Adapting regulated markets – How far to go with liberalisation?

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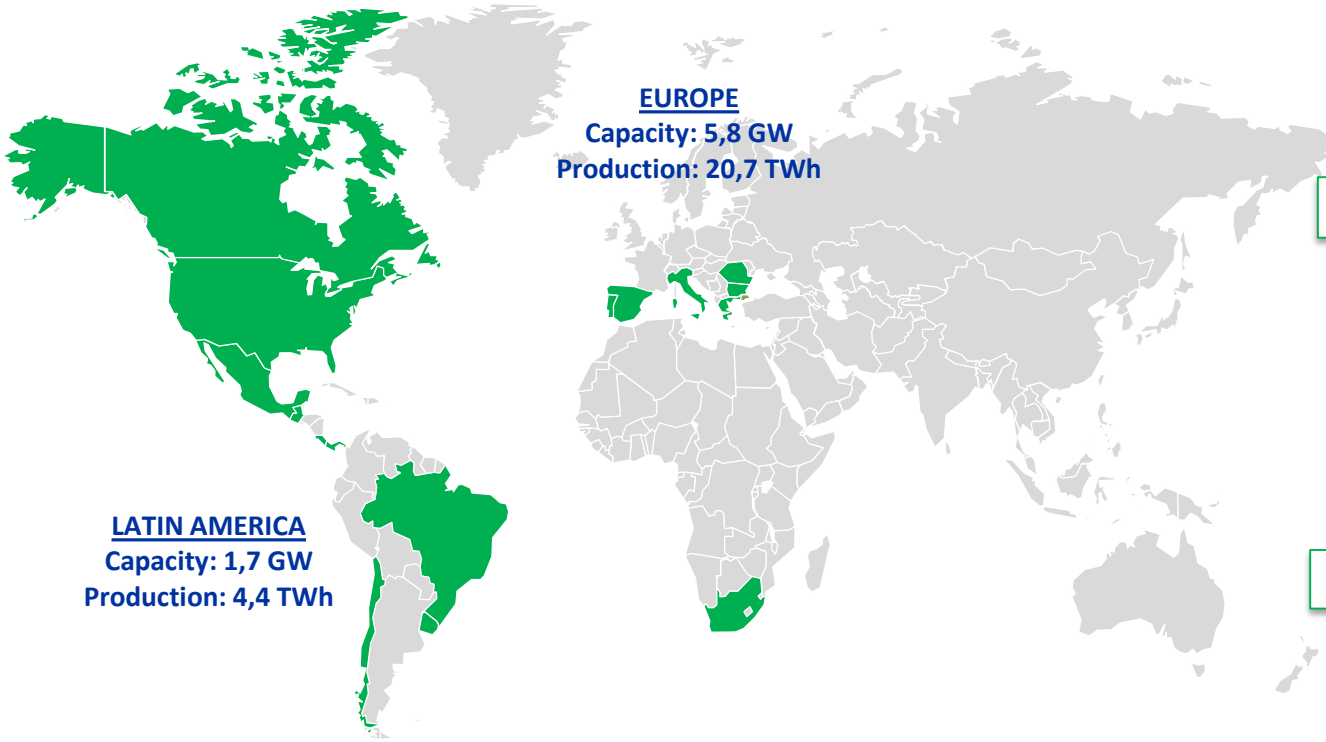
Global leadership in RES development [1]
FY 2014

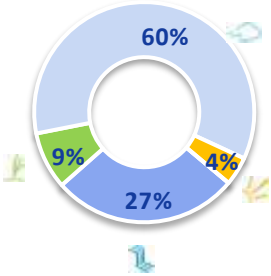
NORTH AMERICA
Capacity: 2,1 GW
Production: 6,7 TWh

EUROPE
Capacity: 5,8 GW
Production: 20,7 TWh

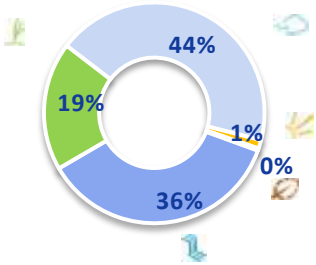
LATIN AMERICA
Capacity: 1,7 GW
Production: 4,4 TWh



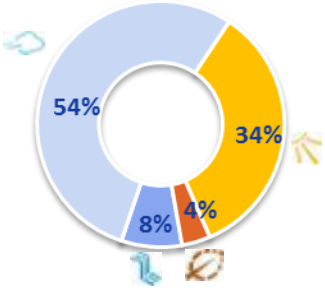
Installed Capacity = 9,6 GW



Production = 31,8 TWh



In execution = 2,0 GW



Geo Hydro Wind Biomass Solar

1. Capacity and production as of December 31, 2014

Evolution of incentive schemes in areas of interest

2010 – EGP Countries	2014 – EGP Countries/Areas of Interest

16 EGP countries of which 6 Tender/PPA

42 EGP Countries of Interest of which 30 with Tender/PPA

Fixed Incentive Schemes (GC, Tariffs)

Competitive Incentive Schemes (tender/PPA)

Note: analysis based on EGP countries. Remuneration mechanisms refer to RES Utility-scale plants. The following countries are classified based on the remuneration mechanism selected by EGP: Costa Rica, Panama, El Salvador, Mexico.
In Brazil also FiTs exist for small hydro projects established under a distributed generation regime and they are currently being phased out

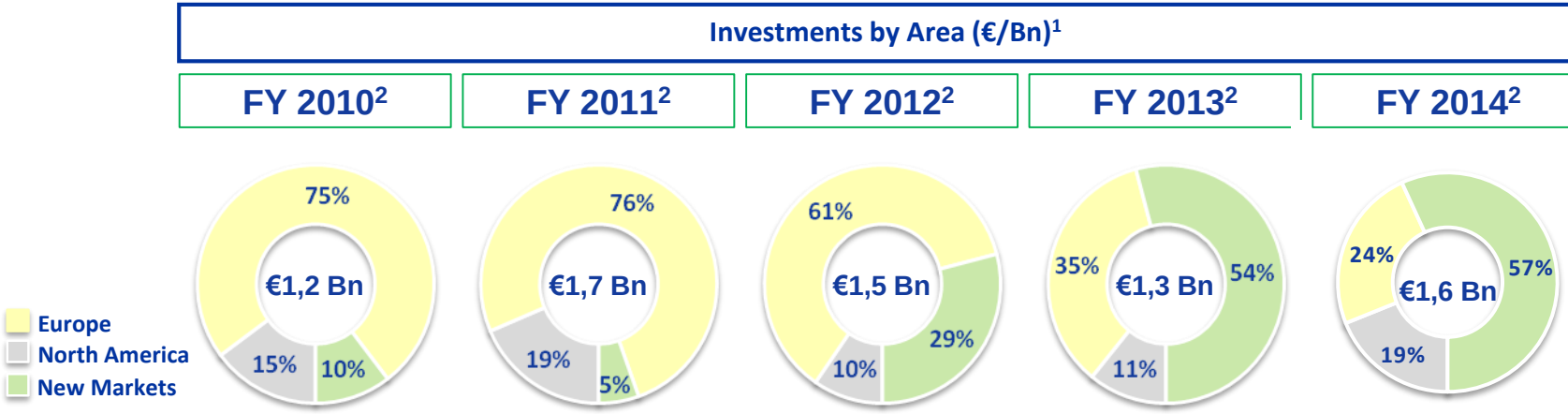
RES Remuneration mechanisms
FIT vs. Competitive mechanisms

	PROS	CONS
Feed in Tariffs eg.: ✓Germany ✓Greece ✓France ✓Turkey	✓ Attractive mechanism also for **low-risk investors** ✓ Support significantly the **acceleration of the installed capacity** ✓ Simple structure, ideal for the mass market**. Eg: Distributed Generation**	✓ **Non meritocratic approach** ✓ **Mismanagement of tariffs** may lead to an under / over development of RES compared to the objective set ✓ **Limited flexibility:** in case of rapid evolution of technology, many changes are required ✓ In case of too generous tariffs**, high costs for the system**
PPAs through competitive process eg: ✓US ✓Brazil ✓South Africa	✓ Efficient use of **economic resources** ✓ Possibility of setting **specific capacity target** ✓ **Meritocratic mechanism** (cheaper and more efficient projects are selected) ✓ **Learning effect** for both parties through practice	✓ With no prequalification criteria, risk of under-bid and **distortion of the competitive mechanism** ✓ Remuneration strongly linked to the **level of competition** ✓ Remuneration uncertainty when entering into a new country ✓ **Not suitable for small-scale projects**

› **Two different approaches to deploy renewable technologies that impact in different ways the national electricity system**

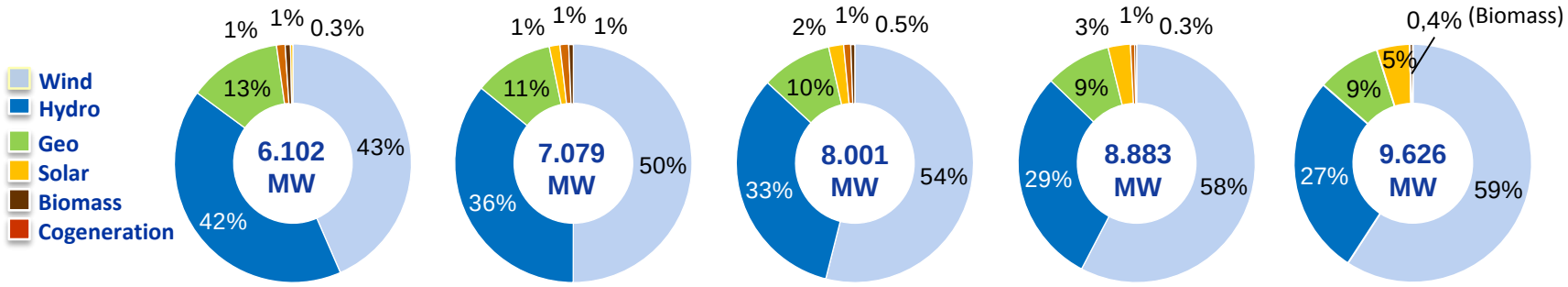
Investments[1] and Installed Capacity 2010-2014

Investments by Area (€/Bn)[1]

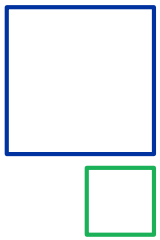


Since 2010 over €7,3 Bn of CAPEX, of which €2,2 Bn in New Markets and €1,1 Bn in North America.

Installed Capacity by Technology (MW)



1. Including maintenance capex..
2. Net cash grant

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