



PROGRESS REPORT

Reporting UN Organization	: United Nations Development Programme
Country	: Lebanon
Award ID	: 00047251
Award Title	: CEDRO – “Country energy efficiency and renewable energy demonstration project for the recovery of Lebanon”
Award Components	: CEDRO 1 – 00056604 CEDRO 2 – 00060150 CEDRO 3 – to be determined
Reporting Period	: 01 Jan 2009 to 31 Mar 2009

I. PURPOSE

Project Summary:

The aim of the CEDRO project is to support Lebanon’s recovery, reconstruction and reform activities and to complement the national power sector reform strategy through the implementation of end-use energy efficiency and renewable energy projects and through the removal of barriers for the promotion of sustainable energy applications in Lebanon. To achieve this, the project will work on three levels: the first involves the establishment of a demonstrative model addressing public sector building and facilities, the second involves the activation of the replication process, and the third involves the triggering of a national sustainable energy strategy and action plan. The CEDRO project is financed through the Lebanon Recovery Fund, and is in-line with Lebanon’s ongoing efforts to improve national patterns of energy consumption and costs.

Project Phases and Outputs:

CEDRO 1 (Oct 2007 – Oct 2009) 2.73 million USD	<ul style="list-style-type: none"> ➔ Implementation of end-use energy efficiency and renewable energy demonstration projects for public sector buildings and facilities (50-60 sites in South, Bekaa and Akkar)
CEDRO 2 (Jan 2009 – Jan 2011) 3.50 million USD	<ul style="list-style-type: none"> ➔ Implementation of end-use energy efficiency and renewable energy applications for public sector buildings and facilities (60-80 sites across Lebanon) ➔ Setting an enabling environment for the conversion of all public sector buildings and facilities into energy efficient modalities
CEDRO 3 (Jan 2010 – Oct 2012) 3.50 million USD	<ul style="list-style-type: none"> ➔ Implementation of end-use energy efficiency and renewable energy applications for public sector buildings and facilities (60-80 sites across Lebanon) ➔ Setting an enabling environment for the conversion of all public sector buildings and facilities into energy efficient modalities ➔ Setting an enabling environment for the development of a national sustainable energy strategy and action plan

Project Linkages to National Priorities and Reconstruction Goals:

Lebanon imports around 97% of its energy needs in the form of fossil fuel. In 2004, the national energy bill amounted to around 1.6 billion USD (around 20% of the annual public expenditure and around 7.8% of the national GDP), and in 2005 it reached 2.1 billion USD (around 26% of the annual public expenditure and around 10% of the national GDP). Despite major steps taken by the Government of Lebanon since 1990 towards improving the electricity sector, the sector is still facing major challenges including inability to meet increasing national energy demand and large financial subsidies for Electricite du Liban (around 1.0 billion USD in 2006).

As a result of the July 2006 conflict, the situation of the energy sector in Lebanon was further aggravated, resulting in a reduction of electricity supply on a national level and an increase in electricity rationing. This only added to the existing electricity supply challenges faced by Lebanon and further deteriorated the living conditions in the country.

Indeed, the government of Lebanon has placed the reform of the power sector among its highest national priorities, as outlined in the recovery, reconstruction and reform paper submitted to the Paris 3 conference. However, given the enormity of the challenges faced by the power sector, the power sector reform strategy has concentrated on addressing the energy supply side, without extending the scope to the demand side of energy management.

Knowing that reform on the supply side needs to be accompanied by reform on the demand side, the proposed CEDRO program has sought to complement the national power sector reform strategy by targeting end-use energy conservation.

This project is an initiative by the Government of Spain to assist the Government of Lebanon in its recovery and reconstruction efforts with a clear focus on promoting sustainable energy services and concentrating on public sector buildings and facilities.

This project is in line with Lebanon's recovery, reconstruction and reform objectives, and falls within the Ministry of Energy and Water's main priority to meet national demand for electricity.

Project Implementation Partners:

International Partners: - Spanish Agency for International Cooperation

National Partners: - Ministry of Energy and Water
and Lebanese Center for Energy Conservation Project (LCECP)
- Ministry of Finance
- Council for Development and Reconstruction

II. RESOURCES

		CEDRO 1	CEDRO 2	CEDRO 3
Total budget approved	:	USD 2,732,240	USD 3,500,000	USD 3,500,000
Total disbursements as for 30 Mar 2009	:	USD 348,400	USD 2,400	-
Commitments for next quarter	:	USD 200,000	USD 5,000	-
Available Balance	:	USD 2,383,840	USD 3,497,600	USD 3,500,000

Budget and Expenditure Breakdown per LRF Category:

CATEGORY	CEDRO1		CEDRO2	
	Total Budget (USD)	Total Exp. to date (USD)	Total Budget (USD)	Total Exp. to date (USD)
1. Personnel (Incl. staff and consultants)	177,000	142,850	220,000	2,400
2. Contracts (Incl. companies, professional services)	220,000	67,872	440,000	-
3. Training (incl. AV printing / production)	22,000	8,875	40,000	-
4. Transport (local)	30,000	28,795	10,000	-
5. Supplies and commodities (Incl. IT equipment and rental & maintenance)	36,300	35,812	50,000	-
6. Equipment (including installation)	2,030,000	34,452	2,450,000	-
7. Travel	14,000	-	15,000	-
8. Miscellaneous	11,683	10,144	30,000	-
9. Agency Management Support (7%)	191,257	19,600	245,000	-
TOTAL	2,732,240	348,400	3,500,000	2,400

III. RESULTS

CEDRO Project	CEDRO 1 (Oct 2007 – Oct 2009) 2.73 million USD	CEDRO 2 (Jan 2009 – Jan 2011) 3.50 million USD	CEDRO 3 (Jan 2010 – Oct 2012) 3.50 million USD
Activity Results	Indicators		
1 - Implementation of end-use energy efficiency and renewable energy demonstration projects for public sector buildings and facilities	<ul style="list-style-type: none"> ➔ Identification and Implementation of 50-60 EE/RE demonstration projects in South, Bekaa and Akkar 	<ul style="list-style-type: none"> ➔ Identification and Implementation of 60-80 EE/RE demonstration projects the remaining regions of Lebanon 	<ul style="list-style-type: none"> ➔ Identification and Implementation of 60-80 EE/RE demonstration projects across Lebanon
2 - Setting an enabling environment for the conversion of public sector buildings and facilities into energy efficient modalities	<ul style="list-style-type: none"> ➔ Development and implementation of technical workshops and awareness tools 	<ul style="list-style-type: none"> ➔ Development and implementation of technical workshops and awareness tools ➔ Development of GIS energy data base and EE/RE procurement specs 	<ul style="list-style-type: none"> ➔ Development and implementation of technical workshops and awareness tools ➔ Development of GIS energy data base and EE/RE procurement specs ➔ Validation of project results and development of replication schemes
3 - Setting an enabling environment for the development of a national sustainable energy strategy and action plan	-	-	<ul style="list-style-type: none"> ➔ Assessment of national renewable energy resources ➔ Assessment of national energy efficiency potential ➔ Development of national EE/RE strategy & action plan

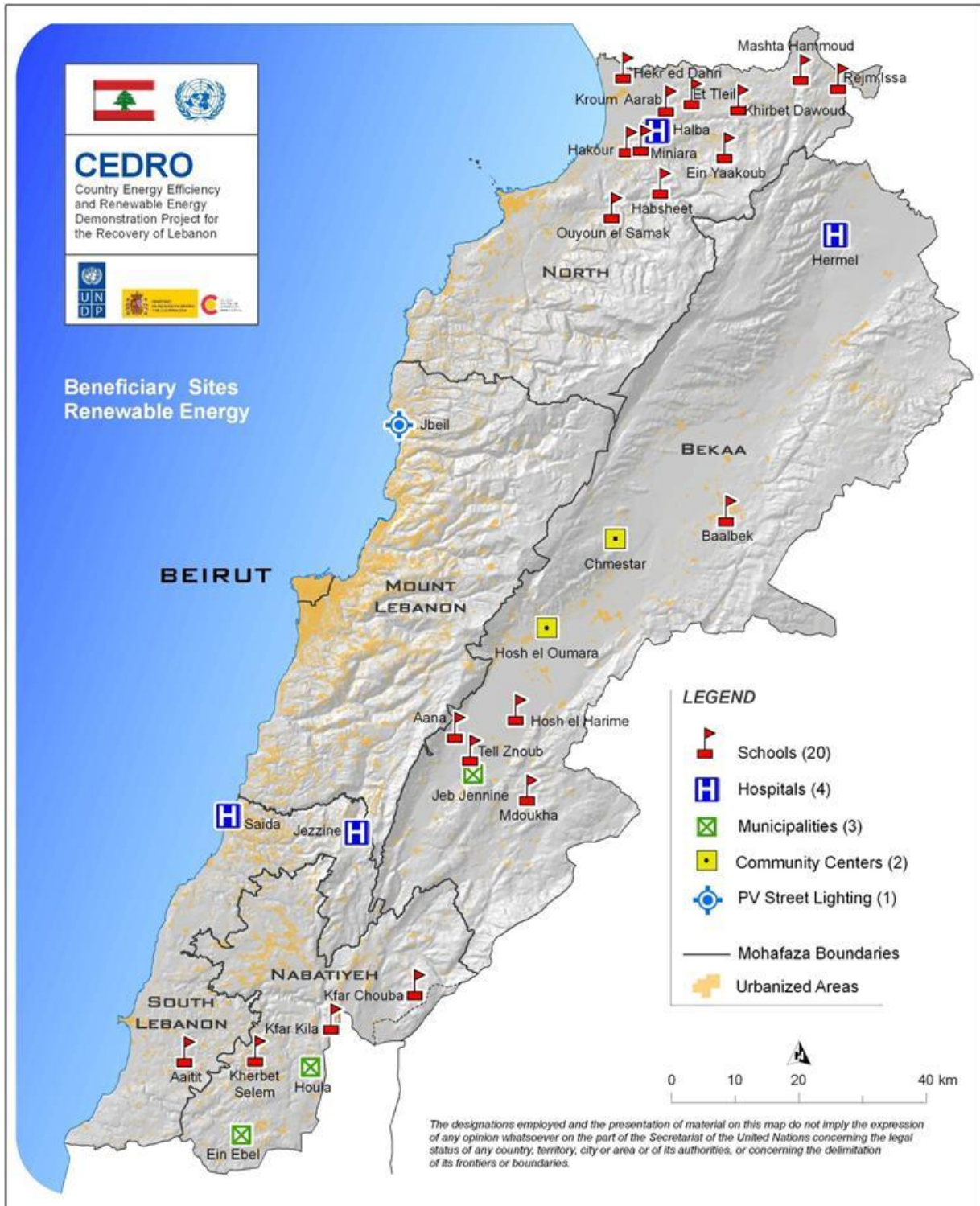
Progress in Project Implementation:

Activity Results	Activity Actions	Progress
<p>1 – Project Management</p>	<p>1.1 Technical Management 1.2 Financial Management 1.3 Operational Management</p>	<ul style="list-style-type: none"> ✓ Development of Project Documents for CEDRO 1, 2 and 3; ✓ Set-up of Project office premises; ✓ Recruitment of Technical Backstopping Agency; ✓ Set up of project management unit ; ✓ Recruitment of project Staff ✓ Set up of Project Coordination Committee; ✓ Preparation of regular progress reports; ✓ Carry-out project review meetings with the LRF Technical Committee (Feb 2008 and Jul 2008); ✓ Organization of field missions and stakeholder meetings;
<p>2 - Implementation of end-use energy efficiency and renewable energy demonstration projects for public sector buildings and facilities</p>	<p>2.1 Undertake targeted assessment and identification of project beneficiary sites 2.2 Develop tender documents and undertake bidding & procurement of goods/services 2.3 Undertake commissioning of works and supervision and monitoring of sites 2.4 Undertake testing of performance & data collection</p>	<ul style="list-style-type: none"> ✓ Preparation of targeted assessment and identification of beneficiary sites including: <ul style="list-style-type: none"> – Development of site identification strategy; – Carrying out of detailed field visits and stakeholder meetings to assess the compatibility of potential building types with envisaged EE/RE applications; – Analysis of site features and Identification of site selection filters and criteria; – Development and posting of Needs Identification Form to assess the needs for EE/RE equipments and systems; – Receipt of over 600 Forms and analysis of data including energy consumption data; – Coordination with LCECP on ongoing energy audits; – Carrying out of outreach and coordination including a project coordination committee meeting and one-on-one meetings – Preparation of the related evaluation report – Preparation of the final list of 60 beneficiary sites ✓ Development of Technical Specifications and Tender documents for the envisaged implementation sites, and launching of the bidding and procurement process for the supply and installation of EE/RE equipments/systems, including: <ul style="list-style-type: none"> – Preparation and posting of an Expression of Interest (EOI); Evaluation of the received EOIs and announcement of the short-listed companies; – Launching of a Request for Proposal (RFP) for the supply and installation of photovoltaic lighting systems; – Launching of a Request for Proposal (RFP) for the supply and installation of solar water heater systems for 4 public hospitals; ✓ Award of Contract for 30 sites, including: <ul style="list-style-type: none"> – 4 Public Hospitals – 20 Public Schools – 3 Municipalities – 2 Community centers – 1 public street lighting

Activity Results	Activity Actions	Progress
3 - Setting an enabling environment for the conversion of public sector buildings and facilities into energy efficient modalities	3.1 Develop and implement technical workshops and awareness activities 3.2 Develop GIS energy data base and EE/RE procurement specs 3.3 Validate project results and enable replication schemes	<ul style="list-style-type: none"> ✓ Oct 2007 - Development and dissemination of the first project brochure (English/Arabic) ; ✓ Oct 2007 - Arrangement of the official Project Signature event at the Council for Development & Reconstruction; ✓ Oct 2007 - Participation in the annual Energy Week at the Order of Engineers and Architects, Beirut (Outreach to around 150 engineers) ✓ April 2008 - Participation in the Omsar municipalities workshop at the Grand Serail (Outreach to around 200 municipalities); ✓ April 2008 - Organization of the cedro First Stakeholder meeting (Outreach to around 100 stakeholders); ✓ Issuing of newspaper releases and magazine articles (national coverage); ✓ Feb - Sept 2008 - One-on-one consultation meetings with stakeholders and beneficiaries; ✓ July 2008 - Organization of the Project Coordination Committee meeting; Nov 2008 – Organization of press conference for the launch of the cedro implementation phase ✓ Development of the LRF CEDRO 2 and 3 project proposals and project documents;
4 - Setting an enabling environment for the development of a national sustainable energy strategy and action plan	4.1 Asses national renewable energy resources 4.2 Assess national energy efficiency potential 4.3 Develop national EE/RE strategy & action plan	<p style="text-align: center;">Planned</p>

* EE/RE = Energy Efficiency and Renewable Energy

Location Map - First list of Beneficiary sites (30 sites)



The list of Sites is attached in [Annex A](#)

Implementation Constraints and Lessons Learned during this quarter:

- ▶▶ With respect to the first quarter of 2009 (Jan-Mar 2009): No major constraints. But a strategic decision was taken to group target projects by technology in order to optimize cost. This would imply that the renewable energy projects under CEDRO 2 may be launched directly after the renewable energy projects of CEDRO 1 and before the energy efficiency projects of CEDRO 1; and the energy efficiency projects of CEDRO 1 and 2 could be launched together.
- ▶▶ With respect to the fourth quarter of 2008 (Oct-Dec 2008): The major constraint was a three months delay from the side of the technical backstopping agency in the delivery of the Tender documents which shifted the issuing of request for proposals by three months.
- ▶▶ With respect to the third quarter of 2008 (Jul-Sept 2008): One of the key implementation constraints continues to be security clearance for field visits, particularly to the North area (Akkar). This is affecting the finalization of the list of beneficiary sites and the finalization of the Tender documents.
- ▶▶ With respect to the second quarter of 2008 (April-Jun 2008): The site visits and the field missions of the international consultants had to be rescheduled several times due to the security situation in the country. This will unavoidably delay the posting of tenders whose preparation is dependent on detailed field visits for the finalization of the feasibility studies and technical specifications.
- ▶▶ With respect to the first quarter of 2008 (Jan-Mar 2008): The implementation of the project activities is dependent on the recruitment of a Technical Backstopping Agency, hence any shift in the commencement of the Technical Backstopping Agency automatically reflects in a shift in the implementation of activities. In this regards, the contract was awarded in November 2007, and the contract start date was 21 January 2008. This has caused a shift in the implementation of the project activities.
- ▶▶ With respect to the last quarter of 2007 (Oct-Dec 2007): The original LRF project proposal did not incorporate the UN requirement of obtaining security clearance for the project office premises. As such, the related processes as well as the budget and timeframe to implement the required security safeguards were not originally factored into the project design. This has caused a few months shift in the set-up of the project office premises.

IV. FUTURE WORK PLAN

CEDRO 1 - 2009

Expected Outputs	Planned Activities	Target Year	Status	Q1	Q2	Q3	Q4
Implementation of energy efficiency & renewable energy applications for public sector buildings & facilities (50-60 sites in South, Bekaa & Akkar)	1 - Identification of pilot projects						
	1.1 - Identification of Needs for EE/RE	2008	Complete				
	1.2 - Identification of Technologies	2008	Complete				
	1.3 - Identification of Beneficiary sites	2008	Complete				
	1.4 - Preparation of Tender Documents	2008/2009	Complete				
	2 - Implementation of pilot projects						
	2.1 - Pre-qualification of firms	2008	Complete				
	2.2 - Issuing of Request for Proposal	2008/2009	Ongoing	X	X		
	2.3 - Commissioning & supervision of works	2009	Ongoing	X	X		
	2.4 - Hand-over of Installations	2009	Planned		X		
	3 - Capacity building & Info dissemination						
	3.1 - Development of training material	2008/2009	Ongoing	X			
	3.2 - Implementation of training workshops	2008/2009	Ongoing	X	X		
	3.3 - Development of awareness tools	2008/2009	Ongoing	X			
	3.4 - Dissemination of awareness material	2008/2009	Ongoing		X		
	4 - Project validation and replication						
	4.1 - Enabling project replication	2008/2009	Ongoing		X		
4.2 - Monitoring of site results	2009	Planned		X	X	X	
4.3 - External Project Evaluation	2009	Planned			X		

CEDRO 2 - 2009

Expected Outputs	Planned Activities	Target Year	Status	Q1	Q2	Q3	Q4
Implementation of energy efficiency & renewable energy applications for public sector buildings & facilities (60-80 sites across Lebanon)	1 - Identification of pilot projects						
	1.1 - Identification of Needs for EE/RE	2009	Planned	X	X		
	1.2 - Identification of Technologies	2009	Planned	X	X		
	1.3 - Identification of Beneficiary sites	2009	Planned	X	X		
	1.4 - Preparation of Tender Documents	2009	Planned	X	X		
	2 - Implementation of pilot projects						
	2.1 - Pre-qualification of firms	2009/2010	Planned	X	X		
	2.2 - Issuing of Request for Proposal	2009/2010	Planned		X		
	2.3 - Commissioning & supervision of works	2009/2010	Planned			X	X
	2.4 - Hand-over of Installations	2009/2010	Planned				X
	3 - Establishment of data base						
	3.1 - Collection of data on public facilities	2009	Planned	X	X		
	3.2 - Set-up of GIS database	2009	Planned	X	X	X	X
	3.3 - Collection of data on energy savings	2009	Planned			X	X
	4 - Capacity Building & Info Dissemination						
	4.1 - Development of training material	2010	Planned				
	4.2 - Implementation of training workshops	2010	Planned				
4.3 - Development of awareness tools	2010	Planned					
4.4 - Dissemination of awareness material	2010	Planned					
5 - Establishment of policies / procedures							
5.1 - Development of procurement tools	2010	Planned					
5.2 - Proposal of O&M schemes	2010	Planned					
5.3 - Establishment of best practices	2010	Planned					
6 - Project validation and sustainability							
6.1 - Monitoring of site results	2010/2011	Planned					
6.2 - Development of sustainability plan	2010/2011	Planned					

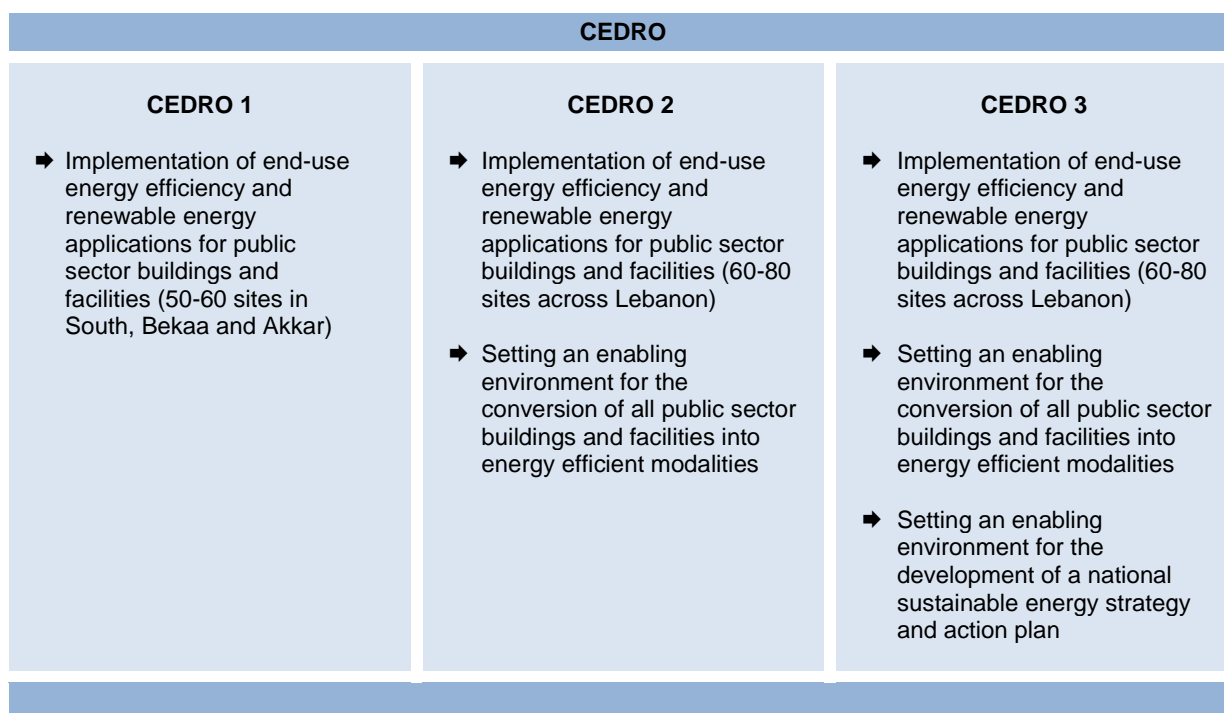
Adjustments to strategies, outcomes or outputs:

With the approval of the LRF CEDRO 2 and CEDRO 3 project proposals, CEDRO became part of a larger project framework which aims not only at supporting Lebanon's recovery activities, but also at supporting Lebanon's recovery, reconstruction and reform activities, namely the power sector recovery, reconstruction and reform plan.

Indeed, the government of Lebanon has placed the reform of the power sector among its highest national priorities, as outlined in the recovery, reconstruction and reform paper submitted to the Paris 3 conference. However, given the enormity of the challenges faced by the power sector, the power sector reform strategy has concentrated on addressing the energy supply side, without extending the scope to the demand side of energy management.












Knowing that reform on the supply side needs to be accompanied by reform on the demand side, the proposed CEDRO programme has sought to complement the national power sector reform strategy by targeting end-use energy conservation. To achieve this, the CEDRO programme has planned a three phase approach, whereby the first foundation phase, CEDRO 1, has targeted the development and implementation of model energy efficiency and renewable energy applications for public sector buildings and facilities. The second phase, CEDRO 2 has supplemented this by an additional objective which targets the setting of an enabling environment for the conversion of all public sector buildings and facilities into energy efficient modalities. The proposed CEDRO 3 project further supplements the afore mentioned two cedro objectives, by a third key objective which is the setting of an enabling environment for the development of a national sustainable energy strategy and detailed action plan. The CEDRO 3 project is the third and final key component to enable sustainability and a nationwide multi sectoral scope.

The overall CEDRO project now benefits from an overall budget of 9.73 million USD and an overall timeframe of five years (Oct 2007 – Oct 2012).



V. ANNEX A – First list of Beneficiary sites

Photovoltaic Systems - Lot 1: Akkar

<p>1.1 - Rajem Issa public school</p>  A two-story white building with a central courtyard and a flagpole on the roof.	<p>1.2 - Mashta Hamoud public school</p>  A modern white building with a glass facade and a balcony, set against a hillside.
<p>1.3 - Kherbet Daoud public school</p>  A single-story white building with a covered entrance and a flagpole.	<p>1.4 - El Tleile public school</p>  A white building with a water tank on the roof, partially obscured by trees.
<p>1.5 - Hekr El Dahiri public school</p>  A white building with a blue metal railing in the foreground.	<p>1.6 - Ouyoun El-Samak public school</p>  A white building with a concrete ramp and a green door.
<p>1.7 - Kroum Arab public school</p>  A white building with a person standing in the foreground.	<p>1.8 - Ain Yaakoub mixed public school</p>  A two-story building with a stone base and a balcony.
<p>1.9 - Habshit public school</p>  A white building with a concrete platform in front, surrounded by trees.	<p>1.10 - Meniara public school for girls</p>  A long white building with a covered walkway and people in the courtyard.
<p>1.11 - El-Hakoor mixed public school</p>  A white building with a covered entrance and a staircase.	

Photovoltaic Systems - Lot 2: Bekaa

2.1 - Baalbak first elementary



2.2 - Chmestar community center



2.3 - Hosh el Harime intermediate school



2.4 - Jeb Jennine Municipality and Library



2.5 - Mdoukha public school



2.6 - Hosh El-Oumara community center









2.7 - Aana Intermediate public school







2.8 - Tell Zounoub Intermediate



Photovoltaic Systems - Lot 3: South

<p>3.1 - Ayteet public school</p> 	<p>3.2 - Kherbet Selem first public school</p> 
<p>3.3 - Kfarkela first public school</p> 	<p>3.4 - Kfarshouba Intermediate</p> 
<p>3.5 - Houla municipality</p> 	<p>3.6 - Ain Ebel municipality</p> 

Solar Water Heating Systems

<p>Lot 1 – Saida Public Hospital</p> 	<p>Lot 2 – Jezzine Public Hospital</p> 
<p>Lot 3 – Abdallah Rassi Public Hospital</p> 	<p>Lot 4 – Hermel Public Hospital</p> 

Photovoltaic Street Lighting – Jbeil seaside port

