

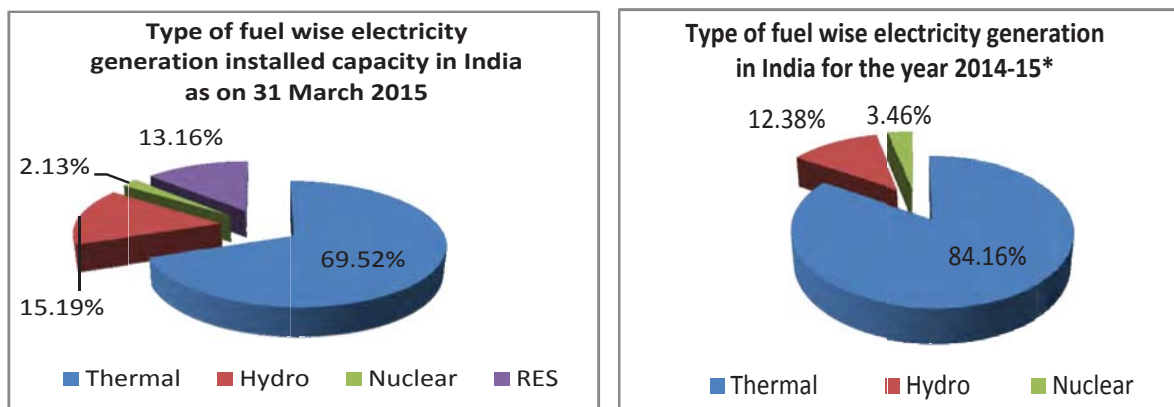
## CHAPTER – I

### Introduction

#### 1.1 Power sector Scenario in India and role of hydro power generators

Hydro power is a renewable and environment friendly source of energy. As hydro power stations have the inherent ability for instantaneous operations, they are more responsive than most other energy sources, for meeting peak demand and improving reliability of the power system.

Against the ideal energy mix<sup>1</sup> of 60 per cent thermal and 40 per cent hydro required for optimal utilisation of installed capacity, the share of hydro installed capacity and hydro generation vis-à-vis total installed capacity and total generation in the Country was 15.19 per cent and 12.38 per cent respectively, as on 31 March 2015. NHPC Limited (NHPC), SJVN Limited (SJVN), THDC India Limited (THDC) and NHDC Limited (NHDC<sup>2</sup>), are the major hydro electricity generators having 23.72 per cent (March 2015) of total hydro power installed capacity in the Country.



\* Data of electricity generation from renewable sources is not available as the same is not maintained by CEA

#### 1.2 Profile of hydro power sector CPSEs

NHPC, SJVN, THDC and NHDC are important Central Public Sector Enterprises (CPSEs) in hydro power sector. Profile of these CPSEs as on 31 March 2015 is in Table 1.1.

<sup>1</sup> As per Annual Report of MoP for 2001-02.

<sup>2</sup> NHDC Limited is a 51:49 Joint Venture company of NHPC Limited and Government of Madhya Pradesh.

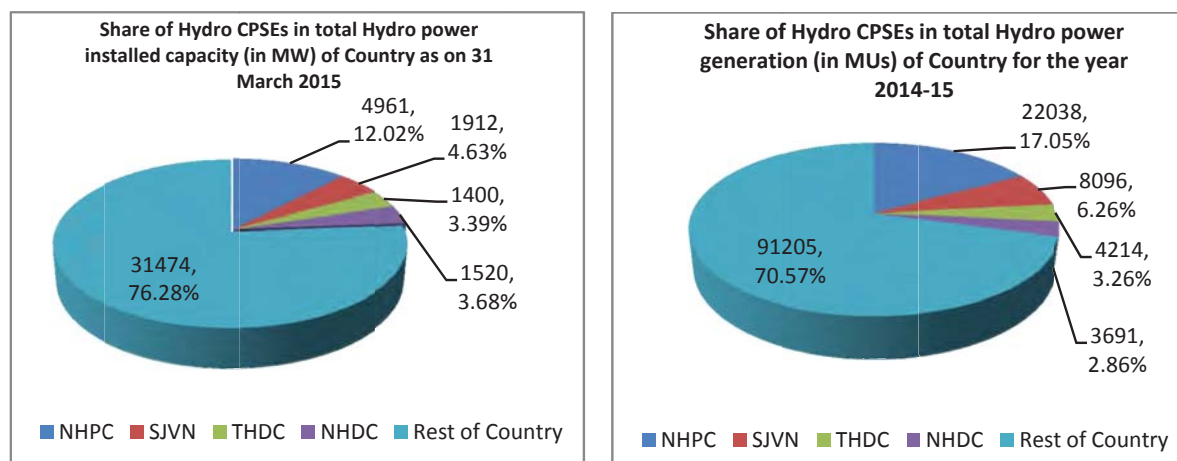
Table 1.1

Profile of CPSEs selected for performance audit

Particulars/Name of the Company	NHPC	SJVN	THDC	NHDC
Month/Year of incorporation	November 1975	May 1988	July 1988	August 2000
Location of power stations	Himachal Pradesh, Jammu & Kashmir, Uttarakhand, West Bengal, Sikkim and Manipur	Himachal Pradesh	Uttarakhand	Madhya Pradesh
Installed power generating capacity as on 31 March 2015	4961.20 MW	1912 MW	1400 MW	1520 MW
No. of power generating plants	18	2 <sup>3</sup>	2	2
Per cent of share of Central/ State Government to total equity as on 31 March 2015	Central: 85.96 (Balance public, FIs, etc.)	Central: 64.46 State: 25.51 (Balance public, FIs, etc.)	Central: 73.51 State: 26.49	NHPC: 51.08 State: 48.92

1.3 Contribution of hydro power CPSEs

As on 31 March 2015, share of NHPC, SJVN, THDC and NHDC in country's total installed hydro power generation capacity and total hydro power generation (central, state and private sector) for the year 2014-15 were as under:



Details of hydropower installed capacity and hydro power generation in the country as a whole and in each of the CPSEs selected for performance audit during six years ended 31 March 2015 are given in *Annexure 1.1*.

<sup>3</sup> Includes Rampur Power Station which was put under commercial operation between May and December 2014

### 1.4 Financial position of CPSEs

Financial position and working results of the four CPSEs during six years ended 31 March 2015 are depicted in Table 1.2.

**Table 1.2**  
**Year-wise financial position and performance of CPSEs during 2009-2015**

(₹ in crore)

Particulars	Financial year					
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
<b>NHPC</b>						
Paid up capital	12300.74	12300.74	12300.74	12300.74	11070.67	11070.67
Reserves and Surplus	10972.45	12279.94	14052.79	15539.76	14996.98	17215.72
Total revenue	4892.09	4932.11	6790.74	6539.43	6993.99	7663.58
Net Profit	2090.50	2166.67	2771.77	2348.22	978.79	2124.47
Return on Net worth <sup>4</sup> (%)	8.98	8.81	10.52	8.43	3.75	7.51
<b>SJVN</b>						
Paid up capital	4108.81	4136.63	4136.63	4136.63	4136.63	4136.63
Reserves and Surplus	2528.25	3068.89	3685.65	4273.38	4913.72	6066.41
Total revenue	1908.73	1955.82	2136.79	1916.62	2110.72	3261.10
Net Profit	972.74	912.13	1068.68	1052.34	1114.63	1676.75
Return on Net worth (%)	14.66	12.66	13.66	12.51	12.32	16.43
<b>THDC</b>						
Paid up capital	3297.58	3297.58	3297.58	3443.09	3473.09	3528.88
Reserves and Surplus	2152.98	2475.30	2864.56	3328.40	3858.15	4309.43
Total revenue	1423.91	1689.27	2055.08	2026.53	2182.38	2407.93
Net Profit	479.95	600.48	703.83	531.38	585.32	691.15
Return on Net worth (%)	8.81	10.40	11.42	7.85	7.98	8.82
<b>NHDC</b>						
Paid up capital	1962.58	1962.58	1962.58	1962.58	1962.58	1962.58
Reserves and Surplus	1231.98	1490.49	2068.96	2575.71	2699.95	3166.09
Total revenue	1005.93	1025.75	1450.51	1338.19	2115.43	1548.85
Net Profit	212.30	304.13	646.90	575.64	1063.63	766.46
Return on Net worth (%)	6.64	8.80	16.04	12.68	22.81	14.94

<sup>4</sup> Net Profit as a per cent of paid up capital plus Reserve & Surplus