

Market Potential for Energy Efficiency & RES projects in Bulgaria

Review on the base of the current practices
of two dedicated EE & RES funds

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EE projects in buildings

75 buildings financed by BEEF analyzed:
(representative types)

Hospitals - 10

Schools - 21

Universities - 5

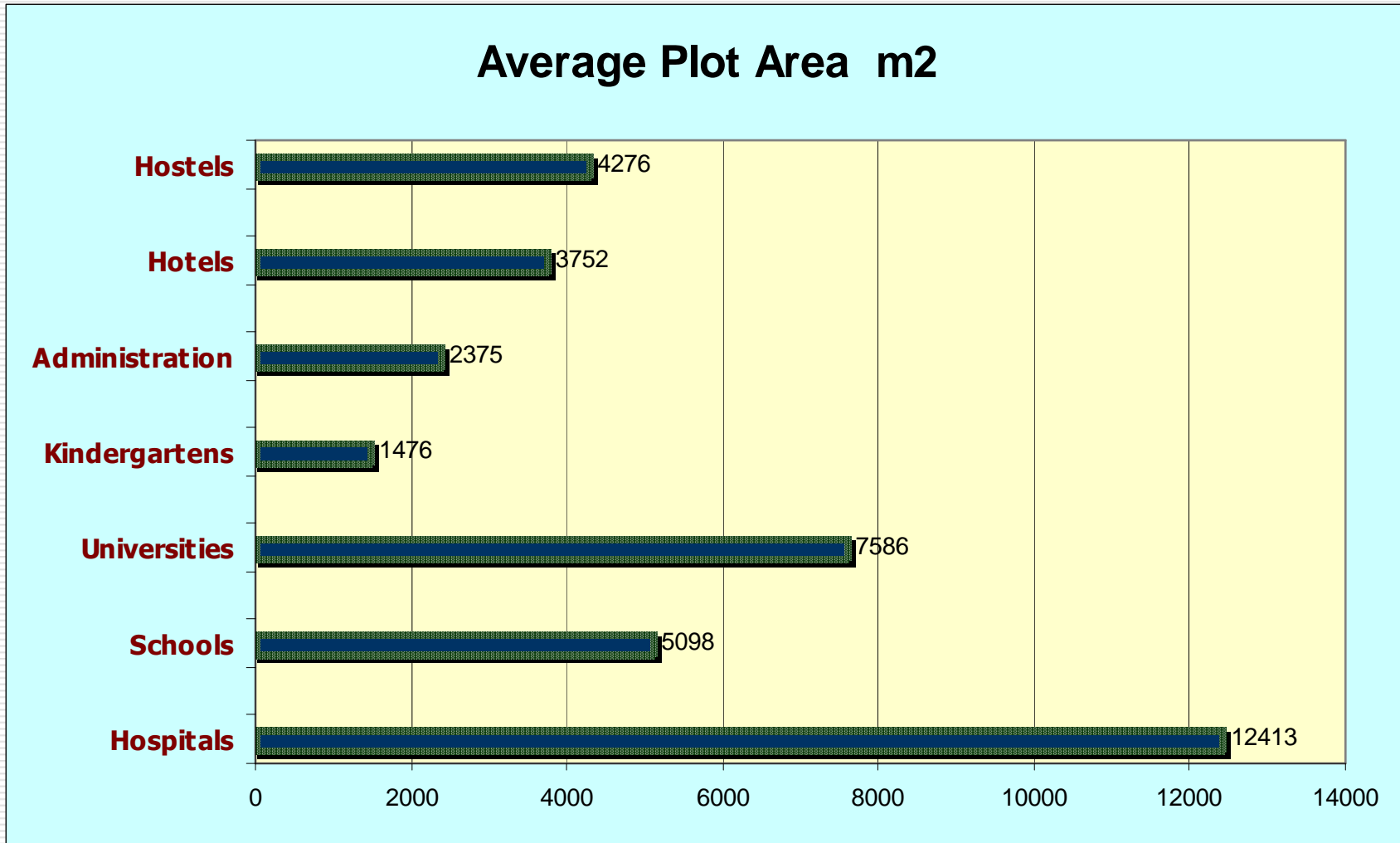
Kindergartens - 11

Office buildings - 23

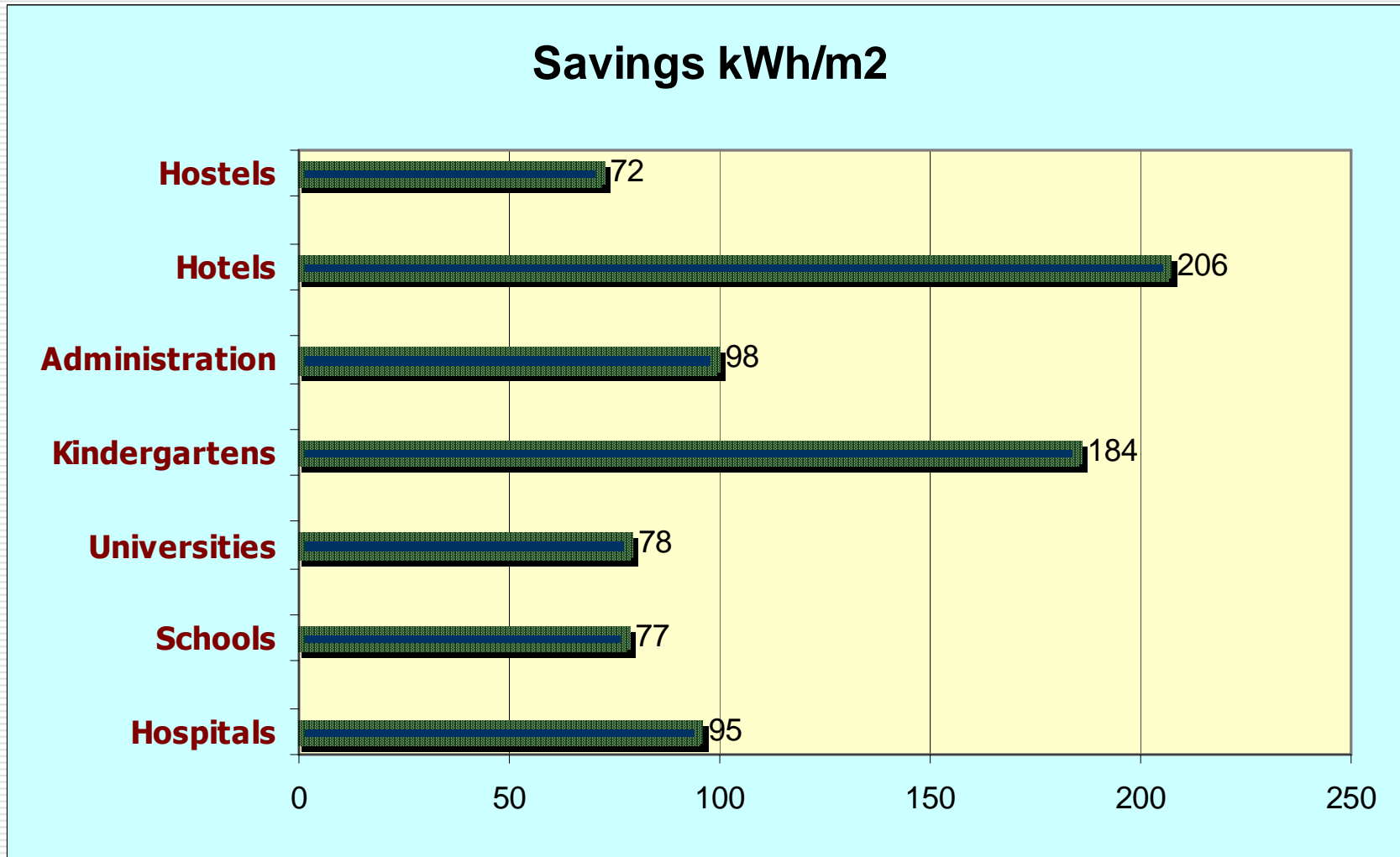
Hotels - 3

Residential buildings /
hostels - 2

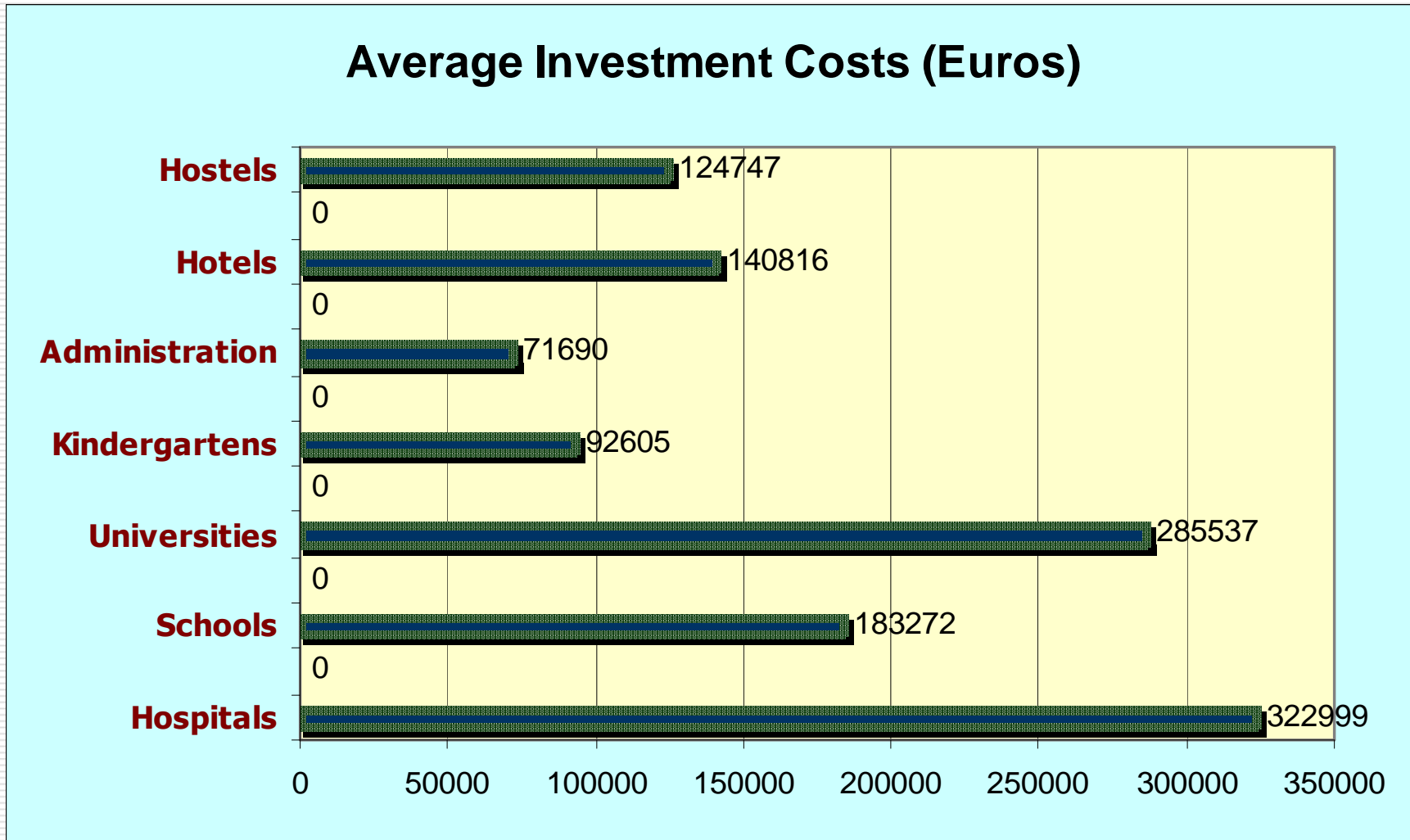
Average building size



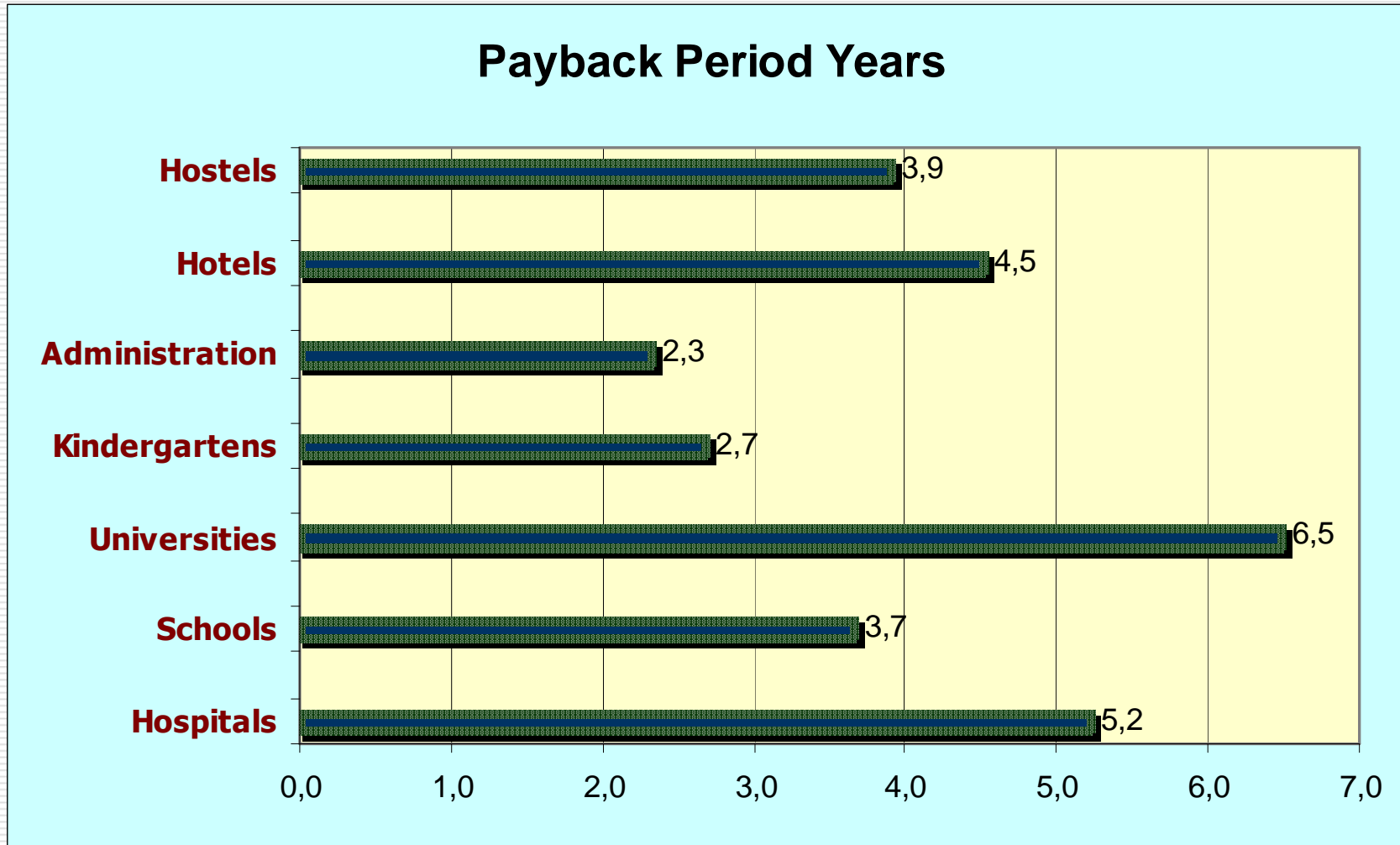
Average energy savings



Average investment costs



Average payback period



Conclusions - buildings

Market potential:

13 mil.m2 / 750 mil. Euros

Average project size:

180 000 Euros

Dominating building types:

Office buildings, schools, kindergartens, hospitals

Bundling instruments:

Banks, ESCOs, EE funds

EE in industry and RES projects

Analyzed 122 projects, financed by BEERECL

Energy Efficiency – 50

Co-generation - 4

Hydro Power - 20

Geothermal / heat pumps – 8

Biomass - 11

Wind Power - 23

Solar Hot Water - 2

Solar Electric (pV) - 1

Biogas - 1

Gasification - 2

EE in industry

Analyzed 56 EE projects, financed by BEERECL

Type	Total Investments	Number	Average Project Cost	PB
	'000 Euros		'000 Euros	Years
Energy Efficiency	29868	50	597	2.1-6.3
Co-generation	17125	4	4281	7-9
Gasification	318	2	159	n.a.

Conclusions – EE in industry

Market potential:

Over 260 SMS industrial enterprises will be considered for EE retrofit (by low) (mandatory EE audits)

Expected investments: **above 200 mil. Euros**

About 80 big companies (still not activated) – with average energy consumption of 350,000 MWh/year will be considered for EE retrofit (by low) (mandatory EE audits)

Expected investments: **above 800 mil. Euro**

RES projects

Analyzed 66 RES projects, financed by BEERECL

Type	Total Investments	Number	Average Project Cost	PB
	'000 Euros		'000 Euros	Years
Hydro Power	29344	20	1467	7-10
Geothermal (heat pumps)	2729	8	341	3.4-4.5
Biomass	22100	11	2009	7-9
Wind power	29040	23	1263	6-9
Solar Hot Water	392	2	196	5-7
Biogas	1000	1	1000	7-9
Solar Electric (pV)	3000	1	3000	11-13

Conclusions - RES

Market potential:

Small hydro – n.a

Solar parks – submitted applications for **885 MW**,
installed ~ 2 MW

Wind parks – submitted applications **3000 MW**,
installed 105 MW

Expected investments 2009

Solar parks – **100 mil.** Euros

Wind parks – **500 mil.** Euros

Local intermediaries

Commercial banks

Several local banks have experience in financing energy efficiency projects

Energy Service Companies (ESCO)

A few local private companies acting as ESCOs

Bulgarian Energy Efficiency Fund (BEEF)

Created by the EE Law, supported by GEF/World Bank / Donations from the Bulgarian and Austrian governments and from the private sector

Thank you!
