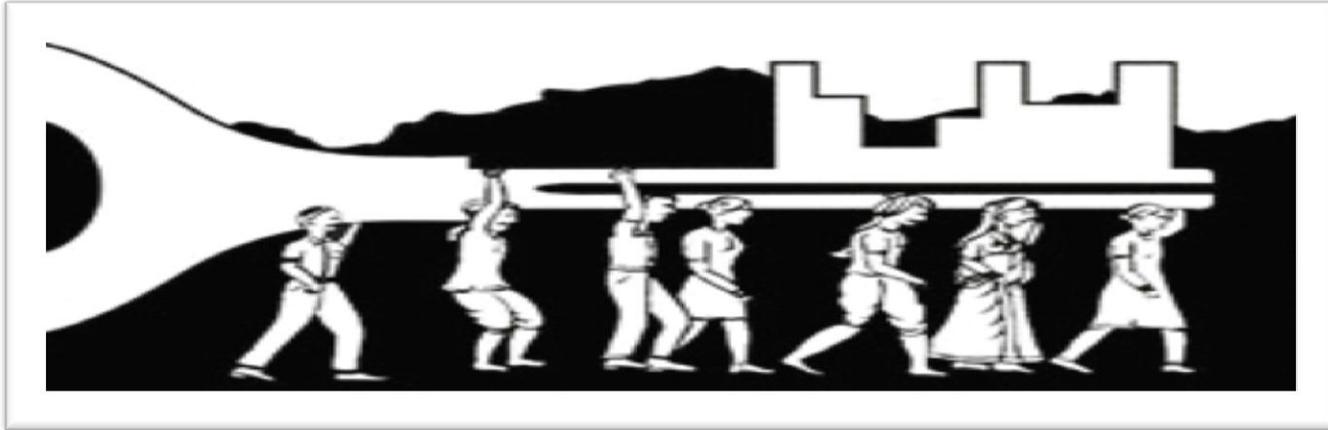


ELECTRICITY GENERATION SECTOR REFORM IN IRAQ

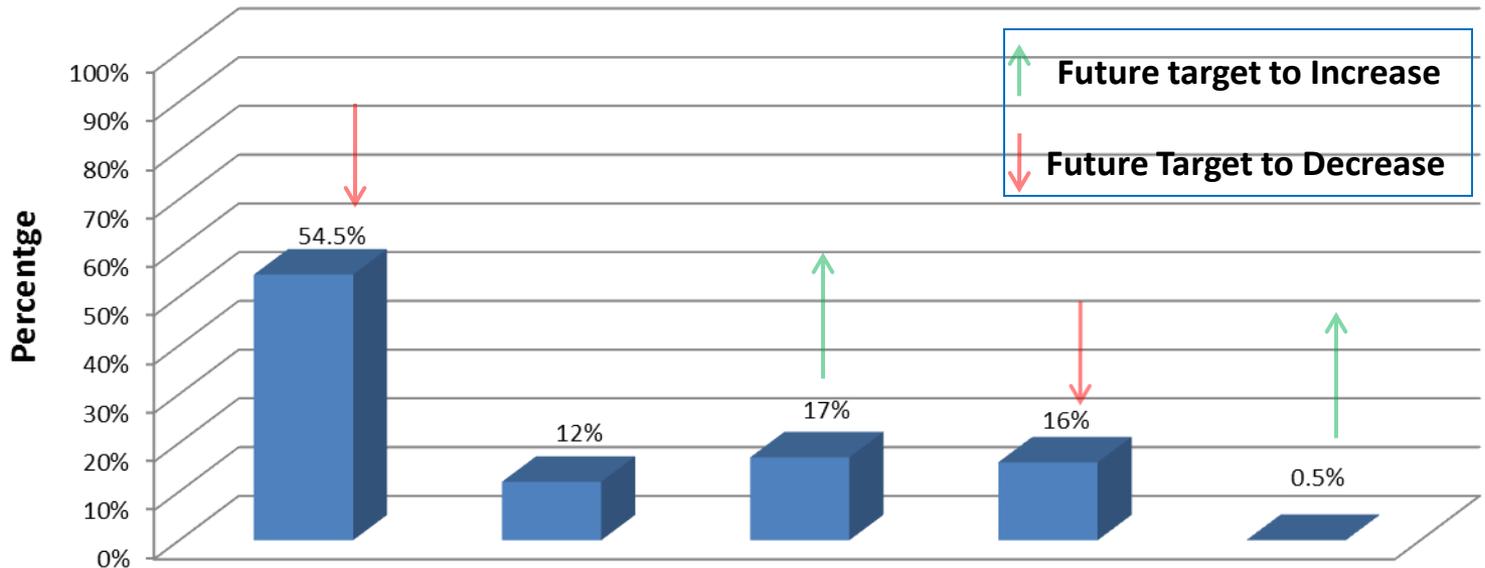
WHY? , HOW? AND WHEN?



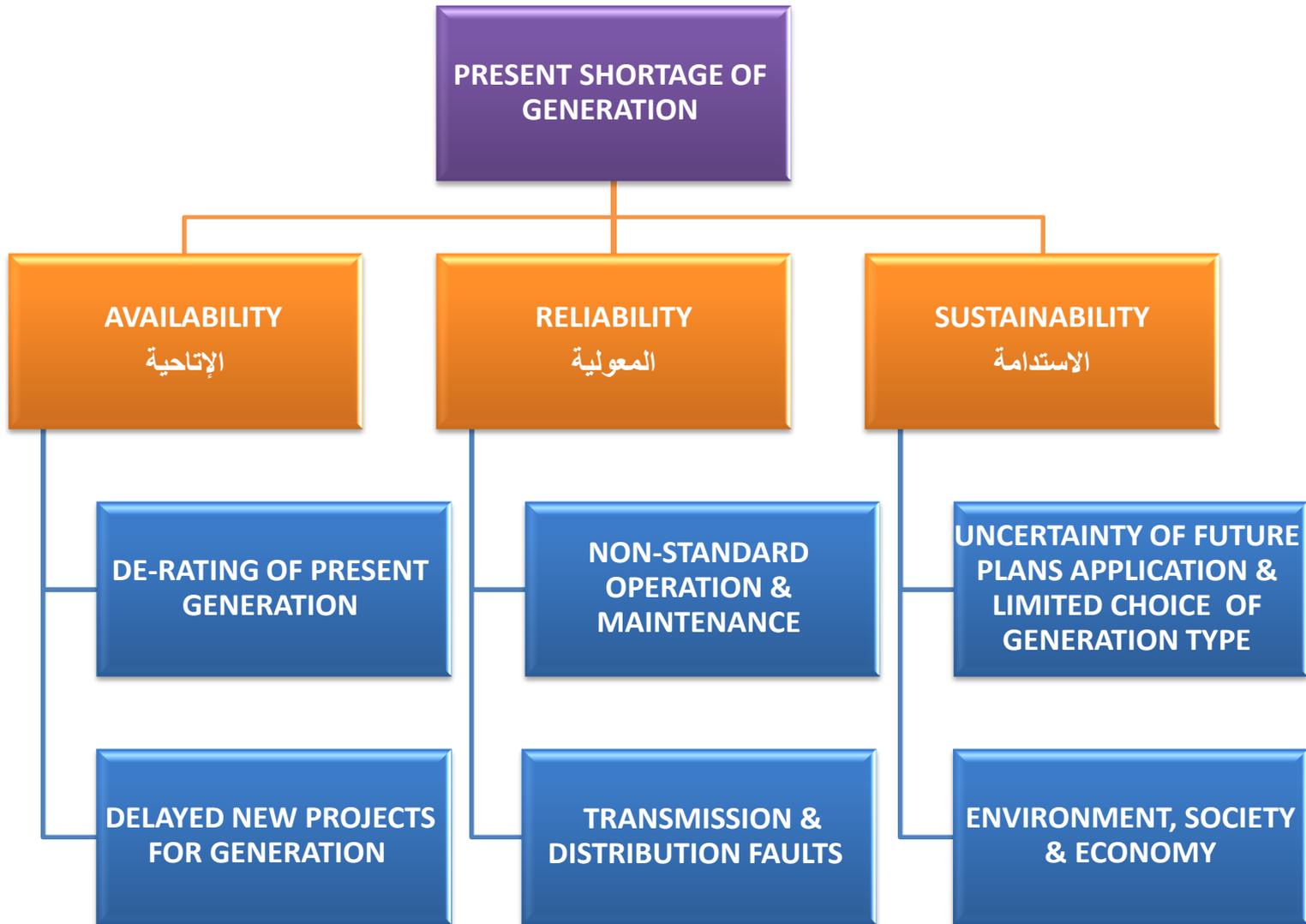
LOAD FORECAST PER CUSTOMER



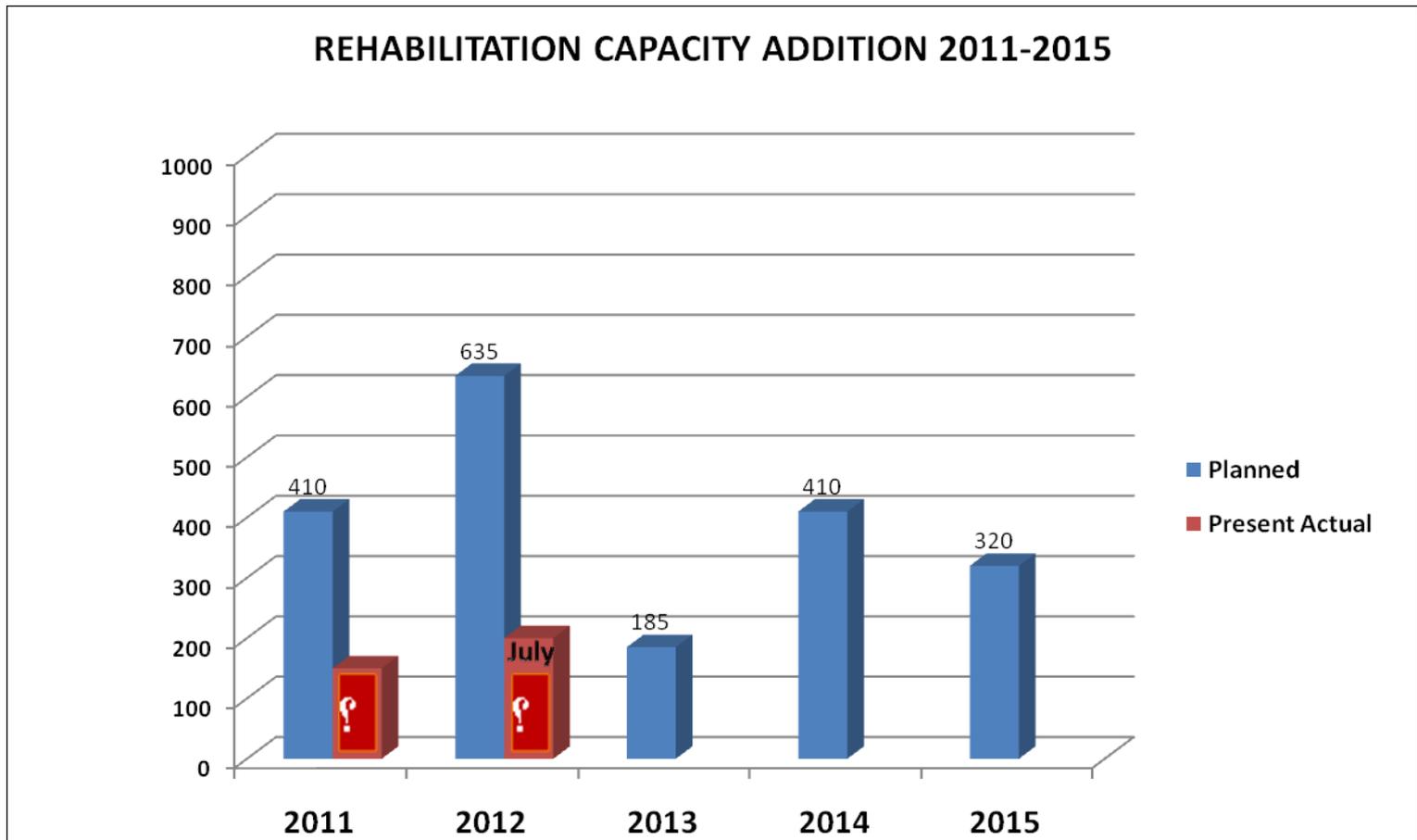
HIGH LOAD FORECAST IEK OVER 2011-2015



Year	Domestic	Commercial	Industrial	Governmental	Agricultural	Total (MW)
2011	7268	1593	2228	2125	68	13282
2012	7864	1734	2411	2299	72	14380
2013	8516	1878	2612	2490	78	15574
2014	9174	2045	2838	2573	86	16716
2015	9883	2238	3071	2658	93	17943



- Aging Equipments: Available capacity far less than installed capacity (**by 50%**)
- Available Capacity liable to rehabilitation, operation & maintenance procedures & standards
- Quantity, type and quality of fuel used in operation
- Shortage of water (for hydrogenation)

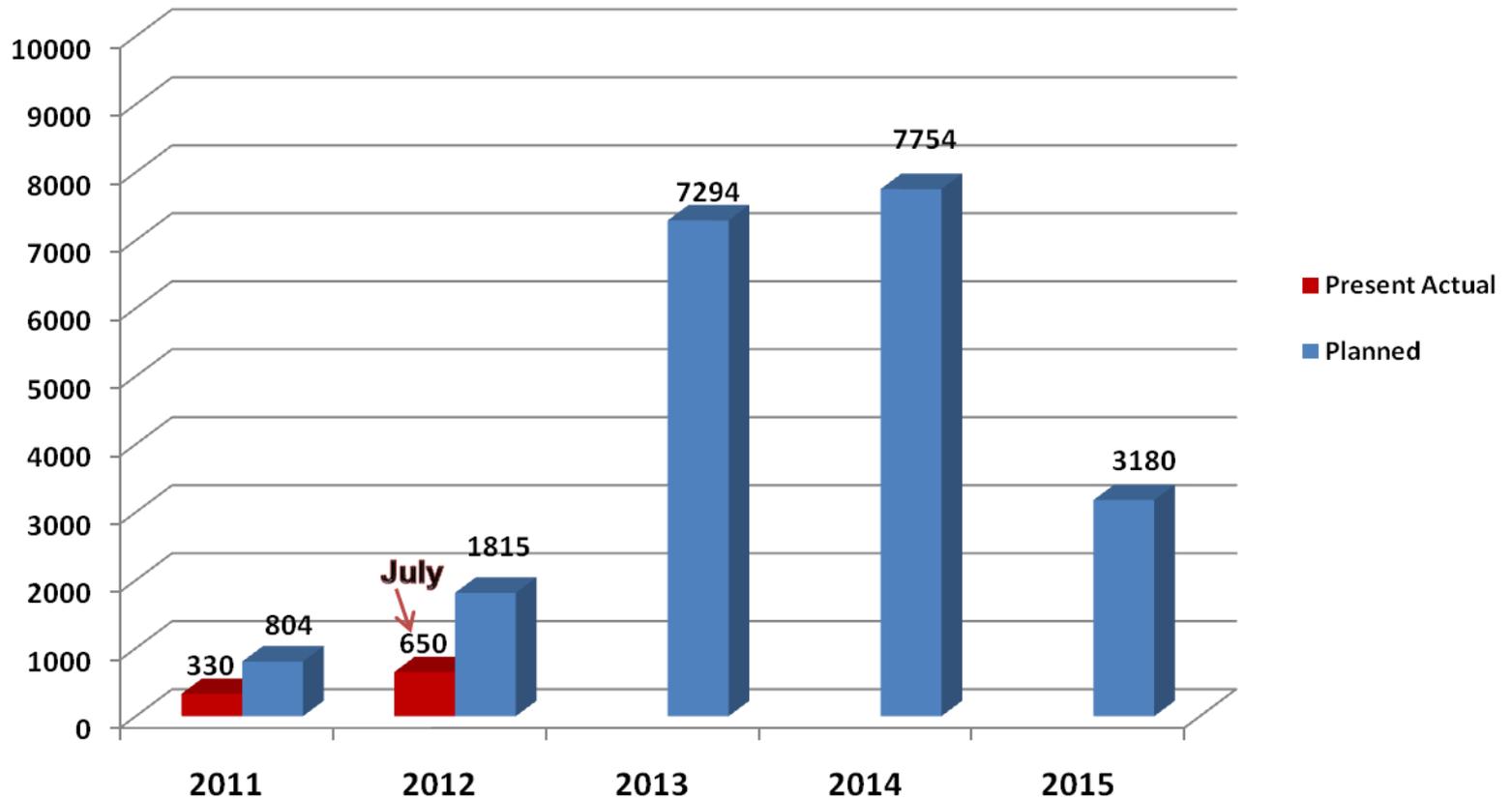


- Present installed capacity = 15000 MW
- Present available capacity = 7500 MW
- Present actual peak load capacity (30/6/2012) = 6193 MW
- Present connections & barges load capacity = 1400 MW
- Energy consumption per capita (based on 10 hrs/day supply)= 912 KWh/Person

URGENT ACTIONS FOR PRESENT GENERATION STATUS

- Need to consider the feasibility of maintenance for aging units
- Adhere to standard operating procedures for old & new units
- Improve maintenance procedures and skills by management contracting

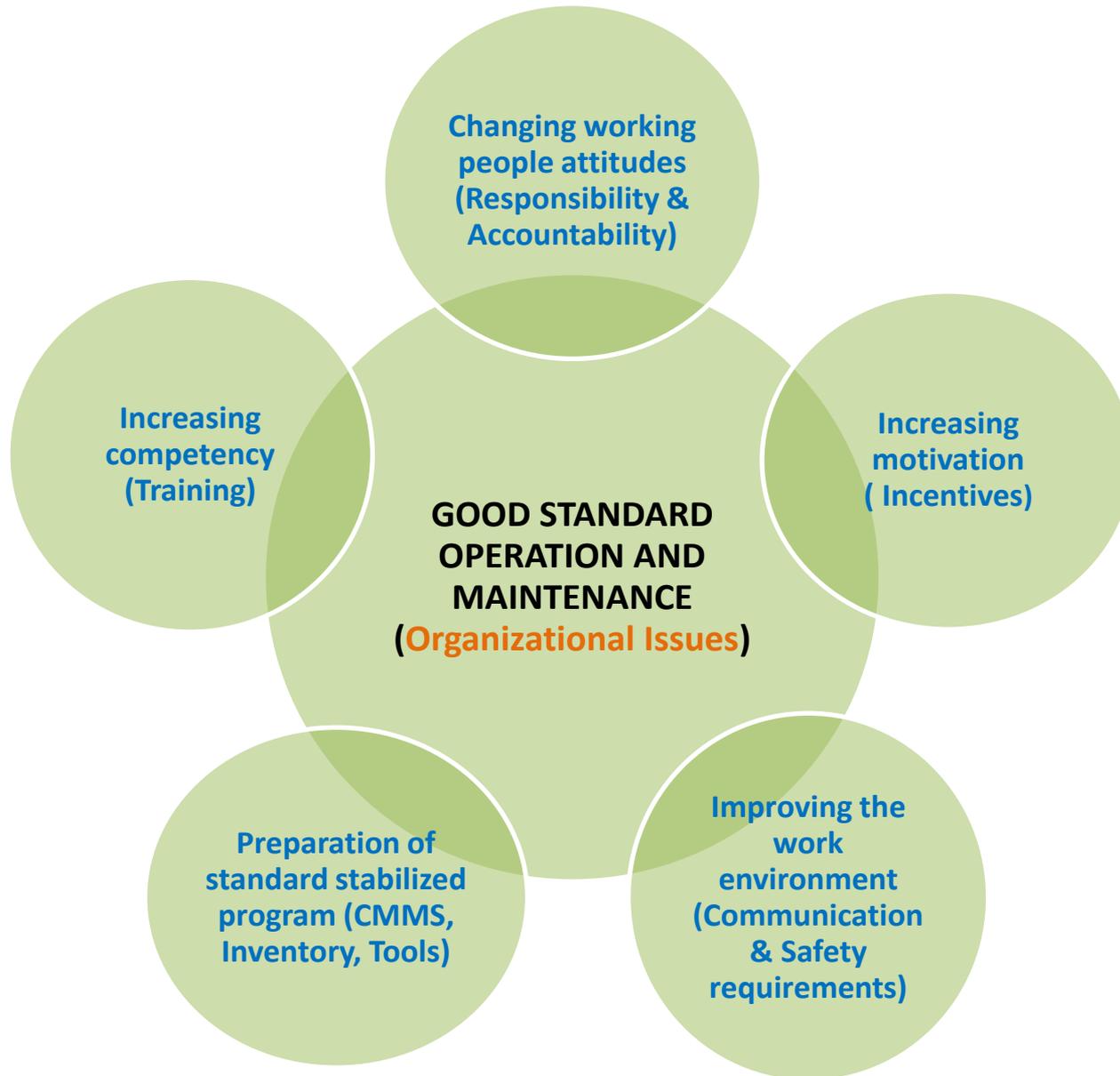
NEW PROJECTS CAPACITY ADDITION 2011-2015 (MW)



ADDED CAPACITY FROM NEW PROJECTS IS MOVING **VERY SLOW** AND NEED IMMEDIATE ACTIONS FOR :

- Project Pursuance Techniques (**IT Implementation**) 
- Technical Issues (**Decision making, Material Acceptance , Improve Weakness in Design**)
- Commercial Issues (**Continuous Chang of Regulations for Customs and Shipping Agencies, L/Cs & Banks (TBI), Clearance, Certification of Shipping documents, 3rd party Inspection**)
- Legal Issues (**Instructions to deal with Delayed Execution, Liquidated Damages, Visas**)
- ❑ **NEED ALLEGRETTO SOLUTIONS TO SETTLE THE ABOVE PROCEDURES (PART OF REFORM PROGRAM)**





FACTS

- ❑ Improper operation causes deterioration, frequent failure and down time and high cost of maintenance for power unit
- ❑ Operation and maintenance are linked to maximize power unit efficiency

FOR THE PRESENT SITUATION OF STATE OWNED GENERATION PLANTS ACTIONS REQUIRED:

- ❑ Management contracting approach for transition period to reform
- ❑ Autonomy of operation and maintenance decisions according to the standards

- Distribution sector reform workshop completed on 8/3/2012
- Transmission sector reform subject will be presented next

A SUSTAINABLE ELECTRICITY GENERATION PROGRAM SHOULD HAVE THE FOLLOWING INDICATORS:

- Economic (Bill collections, Investment in New Infrastructure, Renewable Energy programs, Energy Efficiency and demand Side Management)**
- Social (Health and Safety, Workplace Diversity and Stakeholder Engagement)**
- Environment (Air Emissions, Climate Change Adaptation, Implementation of Environmental Management Systems)**

Dissatisfaction over the poor technical, financial, and managerial performance of the state-owned electricity generation utilities

Power generation sector investment constraints

WHY FOR REFORM ?

Power generation sector investment constraints

National government fiscal constraints

HOW TO REFORM ELECTRICITY GENERATION SECTOR

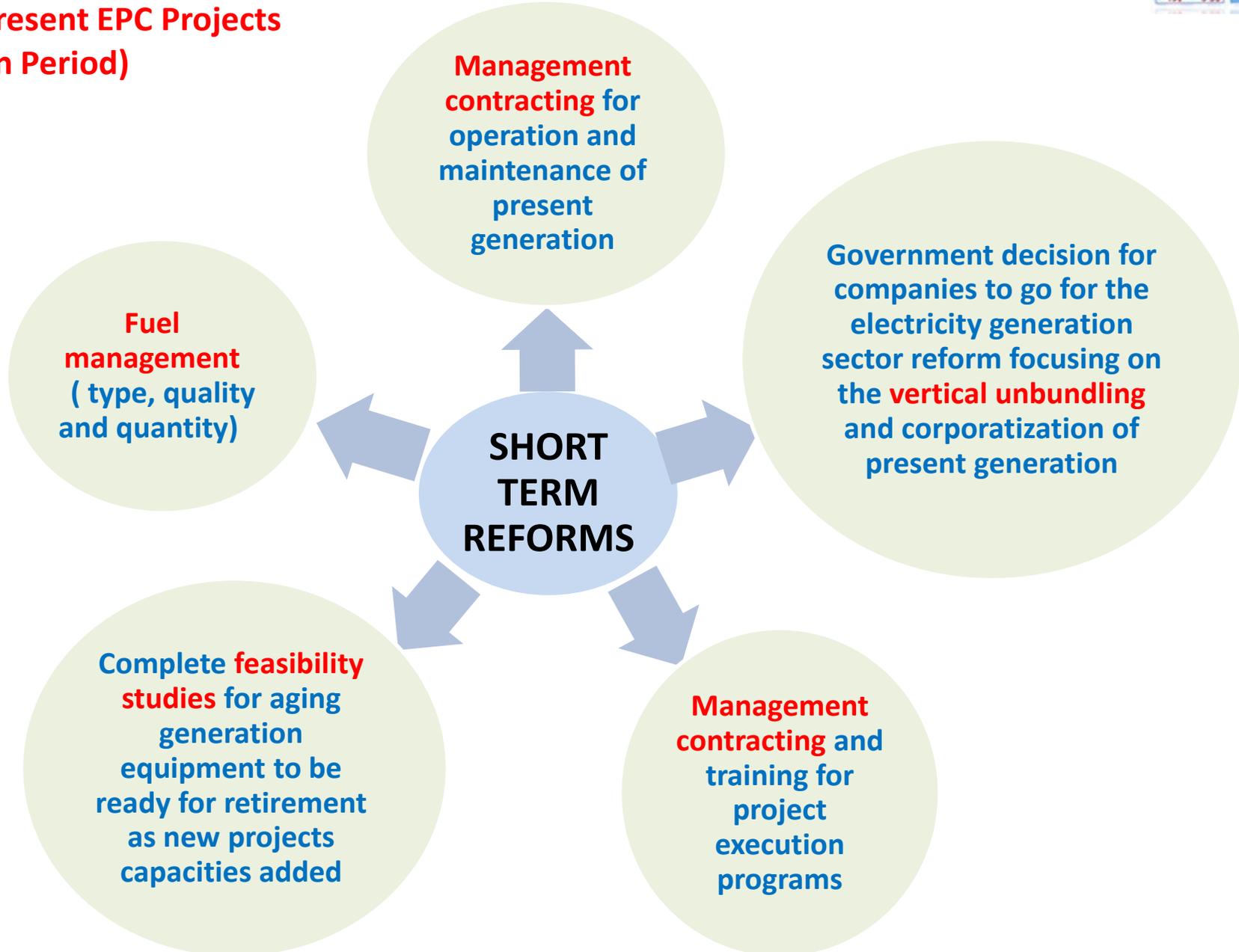


- ❑ Government to establish a **commitment** for the reform of electricity generation sector
- ❑ **Autonomy** of reform decision from political effects
- ❑ Decision for **direction** of generation sector
- ❑ Law to define **corporatization and commercialization benefits**
- ❑ **Investment** climate to attract private capitals to increase generation (IPP, PPP, BOT, BOOT,...etc)
- ❑ Assessment and **Feasibility** study for the aging generation equipment
- ❑ Strategic **fuel management** with clear commitment from MoO.

WHEN TO APPLY REFORM FOR ELECTRICITY GENERATION SECTOR



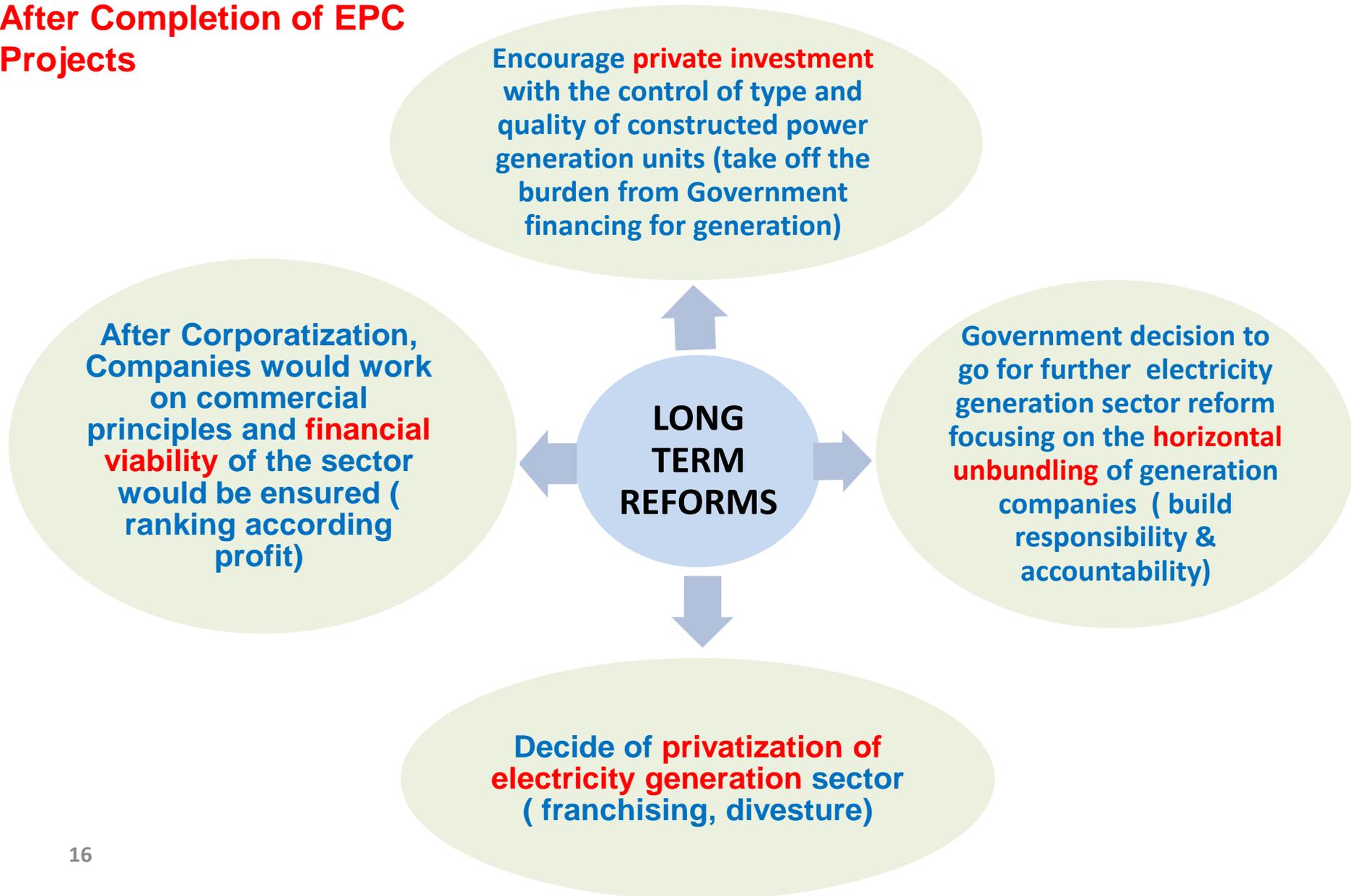
During Present EPC Projects Execution Period)



WHEN TO APPLY REFORM FOR ELECTRICITY GENERATION SECTOR



After Completion of EPC Projects



THANK YOU FOR LISTENING