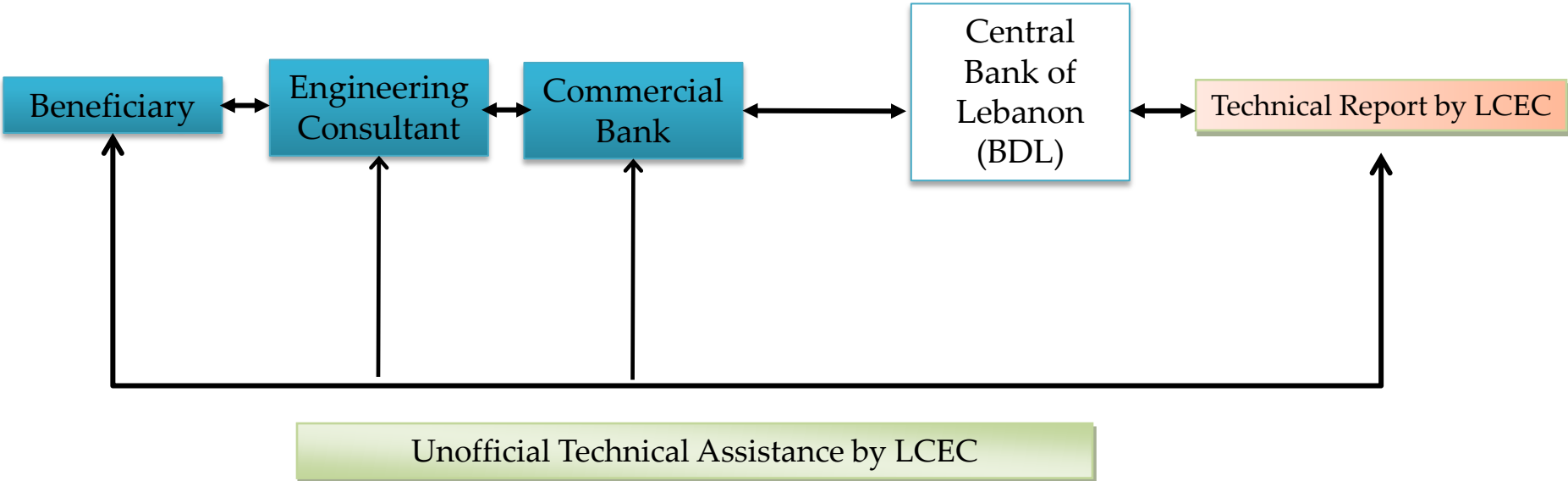




مصرف لبنان
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BDL Green Incentives

Green Incentives Structure



BDL Green Incentives

Cost of Green Investments

$\leq 1\%$

BDL Green Incentives

Up to **14** Years Maturity

Including up to **4** Years Grace Period

National Energy Efficiency and Renewable Energy Action

- Energy Efficiency measures.
- Renewable Energy base, i.e. Solar, Geothermal, Hydro and Wind.





NEEREA
National Energy Efficiency
& Renewable Energy Action

Mechanism



Grant for EE and RE

Italian Ministry for Environment, Land and Sea
(December 2016)



€5,000,000



Maximum €2,000,000 NEEREA loan
60% of the Loan to be used in Italian Technology



€80m. EE Loan

Productive Sectors

12 to 14 Yrs. maturity

≈ 1% interest rate

Certified Green Buildings

- The amount of the Energy loan extended would be based on the following:

Nature of Project	Rating	Energy Loan Amount
New Project	Not rated	EE & RE Cost
	Certified	15% of Total Project Value
	Silver	25% of Total Project Value
	Gold	35% of Total Project Value
	Platinum	45% of Total Project Value
Existing Project	Rated or Not Rated	EE & RE Cost

The certification system developed by LEED is adopted, or equivalent classifications from other internationally recognized systems.

Certified Green Buildings

- New measures to be applied according to Energy/Atmosphere and Water Efficiency:

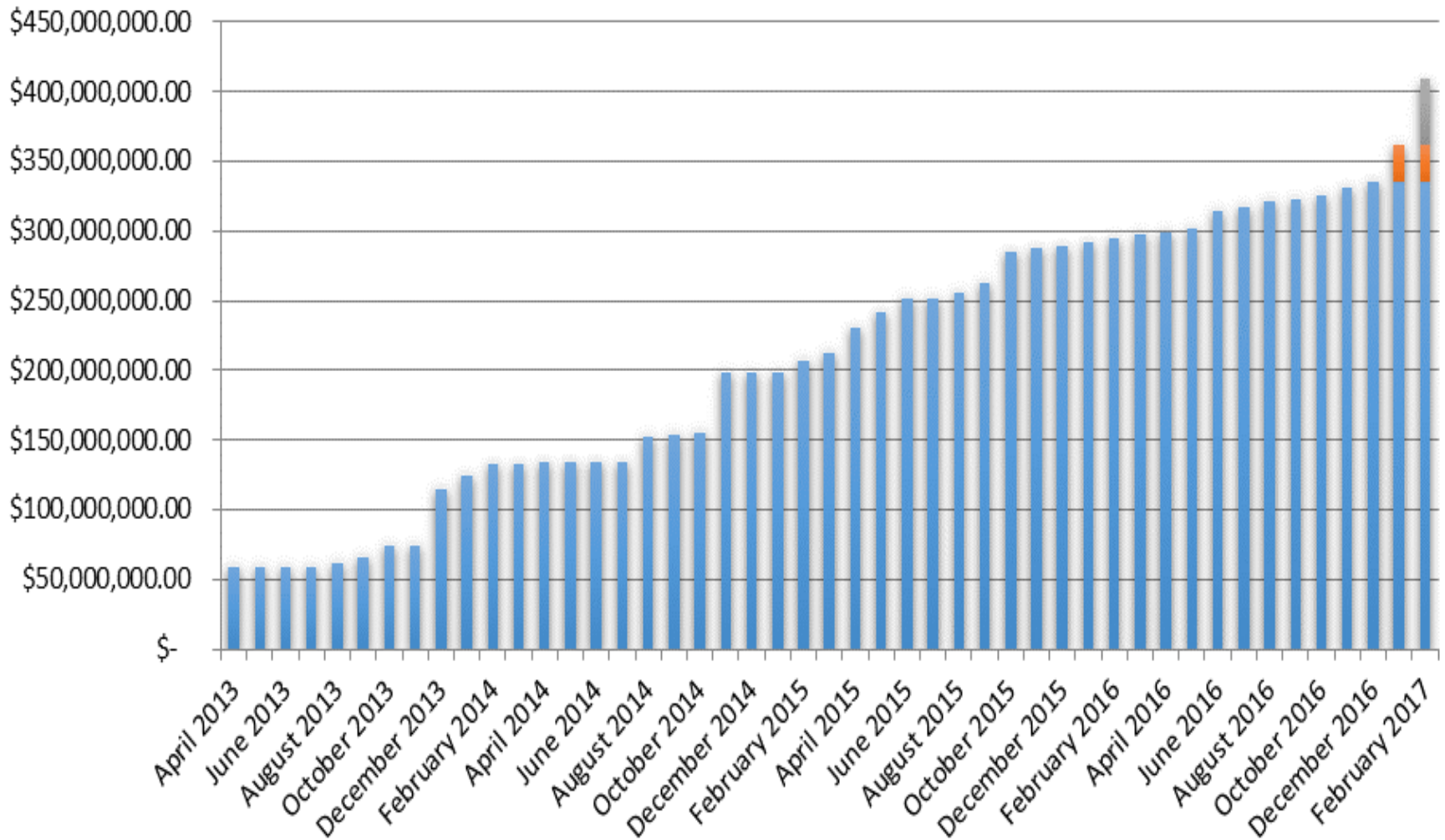
Nature of Project	Rating	Energy Loan Amount
LEED for New Construction	Not rated	EE & RE Cost
LEED for Core and Shell	Certified	15% of Total Project Value
LEED for Schools	Silver	TBD
LEED for Hospitality	Silver Plus	
LEED for Healthcare	Gold	
	Gold Plus	
	Platinum	
	Platinum Plus	
Existing Project	Rated or Not Rated	EE & RE Cost

Other certification systems would be introduced as an addition to the acceptable certifications by BDL.



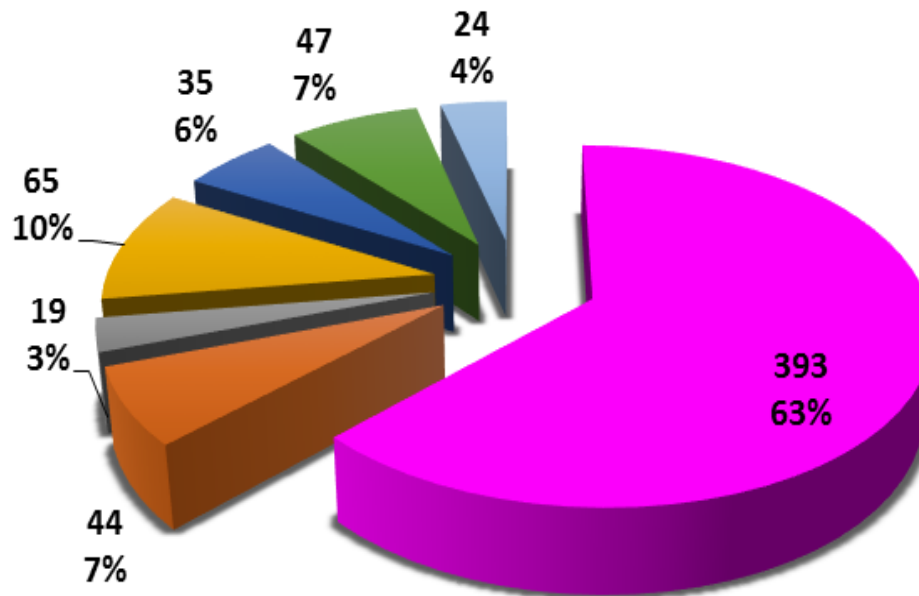
NEEREA
National Energy Efficiency
& Renewable Energy Action

Results



Number of Projects by Technology

■ PV
 ■ SWH
 ■ Biomass Boiler
 ■ LED
 ■ Building Envelope
 ■ Other
 ■ Green Certified Buildings

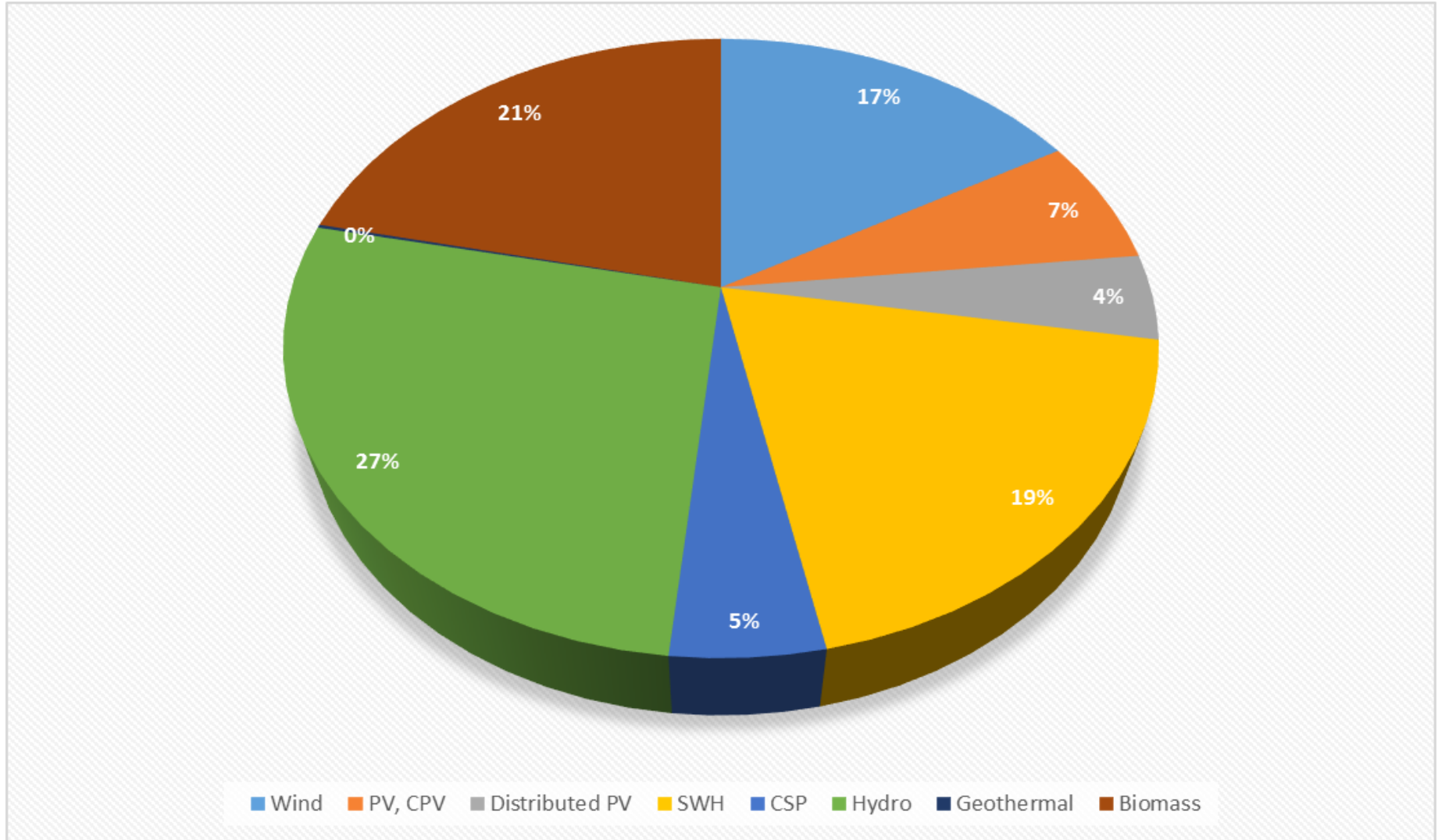


- More than **480** loans approved with a total of **322 million USD**
- Around **51** projects in the pipeline with a total of **70 million USD**
- **338** PV projects of a total installed capacity of **13.5 MWP**



- NEEREA helped create more than **10,000** direct and indirect jobs in the sustainable energy sector in Lebanon
- The number of companies working in the field of solar water heaters rose from **25** in 2010 to more than **170** companies today.
- The number of companies working in the energy audits business rose from **4** in 2010 to more than **30** companies now.
- The number of companies working in solar photovoltaic sector increased from **5** in 2010 to more than **70** companies today.

NREAP: 12% by 2020 (1.7 Billion USD)



RE Technologies

Year	2020		
	MW	GWh	ktoe
Wind	200	595.7	128.7
PV, CPV	150	240.0	51.8
Distributed PV	100	160.0	34.6
CSP	50	170.6	36.8
SWH	1,053,988 m ²	685.5	148.1
Total Hydro	331.5	961.9	207.8
Geothermal	1.3	6.0	1.3
Bioenergy	--	771.5	166.6
Total RE		3,591.2	775.7
Total Primary Energy Demand		29,578.7	6,389.0
Target		12.1	

The Lebanese Environmental Action (LEA)

For Water, Air, and
the Environment



What is LEA?

LEA is a national financing mechanism by the Central Bank of Lebanon with the technical assistance of LCEC.

LEA allows private sector entities to apply for subsidized loans for any type of environmental conservation measure related:

Water

Air Quality

Resource
Conservation

Environment

What are the Environmental projects covered by LEA?

- Organic Farming



- Landscape



- Ecotourism



- Green Roofs



- Green Walls



What are the Environmental projects covered by LEA?

- Stones cladding



- Roof Tiling



- Recycling and Solid Waste Treatment



Eligible Measures for Water Conservation



Rainwater
Harvesting



Efficient
Irrigation



WWTP



Sustainable Landscaping



Sustainable Agriculture Practices



Sustainable Water Fixture

LEA: Requirements by Measure

Landscaping

- Native Plants
- Low water requirements/ Drought Resistant Plants

Efficient Irrigation

- Drip standard, drip pressure compensating, fixed spray, micro spray, rotor
- Achieve 30% water savings from BAU

WWTP

- Effluent water quality suitable for other purposes reuse

LEA: Requirements by Measure

Rainwater Harvesting

- Harvested water quality suitable for further uses

Sustainable Agriculture

- Example: Soilless Irrigation (Hydroponics/Aquaponics)

Efficient Water Fixture

- Reduce Indoor Water Consumption by 30% compared to BAU

BDL Green Incentives: LEA



LEPAP

\$15m. WB Loan or BDL Direct

Industrial Sector

≈ 0% interest rate
7 to 10 Years Maturity

LEA Results, March 2017

- More than 75 projects among, among which 80% are approved and 15% are under review.
- Total granted Loan amount of USD45 Million USD.
- 43% of projects are water related projects costing USD12 Million.
- Economic Sectors:
 - Residential
 - Commercial
 - Industrial

LEA Results, March 2017

Project Distribution per Measure

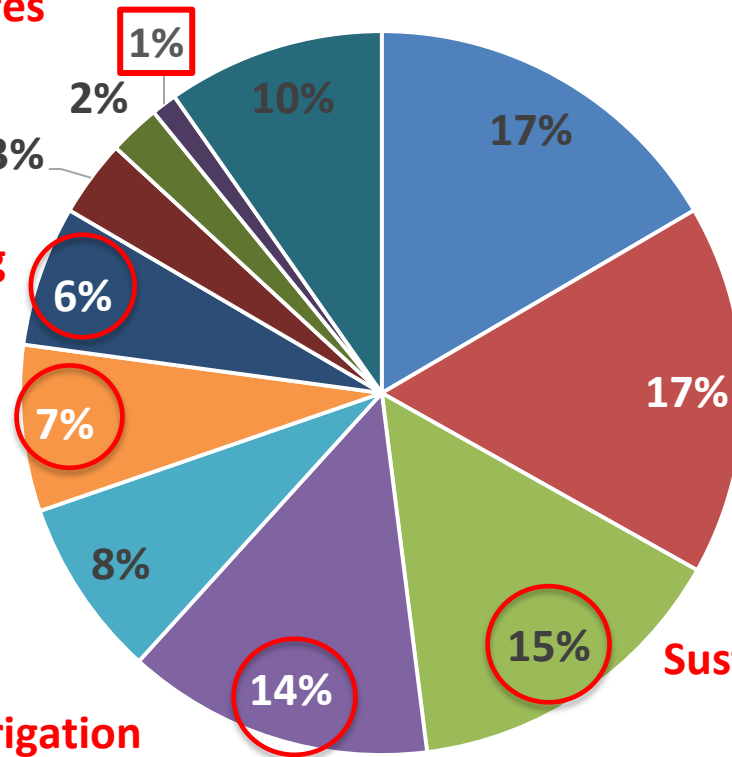
Efficient Water Fixtures

Rainwater Harvesting

WWTP

Efficient Irrigation

Sustainable Landscaping



■ Stone Cladding

■ Efficient Irrigation

■ Rainwater Harvesting

■ Efficient Water Fixtures

■ Roof Tiling

■ Retaining Walls

■ Pollution Abatement Measures

■ Other

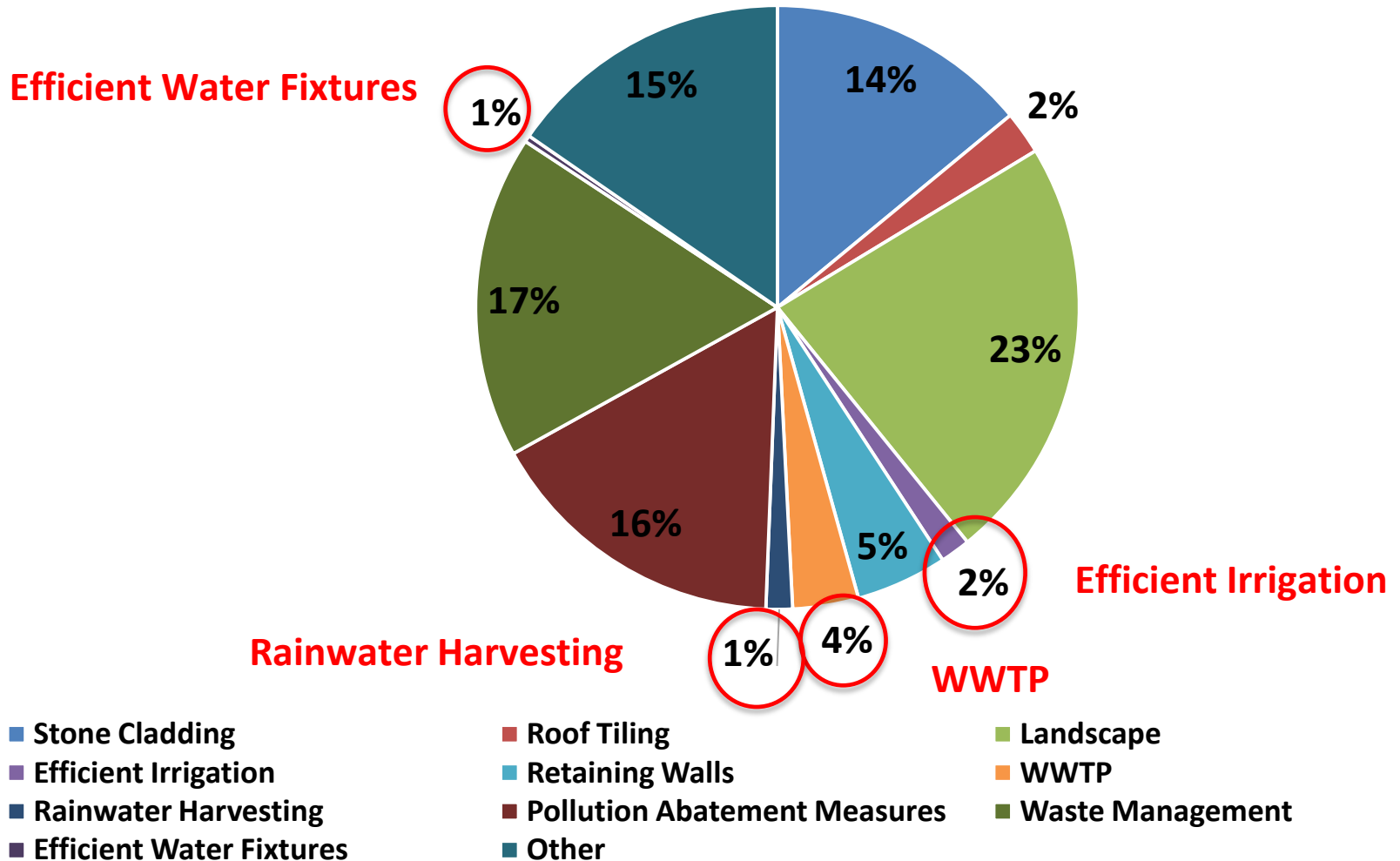
■ Landscape

■ WWTP

■ Waste Management

LEA Results, March 2017

Granted Loan by Measure



BDL Green Incentives

Financing Scheme	Cost on Beneficiary	Multiplier
EIB/AFD Energy	0% - 0.75%	150%
Energy Loans	3.75%- (50%*1Yr. Tbs)	150%
Kafalat Energy	3.5%	100%
Solar Panels Loans	0.75%	150%
Solar Energy – Rural Areas	0.75%	150%
Pollution Abatement - Industry	2 Yr. Tbs – 1% LIBOR 3mths. + 4.5%	60%
World Bank – Pollution Abatement	WB rate + BDL Comm + 3.5% Bank Spread - (100%*1Yr. Tbs)	100%
Non Subsidized – Environmental Loans	3.75%- (50%*1Yr. Tbs)	100%
Environmental Subsidized Loans	2 Yr. Tbs – 0.75%	60%



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Thank You

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