

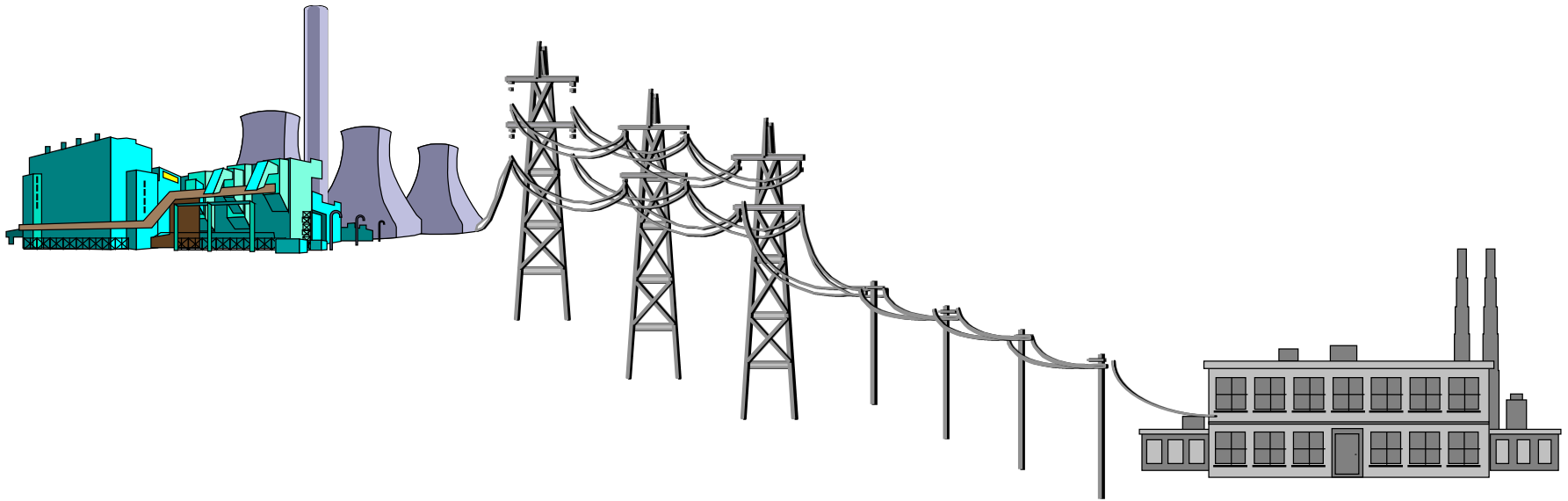
Energy Regulation

**NATIONAL ELECTRIC POWER
REGULATORY AUTHORITY (NEPRA)**

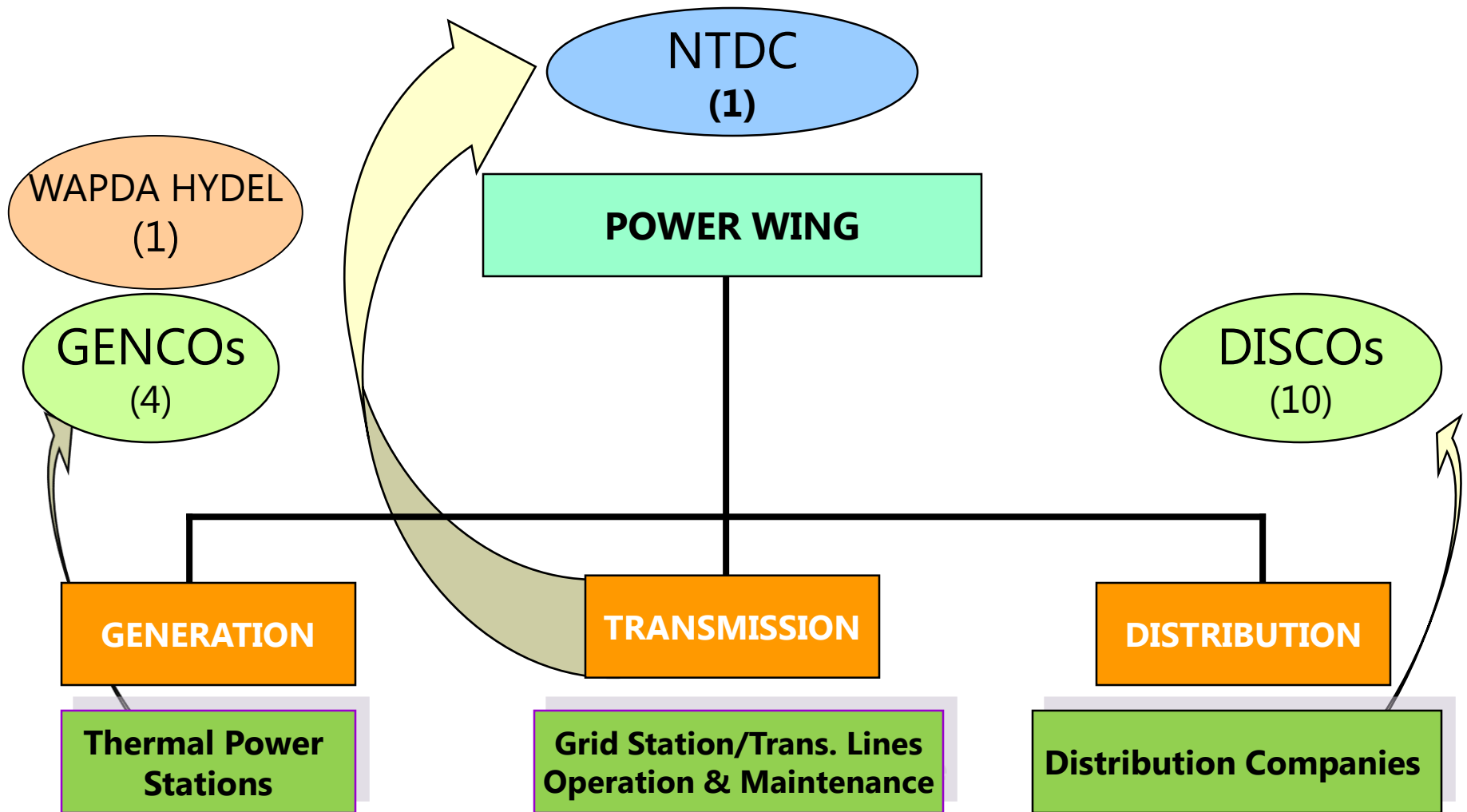
April 13th, 2016

ایمان اتحاد نظم

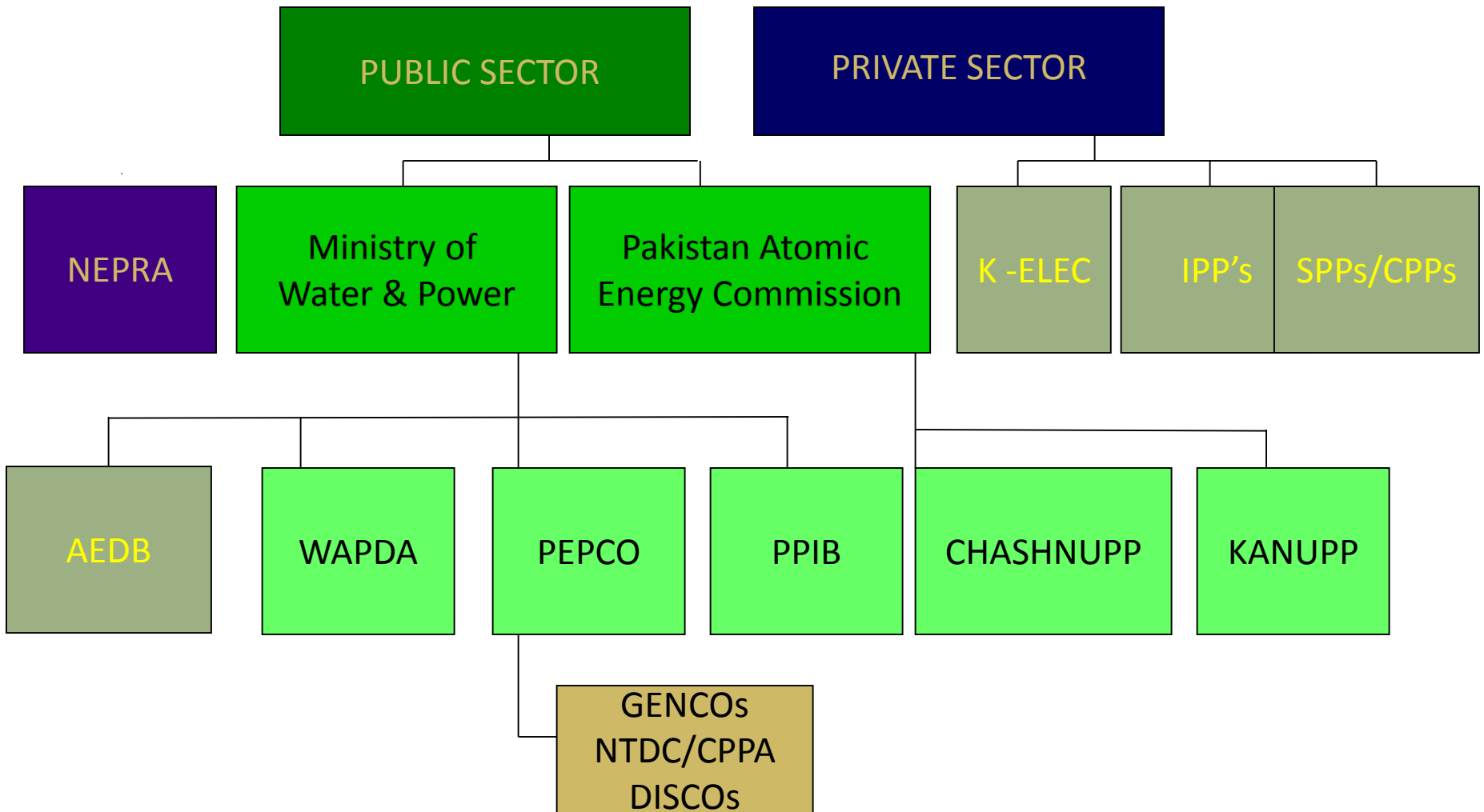
ELECTRICITY/POWER SECTOR: GENERATION, TRANSMISSION AND DISTRIBUTION



WAPDA'S RESTRUCTURING



POWER SECTOR PLAYERS IN PAKISTAN



MANDATE

- To develop and pursue a Regulatory Framework that ensures provision of safe, reliable, efficient and affordable electric power to the electricity consumers of Pakistan.
- Facilitate transition from a protected monopoly service structure to a competitive environment.
- Maintain balance between the interests of the consumers and investors.

REGULATORY INDEPENDENCE

- No direct or indirect financial interest in any entity within its jurisdiction.
- No budgetary support from the Government.
- Revenue generation through levy of fees and fines.
- Once a determination of rates is made by NEPRA, the Government can not change/over-rule the decision but can only request NEPRA to reconsider its decision {Rule 16(12)}.
- Once appointed, the Members/Chairman cannot be removed by the Government {Section 4}.

POWER AND FUNCTIONS

As per Section 7(1) and (2) of NEPRA Act, the Authority shall be exclusively responsible for:

- Grant licenses for Generation, Transmission and Distribution of electric power.
- Prescribe Procedure and Standards for Investment Programs by Generation, Transmission and Distribution Companies.
- Prescribe and Enforce Performance Standards for Generation, Transmission and Distribution Companies.
- Establish a Uniform System of Accounts by Generation, Transmission and Distribution Companies.

POWER AND FUNCTIONS

As per Section 7(1) and (2) of NEPRA Act, the Authority shall be exclusively responsible for:

- Prescribe fee including fees for grant of licenses and renewal thereof.
- Prescribe fines for contravention of the provisions of this Act.
- Perform any other function which is incidental or consequential to any of the aforesaid function.
- Determine tariff, rates, charges and other terms and conditions for supply of electric power services by the Generation, Transmission and Distribution Companies and recommend to the Federal Government for notification.

POWERS AND FUNCTIONS

As per Section 7 (3) of NEPRA Act, the Authority shall:

- Determine tariff, rates, charges and other terms and conditions for supply of electric power services by the generation, transmission and distribution companies and recommend to the Federal Government for notification;
- Review organizational affairs, of generation, transmission and distribution companies to avoid any adverse effect on the operation of electric power services and for continuous and efficient supply of such services;
- Encourage uniform industry standards and code of conduct for generation, transmission and distribution companies;
- Tender advice to public sector projects;
- Submit reports to the Federal Government in respect of activities of generation, transmission and distribution companies; and
- Perform any other function which is incidental or consequential to any of the aforesaid function.

RULES / REGULATIONS / PROCEDURES (FRAMED BY NEPRA)

- Tariff Standards and Procedure Rules, 1998;
- Licensing, Application & Modification Procedure Regulations, 1999;
- Licensing (Distribution) Rules, 1999;
- Licensing (Generation) Rules, 2000;
- Fees and Fines Rules, 2002;
- Consumer Eligibility Criteria (Regulations), 2003;
- Resolution of Disputes between IPPs & other Licensees, 2003;
- Performance Standards Distribution Rules, 2005;
- Performance Standards Transmission Rules, 2005;
- Interim Power Procurement (Procedure & Standards) Regulations 2005;
- Grid Code, Distribution Code, 2005;
- Consumer Service Manual, 2007;
- Mechanism for tariff Determination of Hydropower Projects;
- Upfront Tariff (Approval & Procedure) Regulations, 2011;
- NEPRA (Procedure of Filing Appeals) Regulations, 2012;

PARTICIPATORY APPROACH

- While drafting rules, regulations and procedures and determining tariff etc. the process is widely advertised for soliciting stakeholders' participation;
- Public hearings are invariably arranged while determining tariffs and issuing licenses;
- All decisions in writing (giving reasons);
- All regulatory decisions open to public and posted on website (www.nepra.org.pk).

HIERARCHY OF LEGAL INSTRUMENTS GUIDING NEPRA

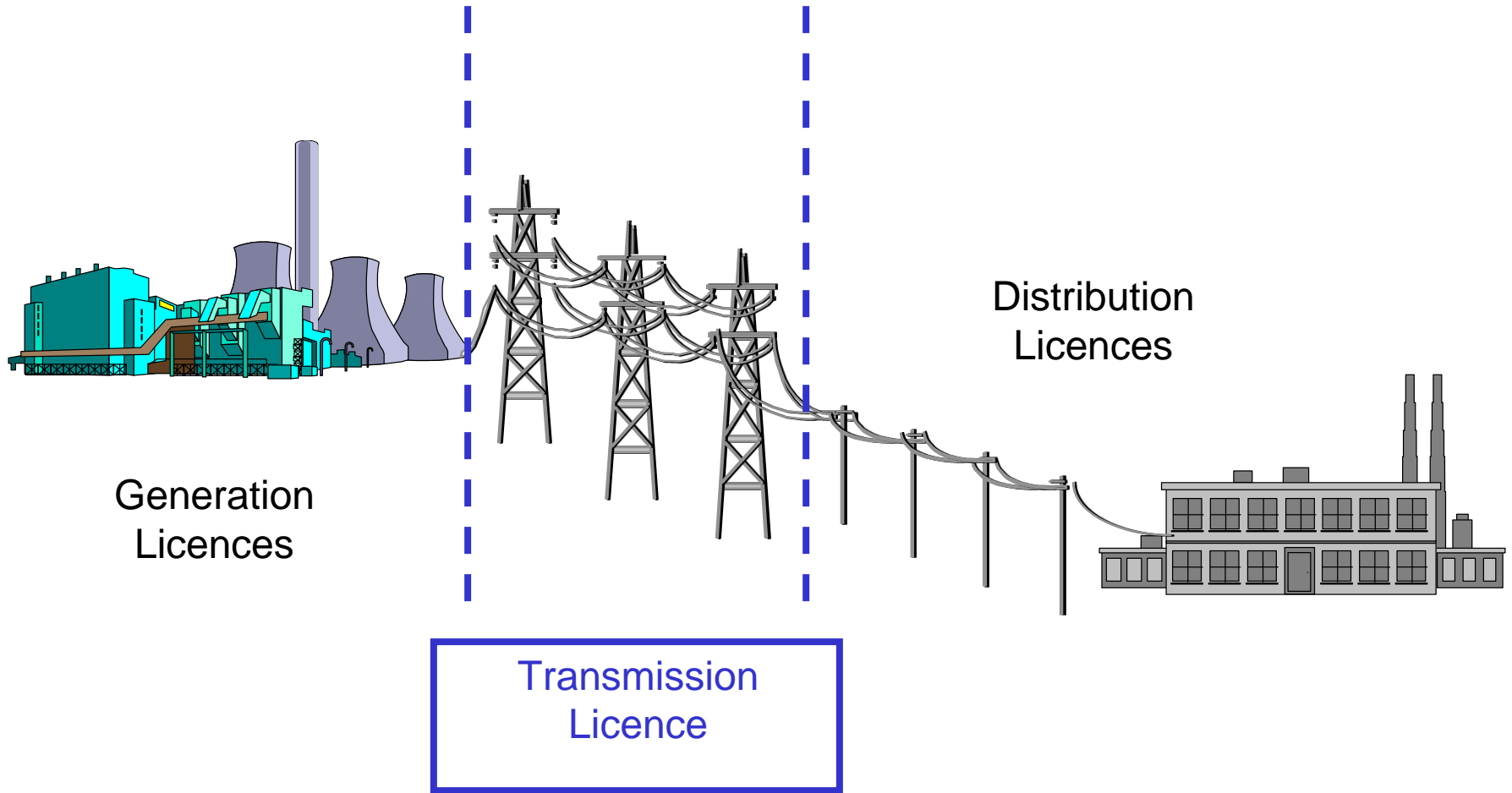
- NEPRA Act
- NEPRA Rules
- NEPRA Guidelines
- NEPRA Internal Guidelines

MAIN FUNCTIONAL AREAS

- **Licensing**
- **Tariff**
- **Performance Standards (Monitoring & Enforcement)**
- **Consumer Affairs**

LICENSING

UNBUNDLING AND REGULATION OF GENERATION, TRANSMISSION AND DISTRIBUTION



TYPE OF LICENSES

- **Generation Licenses** (for entities involved in generation of power including Ex-WAPDA Generation Companies):
 - Northern Power Generation Company (GENCO-III),
 - Central Power Generation Company (GENCO-II),
 - Jamshoro Power Generation Company (GENCO-I),
 - Lakhra Power Generation Company (GENCO-IV),
 - Generation Companies in the Private Sector (i.e. Independent Power Producers (IPPs) such as HUBCO, KAPCO, UCH, AES etc).
- **Transmission Licenses**
 - National Transmission and Dispatch Company (NTDC) and KESC.
- **Distribution Licenses** (for entities involved in activity of distribution including Ex-WAPDA DISCOs)
 - PESCO, IESCO, LESCO, HESCO, QESCO etc. and other private entities maintaining their isolated Distribution Networks (like Monnoo Energy Limited, Kohinoor Mills Limited, Gulistan Power Generation Limited, Sapphire Power Generation Limited and Engro Chemicals Pakistan Limited etc.)

YEAR-WISE DETAIL OF LICENSES GRANTED

Year	Generation		Transmission		Distribution			Total
	Public Sector	Private Sector	NTDC	KEL	DISCOs	KEL	Others	
2001	-	9	-	-	1	-	-	10
2002	4	5	1	-	7	-	-	17
2003	1	11	-	-	-	1	-	13
2004	1	16	-	-	-	-	-	17
2005	2	9	-	-	-	-	-	11
2006	1	10	-	-	-	-	7	18
2007	-	10	-	-	-	-	-	10
2008	-	17	-	-	-	-	2	19
2009	-	15	-	-	-	-	1	16
2010	-	23	-	1	-	-	1	25
2011	1	19	-	-	1	-	-	21
2012	-	14	-	-	-	-	-	14
2013	-	16	-	-	1	-	-	17
2014	2	28	-	-	-	-	-	30
Grand Total	12	202	1	1	10	1	11	238



TARIFF

TARIFF METHODOLOGY

- The Company/ Licensee files a petition for determination of its tariff according to NEPRA Tariff Standard Procedure Rules - 1998;
- The Authority on the basis of information decides whether *prima facie* case exists for admission of the tariff petition;
- In case Authority admits the petition for consideration it gives notice to all the stakeholders through advertisement in the national newspapers inviting them for intervention to participate in the tariff proceedings through personal participation or through written comments;
- After public hearing, based on the evidence provided by the petitioner and the stakeholders, the Authority after due diligence determines the tariff and recommends to the Federal Government for notification in the official gazette;

NEPRA TARIFF REGIME

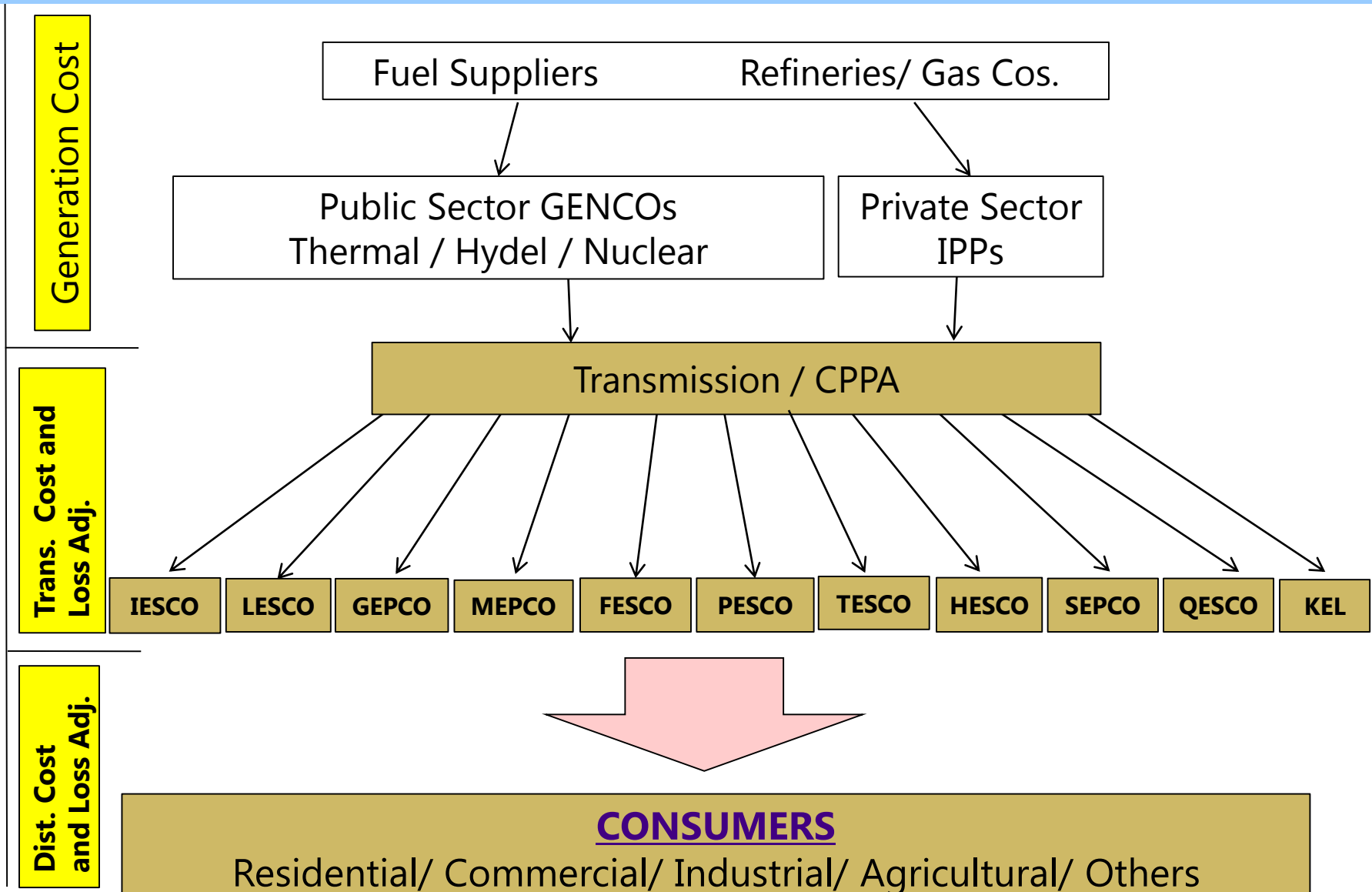
NEPRA determines tariffs for the three sectors namely Generation, Transmission and Distribution:

- o Tariff for Generation Companies are determined on rate of return (cost plus basis) in most cases, under long term (25-30 years) PPAs for Greenfield generation projects;
- o Tariffs are approved on Competitive Bidding basis (detailed determination is not carried out by NEPRA if International Competitive Bidding process is followed by the relevant agencies i.e. PPIB).
- o Bilateral Contracts between the Power Producer and the Purchaser (NEPRA does not carry out detailed prudence of costs, if Captive Power Plants enter into bilateral contracts with DISCOs for sale of their excess power);

NEPRA TARIFF REGIME

- o Tariff of Transmission Company is determined on annual cost plus basis (where, in addition to the costs, certain return on equity or assets is allowed);
- o Distribution Companies are mostly given tariffs on cost plus basis, whereas multiyear tariffs (Performance Based) have also been determined by NEPRA for FESCO and K-Electric.

CHAIN OF COST COMPONENTS



YEAR-WISE PROGRESS (TARIFF) (CALENDAR YEAR)

Year	Determinations (WAPDA/ KEL/GENCOS/ NTDC/DISCOs)	Others	Total
1998/99	8	----	8
2000	2	1	3
2001	7	----	7
2002	6	1	7
2003	9	1	10
2004	19	3	22
2005	20	4	24
2006	25	9	34
2007	31	15	46
2008	8	13	21
2009	32	8	40
2010	44	9	53
2011	33	17	50
2012	32	34	66
2013	28	21	49
2014	22	43	65
Total	293	179	472

Performance Standards

PERFORMANCE STANDARDS

- Performance standards are designed to encourage safe, efficient and reliable service, including standards for service characteristics such as voltage and stability and scheduled and unscheduled outages.
- Rules are enforced through Licenses under which periodic reporting is required by Licensees.
- Performance Audit also conducted by NEPRA.

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PERFORMANCE STANDARDS

○ **Generation:**

- ❖ Gradually be deregulated so that market forces would put pressures on operators to improve performance.
- ❖ PPA's with IPP's set standards of performance for operators.
- ❖ Draft Generation performance standards circulated.

○ **Transmission:**

- ❖ Performance Standards (Transmission) Rules, 2005 framed and have been sent to the Government for notification.
- ❖ Grid Code has been approved and notified.

○ **Distribution:**

- ❖ Performance Standards (Distribution) Rules, 2005 have been notified in the official gazette.
- ❖ Distribution Code has been approved and notified.

MONITORING AND ENFORCEMENT

Monitoring of various issues relating to the following:

- Authority's direction
- Compliance with the licencing conditions
- Performance related Generation and Transmission

CONSUMER AFFAIRS

CONSUMER AFFAIRS

- NEPRA pursuant to Section 39 of the Act, deals with complaints by any interested person against a licensee for violation of its rules, regulations and orders.
- Pursuant to Section 21 (2) (b) of the Act, NEPRA has issued Regulations for Eligibility Criteria for consumers for non discriminatory provision of distribution services and sale of electric power.
- Pursuant to Section 38, all four provinces have established the Provincial Offices of Inspection (POIs).

COMPLAINT HANDLING (CALENDAR YEAR)

Year	Complaints Received	Complaints Redressed*
2001	76	76
2002	187	172
2003	237	225
2004	354	325
2005	1,098	1,025
2006	548	527
2007	503	495
2008	469	469
2009	663	662
2010	2,349	2,290
2011	2,271	2,271
2012	3,081	3,075
2013	2,161	2,034
2014	3,539	3,313
Total	15,370	14,925

* Remaining complaints were redressed in succeeding years.

INITIATIVES BY NEPRA

- To expedite tariff determination, upfront tariffs have been announced for different technologies.
- Applicant opting for upfront tariff are being given approval within 10 days as against the 8 months period indicated in the Tariff (Standards & Procedure) Rules – 1998.
- Facilitating Investors to structure, build and operate plants in their given package without further interaction with NEPRA.

Cont...



INITIATIVES BY NEPRA

- NEPRA Guidelines for determination of Multi-year Consumer-end Tariff (Methodology and Procedure), 2015 notified on 16th January, 2015.
- NEPRA Guidelines for Sale of Electric Power by Renewable Energy Companies, notified on 23rd January, 2015.
- Separation of CPPA from NTDC's Licence for creation of competitive market in Power Sector dated 29th May, 2015.
- Existing Bagasse based Power Plants allowed sale to DISCOs.

Cont...

INITIATIVES BY NEPRA

- Regulations for Supply of Power by DISCOs to other DISCOs and Housing Colonies have been uploaded on NEPRA website for comments.
- Templates/formats for development of Integrated Generation Transmission and Distribution Plans (IGTDP) finalized on 9th July, 2015.
- Special Purpose Transmission Licence to Fatima Energy Limited granted on 21st August, 2015.
- NEPRA Net-Metering Regulations, 2015 will be finalized by 28th August, 2015.

Cont...

INITIATIVES BY NEPRA

- NEPRA Investment Standards and Procedure (Transmission and Distribution) Rules, 2015 will be finalized by 28th August, 2015.
- NEPRA (Interconnection Facilities for Renewable Generation Facilities) Guidelines, 2015 will be finalized by 4th September, 2015.
- Regulations on Wheeling of Electricity will be finalized by 18th September, 2015.

MAJOR ISSUES IN POWER SECTOR

1. Expensive Energy Mix

- Shortage of Gas.
- Inefficient Power Plants in Public Sector.
- No major hydropower in the system inducted over the past 15 years.
- Absence of base load plants on Coal.

2. Circular Debt

- Revenue recovery gap between billed and recovered amount in DISCOs.
- High losses (T&D) in the Distribution Companies.
- Accumulation of receivables of fuel suppliers.
- Non payment of tariff differential subsidy.

3. Performance of Distribution Companies

- i) Losses
- ii) Billing and Recovery Position
- iii) DISCOs' Receivables

Cont...

MAJOR ISSUES IN POWER SECTOR

4. **Independence of DISCOs and GENCOs**
5. **Efficiency and Availability of Existing Power Plants in the Public Sector GENCOs**
6. **K-EL issues**
 - (i) Non-operation or under-utilization of RFO based power plants
 - (ii) Gas Supply Issue
 - (iii) Liquidity Crunch-Circular Debt

Thank you