



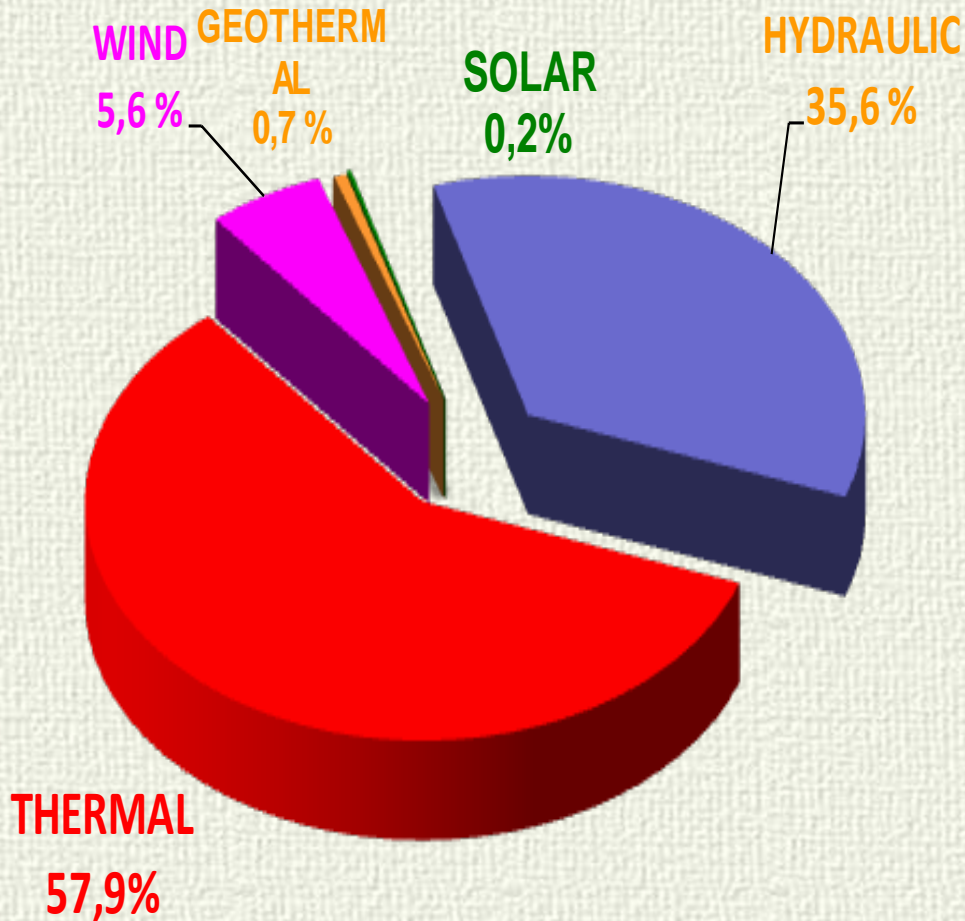
THE IMPACT OF LIBERALISATION ON HYDROPOWER MARKET IN TURKEY



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President - Hydropower Department

22.01.2016

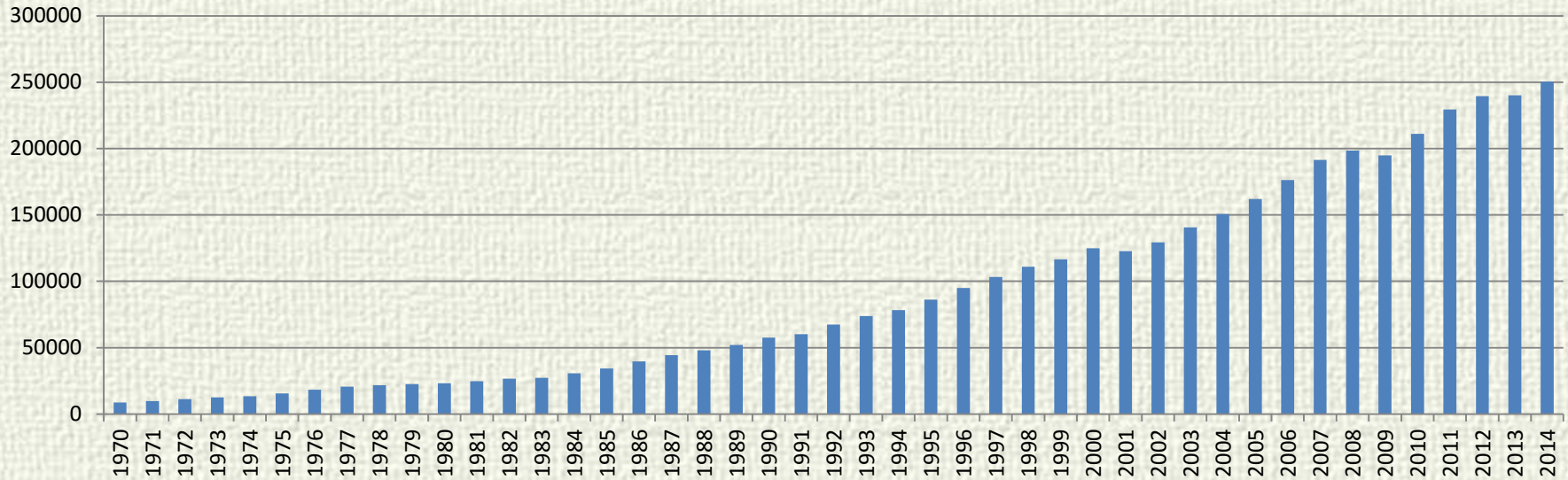
INSTALLED CAPACITIES DEPENDING ON SOURCES



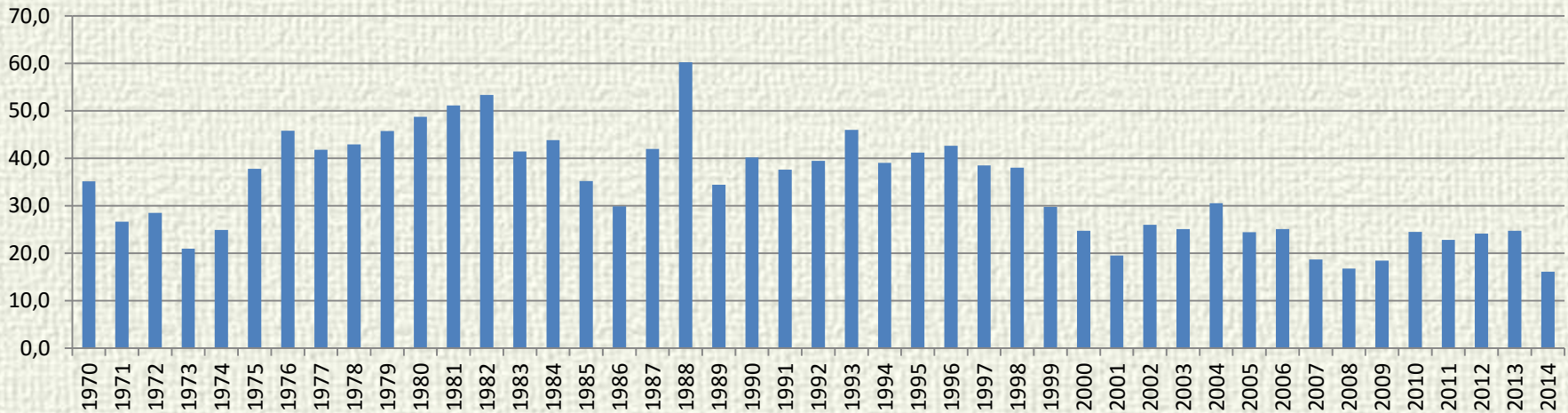
SOURCE		INSTALLED CAPACITY (MW)	
HYDRAULIC		25 800 (%35,6)	
THERM AL	Natural Gas	21 511	41 928 (% 57,9)
	Coal	14 794	
	Fuel-Oil	766	
	Other	4 857	
WIND		4 052 (% 5,6)	
GEO THERMAL		523,6 (% 0,7)	
SOLAR		155 (%0,2)	
TOTAL		72 458,6	

ENERGY GENERATION & SHARE OF HYDROPOWER

Energy Generation (GWh/a)



Share of Hydropower (%)





HYDROPOWER POTENTIAL OF TURKEY



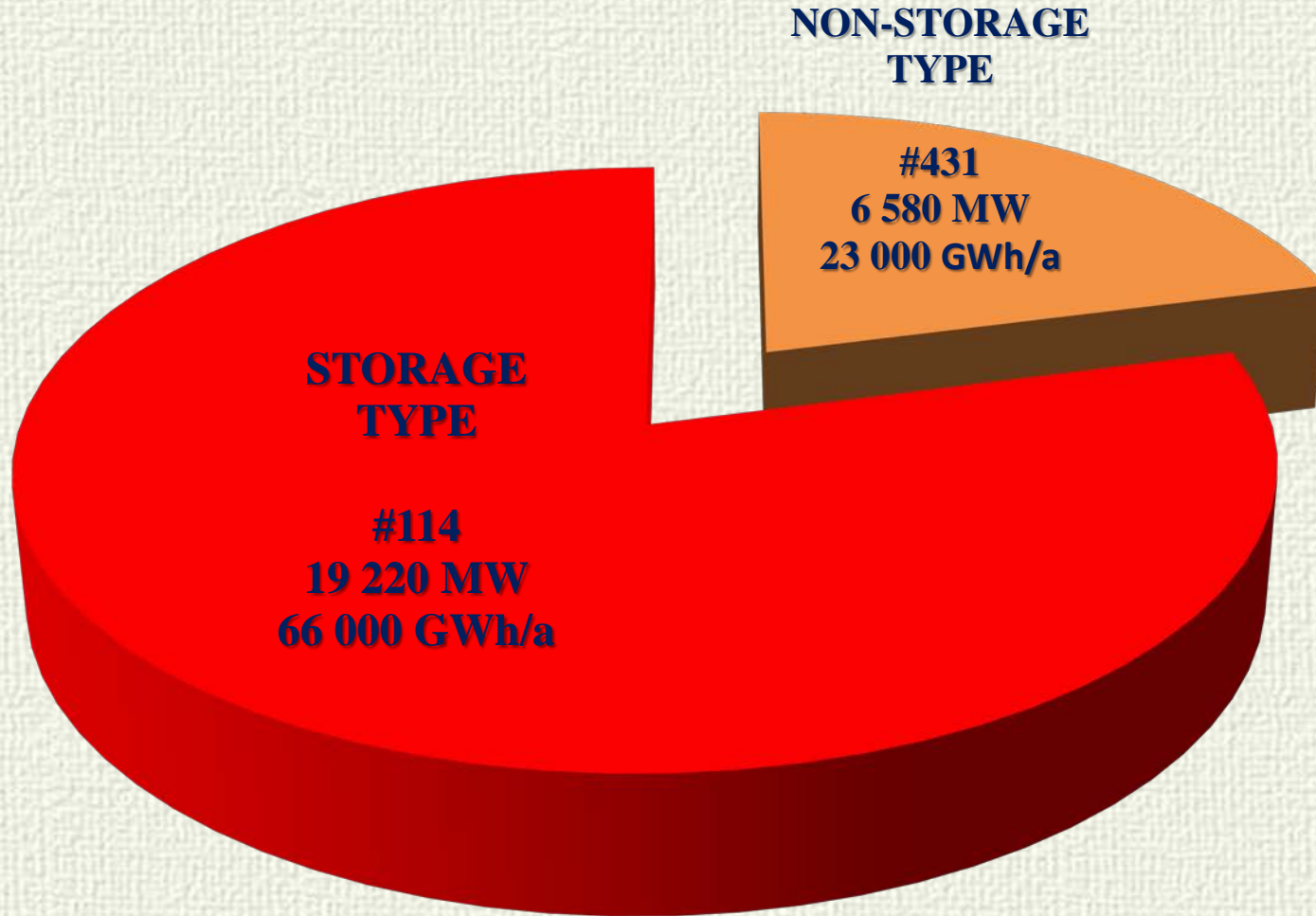
Total hydropower potential is **216 billion kWh/a.**

Developed potential is now **158 billion kWh/a.**

Developed potential consists of **1.400 projects** at several stages.



STORAGE/NON-STORAGE STATUS



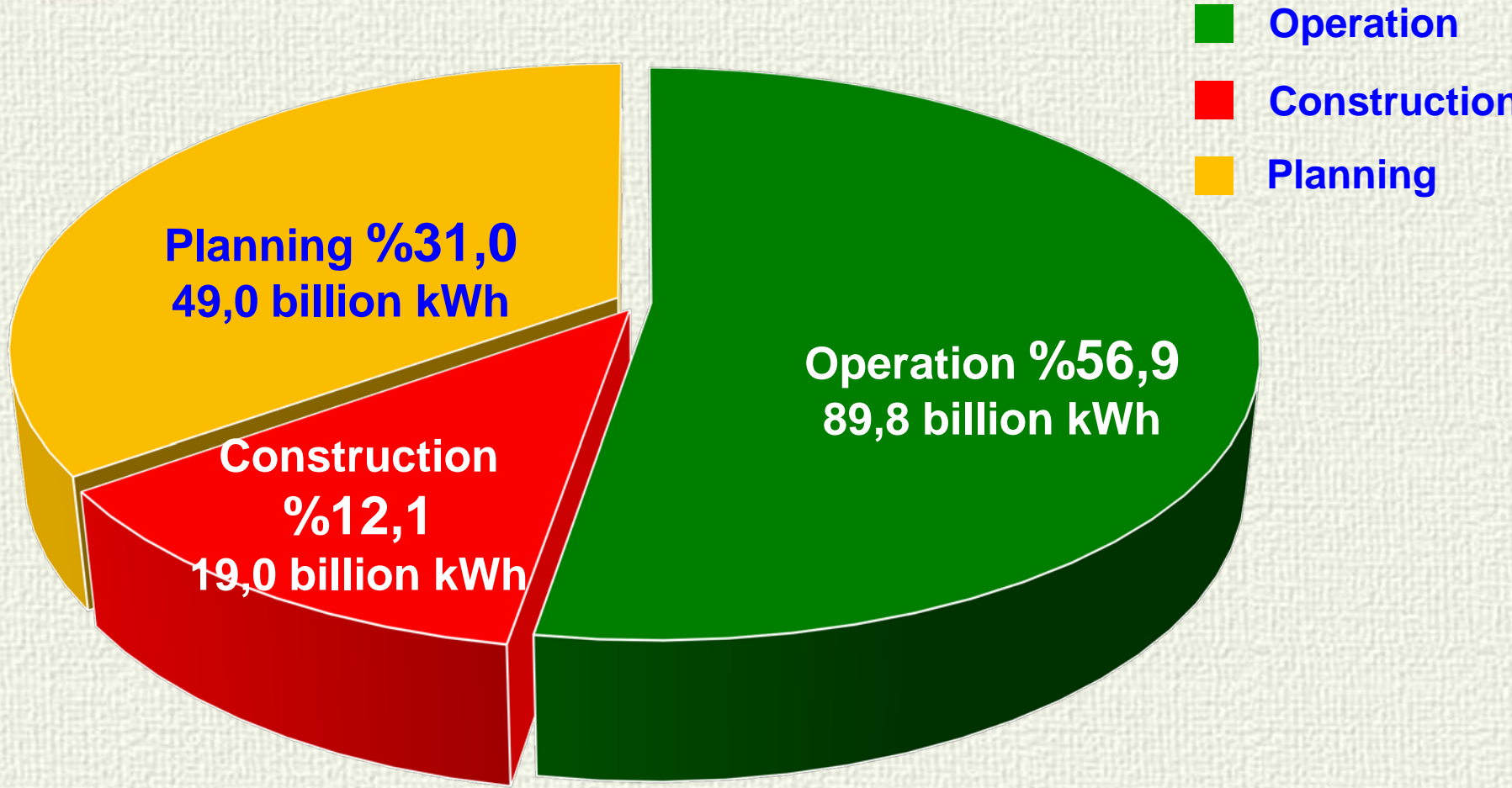


LATEST STATUS OF HYDROPOWER DEVELOPMENT -as of Dec. 2015



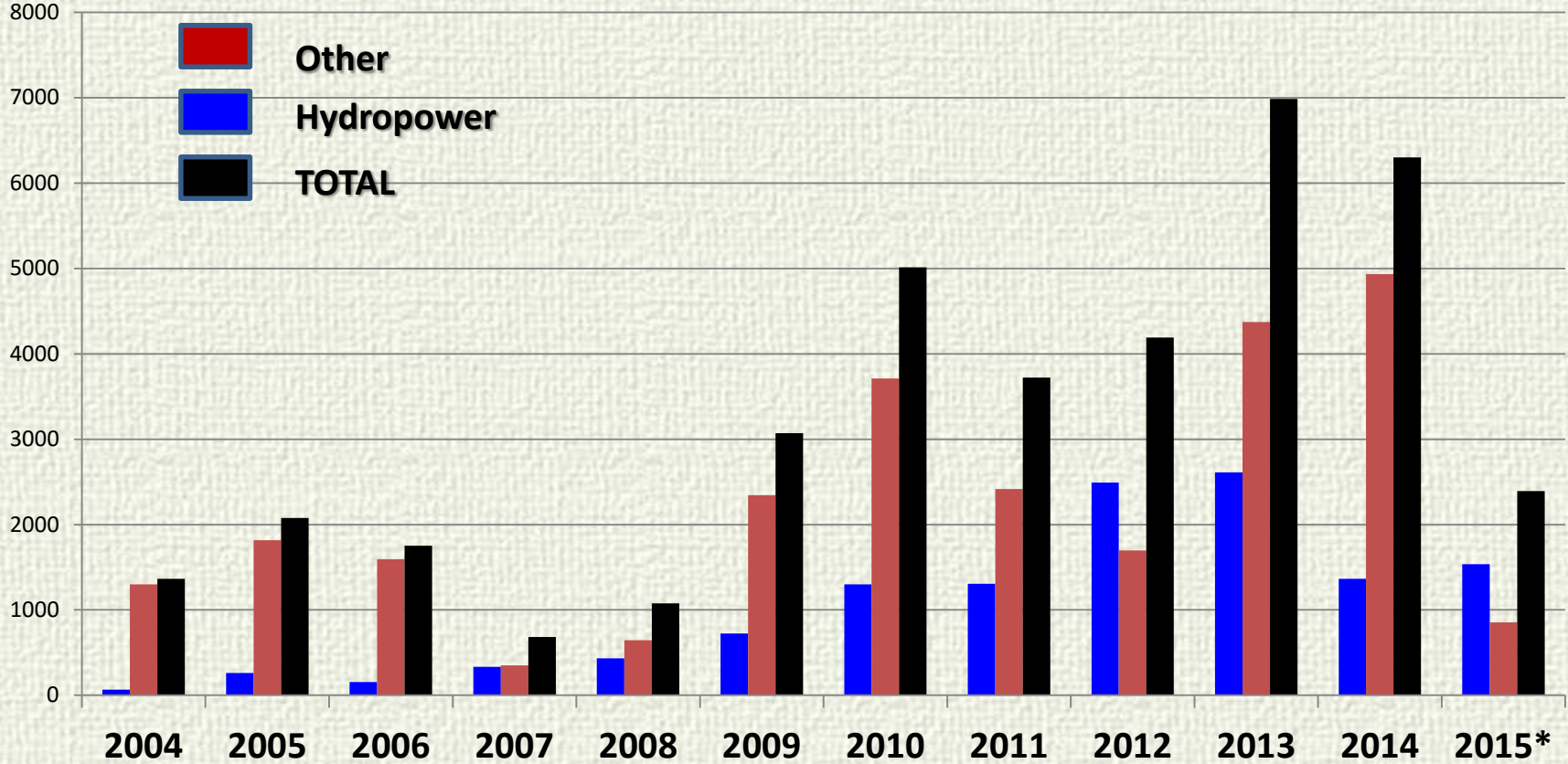
Stage	Owner	#	Installed Capacity (MW)	Generation (GWh/yıl)	Generation Share (%)	
OPERATION	DSİ	65	12 369	43 296	27,4	56,9
	Private Sector	404	11 098	37 991	24,1	
	Other(YiD, ÇEAŞ vs.)	76	2 333	8 477	5,4	
	TOPLAM	545	25 800	89 764		
CONSTRUCTION	DSİ	4	1 940	6 161	3,9	12,1
	Private Sector	121	4 401	12 848	8,2	
PLANNING	DSİ	82	1 582	5 423	3,4	31,0
	Private Sector	636	12 416	43 545	27,6	
DEVELOPED POTENTIAL	DSİ (total)	151	15 891	54 880	34,8	100
	Private Sector (total)	1 161	27 915	94 384	59,8	
	Other (total)	76	2 333	8 477	5,4	
	General Sum	1 388	46 139	157 741	100	

LATEST STATUS OF HYDROPOWER DEVELOPMENT -as of DEC. 2015





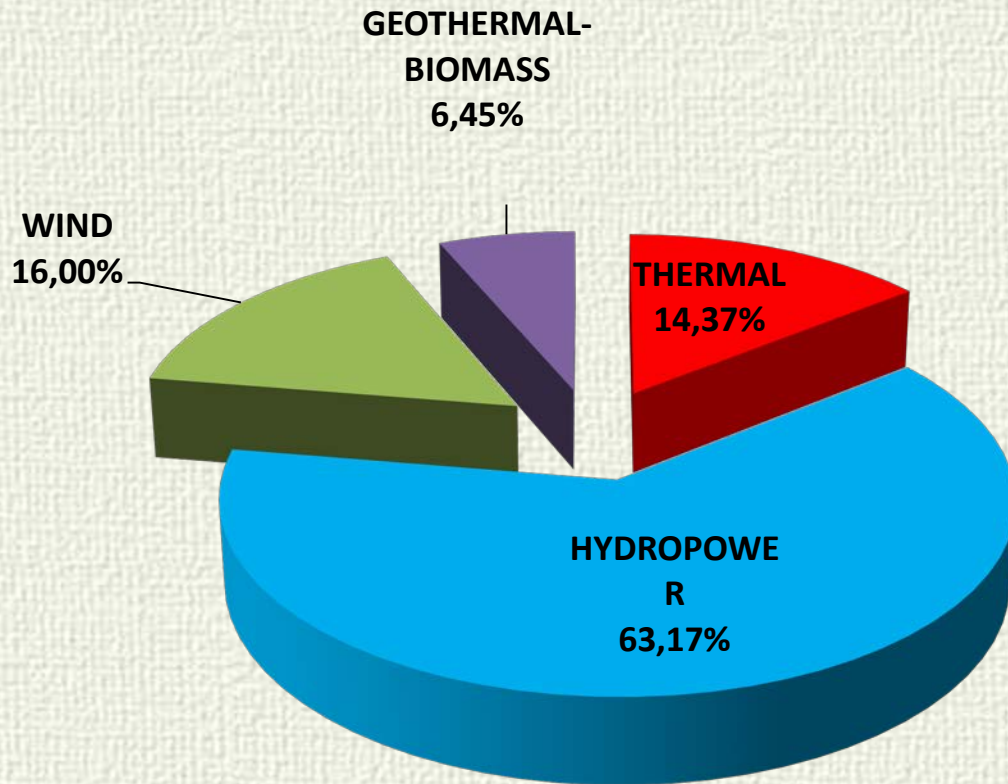
COMMISSIONED CAPACITY SINCE 2004



Hydro	67	261	157	332	433	725	1300	1306	2492	2613	1366	1537
Others	1299	1817	1594	352	644	2344	3712	2415	1698	4373	4936	854
Total	1366	2078	1751	684	1077	3069	5012	3721	4190	6986	6302	2391

(*): Ağustos 2015 verilerine göre

2015 ENERGY INVESTMENTS



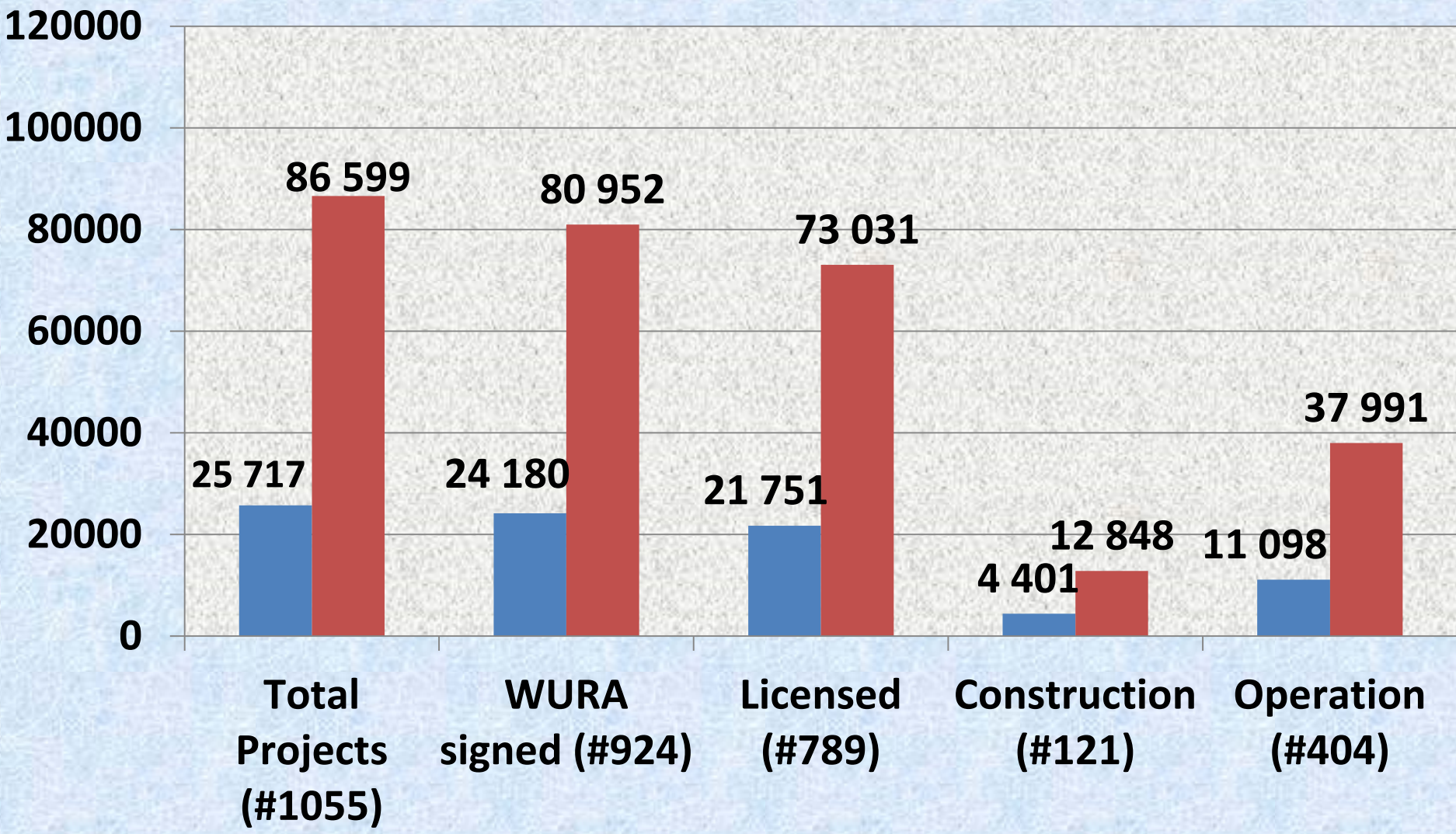
<i>SOURCE</i>	<i>INSTALLED CAPACITY (MW)</i>
THERMAL	427,566
HYDRO	1879,113
WIND	476,000
BIOMASS, GEOTHERMAL	191,837
TOTAL:	2974,516

PRIVATE SECTOR INVESTMENTS

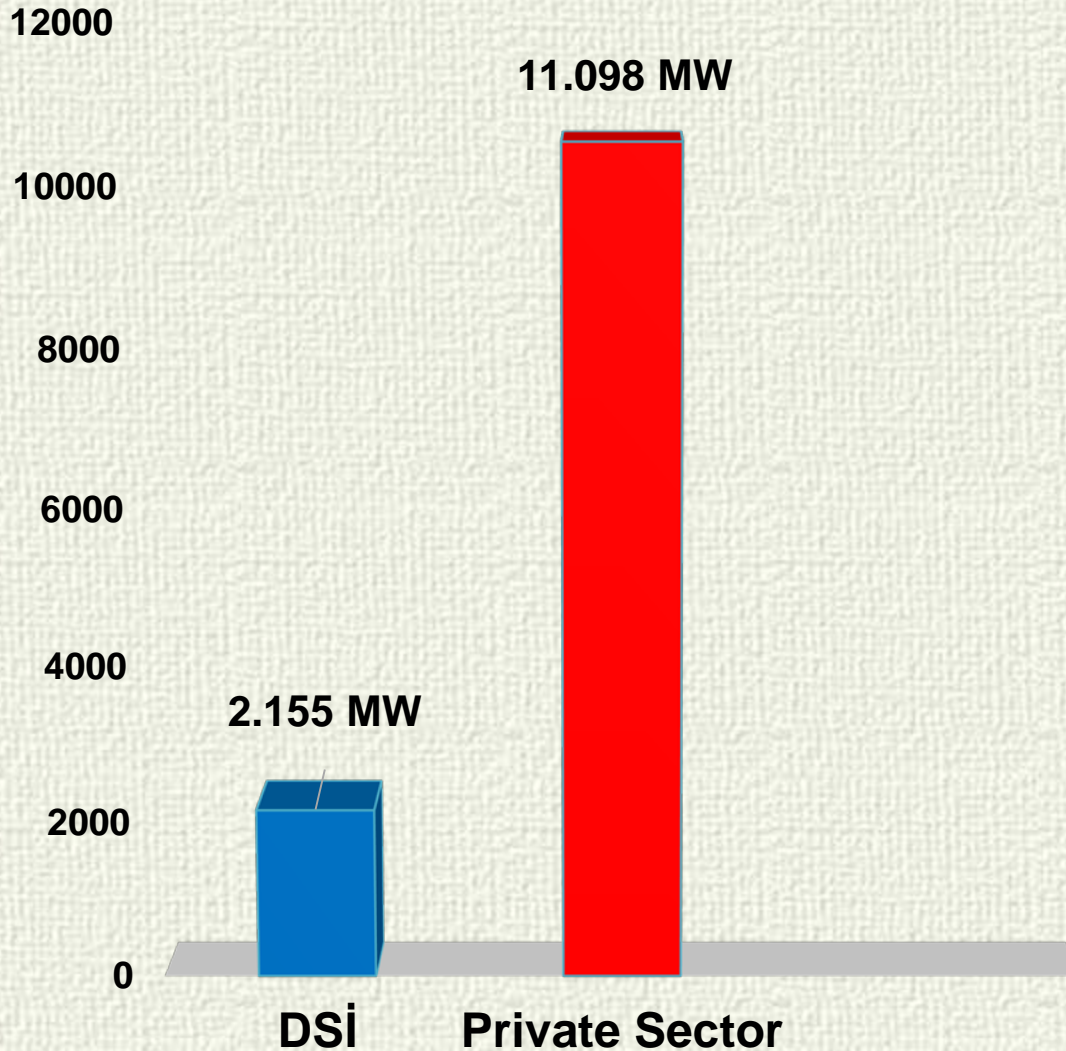
MATURITY LEVELS OF ONGOING PROJECTS



■ Installed Capacity (MW) ■ Annual Generation (GWh)

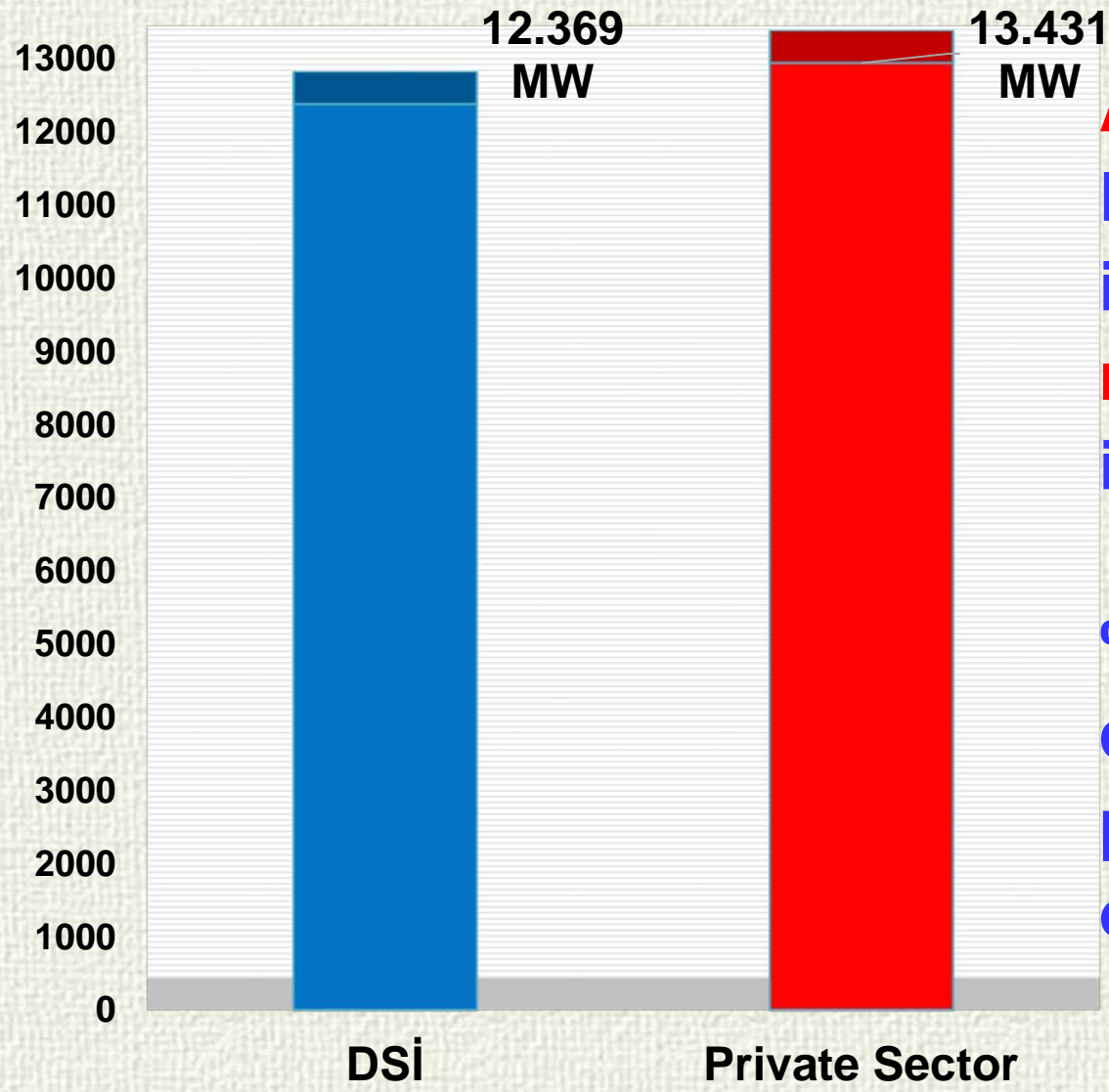


PUBLIC- PRIVATE CONTRIBUTION



Since 2003
11.098 MW (%85) is by
private sector, out of
commissioned 13.253
MW total capacity.

TOTAL PUBLIC – PRIVATE CONTRIBUTION



As of August 2015
Private sector
investments becomes
more than DSi
investments.

%71 of the
commissioned hydro
plants is storage type
one.



BY PRIVATE SECTOR



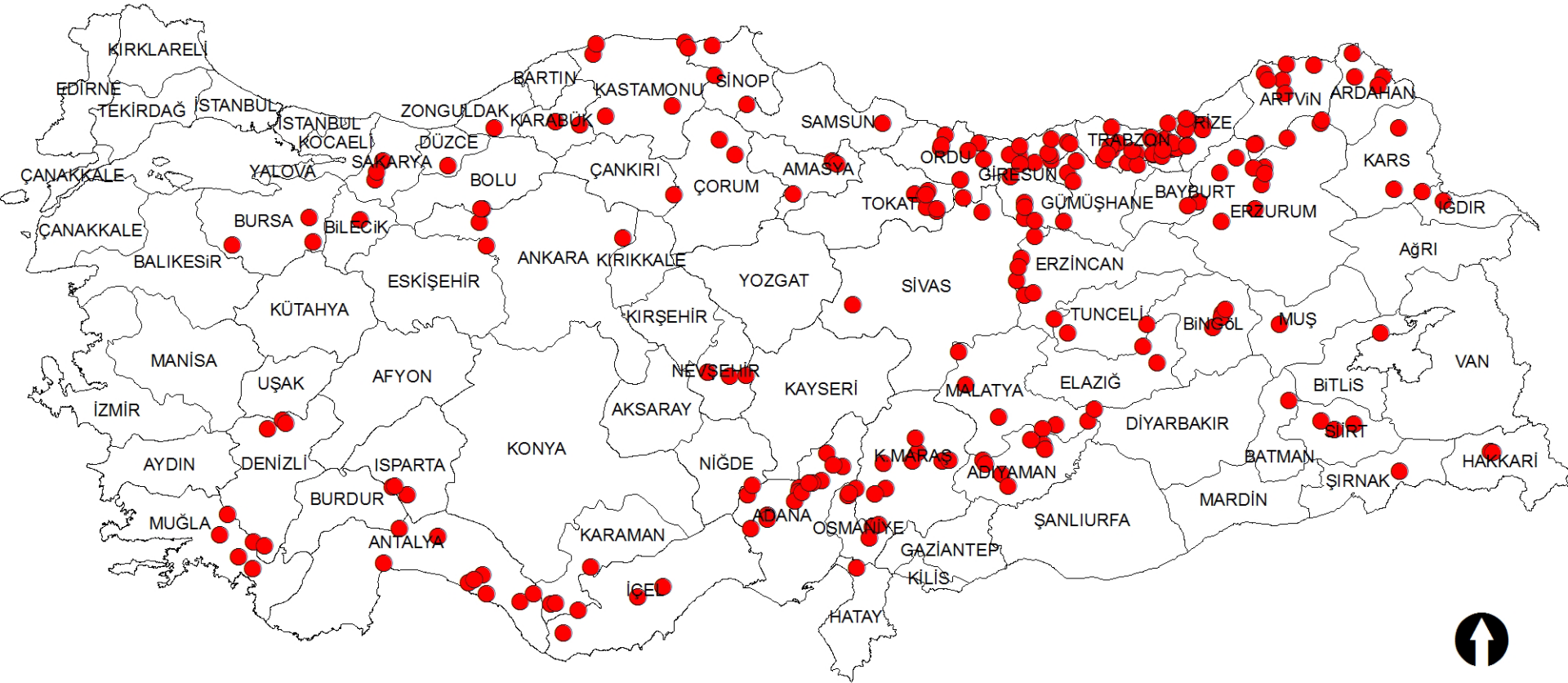
60 BILLION \$ INVESTMENT

Last 12 years by private sector;

- ✓ For **404** hydropower projects under operation **approx. 22 billion \$** invested.
- ✓ For **121** hydropower projects under construction **approx. 8 billion \$** are being invested.
- ✓ For hydropower projects under planning **30 billion \$** will be invested.

Total investment volume is being envisaged as
60 billion \$

PROJECTS UNDER CONSTRUCTION





THANK YOU

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State Hydraulic Works
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