



**Presentation on  
Evolution, Role and Functioning of  
Central Electricity Regulatory Commission, India**

**By  
Central Electricity Regulatory Commission**

**For  
Asia Pacific Energy Regulatory Forum**



# In this presentation...

---

- Power Sector Overview
  - Evolution of Regulatory Framework in India
  - CERC Procedures, Roles & Responsibilities
  - Achievements of Regulators
- 



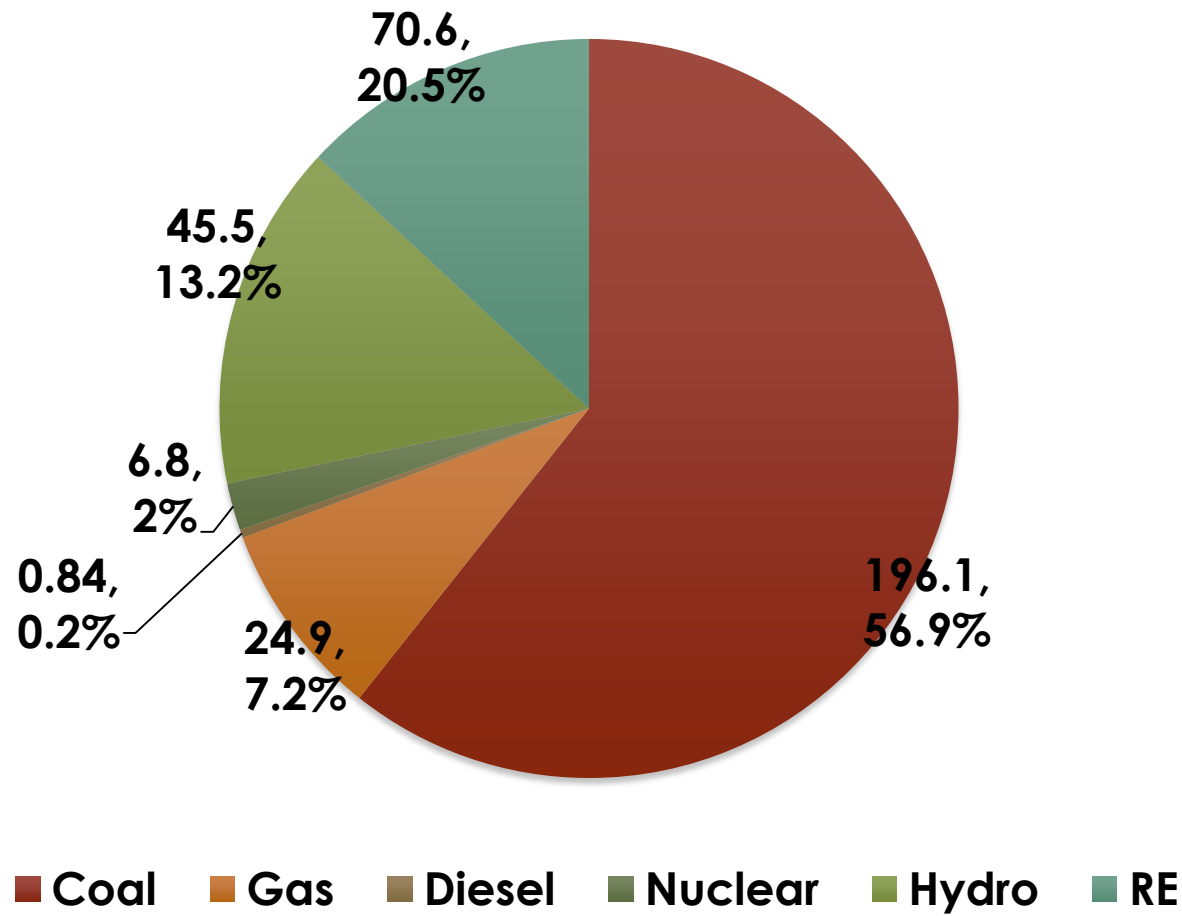
---

# Power Sector Overview



# Generation Capacity in India

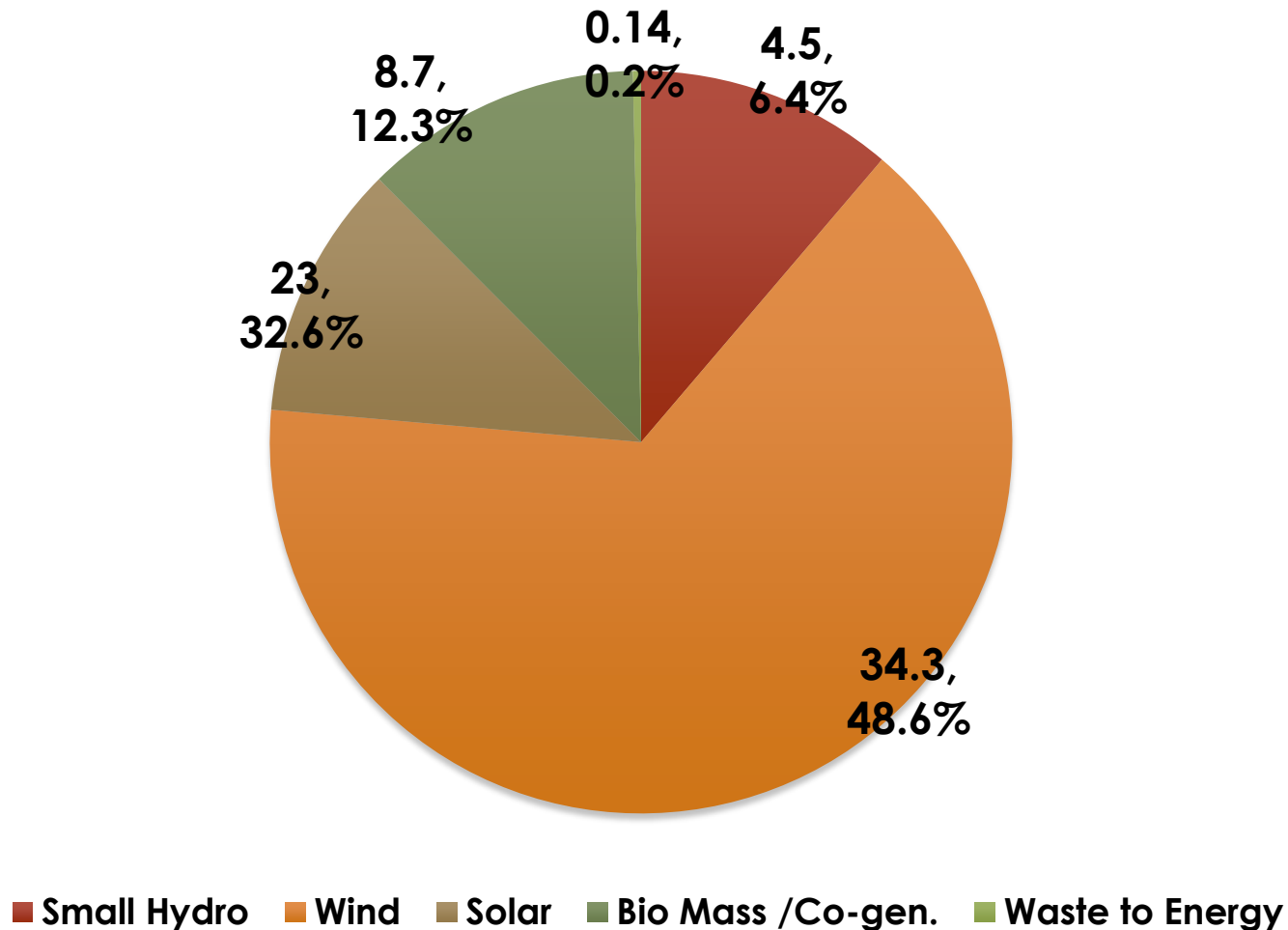
## Installed Generation Capacity 344.7 GW



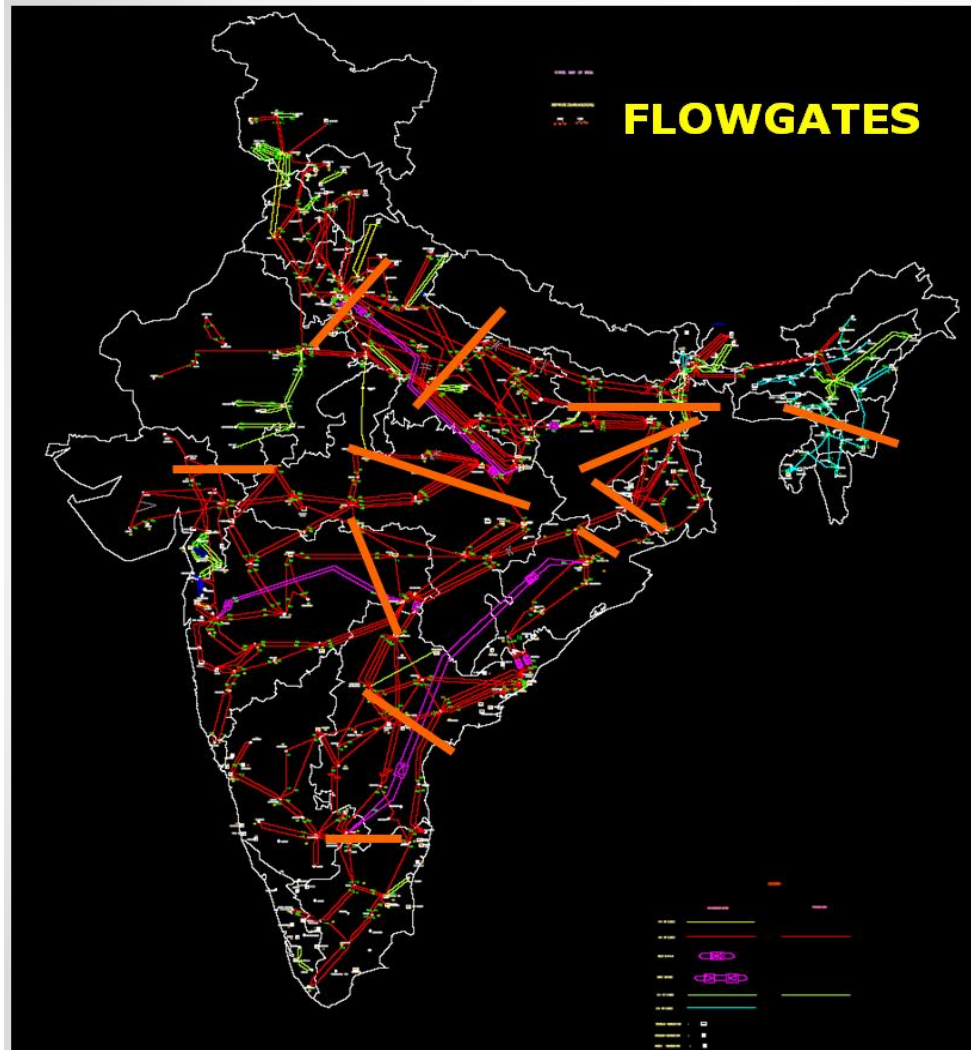
# Generation Capacity in India



Generation through RE Sources 57.26 GW



# Creation of Transmission Flow-gates



**Pan India Market:  
All India Economy &  
Efficiency**

**Optimal utilization of  
resources**

**Well Meshed Network**

**400 kV Backbone (~100,000  
ckt kms)**

**765 kV Operations  
commenced**

**Bulk transfer through  
HVDCs**

**High Capacity Corridors  
under construction**

# Generation, Transmission & Distribution Ownership

---



- Generation is owned by
    - *Central (24.55%) / State (29.87%) / Private (45.58%) Sectors*
  - Transmission - more than 90% is owned by public sector
    - *Regulated monopoly business*
    - *New projects through competitive bidding*
  - Distribution - about 13% owned by private sector
- 



---

# Evolution of Regulatory Framework *in India*



# Drivers of Regulatory Reforms in India



## Context

- **India, a federal polity; and Electricity, a concurrent subject**
  - *Centre and States can legislate*
- **Powers of Regulation historically with**
  - *Government/Government organization*
- **Vertically integrated**
  - *State Electricity Boards until... ..*
- **Power sector reforms initiated in 1990's**
  - *Seeking to open up the sector to competition*



# Drivers of Regulatory Reforms in India



## Drivers

- **Need for tariff rationalization**
- **Market expectations as pre-condition to rolling out competition**
  - *A neutral body for*
    - *investors' confidence*
    - *regulating multiple players*
    - *preventing market failure*
- **Demand for level playing field**
  - *Government cannot regulate as well operate*



# Independent Regulatory Commission



- ▶ **Independent regulatory commission set up in 1996/1998**
  - *Initially with powers of tariff fixation*
  - *At the Centre (CERC) and in the States (SERCs/JERCs)*
- ▶ **Powers of regulatory commission expanded in 2003**
  - *Complete distancing of Government from regulation (licensing, market development...)*
- ▶ **Forum of Regulators**
  - *To harmonize regulation between Centre and States*



# Role Demarcation between Government & Regulators

## Parliamentary Oversight

- Laying of Annual Report, Annual Accounts, Regulations before Parliament
- Scrutiny by Parliamentary Committees
- Audit by the Comptroller & Auditor General of India

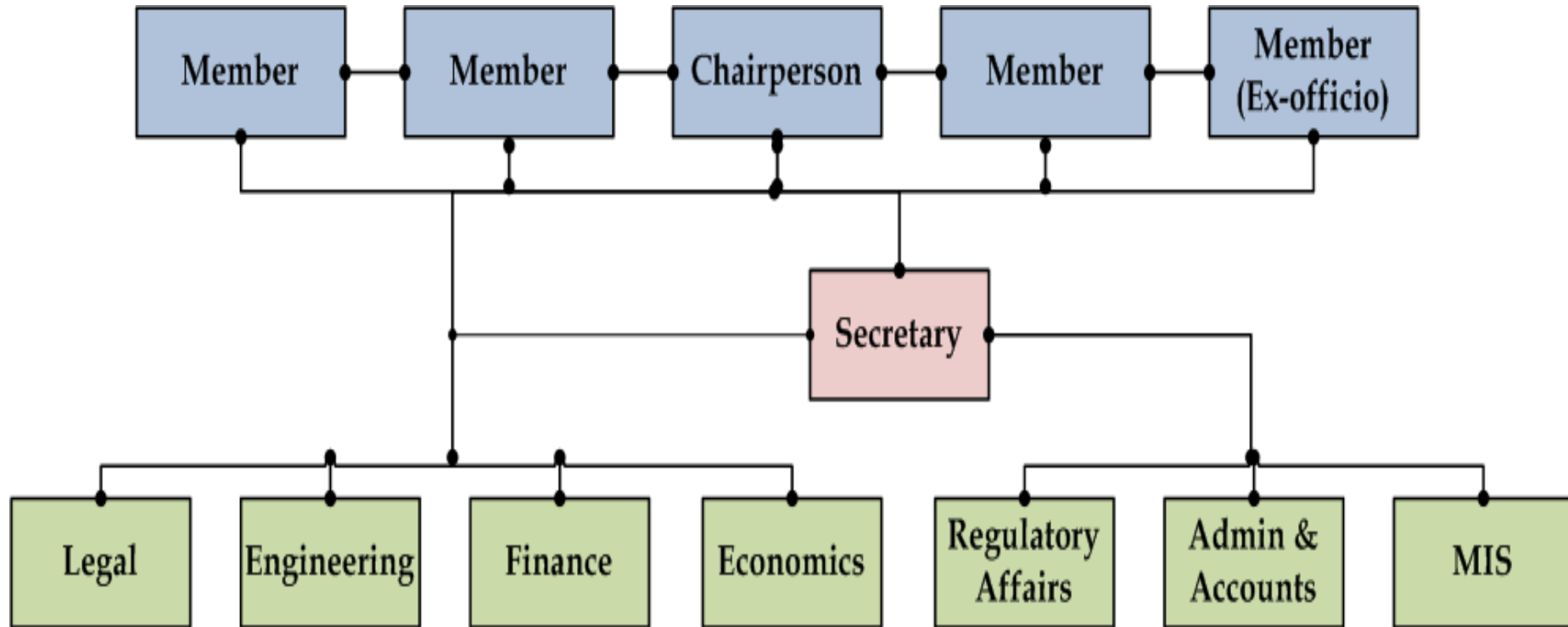
## Role of Government

- Formulation of *National Electricity Policy, Tariff Policy, Rural Electrification Policy*
- Powers to give *Policy Directions to Regulators*

## Regulatory Commission - A Quasi Judicial Body

- Powers of Civil Court for *inquiry / proceedings*
- Powers to impose *penalty*
- Powers to *adjudicate*
- Full powers to *regulate*

# CERC Organizational Structure

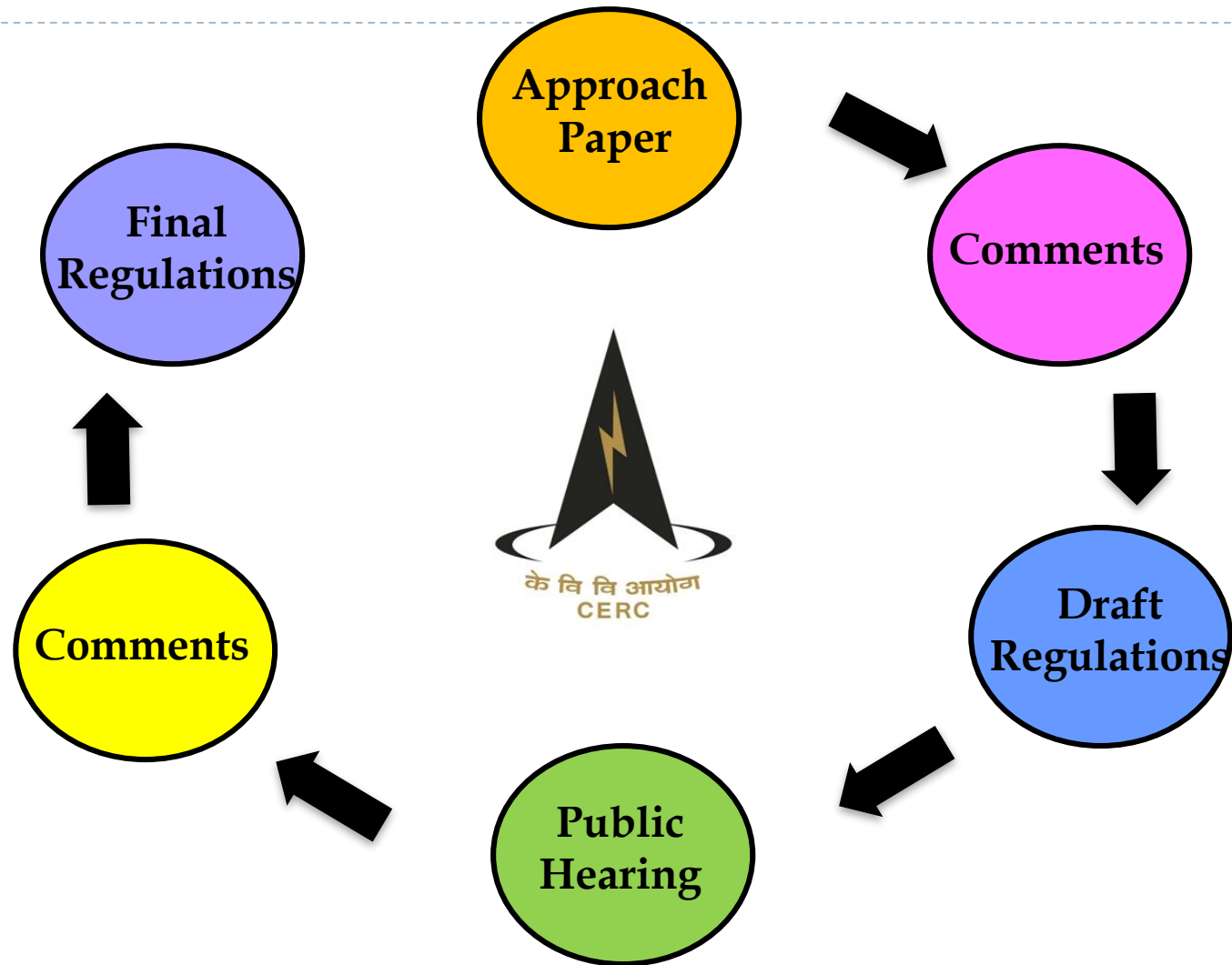


---

# **CERC Procedures, Roles & Responsibilities**



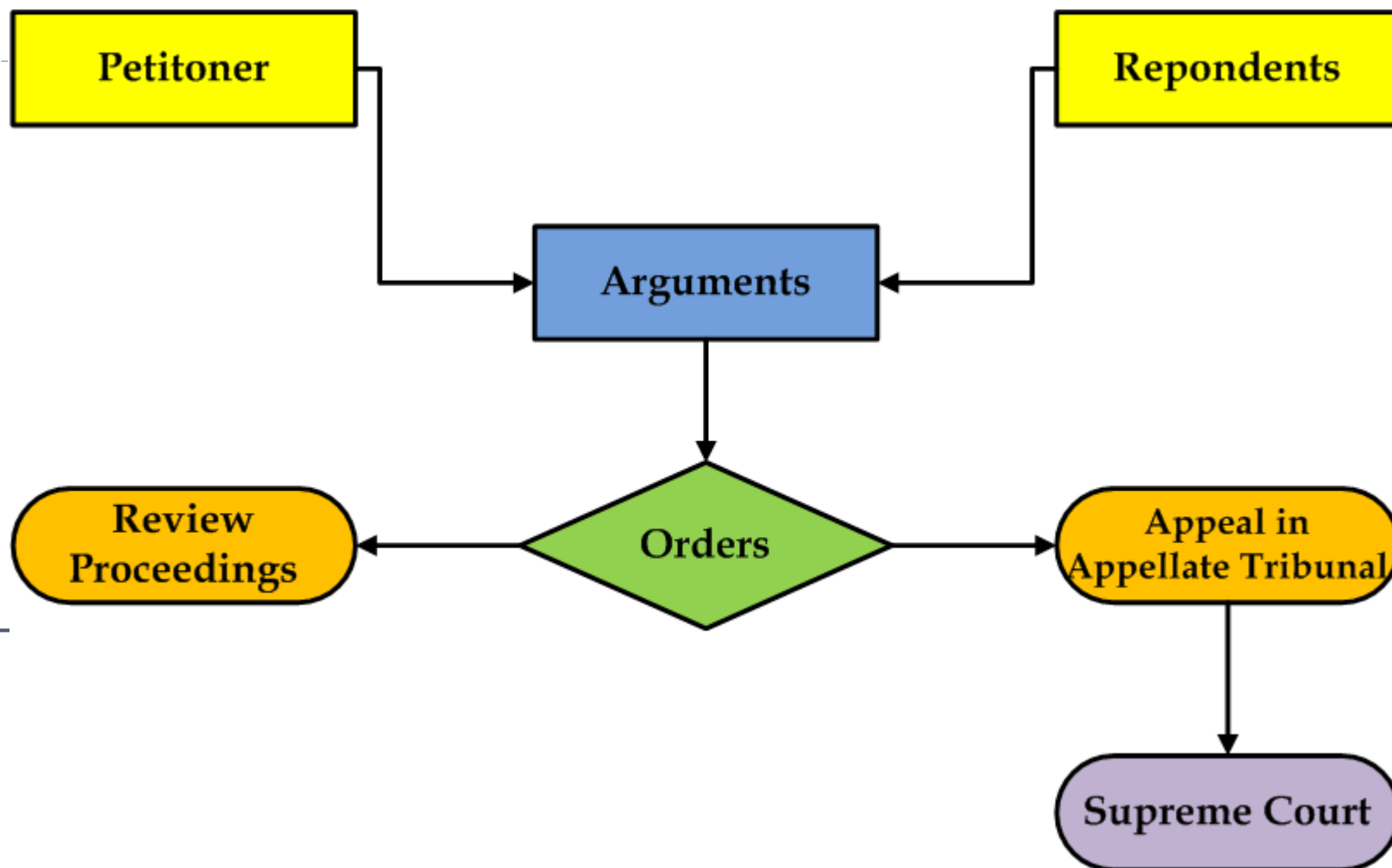
# CERC Procedure for Regulations



CERC notified more than 30 Regulations / 100 Amendments

Ensuring Transparency

# CERC Procedure for Petitions



**Disposed of more than 4000 petitions since 1999**

**Implemented 'E-Court' system from June, 2017**

**Ensuring Transparency**



# **CERC E-Court :**

## **A Move Towards Paperless Court**

---

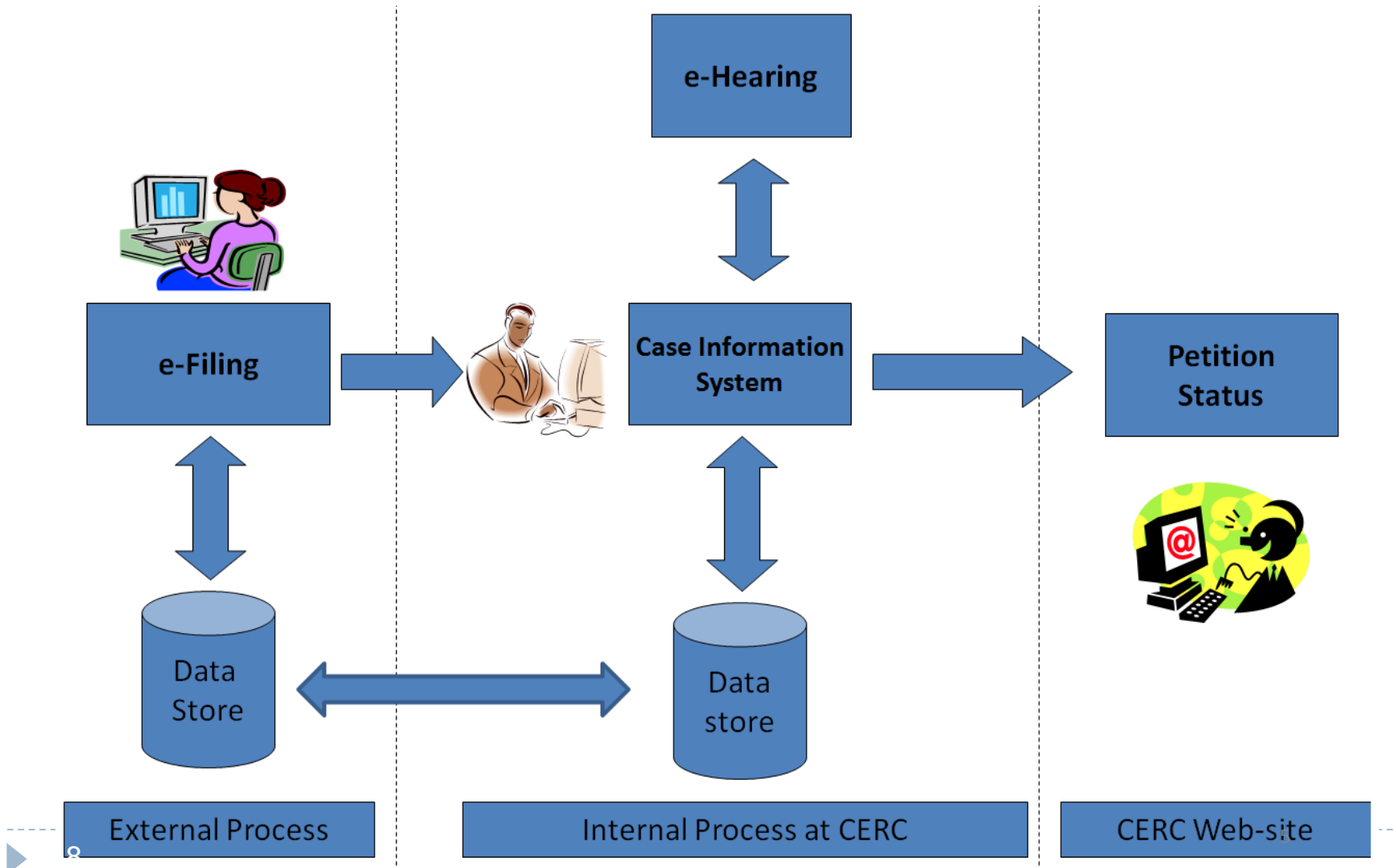


### **Objective**

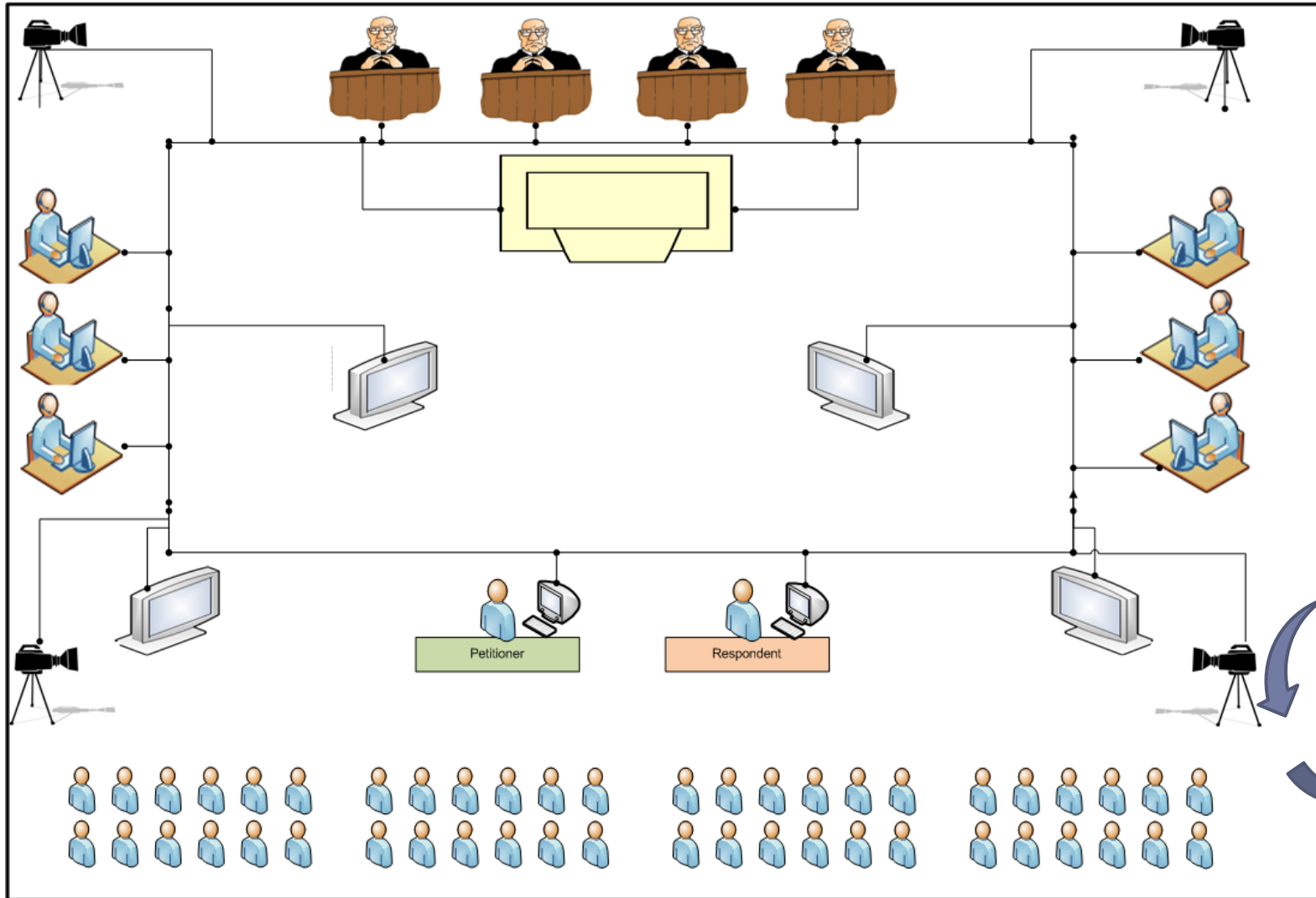
- Increase transparency
- Instant filing of Petitions
- Increase efficiency
- Paper less process
- Improve decision making to develop the sector.

<b>e-Filing</b>	<b>Filing of petitions (soft format) on the portal</b>
<b>e-Pleading</b>	<b>Filing of reply, rejoinder, comments etc online</b>
<b>e-Hearing</b>	<b>Hearing through soft copies of petitions</b>
<b>e-Library</b>	<b>Digitization of records, petitions, comments etc.</b>
<b>Case Information System</b>	<b>Processing of petitions, Case Data and Cause list Generation</b>

# CERC E-Court: Process Flow



# CERC E-Court: Schematic Representation



# CERC Roles & Responsibilities



- Tariff Regulation
  - Regulated Tariff
  - Competitive Bidding
- Licensing
  - Transmission, Trading, Distribution
- Development of power market
  - Facilitating Open Access
  - Licensed traders
  - Power Exchanges
- Inclusive Growth
  - Consumer Protection
  - Promotion of Green Energy



# Electricity Regulators in India have ...



- Brought **Transparency** in Regulatory process
- Introduced **Efficiency** in Operation
- Created environment to attract private **investment** in Generation
- Promoted **Competition** in generation and transmission
- Created **Market Structure** in power sector
- Facilitated **Sustainable development** through promotion of **Renewable Energy**



---

**Thank you**

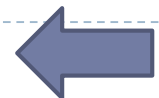
Please visit  
[www.cercind.gov.in](http://www.cercind.gov.in)



# Tariff Determination

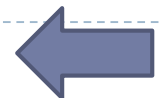
---

- ▶ Tariff Determination : performance based regulation (Regulated Tariff)
- ▶ Adoption of tariff determined through competitive bidding (Competitive Tariff)



# Licensing

- ▶ CERC grants licence for inter-state transmission and inter-state trading in electricity
- ▶ SERCs grant license for intra-state transmission and intra-state trading and distribution
- ▶ Generation is delicensed in India





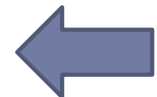
# Market Development



- Enabling Framework : Non-discriminatory Open Access
- Framework for National Power Market
- Power Trading
- Large Number of Licensed Traders
- Short Term markets – Multiple Buyers & SellerS

## Multiplicity of Players

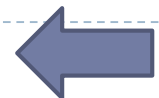
- 600+ generators
- 30+ Transmission licensees
- 70+ Distribution Utilities
- 2 Power Exchanges
- 40 Trading Licensees
- 1 NLDC, 5 RLDCs, All State SLDCs (system operators)



# **Sustainable Development Demand Side Management & Energy Efficiency**

---

- ▶ Regulators induce efficiency in operation through tariff framework
- ▶ Model DSM Regulations
- ▶ Bureau of Energy Efficiency driving energy efficiency measures in the country.



# Consumer Focus



---

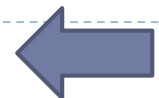
## ▶ Regulatory Commissions

- Set and monitor Standards of Performance of Licensees.
- Licensee to pay compensation to consumer for failure to comply with the standards.
- Induce efficiency through tariff interventions

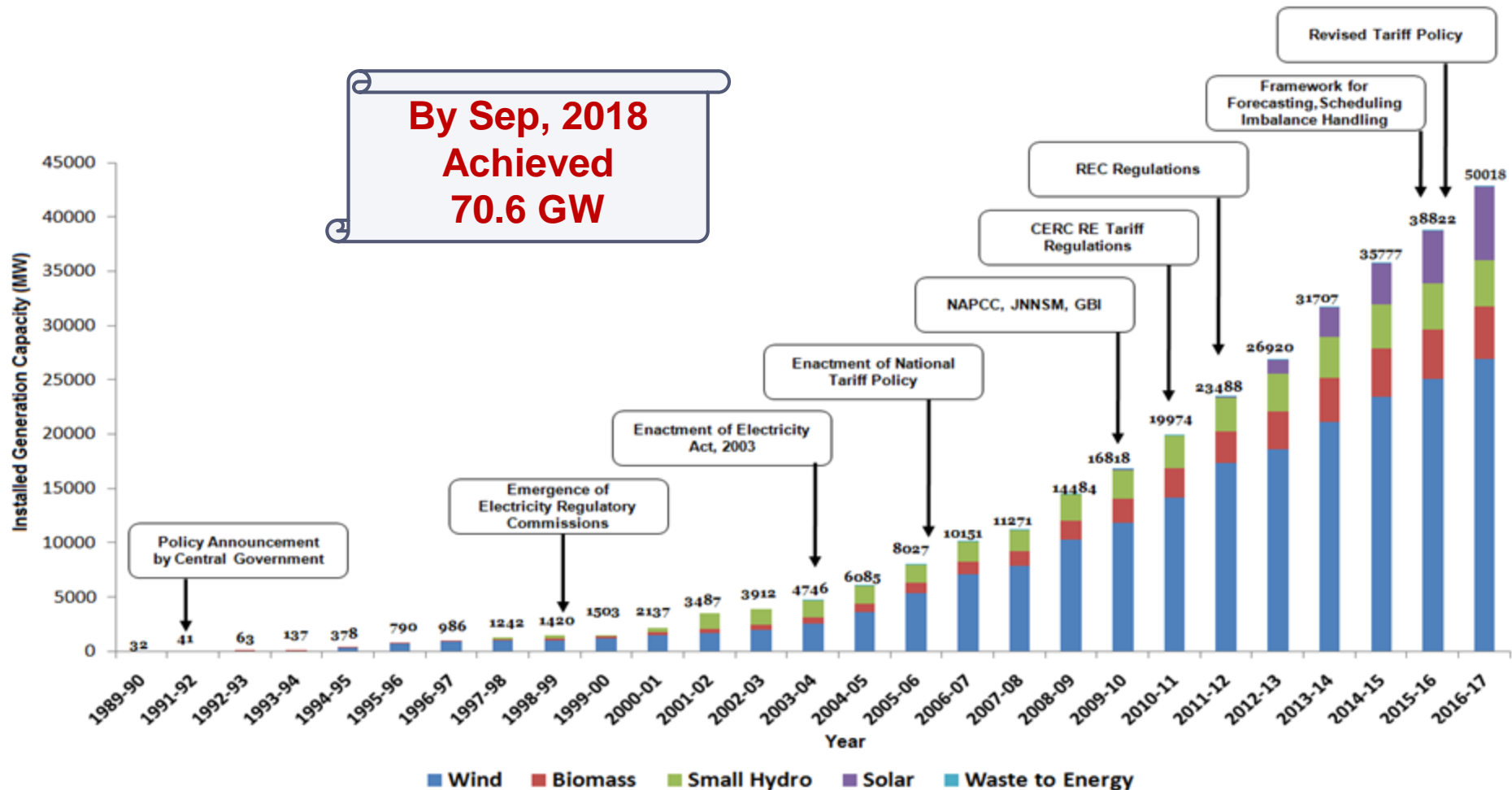


# Sustainable Development Renewable – Regulatory Intervention

- ▶ Preferential Tariff
- ▶ Renewable Purchase Obligation
- ▶ Facilitative framework for grid connectivity
- ▶ Renewable Energy Certificate (REC) market
  - To boost market development in renewable.



# Growth of Generation using RE Sources



initiatives

