

Turkish Standard Institute, Turkey	Feasibility Study of LV/MV/HV Testing Laboratory Complex	2012-2013	*
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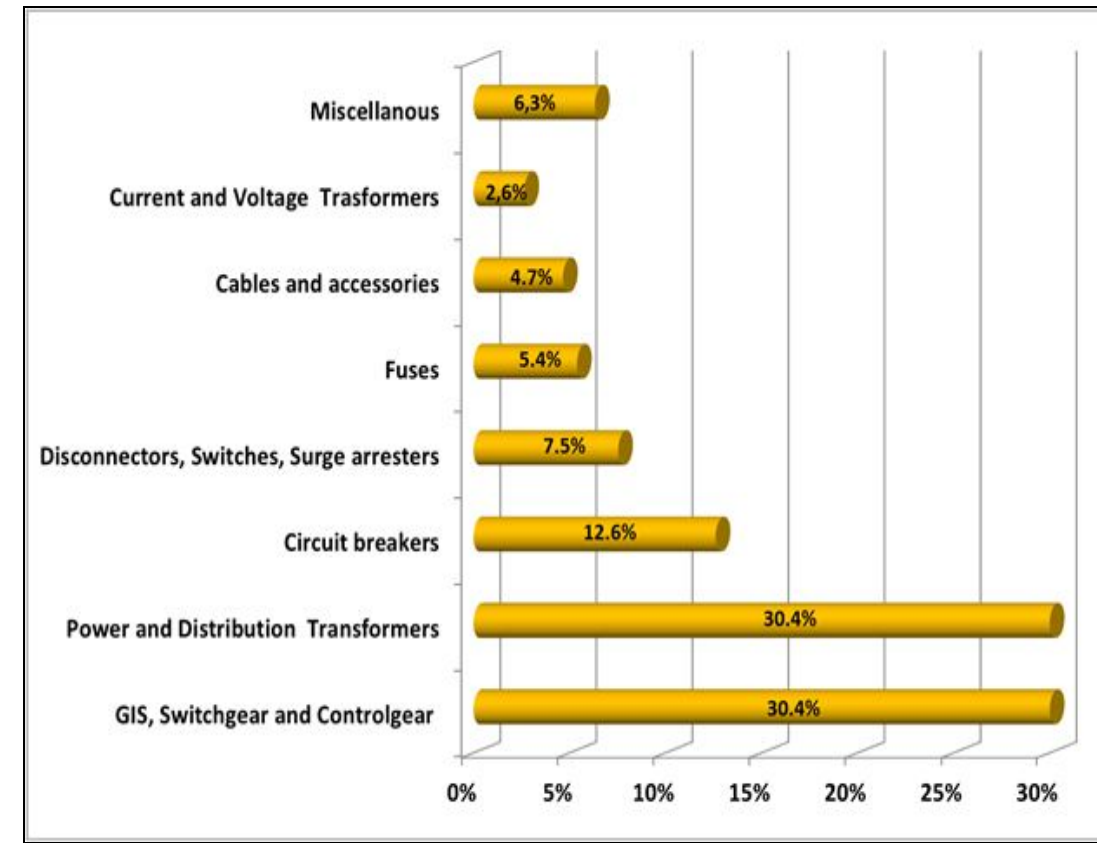
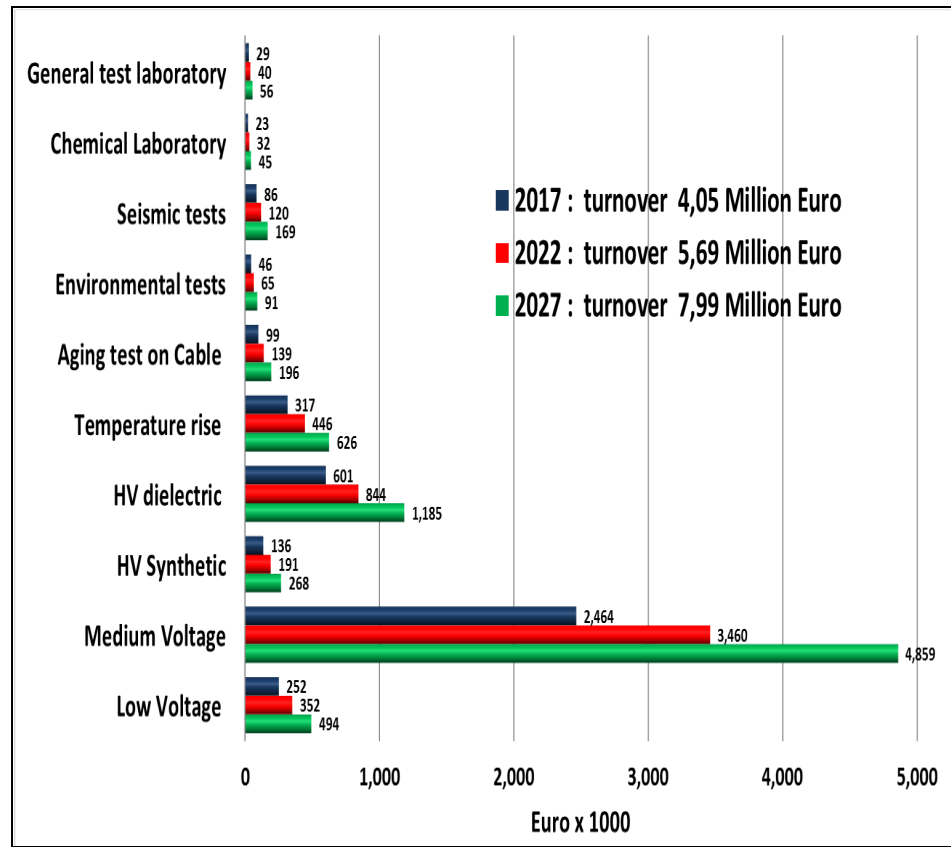
Testing Facilities and maximum ratings of equipment to be tested

The Turkish Institute of Standard requested a feasibility study concerning the establishment of an independent Testing Laboratory complex in Turkey to support the domestic electromechanical industries and power utilities. The complex includes the following Testing Facilities:

- High Power laboratory including:
 - Low Voltage section for testing LV Switchgear assemblies up to 1000 V rated voltage and up to 160 kA short-circuit current;
 - Medium Voltage section for testing:
 - MV Switchgear and Controlgear, Circuit-breakers up to 41 kV rated voltage and up to 31.5 kA short-circuit current,
 - Power and Distribution Transformers with ratings 100 MVA/400 kV;
 - Synthetic section for testing HV Circuit-breakers up to 420 kV rated voltage and up to 63 kA short-circuit current;
- High Voltage laboratory for dielectric tests (Lightning impulse voltage up to 2200 kV, Switching Impulse voltage up to 1600 kV, Power frequency voltage up to 800 kV, DC voltage up to 25 kV for tests on dc railway circuit-breakers, PD measurement, loss measurements, $\tan \delta$ measurements) on Distribution and Power Transformers, Circuit Brakers, Switching Equipment, Switchgears and Controlgears, Cables;
- Temperature rise testing laboratory on:
 - Switchgear and Controlgear, Circuit-breakers and Disconnectors up to 6 kA,
 - Power Transformer with ratings 100 MVA/400 kV;
- Environmental testing laboratory: Dielectric tests under wet conditions and contamination, Low and High temperature mechanical tests, Temperature rise tests at increased ambient temperature;
- Cable laboratory for ageing and prequalification tests up to 550 kV rated voltage;
- Seismic laboratory;
- Chemical laboratory;
- Mechanical endurance tests and protection class testing laboratory.

Tasks performed:

- Assessment of testing requirement and relevant reference Standard,
- Turkish Testing Market survey assessment based also on the inquiry on the key manufacturers,
- Workload and turnover evaluation for different Testing Laboratory Complex options,
- Capital and operating costs estimation for different Testing Laboratory Complex options,
- Profit&Loss Statement for the best option.



* as CESI subcontractor