

Hydro Power Stations

4303. SHRI B.L. SHANKAR :
SHRI S.D.N.R. WADIYAR :

Will the PRIME MINISTER be pleased to state :

(a) the number of Hydro Power Stations have been identified by CEA for renovation, modernisation and uprating to generate additional capacity of power;

(b) the details and estimated cost thereon, State-wise and Project-wise;

(c) whether some hydro-electric Power projects have been set up in Karnataka during the Eighth Five Year Plan; and

(d) if so, the installed capacity of each project?

THE MINISTER OF STATE IN THE MINISTRY OF POWER AND MINISTER OF STATE IN THE MINISTRY OF NON-CONVENTIONAL ENERGY SOURCES (DR. S. VENUGOPALACHARI) : (a) 55 Hydro Electric Schemes covering 211 units have been identified by Central Electricity Authority for renovation, modernisation and uprating to generate additional capacity of power.

(b) The details and estimated cost thereon, state-wise and project-wise is given in the statement enclosed.

(c) and (d). The details of Hydro-Electric Projects set up/commissioned in Karnataka during the Eighth Five Year Plan are given below :

S.No.	Name of Project	Installed Capacity (MW)
1.	Kalindi-II	3x40 + 3x50* = 270 MW
2.	Mallapur	2x4.5 = 9 MW
3.	Varahi (Mani Dam)	2x4.5 = 9 MW
4.	Shivpur (Pvt.)	2x9 = 18 MW
5.	Ghatprabha Unit-2	1x16 = 16 MW

* Of this, only 50 MW of generating capacity is now expected to be commissioned during the Eighth Five Year Plan, i.e. by March, 1997.

STATEMENT

Details of Estimated cost, project-wise

S.No.	Project Year of commission Make	Installed Capacity MW	Estimated cost Rs. Crs.
1	2	3	4
ANDHRA PRADESH			
1.	Machkund ** Stage-I, 1955-56 M. Smith, USA (T) W. House, USA (G) Stage-II, 1959 Voith, W.G. (T) BBL, Switzerland (G)	3x17 +	89.11

1	2	3	4
2.	Nizam Sagar ** 1956 E.E., UK (T) & (G) (Unit 3 disposed off)	2x5	8.00
3.	Lower Sileru \$ 1976-78 LMW, USSR (T) Electrocilla, USSR (G) BHEL (U3, 4) (G)	4x115	13.35
4.	Srisaillam \$ 1982-87 BHEL (T) & (G)	7x110	16.32
BIHAR			
5.	Subernrekha ** 1977-80 BHEL (T) & (G)	2x65	16.20
GUJARAT			
6.	Ukai (#1 & 3) \$ 1974-76 BHEL (T) & (G)	4x75	20.17
HIMACHAL PRADESH			
7.	Bassi ** 1970-91 BHEL (T) & (G)	4x15	5.35
8.	Giri \$ 1978 BHEL (T) & (G)	2x30	9.85
JAMMU & KASHMIR			
9.	Chenani @@ 1971-75 Ganz Movag, (T) & (G) Hungary	5x4.66	11.00
10.	Lower Jhelum @@ 1978-79 BHEL (T) & (G)	3x35	20.00
11.	Sumbal Sindh @@ 1973-74 BHEL (T) & (G)	2x11.3	11.00
KARNATAKA			
12.	Mahatma Gandhi # 1947-52 Boving, UK (T) British Thompson (G) UK, (12 MW Units) GEC, USA (18 MW Units)	4x12 + 4x18	33.90
13.	Nagjhari (Unit 2) @ 1979-84 BHEL (T) & (G)	6x135	11.97

1	2	3	4
14.	Sharavathy \$ (U 1 to 8) U 1 & 2 1964-65 U 3 to 8 1967-71 Neyrpic, (U1-8) (T) France Hitachi, (U 1&2) (G) Japan. GEC, USA (U. 3-8) (G)	8x89.1	65.00
15.	Sharavathy \$ (U 9&10) 1976-77 BHEL (T) & (G)	2x89.1	17.96
16.	Shivasamudram @ 1919-38 Boving, U.K. (T) (U 1 to 7, 9 & 10) Escher Wyss (U-8) (T) Switzerland GEC, USA (U 1 to 10) (G)	6x3+ 4x6	8.00
KERALA			
17.	Neriamangalam ** 1961-63 Charmilles, Geneva (T) ABB, Switzerland (G)	3x15	31.92
18.	Poringalkuthu ** 1957-60 Charmilles, Geneva (T) E.E. U.K. (G)	4x8	9.55
19.	Sabarigiri \$\$ 1966 Allis Chalmers, USA (T) & (G)	6x50	163.34
20.	Sholayar ** 1966-68 Litostroj, Yugo (T) Rade Koncar, Yugo (G)	3x18	7.58
MAHARASHTRA			
21.	Koyna-I & II \$ Stage I 1962-63 Neyrpic, France (T) AEG, W. Germany (G) Stage II 1966-67 Charmilles, Geneva (T) AEG, Germany (G)	4x65+ 4x75	38.53
22.	Koyna-III ** 1975-78 BHEL (T) & (G)	4x80	0.80
MEGHALAYA			
23.	Kyredemkulai ** 1979 BHEL	2x30 (T) & (G)	7.40

1	2	3	4
24.	Umiyam I & II \$\$ 1965-79 Toshiba, Japan (T) & (G)	4x9+2x9	140.19
ORISSA			
25.	Hirakud-I (U 1&2) \$ 1956-57 E.E., UK (T) & (G)	2x37.5	90.26
26.	Hirakud-I (U 3&4) ** 1956-57 Voith, W. Germany (T) Siemens, W. Germany (G)	2x24	54.30
27.	Hirakud-I (U 5&6) * 1962-63 Hitachi, Japan (T) & (G)	2x37.5	106.77
28.	Hirakud-I ** Switchyard equipments	-	9.85
29.	Hirakud-II \$ 1962-64 Voith (U. 1&2) (T) W. Germany LMW, USSR (U 3) (T) Hitachi (U1&2) (G) Japan. Electrocilla (U3) (G) USSR	3x24	50
PUNJAB			
30.	UBDC-I @ 1971-73 AEI, UK (U 1) (T) & (G) BHEL (U 2&3) (T) & (G)	3x15	11
TAMILNADU			
31.	Kadamparai \$ 1987-88 Boving, UK (U1) (T) GEC, UK (U1) (G) BHEL (U 2, 3&4) (T) & (G)	4x100	23.17
32.	Kundah-III (U 1&2) @ 1965-78 Vancouver (U 1&2) (T) Dominion (U3) (T) W. House (U 1&2) (G) CGA (U 3) (G) T&G of units 1, 2&3, Canada	3x60	5.45
33.	Mettur Dam ** 1937-48 E.E., UK (T) Metro Vickers, UK (G)	4x10	41.50
34.	Moyar @ 1952-53 Boving, UK (T) Vickers, UK (G)	3x12	1.62

1	2	3	4
35.	Papanasam ** 1944-51 E.E., UK (T) British Thompson (G) UK	4x5.8	40.23
36.	Pykara \$ 1932-54 Escher Wyss, Switz. (T) Metro Vickers, UK (G)	3x6.65+ 2x11+2x14	17.06
37.	Sholayar-I @ 1971 Litostroj, Yugo. (T) Rade Koncar, Yugo (G)	2x35	1.40
TRIPURA			
38.	Gumti @ 1976-84 BHEL, (Y) & (G)	3x5	17.50
UTTAR PRADESH			
39.	Chilla ** 1980-81 BHEL (T) & (G)	4x36	4.26
40.	Khatima ** 1955-56 E.E., UK (T) & (G)	3x13.8	1.64
41.	Obra ** 1970-71 BHEL (T) & (G)	3x33	1.53
42.	Pathri (U3) ** 1955 Voith, W. Germany (T) Siemens, W. Germany (G)	3x6.8	3.80
43.	Ramganga ** 1975-77 BHEL (T) & (G)	3x66	1.60
44.	Rihand @ 1962-66 E.E., UK (T) & (G)	6x50	1.43
45.	Tiloth ** 1984 BHEL (T) & (G)	3x30	8.02
WEST BENGAL			
46.	Jaldhaka-I @@ 1967-83 Stage-I Litostroj, Yugo (T) Rade Koncar, Yugo (G)	3x9	12.60
CENTRAL SECTOR			
BBMB			
47.	Bhakra RB \$ 1966-68 LMW, USSR (T) Kirov, USSR (G)	5x132	77.50

1	2	3	4
48.	Dehar (U 2,3&4) \$ 1977-83 BHEL (T) & (G)	6x165	46
49.	Ganguwal (U 2) ** 1955 W. House, Canada (T) & (G)	2x24.2+ 1x29.25	18.90
50.	Kotla (U 3) ** 1966 W. House, Canada (T) & (G)	2x24.2+ 1x29.25	18.90
, DVC			
51.	Maithon ** 1957-58 Neyrpic, France (T) Siemens, W. Germany (G)	3x20	17.34
52.	Panchet ** 1959 NOHAB, (T) AEG, W. Germany (G)	1x40	2.17
NHPC			
53.	Baira Siul @ 1980-81 BHEL (T) & (G)	3x60	25.98
54.	Loktak @@ 1983 BHEL (T) & (G)	3x35	24.40
NEEPCO			
55.	Khandong (U 1) @ 1984 BHEL (T) & (G)	2x25	0.62
TOTAL		9653	1493
Restoration		398 MW	
Upgrading		570 MW	
Prevention of Capacity Loss		1563 MW	
		2531 MW	

@ - Completed

\$\$ - Under Examination

\$ - Ongoing-CEA approved

• - DPR to be received

** - Execution not in progress

@@ - Ongoing-State Govt. approved.

Note : Units commissioned 30 years ago or earlier are taken under prevention of capacity loss.