

COUNTRY: Project Name
Results Framework

Project Development Objective (PDO):

The Project Development Objective is “to strengthen the capacity of key public sector institutions to improve the contribution of energy and mining resources to accelerated national economic growth and increased social and environmental sustainability in a context of globalization and technological change”.

PDO Level Results Indicators	Core	Unit of Measure	Baseline	Cumulative Target Values*					Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4	Total				
Indicator One: The capacity of key government institutions in charge of supporting the development of both the energy and the mineral sectors has been strengthened	□	• Nb of new database created and utilized	0	0	2	5	9	6	Annual	Annual Progress Report	PMU	Database for planning and socio-environmental monitoring
		• Nb of new methodologies created and utilized	0	0	2	4	6	6	Annual	Annual Progress Report	PMU	Methodologies to internalize long-term sustainability in planning, policies design and regulations
		• Nb of Training Programs	0	0	0	1	3	3	Annual	Annual Progress Report	PMU	Training programs for capacitating staff of ministry, co-executing entities and communities
		Nb of entities created or restructured as specified in the new Regulatory Framework already prepared by the Ministry of Mines and Energy	0	0	2	2	2	2	Annual	Annual Progress Report	PMU	Restructuring of Secretary of Geology and Mining and creation of National Counsel for Mineral Production

Indicator Two: Sectoral Applied R&D laboratories for providing emerging and state of the art technologies to the energy and mining sectors have been enhanced	<input type="checkbox"/>	Nb of power transmission technologies developed and/or deployed			1	1	3		Annual	Annual reports of CEPTEL and ONS		Power Transmission Technology: 1) Ultra-high Voltage (UHV) transmission technology 2) Synchronized realtime phases measurement technology (PM) 3) Upgrade the computing capacity to state-of-the art technology to enable the simulation of complex power system and its realtime dispatch (Clusters)
		Nb of geophysical technologies			2	3	4	4	Annual	Annual report of CPRM		Geophysical: 4) Electroresistivimeter, 5) Electromagnetic meter, 6) Ground Penetration Radar, 7) Sysmograph

INTERMEDIATE RESULTS

	Core	Unit of Measure	Baseline	Cumulative Target Values**				Frequency	Data Source/ Methodology	Responsibility for Data Collection	Description (indicator definition etc.)
				YR 1	YR 2	YR3	YR 4				
Intermediate Result (Component One): Strengthening the Capacity of the Government to drive sustainable development of the Energy and Mineral Sectors											
<i>Intermediate Result indicator One:</i> Apply newly-collected and processed energy-use data to improve energy models. Demonstrate improvements in planning documents for one selected sector. (activity 35, 36, 38)		Number of subsectors with improved data incorporated into energy planning models	Low quality non primary data.		3 subsectors with new primary data.	New data for 3 sub-sectors incorporated into energy planning models.	New data for 3 sub-sectors incorporated into energy planning models.	Annual	Verification	EPE	Methodology, toolkit or database

<i>Intermediate Result indicator Two:</i> Development of internal capacity to execute an annual inventory of greenhouse gas (GHG) emissions, both through the development of a methodology and staff training. (activity 5)		Inventory of GHG emissions of the Energy sector	No methodology or internal capacity for GHG accounting.		New methodology and manual adopted by the MME		One GHG inventory completed using the new methodology	One-time	Verification	SPE/DDE	Methodology and manual
<i>Intermediate Result indicator Three:</i> Improve the capacity of the Ministry and the Energy Planning Agency (EPE) to define the potential of wind energy that can be integrated to the grid, consistent with the stability of the power system (activity 8)		Standard to integrate wind energy into the interconnected power system	Data on the full potential exists, but neither data nor criteria on the technical-economic potential that can be integrated safely			Standard to integrate wind energy into the interconnected power system elaborated.	Standard to integrate wind energy into the interconnected power system adopted	One-time	Verification	SPE/DPE	Methodology
<i>Intermediate Result Indicator Four:</i> Improve the primary data on small-scale mining in order to facilitate the adoption of an Action Plan for the sector. (activity 10)		% inventoried	Data for 1993 only, and has not been updated.		100% inventoried.	Action Plan for small-scale mining adopted	Action Plan for small-scale mining adopted and implementation has begun	One time	Verification	SGM	Inventory and action plan
<i>Intermediate Result Indicator Five:</i> Training of staff		Nb of staff trained	0	25	75	100	150	Annual	Verification	PMU/MME	Number of staff
Intermediate Result (Component Two):Strengthening of regulatory institutions											
<i>Intermediate Results Indicator One:</i> Reduction of energy used due to the implementation of demand response measures, via Demand Side Bidding.		% of load reduction bid via DSB over total load of SIN	0 (DSB mechanism does not exist)	0	0	5%	10%	Annual	Database from CCEE	ANEEL/ CCEE	Includes Demand Side Bidding - price responsive demand side. Eligibility to participate to be defined in regulations, therefore number or customers and aggregators, if any. No load control contemplated in this phase
		% of load actually curtailed via DSB over total load of SIN	0 (DSB mechanism does not exist)	0	0	5%	10%	Annual	Database from CCEE	ANEEL/ CCEE	

<i>Intermediate Results Indicator Two: Smart Meter deployment</i>		% of Smart Meter deployed by customer group Large Small	0% 0%	0% 0%	0% 0%	20% 5%	40% 10%	Annual Annual	Verification Verification	ANEEL ANEEL	Smart meters defined as devices with remote metering, automated disconnection, load control
<i>Intermediate Result Indicator Three: Adjust the structure of SGM to the new legal and regulatory framework, and create the CNPM. This will include creating an action plan, procedural norms, and capacity plan.(activity 13)</i>			SGM remains with old structure without an Advisory Board.	New Legal and Regulatory Framework	SGM restructured	CNPM operational	SGM restructured and CNPM operational.	Annual	Verification	SGM	Units created or restructured
<i>Intermediate Result Indicator Four: Improve the management and security of documents related to mineral rights through implementing an electronic document management system. (activity 17)</i>		Software purchased and customized.	Continue with physical processing of documents.	New program developed and tested	New program being utilized.	New program being utilized	New program being utilized	One-time	Verification	DNPM	Software
Intermediate Result (Component Three): Technology Development											
<i>Intermediate Result indicator One: Developed and demonstrated in the laboratory: a high-performance long-distance transmission line to enhance the design, testing, commissioning and operation of major trunk lines. (activities 44, 45, 46, 48, 49, 50, 51A/B, 52)</i>			No testing capacity for developing and testing high voltage transmission lines above 700kV		Operational ized insulators flashover voltage for ultra high tension for testing.	Be fully operational to test ultra-high tension equipment (insulators, transformers, switchgears) and have tested the transmission lines.	Technology for long distance transmission lines (765 kV AC or 500 kV DC) developed and demonstrated in the laboratory.	Annual report on implementation progress	Verification and testing	CEPEL	Equipment and application
<i>Intermediate Result Indicator Two: Development of a new high-performance version of CEPEL's computer model to support expansion planning and operation of the SIN. (activity 43)</i>		Operational Computational Clusters	0	0	2 clusters acquired	2 new clusters utilized, allowing to run more efficiently the software	Results of simulation obtained by running the software utilizing the new clusters	One-time	Verification and testing	CEPEL	Hardware

<p><i>Intermediate Result Indicator Three:</i> Demonstrate, with the help of gauges and real-time digital simulation, the application of phaser synchronization measurement technologies to monitor large-scale disturbances in the SIN. (activity 53)</p>		PMU testing lab	No testing capacity for developing and testing phasor technologies	-	-	Lab fully operational for testing and research on PMU and phasor data concentrators		One time One-time	Verification and testing Verification and testing	CEPEL CEPEL	Laboratory and application Equipment
<p><i>Intermediate Result Indicator Four:</i> Improved capacity of the CPRM to create maps of the geophysical risk susceptibility of different municipalities in order to reduce natural disaster risk. (activity 16)</p>		Maps of the geophysical risk susceptibility	0		50 maps	100 maps	247 maps	Annual report	Verification	CPRM	Maps
<p>Intermediate Result (Component Four): South-South Cooperation</p>											
<p><i>Intermediate Result indicator One:</i> Improve capacity of MME to contribute effectively in south-south cooperation in the energy and mining sectors</p>		1) Management information system and procedures 2) Specific South-south activity	Ad hoc response to solicitations, no organized management of MME South-South activities		1) New management information system and procedures for South-South activities in place 2) Two activities		2) Four activities	Annual report	Verification	PMU/MME	

*Target values should be entered for the years data will be available, not necessarily annually.