realized, that may lead to a new approach able to bring value to the Italian System and promote joint, effective, efficient and locally valuable actions. As also stated in the programmatic lines of 2016-2018, among the central topics of the Italian cooperation, energy represents a basic dimension within the wider environmental topic, in particular referring to the relations between Italy and the African countries. The action of the Italian Cooperation will be then based on a vision of energy as precondition and instrumental right for guaranteeing access to basic needs as lighting and food safety, to further provide access to main services of the community as education and health, and to act as leverage for local development, when supplied for productive uses or income generating activities.

Within this framework, the UNESCO Chair in Energy for Sustainable Development at the Department of Energy has launched a new initiative, by proposing the activation of a 'Multi-stakeholder Platform for Energy in Development', to define a first national pilot experience of multi-actors collaborations, which may count on a rich and extensive framework of Italian expertise and competence, and includes institutional and private sectors, civil society, academic and research sectors. The overall objective of the Platform is to identify, formulate and validate intervention strategies

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1 Italian Law 11 August 2014, no. 125

in line with the SDG7, to promote synergic actions related to energy and sustainable development, able to combine interventions of high impact for local and autonomous development with equal promotion of Italian of culture, education, research and industrial innovation. The platform is coordinating with the Italian Agency for Cooperation and with the General Direction for Cooperation to Development of the Italian Ministry of Foreign Affairs and International Cooperation.

In May 2016, the Platform has started the elaboration of a shared document on 'Guidelines for projects in Energy & Development', which is now close to the finalization and approval (DGCS, Italian Agency for Cooperation, and Politecnico di Milano 2017). The document has been developed through a coordinated action between the stakeholders and contributes to define a national framework for planning energy projects in the development cooperation, in relation the best practices existing in the international framework.

The guidelines are structured with an informative and a methodological part. After an introductive chapter where the link between energy and development is introduced, a focus on the Italian context is presented, highlighting the national tradition and international commitment in the energy sector. Reference policies, financial schemes & business models are proposed, which represent best practices consolidated at international level. The last two chapters aim at giving an overview on the strategic objectives for the actions of the development cooperation, proposing a needs-based approach and mapping quality attributes for interventions, beyond a binary and quantitative metric. Attention is also given to the relevance of local capacity development. Some criteria regarding the different phases of identification, formulation and monitoring are also specified. These criteria are complemented with other recommendations in terms of specific attributes for energy-related activities.

The Multi-stakeholder platform Energy and Development and the Italian guidelines Strategic objectives and implementing strategies

In line with the national and international context previously described, where energy emerges as a means, and not an end in itself, the definition of strategic objectives and implementing strategies for energy and development, needs to be based on an inclusive and integrated approach including all the implications of energy on social, economic and environmental dimensions. The intervention needs to match energy needs and appropriate energy resources, by improving the quantity and quality of energy supply, by promoting a combination of cleaner and more efficient fuels and adopting mainly (though not exclusively) renewable energies (Nissing and von Blottnitz 2010). This may then boost local socio-economic development and align national policies to the SDGs while giving to access to energy the right perspective.

Need-based perspective

Energy can be leverage to development when it is designed to cover people's needs which may be classified according to the following standard needs:

(i) household level
(ii) community services
(iii) productive uses in industry and enterprises
(iv) productive uses in agriculture
(v) integration of resources

For this reason, energy interventions are strongly recommended to tackle one of these needs improving these services, in accordance with some reference standard presented below (Colombo et al. 2013).

Multi-attribute mapping

Moreover, energy access needs to be classified beyond a binary metrics ("having" or "not having access") including a more detailed breakdown into Tiers or Levels of access. The Multi-Tier Framework (MTF) of the World Bank proposed within the SE4ALL Global Tracking Framework report 2015 is the reference (IEA and World Bank 2015).

Tiers are based on a number of attributes such as capacity, duration, reliability, quality, affordability, convenience, safety, health, legality, and all the projects aiming at addressing access to energy should be able to provide information about the changing in these attributes before and after the project. Slightly different attributes are detailed for the different category of intervention as reported in the following paragraphs. Within the Tiers, information about the types of technology that deliver the energy attributes are added, highlighting the key role that suitable technologies can play to each level.

<u>Household level and reference standards</u>

Need-Based perspective: Providing basic needs and services to people is fundamental to human rights and equity, as well as for households' daily life. At household level, energy access and energy efficiency should guarantee the achievement of a sufficient access to the full range of energy supplies required to support human development. An affordable and reliable electricity service should allow families to benefit of safe indoor lighting and to power key communication devices, such as radios and mobile phones, while the access to more efficient and cleaner technologies for cooking and heating would allow decreasing health risks and environmental degradation.

Table 1 – Indicative multitier framework for household electricity access

Tier	0	1	2	3	4	5
Energy supply attributes	**Continuous spectrum of improving energy supply attributes, including quantity (Watts), duration (hours), evening supply (hours), affordability, legality, quality (voltage)** →					
Energy services	None	Electric lighting, radio, mobile phone charging	Tier 1 + multi-bulb lighting, air circulation, TV	Tier 2+ water heater, rice cooker	Tier 3 + refrigerator, mechanical loads	Tier 4 + electric cooking, space heating and cooling
Likely energy supply technology (indicative)	None	Solar Lanterns	Stand-alone home systems	Mini-grids with limited supply or poor grid connection	Unreliable grid with limited supply	Reliable grid with 24-hours supply

Table 2 – Indicative multitier framework for household cooking solution

Tier	0	1	2	3	4	5
Household cooking attributes	**Continuous spectrum of improving energy supply attributes, including overall emissions, indoor emissions, fuel use (efficiency), safety and health impacts** →					

Likely energy supply technology (indicative)	Traditional cook stoves + solid fuels	Traditional cook stoves + solid fuels Improved cook stoves + solid fuels	Improved cook stoves + solid fuels	Improved cook stoves + solid fuels Kerosene cook stoves Advanced cook stoves + solid fuels	Kerosene cook stoves Advanced cook stoves + solid fuels Gaseous fuels such as LPG, natural gas, biogas	Gaseous fuels such as LPG, natural gas, biogas Electric

Multi-attribute mapping:

Table 1 and Table 2 are two representations of the Multi-Tier framework (MTF) adapted for the energy needs at household level, both for electricity and cooking. In addition to the energy supply's classification in 6 Tiers, some information about the types of technology that deliver the energy attributes (performances, such as capacity, duration, affordability, reliability, etc.) are added. A higher Tier represents the possibility of access to more modern energy services or improved energy efficiency to improved well-being for users. Table 3 proposes some minimum standards household services and may represent a reference for project planning.

Table 3 – Total Energy Minimum Standards (Practical Action 2010, 2012, 2013)

Energy service	Minimum standard
Electricity	250 kWh per household per year
Lighting	300 lumens for a minimum of 4 hours per night at household level (comparable to a 30 W incandescent bulb)
Cooking and water heating	1 kg wood fuel or 0.3 kg charcoal or 0.04 kg LPG or 0.2 litres of kerosene or biofuel per person per day, taking less than 30 minutes per household per day to obtain
	Minimum efficiency of improved solid fuel stoves to be 40% greater than a 3-stone fire
	Annual mean concentrations of particulate matter (PM2.5) < 10 $\mu g/m^3$ in households, with interim goals of 15 $\mu g/m^3$, 25 $\mu g/m^3$ and 35 $\mu g/m^3$
Space heating	Minimum daytime indoor air temperature of 18°
Cooling	Households can extend life of perishable products by a minimum of 50% over that allowed by ambient storage
	Maximum apparent indoor air temperature of 30°C
Information and communications	People can communicate electronic information from their household
	People can access electronic media relevant to their lives and livelihoods in their household

<u>Community services and reference standards</u>

Need-base perspective: Adequate energy access and energy efficiency are key factors also for improving the quality and the quantity of the access to several social services, among which education (schools and training centres), health (hospitals, clinics), public institutions and others infrastructure services such as water grid, street lighting and drainage systems. The availability and the affordability of modern energy services within a community would trigger a positive feedback on other social issues such as gender equality and women empowerment, digital divide and access to information and communication technologies, climate change and environmental preservation.

Multi-attribute mapping: In order to classify and measure the possible levels of energy supplies for education and health centres, two specific Multi-Tier Frameworks for school and health-care facilities are presented in Table 4 and Table 5. These frameworks are able to measure access to energy, prioritizing services as well as supply-side perspectives, for education and health-care provision. They can be used in order to track improvements in education and health facilities through new strategies on energy access and energy efficiency, or to better guide future interventions.

Table 4 – An indicative framework for defining and measuring access to energy for schools

Tier	0	1	2	3	4	5
Attributes of energy accessed	**Continuous spectrum of improving energy supply attributes, including adequacy, availability, reliability**					
Energy applications: *Basic energy services*	Lighting	Limited task lighting + mobile phone + radio + cooking	Tier 1 + limited general lighting + air circulation + VHF radio + cooking + space heating	Tier 2 + multiple lighting + air cooling + refrigeration	Tier 3 + air cooling / heating	All applications are feasible
Energy applications: *Teaching equipment*	None	None	Limited computer use	Projector + Laboratory equipment + Multiple computers w/internet	Tier 3	All applications are feasible
Likely energy supply technology (indicative)	Kerosene lamps + Candles	Third-party charging + Improved cook stoves	Small stand-alone solar PV + Kerosene/gas refrigerator + Institutional cook stoves + Biomass heater	Mini-grid connection + Unreliable Grid Connection + Incinerator	Mini-grid connection + Unreliable Grid Connection with backup	Reliable grid connection

Table 5 – An indicative framework for defining and measuring access to energy for health centers

Tier	0	1	2	3	4	5
Attributes of energy accessed	**Continuous spectrum of improving energy supply attributes, including adequacy, availability, reliability**					
Energy applications: *Basic energy services*	Lighting	Limited task lighting + mobile phone + radio	Tier 1 + limited general lighting + air circulation + VHF radio + cooking	Tier 2 + multiple lighting + air cooling + refrigeration + computers w/internet + TV	Tier 3 + air cooling / heating	All applications are feasible
Energy applications: *Medical equipment*	None	None	Vaccine refrigeration + sterilization	Low power medical appliances (microscope, testing equipment, etc.) + incineration	Tier 3 + high power equipment (x-ray machineries, ultrasound, scanners, etc.)	All applications are feasible
Likely energy supply technology (indicative)	Kerosene lamps + Candles	Third-party charging + Improved cook stoves	Small stand-alone solar PV + Kerosene/gas refrigerator + Solar autoclave + Institutional cook stoves	Mini-grid connection + Unreliable Grid Connection + Incinerator	Mini-grid connection + Unreliable Grid Connection with backup	Reliable grid connection

Productive uses in industry and enterprises and reference standards

Need-based perspective: in developing countries Micro and Small Enterprises (MSEs) sometimes called rural industries may have several benefits on the local community, mainly if supported by an adequate access to energy and energy efficiency. However, each MSE has its own specific requirement and therefore specific energy services. Within each category (electricity and/or thermal energy) the amount of power and the form of energy supply may vary depending on the activities, on the scales of operation, and also on local culture and traditions. Energy services include process heating and cooking, mechanical processing, cooling, manufacturing, repair and powering ICTs services. Improved energy services can indirectly support product manufacturing or service delivery while also contributing to improve process efficiency, thus increasing indirect returns for the enterprise. Energy access may assume an important role also within the income generating activities in rural areas, where rural industries has become an essential component of rural economic transformation to supplement agriculture-based incomes and to mitigate rural–urban migration. Enterprises often need different energy supplies and qualitative factors and to define a set of minimum energy service standards for Practical Action has developed an Enterprise Energy Matrix (Table 6), which provides specific indicators for energy access and efficiency, useful when providing electricity, fuels, mechanical power, and appliances to enterprises. Quantitative threshold are not defined since the variate of the case is too wide.

Table 6 – Enterprise Energy Matrix (source: Poor People Energy Outlook 2013, Practical Action)

	Electricity	Fuels	Mechanical power	Appliance
Reliability	Availability (hours per day) Predictability (timetabled or intermittent)	Availability (days per year)	Availability (days per year)	Downtime (%), linked to ease of maintenance and availability of spare parts
Quality	Voltage and frequency fluctuation (+/- 10%)	Moisture content (%)	Controllability	Convenience, health and safety, and cleanliness of operation
Affordability	Proportion of operating costs (%), including capital cost payback if financed	Proportion of operating costs (%) Time to gather as proportion of working day (%)	Proportion of operating costs (%) Time spent (if human powered) as proportion of working day (%)	Proportion of operating costs (%) including capital cost payback if financed
Adequacy	Peak power availability (kW)	Energy density / calorific value (MJ/kg)	Peak power availability (kW)	Capacity compared with available resource and market (% capacity)

Multi-attribute mapping: An additional representation of the MTF for measuring energy access for productive uses is shown in Table 7. This frame considers mechanical energy as the main form of energy used for people's livelihoods, even if the energy supply for productive uses comprises a wide range of possible uses. Mechanical power technologies are typically high-energy devices that may include machinery for water pumping, agricultural production and agro- processing, small-scale manufacturing. This kind of energy can be generated from different energy resources, including human, animal, renewable (commonly hydro and wind, such as hydro-driven appliances or wind-powered power pumps), engines and electricity-using motors.

Table 7 – Indicative multi-tier framework for mechanical power for productive uses

Tier	0	1	2	3	4	5
			Possible energy technologies for key livelihoods activities			
Water pumping	Bucket	Treadle pump	Hydraulic ram pump	Water current turbine	Solar PV water pump, motorised pump	High power electric pump
Agro-processing	Hand pounding	Animal powered mill	Traditional water mill	Improved water mill	Diesel-powered mill	High power electric mill
Small-scale manufacturing	Hand tools	Treadle tools	N/A	Mechanical lathe	Engine-powered circular saw	Electric saw
Likely energy supply technology resource	Human power	Human power Animal power	Animal power	Animal power Engine	Engine Electrical Power	Electrical Power

<u>Productive uses in agriculture and reference standards</u>

Need-base perspective: The availability of modern energy has proven to be essential in increasing the productivity of the agricultural sector. A reliable energy access and efficiency can add value all along the food supply chain and to move away from subsistence agriculture. Direct energy uses comprise land preparation, cultivation, irrigation, harvest, post-harvest processing, storage, and the transportation of agricultural inputs and outputs. Instead, indirect uses imply fertilizers and other products, sometimes necessary, such as weedicides, pesticides, and insecticides.

Multi-Attribute Perspective: rural enterprises can take advantage from a higher penetration of modern energies, particularly renewable, in order to improve their costs effectiveness, or reduce dependency from centralized electricity or fuels. Moreover, energy efficiency may increase productivity, while saving time and effort, and increase earnings through new market opportunities. Greater agricultural productivity requires improvements in each stage of the agro food production chain: agricultural production, agro-processing, post-harvest and storage facilities, distribution and retail. Table 8 outlines these activities, classified according to the specific energy supply they require.

Table 8 – Energy inputs to enable activities in the agricultural value chain

	Electric Energy	Mechanical Energy	Thermal/Chemical Energy and Fuels
Production	Irrigation	Land preparation, Planting, Cultivation, Irrigation, Crop protection, Harvesting, Threshing	Fertilising, Crop protection
Processing, post-harvest and storage	Drying, Milling, Pressing, Packing, Storing	Milling, Pressing, Packing, Storing	
Distribution and retail	ICTs, Training, Selling	Transport	Transport, Selling

Mechanical power is a particularly important input in any farming system, even if many rural areas are still based on human and animal energy for tilling, harvesting, processing and rain irrigation (Bazilian et al. 2011). However, the application of renewable energy technologies (e.g. wind pumps, solar dryers, water wheels, biomass conversion technologies), fossil fuel-based technologies (e.g. diesel engines and pumps) or hybrid systems (a combination of both) for motive and stationary power applications and for processing agricultural products, would allow a better productivity and effectiveness. The type of farm-power system represents a key factor in determining the area of land they can cultivate. Human-powered farms typically cultivate 1-2 hectares (ha) per year, draught animal hirers cultivate 2 ha, farmers owning draught animals cultivate 3-4 ha, tractor hirer cultivate about 8 ha, and farmers owning tractors cultivate more than 20 ha (Kienzle and Sims 2006).

Hence, well-designed policies must take into account factors like mechanization, organic farming and job creation in order to increase productivity, improve quality and quantity of products at less time and efforts, and encourage new market opportunities without damaging environment nor social inclusion.

Integrated management of Water-Energy-Food Nexus and international frameworks

Need-base perspective: a nexus-oriented approach is needed to address unsustainable patterns for human security and to address the causes by identifying effective points for intervention. The recognition of the relationships at local level among the elements of WEF is required to plan for investments, policies and actions. A framework of action should take a holistic approach to reduce unintended consequences and trade-offs, and generate additional benefits.

Multi-attribute mapping: Elements of water, energy and food security are proposed by the International Institute for Sustainable Development (IISD) (Kienzle and Sims 2006). Elements of food security can be categorized in: (1) food availability: influenced by production, distribution and exchange of food; (2) access to food: including affordability, allocation and preference; (3) utilization: nutritional value, social value and food safety (4) food stability over time. Water security includes: (1) water access; (2) water safety; and (3) water affordability in terms of ability of people to lead a healthy and productive life, while ensuring environment protection. Energy security includes: (1) continuity of energy supplies relative to demand; (2) physical availability of supplies; and (3) supply sufficient to satisfy demand at a given affordable price.

The framework of action is generally centred on available water resources, connecting energy and food security, and including urbanization, population growth and climate change consequences (Hoff 2011). An advanced framework can link food and water security to economic disparity and governance, causing water and food shortages in case of failures, and energy security to economic risks in the form of energy shortages with impacts on growth and social stability (Schwab, Sala-i-Martin, and others 2010). This framework also includes population and economic growth as well as environmental pressures affecting the nexus. In addition, it requires the identification of specific relationships among the elements of WEF, such as intensity of energy use in food production as well as water use in both food and energy production.

Recommended multi-attributes descriptive for energy solution planning

After defining some recommended criteria, additional recommendations are worth to be done in order to align the Italian approach with the best practice at international level by defining three categories: ‘electricity’ and ‘thermal energy’ and ‘efficiency’. For each of these categories, some attributes (Table 9, Table 10 and Table 11) are provided in order to determine the “usability” and the quality of the energy service. Attributes represent some performance indicators of the energy service, useful both in planning and evaluation phase. Attributes state the coherence with the efforts made by the World Bank in going beyond a binary metrics (“having access” or “not having access”). The use of this multi-attribute descriptive will help the Italian system of cooperation to account for the achievement of any programme according to this new metrics.

Table 9 – Attributes for electric energy

	Attributes for Electric Energy	
Electricity for household level, community services and productive uses		**Lighting**
Capacity	Safety	Lumen Hours per Household
Duration	Health	Phone Charging Capability
Reliability	Legality	Use Behaviour
Quality	Services / Activities	
Affordability	Specific consumption p.c	
Convenience	Service or Activity	

Table 10 – Attributes for thermal energy

	Attributes for Thermal Energy
Household Cooking	**Space heating and other thermal uses**
Indoor Air Quality	Capacity
Cook stove Efficiency	Duration
Test method	Reliability
Convenience	Quality of fuel
Safety	Affordability
Affordability	Convenience
Quality of fuel	Safety
Availability of fuel	Indoor air quality
Services / Activities	Services / Activities
Specific consumption p.c	Specific consumption p.c
Service or Activity	Service or Activity

Table 11 – Interventions to improve Energy Efficiency

Interventions to improve Energy Efficiency	
Improvement of Efficiency	Legalization of supply
Improvement of Capacity	GHGs reduction
Improvement of Duration	Local pollution reduction
Improvement of Reliability	Services / Activities Increase of the Specific Consumption
Improvement of Quality (Service)	Lighting
Fuel Switch	Change in Lumen Hours
Higher Affordability	Additional Phone Charging Capability and other services
Convenience compared to other solutions	Use variation by users
Improvement of safety	Metering
Improvement of health (included Air Quality)	

Recommended criteria for projects in ‘energy and development’

On a general perspective, 10 criteria seem to require special attention in the field of energy. Some of them are already included in the best practices for cooperation projects and they represent well known standard of reference. They are below broken down into the three main phases of a project planning: identification, formulation and monitoring and are also briefly presented at the light of the energy-development nexus.

Identification phase

In the identification phase where the project needs to be drawn, while analysing the problem, the objective, the stakeholders and the strategy, the items listed in Table 12 are recommended.

Table 12 – Specific criteria for the Identification phase

Criteria 1-4	Specific step in Identification	Description
Involvement and ownership of beneficiaries	Problem analysis and target identification	The approach related to the involvement of local beneficiaries within the project and the main actions intended to increase local ownership need to be described in details. The direct and indirect benefit of the project over the local community has to be clearly highlighted. Beneficiaries need to be recognised as partner in the project since this may effect long term duration and outcome of the project. This asset is strongly recommended
Multi-stakeholders partnership and their specific role	Stakeholder analysis	The presence of a diverse group of stakeholders needs to be highlighted. Each stakeholder should be characterised with a specific role and mandate within the project. Motivation for each stakeholder to participate to the project should also be stated clearly as well as the global governance of the consortium. Avoid overlapping and enforce synergies with other actions by the same stakeholders in the same areas. Multi-stakeholder actions are strongly recommended
Strategies for medium- long-term sustainability	Strategy Selection	When highlighting the strategy of the project, a special attention to long term sustainability needs to be given. It is so requested to provide concrete action to the purpose. By highlighting the main socio-economic, cultural or institutional risks to the project, a good remediation strategy can be set up. Sustainability of the proposed action is considered an essential asset for the Italian cooperation system and will be a crucial evaluation criteria.
Project contribution to the SDGs (not only SDG7)	Overall Objective (main goal)	In order to be able to measure the impact of the Italian cooperation system when working in the energy sector a clear identification of the contribution each project may bring to SDG7 is strongly requested. In addition and in light with the multidimensional concept of sustainable development, each project should highlight the contribution provided to any other SDGs. This criteria is crucial and central to the monitoring of the action

Formulation Phase

In the formulation phase where the project needs to be structured, while drafting the Logical Framework, the budget and the Activity Plan for the project (EuropeAid Cooperation Office 2004), the items listed in Table 13 are recommended.

Table 13 – Specific criteria for the Formulation phase

Criteria 5-7	Specific step in the Formulation Phase	Description
Quality of output, outcome and impact indicators	Logical Framework of the project	Objective Verifiable Indicators need to be as SMART as possible: Specific, Measurable, Available, Relevant and Time-Bound. In the identification of the output (results), outcome (objective or purpose) and impact (overall objective) indicators, information needs to be provided in term of quantity and level of quality together with a time frame for the achievement. A comprehensive set of sound indicators is a plus for the project evaluation.
Reliability in source of verification & data collection	Logical Framework of the project	To complement indicators, the right source of verification needs to be found. Source of verification need to be accessible and available within the project time frame. The selection sources, whose reliability is consistent, is under the responsibility of the project manager and thus represents a crucial asset for the project evaluation

Budget /Business Plan Coherence	Logical Framework, Gannt Chart and Budget scheme	The coherence of the budget and business plan is also recognised to be essential if long term and successful energy strategies need to be scaled up at field level. Two are the level of coherence: Enough inputs in terms of resources need to be provided to allow achievement of results The share of the different item costs within the overall budget need to be coherent In case of productive activities a business plan is also envisage and recommended for the sustainability of the activity after the project closure.

Monitoring and Evaluation phase

In the formulation phase where the project needs to be structured, while drafting the Logical Framework, The budget and the Activity Plan for the project the items listed in Table 14 are recommended.

Table 14 – Specific criteria for the Monitoring and Evaluation phase

Criteria 8-10	**Specific step in M&E Phase**	**Description**
Expected evaluation of the project versus the 5 OECD-DAC criteria	Monitoring and Evaluation	A brief indication of Efficiency, Effectiveness, Relevance, Sustainability and Impact is requested in the project proposal. This would help the global monitoring of the Italian activity for the OECD DAC. Sustainability is also provided in other criteria.
Long term evaluation	Evaluation	When possible is strongly recommended that the project set up a strategy for keeping track of the long term evaluation of impacts even beyond the duration of the project. Involvement of local people and allocation of budget for this activity (for instance, from any induced revenues) is envisaged, but due to its high complexity, this criteria can not be applicable in all the project. For this reasons it will represent an additional added value and not an evaluation criteria.
Creation of Value at local level	Evaluation	Another added value will be represented by the creation of value at local level. This is an induced benefit of the project and may apply in some specific case. In this criteria the project manager can highlight the impact of the energy project on the other nexus related to energy from gender balance to local enterprises, from water to food and education or local empowerment.

Conclusions and final remarks

The activation of the 'Multi-stakeholder Platform for Energy in Development' represents a first national pilot experience of multi-actors collaborations, which may count on a rich and extensive framework of Italian expertise and competence, including institutional and private sectors, civil society, academic and research sectors. The overall objective of the Platform is to identify, formulate and validate intervention strategies in line with the SDG7, to promote synergic actions related to energy and sustainable development, able to combine interventions of high impact for local and autonomous development with equal promotion of Italian of culture, education, research and industrial innovation.

The document 'Guidelines for projects in Energy & Development', now close to the finalization and approval and developed through a coordinated action between the stakeholders, contributes to define a national framework for planning energy projects in the development cooperation, in relation the best practices existing in the international framework. Indeed, these guidelines would place the Italian cooperation system at the forefront, providing a system of excellence for the identification and monitoring of the Italian interventions in the energy sector, on the one hand fully aligned with relevant international practices, and on the other by adding innovative elements in the definition of interventions and in the promotion of effective and efficient public-private relations.

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