



The SWH Market in Lebanon:

A Massive Market Transformation

The Lebanese Center for Energy Conservation

Nader Hajj Shehadeh

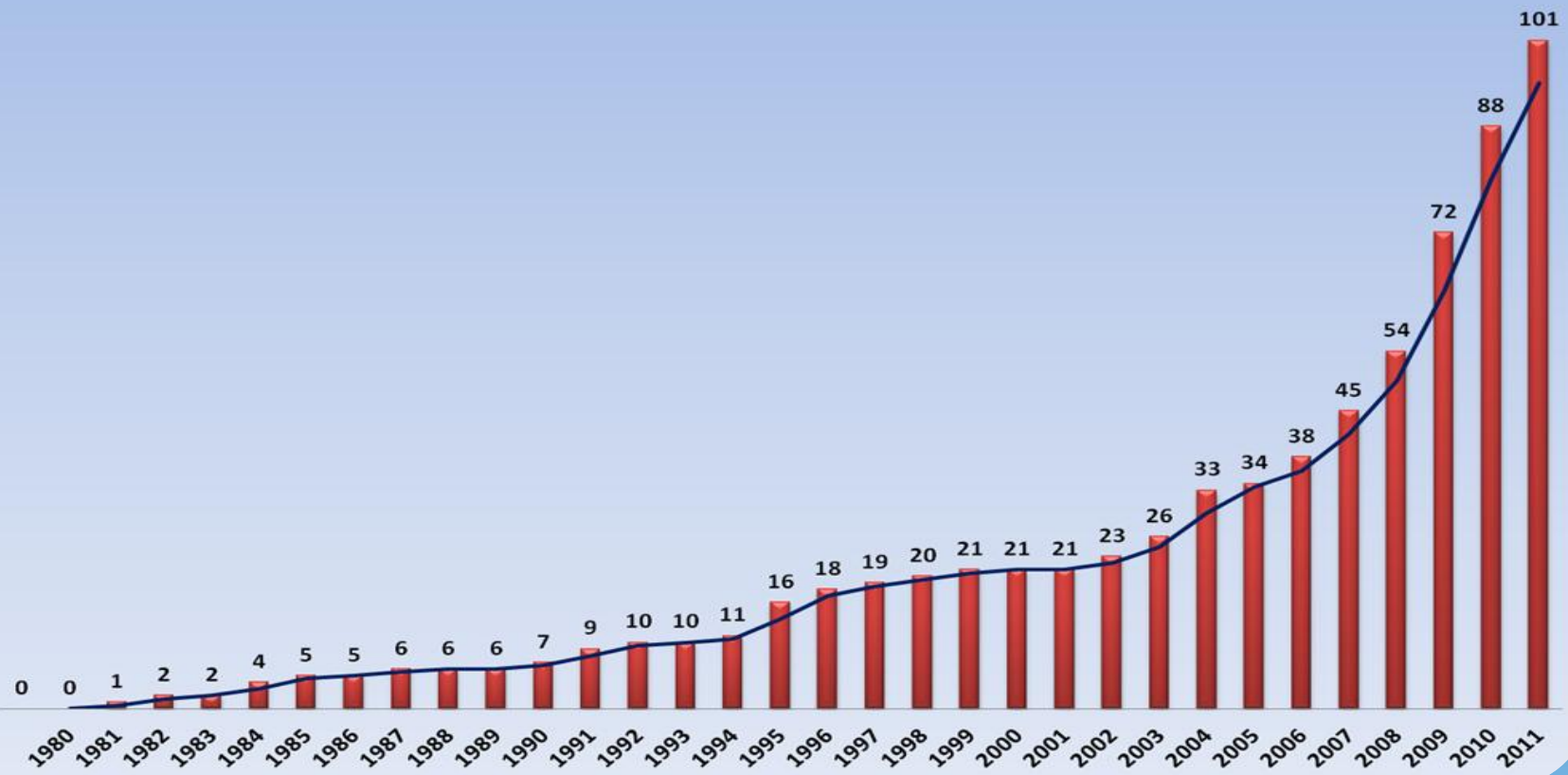
Workshop on Solar Thermal in the Mediterranean region

Mondial Hotel – Tirana

20-21 March 2013

An Indicator of Market development... or is it?

Local SWH Companies (1980-2011)



Some Figures From 2008

Installed Capacity ($\text{m}^2/1000$ inhabitants)






40 Systems /1000 Residences

Annual installed Capacity: $22,000 \text{ m}^2$

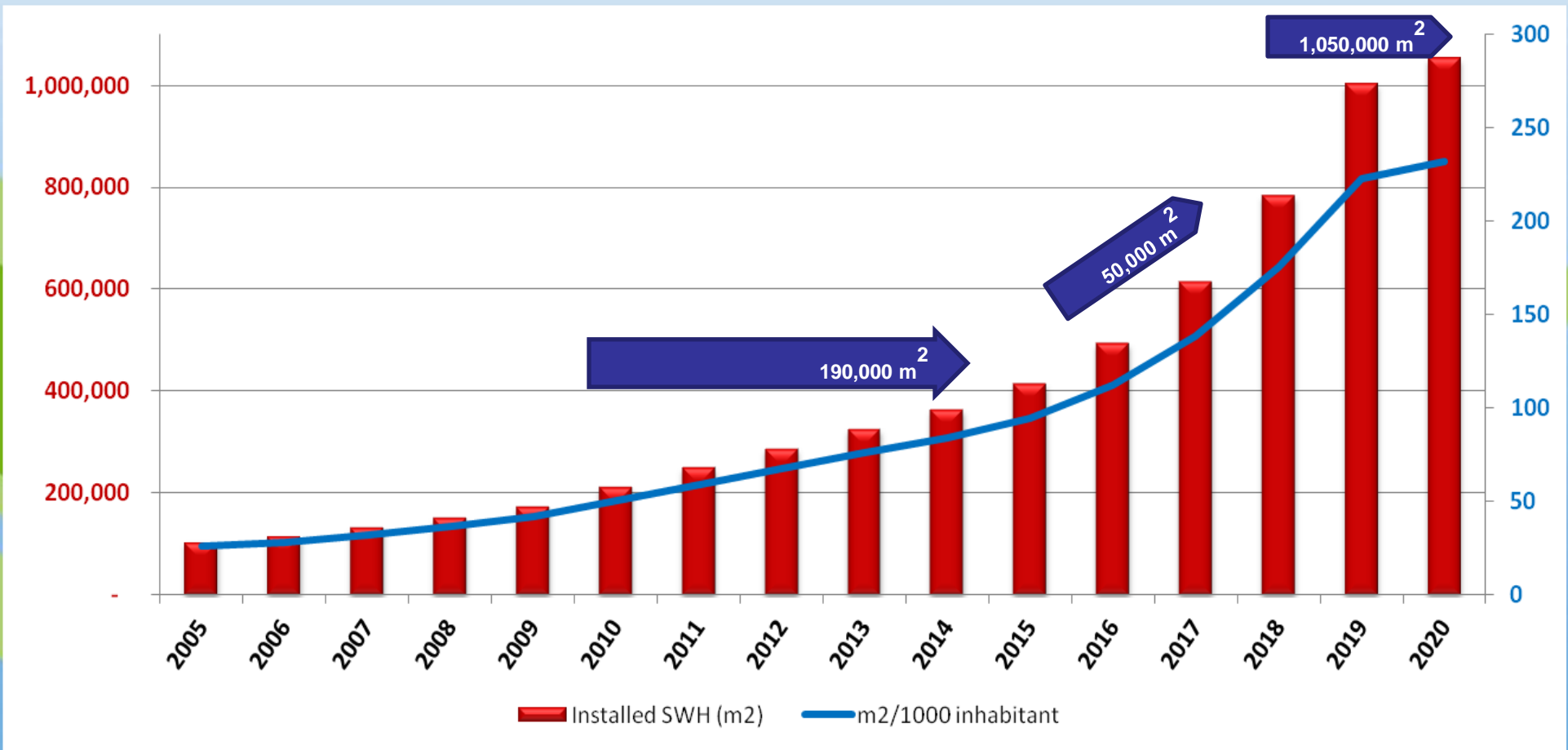
The GSWH Market Transformation

- **Duration:** June 2009 – June 2014
- **Donors & Budget:**

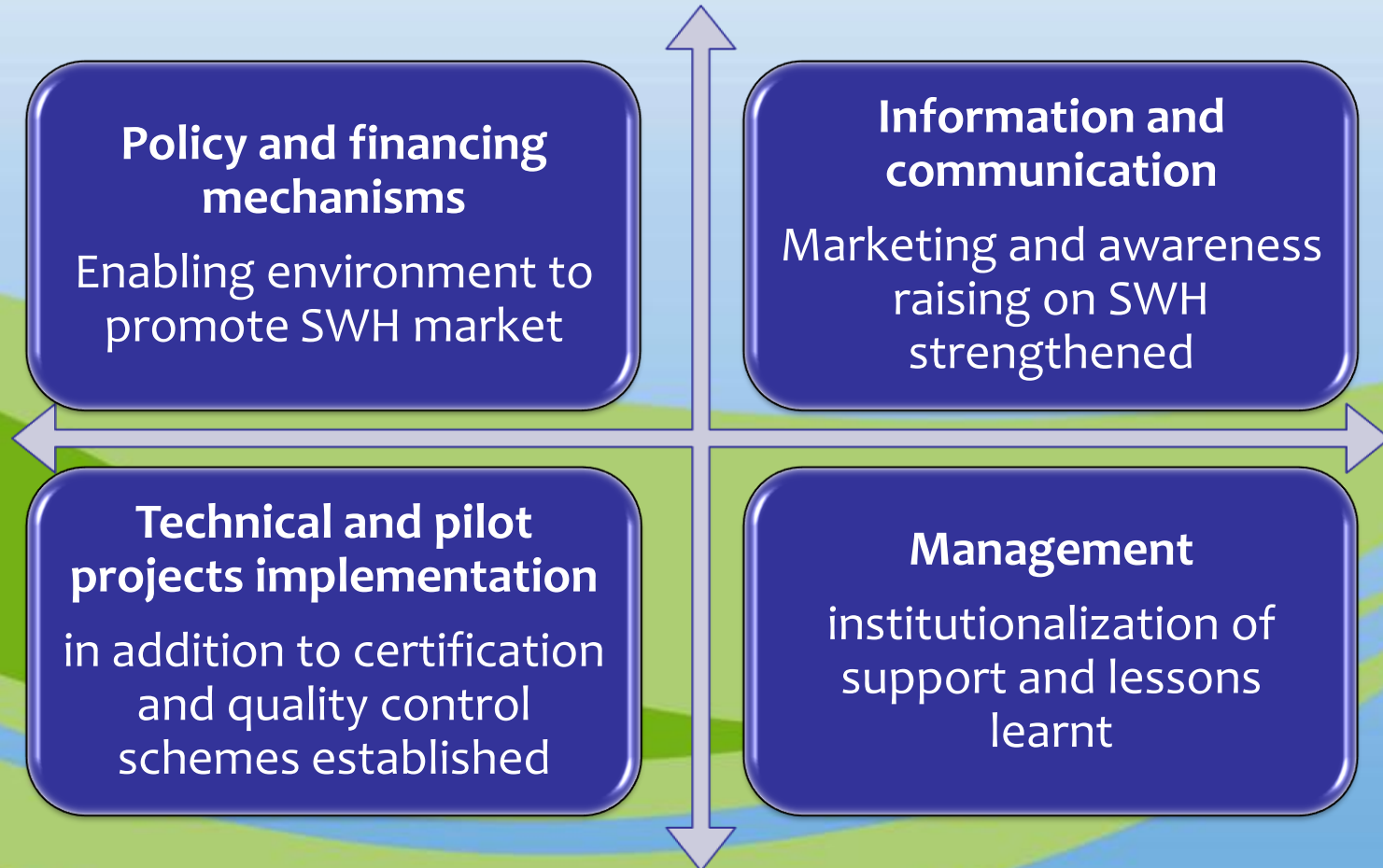
	GEF:	\$ 1,000,000
	UNDP:	\$ 100,000
	MEW:	\$ 40,660

Total: \$1,140,660

The GSWH Market Transformation

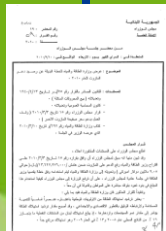
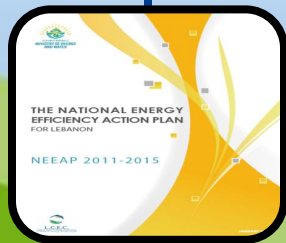


The GSWH Market Transformation



The GSWH Market Transformation

Policy and Finance



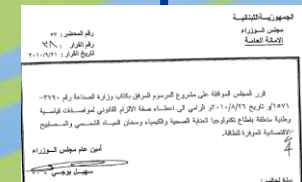
Info & Marketing



Technical and Pilot Projects



Quality Control



The First Awareness Raising Campaigns



The NEEAP of Lebanon



The MEW Initiative

- MEW proposed using 9.08 Million USD to implement three initiatives in energy conservation:
 - 7 Million USD to implement the 3 Million Compact Fluorescent Lamps (CFL) project;
 - **1.5 Million USD to offer subsidies on Solar Water Heaters (SWH);**
 - 0.58 Million USD to implement a national O&M plan on public street lighting;

The Financing Possibilities



The National Solar Water Heating
Companies Qualification

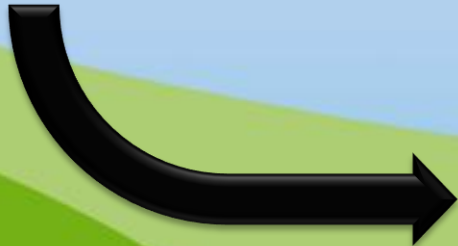
SWHCOs Qualification

Some Figures From 2011

Installed Capacity ($\text{m}^2/1000$ inhabitants)



60 $\text{m}^2/1000$ inhabitant



71 Systems /1000 Residences

Annual installed Capacity: $\sim 40,000 \text{ m}^2$

Results of SWH Subsidy Program

The Beirut 2012 Version

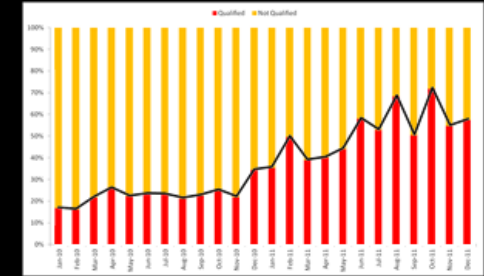


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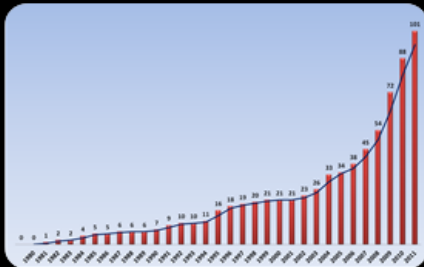
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Country of Origin: All Applications



March 20, 2012

Naderia@Shahadeh

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Country of Origin: Approved Applications

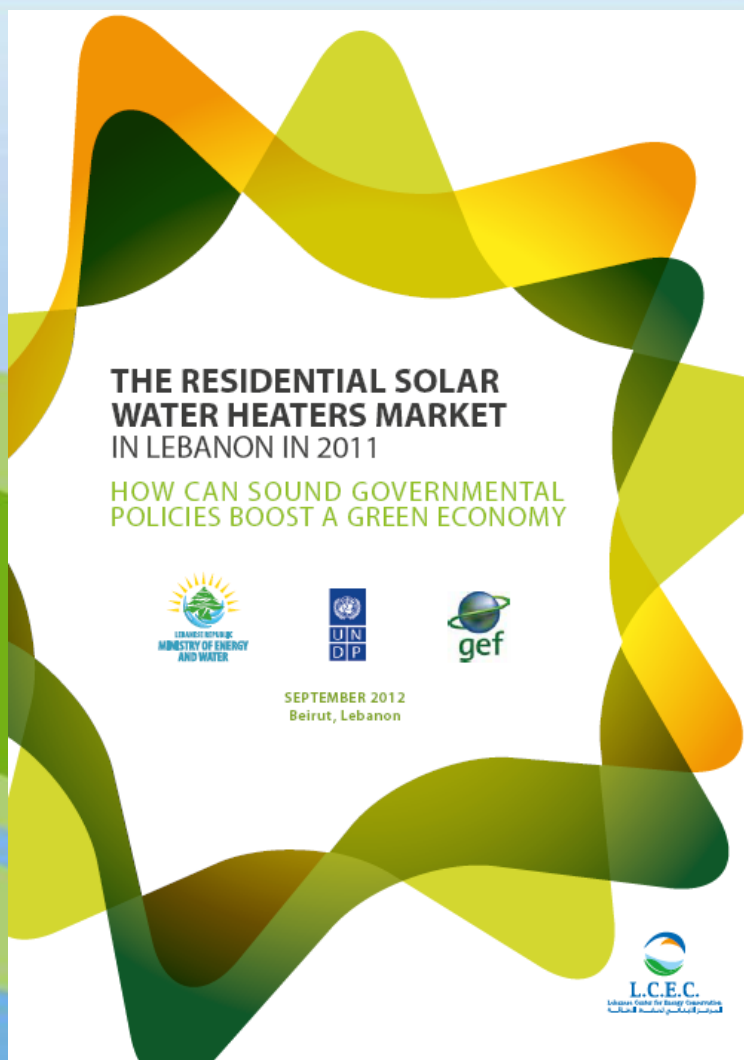


March 20, 2012

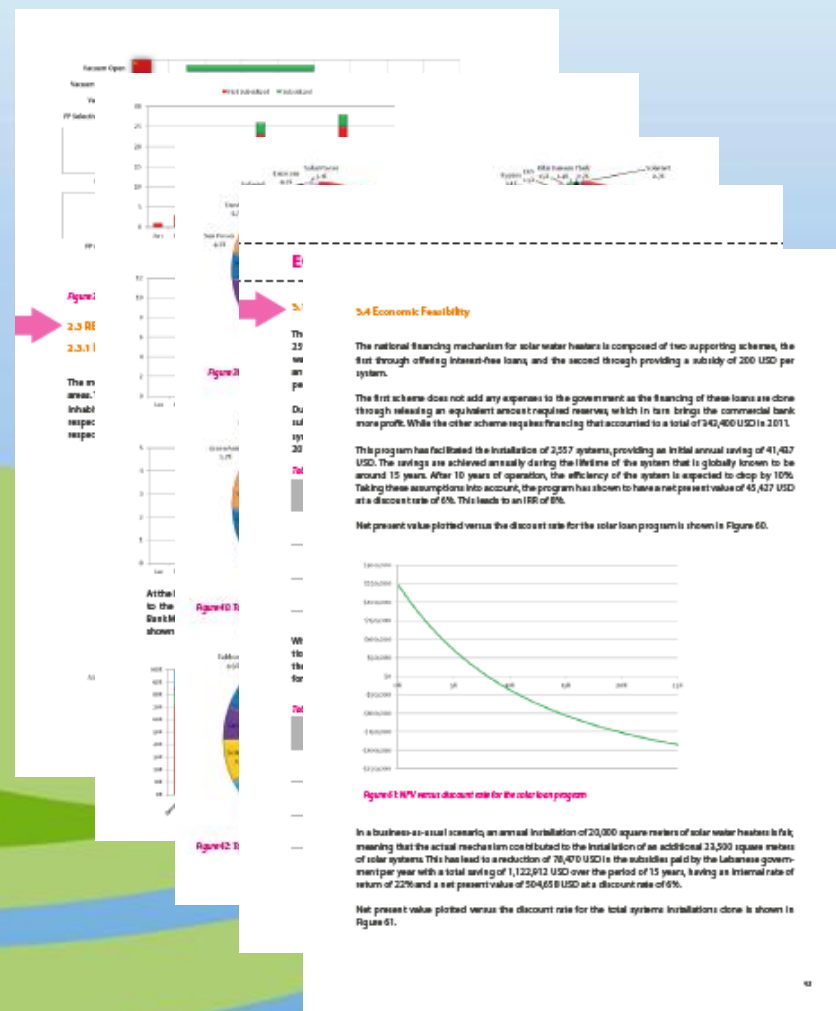
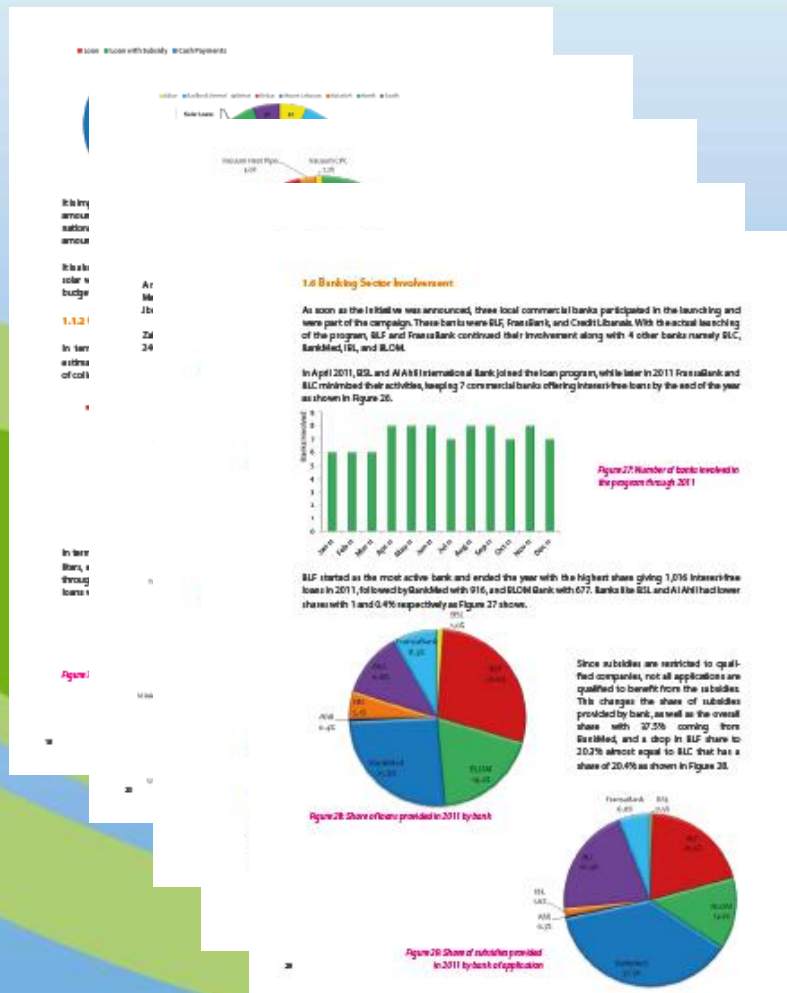
Naderia@Shahadeh

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Results of SWH Subsidy Program Report Released



Results of SWH Subsidy Program





The impact of the program

“ A TALK WITH...

Jean Paul Sfeir
GM, Solarnet

The loan introduction has energized the market. Some applicants did not apply for the loan but decided to install solar water heaters after hearing about such loan.

”

Elie Kanan
Kanaan Trading

The solar water heating market has risen significantly to become one of the leading markets in Lebanon. This initiative has proven to be a big step forward (...)

We applaud the LCEC for taking on an initiative of this magnitude, which included great advertising campaigns and a constructive relationship with the banking sector. It has allowed Lebanon to take a major green step towards a cleaner future for generations to come.

”

Jihad Ghorra
Manager, Solar Solutions

The solar loan was a real market mobilizer, also the campaign for the heaters was really good. During the year 2011 we had a growth of almost 35%

”

Toni Traboulsy
GM, The Green Pact

The solar loan by BDL was a key in the implementation of “The National CDM Project for Solar Energy” where the initial model created did include subsidizing the interest in order to make solar water heaters widely available for the people who most need it but can’t afford buying it.

(...) We can inform you that our sales have more than quadrupled during the second half of 2011 and the individual systems sold through BDL solar loan. The subsidized interest loan was a main catalyst among the other benefits provided through the project for this increase.

”

Rabih Shehayeb
GM, Kodrat

The BDL loan did a major impact on the market.

(...) Although very few companies were only qualified for most of the year 2011, the cash sales has increased a lot, mostly for the low cost units (\$600-\$700). This was because of the rise of interest in people minds about solar energy, and also the increased credibility of its performance - “if BDL is supporting this then it must be a good solution”.

”

Ziad Doumit
GM, RenMed Energies

The solar loan by BDL is without any doubt a market mobilizer.

”



Results of SWH Subsidy Program

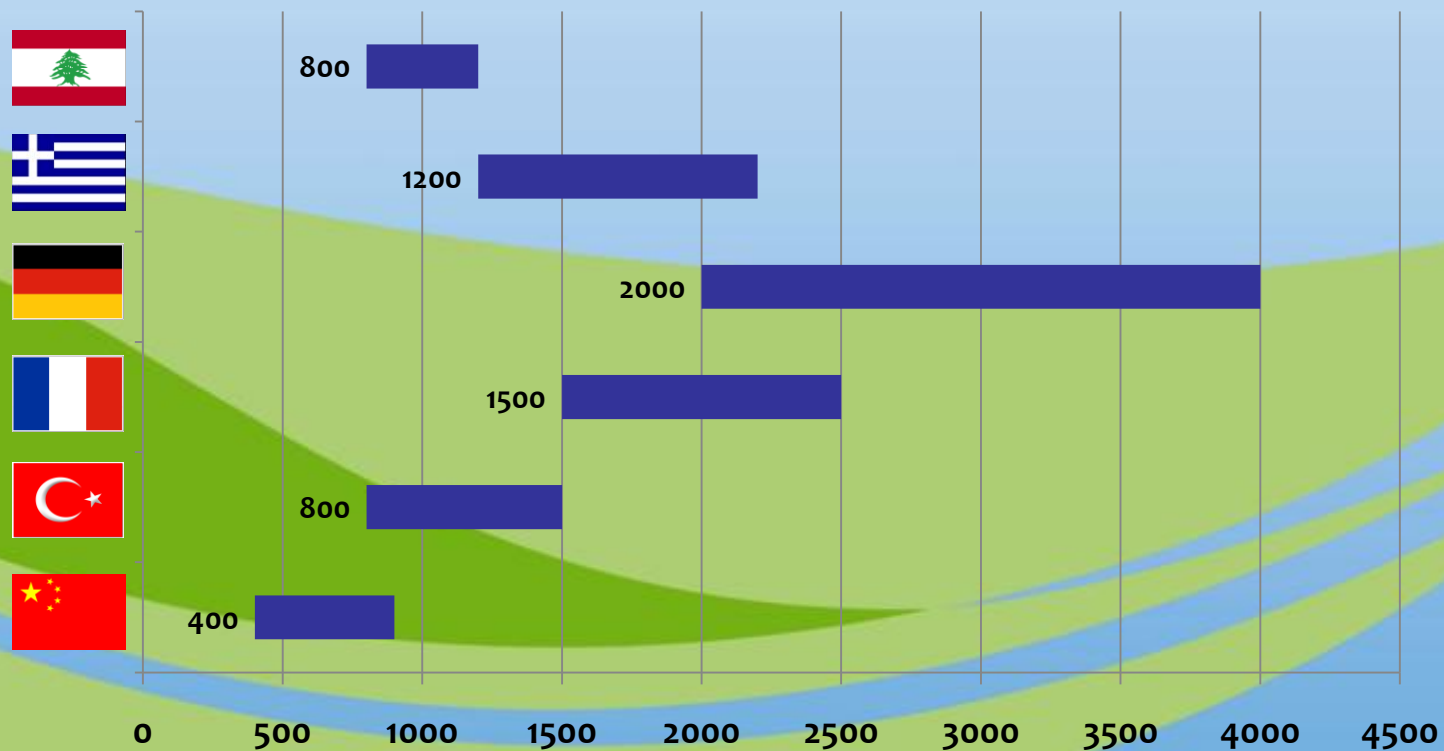
- ✓ **12,197** SOLAR WATER HEATERS ARE INSTALLED IN THE RESIDENTIAL SECTOR OF LEBANON IN 2011.
- ✓ THE ESTIMATED MARKET VALUE FOR SOLAR WATER HEATERS IN LEBANON REACHED **18,131,183** USD IN 2011.
- ✓ **3,557** CITIZENS BENEFITTED FROM INTEREST-FREE LOANS OFFERED AS PART OF THE NATIONAL FINANCING MECHANISM.
- ✓ **1,717** CITIZENS RECEIVED THE 200 USD GRANT SUBSIDIES OFFERED BY THE MINISTRY OF ENERGY AND WATER.
- ✓ **43,500** SQUARE METERS OF SOLAR WATER HEATERS COLLECTOR AREA IS INSTALLED IN 2011.
- ✓ **53** COMPANIES OUT OF 110 WORKING IN THE SOLAR WATER HEATERS SECTORS ARE QUALIFIED BY THE LEBANESE CENTER FOR ENERGY CONSERVATION (LCEC).
- ✓ **8** LEBANESE COMMERCIAL BANKS ARE INVOLVED IN THE NATIONAL FINANCING MECHANISM THROUGH THE LOAN APPLICATIONS RECEIVED FROM THE CENTRAL BANK OF LEBANON.
- ✓ **69%** OF THE SYSTEMS INSTALLED AS PART OF THE NATIONAL FINANCING MECHANISM ARE VACUUM TUBES SYSTEMS WHILE **29%** ARE FLAT PLATE SYSTEMS.
- ✓ SOLAR WATER HEATERS INSTALLATIONS SAVED A TOTAL OF **18,390** TONS OF CO₂ ANNUALLY AFTER EQUIVALENT.
- ✓ SOLAR WATER HEATERS INSTALLATIONS RESULT IN YEARLY SAVINGS OF **3,754,687** USD.

Average System Price

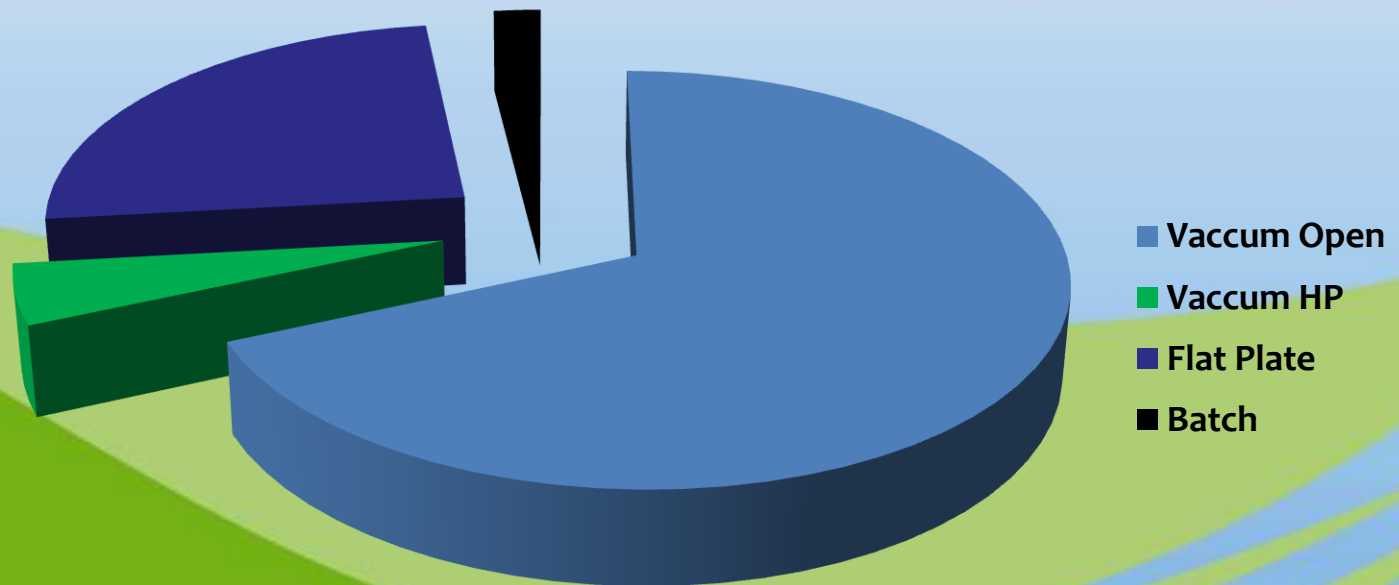


The SWH Market in Lebanon

- Prices for a typical 200-liters SWH



System Type: All Applications



Country of Origin: All Applications

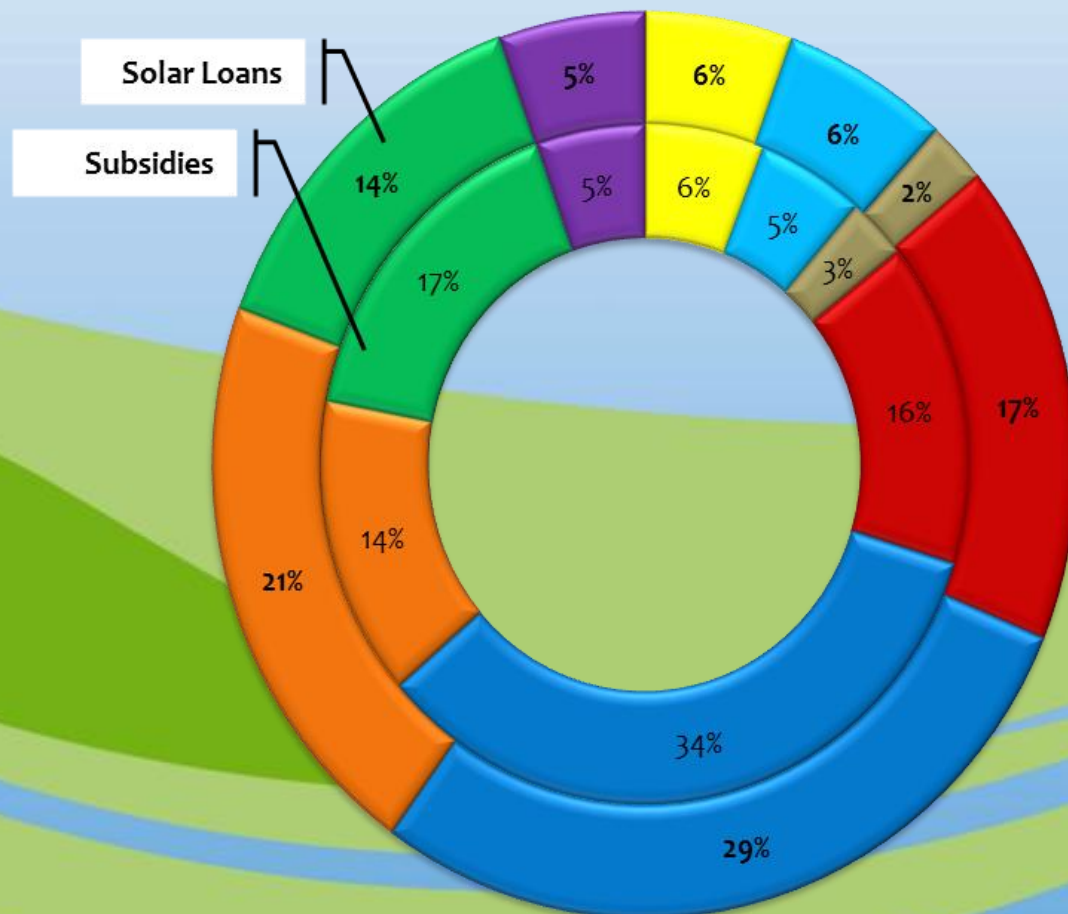


Country of Origin: Approved Applications



Geographic Distribution

■ Akkar ■ Baalbeck-Hermel ■ Beirut ■ Bekaa ■ Mount Lebanon ■ Nabatieh ■ North ■ South

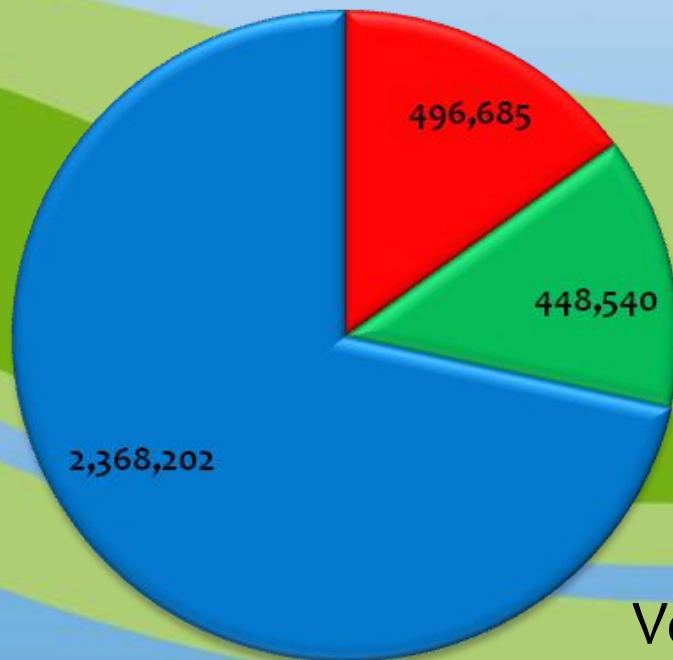


Targets

**Ideal Target for 2011:
38,000 m²**

**Actual Real Target
in 2011:
43,500 m²**

■ Loan ■ Loan with Subsidy ■ Cash Payments



Volume in Liters

Final Thought

*Believe you can and you're
halfway there.*



Thank You!



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