

Hydro Power Development in Haryana

Identified Hydro Power Potential and its status of Development:

|                                                                                                                               | Nos. | Capacity (MW) | Percentage (%) |
|-------------------------------------------------------------------------------------------------------------------------------|------|---------------|----------------|
| Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW)# | 1    | 64            | 100            |

#Western Yamuna Canal project (64 MW) has been developed in 4 stages each having Installed Capacity below 25 MW.

Hydro Power Development in Himachal Pradesh

| Identified Hydro Power Potential and its status of Development:                                                                 |                                                           |                                                                               |      |               |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------|------|---------------|
|                                                                                                                                 |                                                           |                                                                               | Nos. | Capacity (MW) |
| Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects<br>(Projects having capacity above 25 MW) |                                                           |                                                                               | 68   | 18540         |
| I                                                                                                                               | Projects in operation                                     |                                                                               | 26   | 9809          |
| II                                                                                                                              | Projects under construction                               |                                                                               | 8    | 1885          |
| III                                                                                                                             | Projects allotted by States for development               |                                                                               |      |               |
|                                                                                                                                 | (i)                                                       | Projects cleared by CEA and yet to be taken up for construction               | 4    | 696           |
|                                                                                                                                 | (ii)                                                      | Projects under Examination in CEA                                             | 2    | 573           |
|                                                                                                                                 | (iii)                                                     | Projects returned to project authorities                                      | 5    | 1746          |
|                                                                                                                                 | (iv)                                                      | Projects under S&I                                                            | 3    | 1032          |
|                                                                                                                                 | (v)                                                       | Projects allotted for development on which S&I is held up/ yet to be taken up | 5    | 1630          |
| IV                                                                                                                              | Projects dropped due to Basin studies/ Other reasons      |                                                                               | 7    | 689           |
| V                                                                                                                               | Projects yet to be allotted by the State for development* |                                                                               | 25   | 2000          |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the Projects, addition/deletion of the projects and merger of two projects into one etc.

1. H.E. Projects in Operation:

| S. NO. | UTILITY/STATIONS                    | NO. OF STNS. | NO. OF UNITS | NO. OF UNITS X CAPACITY (MW) | RIVER/ BASIN*                                | DISTRICT  | CAPACITY (MW) | YEAR OF COMMISSIONING |
|--------|-------------------------------------|--------------|--------------|------------------------------|----------------------------------------------|-----------|---------------|-----------------------|
|        | CENTRAL SECTOR                      |              |              |                              |                                              |           |               |                       |
|        | BBMB                                |              |              |                              |                                              |           |               |                       |
| 1      | BHAKRA LEFT (BHAKRA NANGAL)         | 1            | 5            | (2X108+ 3x126)               | SUTLEJ                                       | BILASPUR  | 594           | 1960-1961             |
| 2      | BHAKRA RIGHT (BHAKRA NANGAL)        | 1            | 5            | (5X157)                      | SUTLEJ                                       | BILASPUR  | 785           | 1966-1968             |
| 3      | DEHAR (PANDOH DIVERSION)            | 1            | 6            | (6X165)                      | BEAS                                         | MANDI     | 990           | 1977-1983             |
| 4      | PONG (PONG DAM)                     | 1            | 6            | (6X66)                       | BEAS                                         | KANGRA    | 396           | 1978-1983             |
|        | SUB-TOTAL BBMB                      | 4            | 22           |                              |                                              |           | 2765          |                       |
|        | NHPC                                |              |              |                              |                                              |           |               |                       |
| 5      | BAIRA SIUL                          | 1            | 3            | (3X60)                       | RAVI                                         | CHAMBA    | 180           | 1980-1981             |
| 6      | CHAMERA- I (CHAMERA SHERPUR)        | 1            | 3            | (3X180)                      | RAVI                                         | DALHOUSIE | 540           | 1994                  |
| 7      | CHAMERA- II (GWAR)                  | 1            | 3            | (3X100)                      | RAVI                                         | CHAMBA    | 300           | 2003-2004             |
| 8      | CHAMERA- III (HIBRA)                | 1            | 3            | (3X77)                       | RAVI                                         | CHAMBA    | 231           | 2012                  |
| 9      | PARBATI-III [SAINJ (PARBATI - III)] | 1            | 4            | (4X130)                      | SAINJ                                        | KULLU     | 520           | 2014                  |
|        | SUB-TOTAL NHPC                      | 5            | 16           |                              |                                              |           | 1771          |                       |
|        | SJVNL                               |              |              |                              |                                              |           |               |                       |
| 10     | NATHPA JHAKRI                       | 1            | 6            | (6X250)                      | SATLUJ                                       | SHIMLA    | 1500          | 2003-2004             |
| 11     | RAMPUR (RAMPUR NANJAH)              | 1            | 6            | (6X68.67)                    | SATLUJ                                       | SHIMLA    | 412.02        | 2014-15               |
|        | SUB-TOTAL SJVNL                     | 2            | 12           |                              |                                              |           | 1912.02       |                       |
|        | NTPC LTD.                           |              |              |                              |                                              |           |               |                       |
| 12     | KOLDAM                              | 1            | 4            | (4X200)                      | SATLUJ                                       | BILASPUR  | 800           | 2015                  |
|        | SUB-TOTAL NTPC LTD.                 | 1            | 4            |                              |                                              |           | 800           |                       |
|        | TOTAL CENTRAL SECTOR                | 12           | 54           |                              |                                              |           | 7248.02       |                       |
|        | STATE SECTOR                        |              |              |                              |                                              |           |               |                       |
|        | HPSEBL                              |              |              |                              |                                              |           |               |                       |
| 13     | BASSI                               | 1            | 4            | (4X16.5)                     | BEAS                                         | MANDI     | 66            | 1970-1981             |
| 14     | GIRI BATA *                         | 1            | 2            | (2X30)                       | YAMUNA                                       | SIRMAUR   | 60            | 1978                  |
| 15     | LARJI                               | 1            | 3            | (3X42)                       | Beas River & its tributaries Sainj & Tirthan | KULLU     | 126           | 2006                  |
| 16     | SANJAY [BHABA (SANJAY)]             | 1            | 3            | (3X40)                       | SATLUJ                                       | KINNAUR   | 120           | 1989                  |
|        | TOTAL HPSEBL                        | 4            | 12           |                              |                                              |           | 372           |                       |
|        | HPPCL                               |              |              |                              |                                              |           |               |                       |
| 17     | INTEGRATED KASHANG                  | 1            | 3            | (3X65)                       | SATLUJ                                       | KINNAUR   | 195           | 2016-17               |
| 18     | SAINJ (SAINJ-I)                     | 1            | 2            | (2X50)                       | SAINJ                                        | KULLU     | 100           | 2017                  |
|        | TOTAL HPPCL                         | 2            | 5            |                              |                                              |           | 295           |                       |

| S. NO. | UTILITY/STATIONS                           | NO. OF STNS. | NO. OF UNITS | NO. OF UNITS X CAPACITY (MW) | RIVER/ /BASIN*        | DISTRICT | CAPACITY (MW) | YEAR OF COMMISSIONING |
|--------|--------------------------------------------|--------------|--------------|------------------------------|-----------------------|----------|---------------|-----------------------|
|        | PSPCL                                      |              |              |                              |                       |          |               |                       |
| 19     | SHANAN                                     | 1            | 5            | (1X50)+ (4X15)               | UHL & Lamba Dug River | MANDI    | 110           | 1932-1982             |
|        | TOTAL PSPCL                                | 1            | 5            |                              |                       |          | 110           |                       |
|        | TOTAL STATE SECTOR                         | 7            | 22           |                              |                       |          | 777           |                       |
|        | PRIVATE SECTOR                             |              |              |                              |                       |          |               |                       |
|        | MPCL                                       |              |              |                              |                       |          |               |                       |
| 20     | MALANA                                     | 1            | 2            | (2X43)                       | MALANA                | KULLU    | 86            | 2001                  |
|        | TOTAL MPCL                                 | 1            | 2            |                              |                       |          | 86            |                       |
|        | GBHPPL                                     |              |              |                              |                       |          |               |                       |
| 21     | BUDHIL                                     | 1            | 2            | (2X35)                       | RAVI                  | CHAMBA   | 70            | 2012                  |
|        | TOTAL GBHPPL                               | 1            | 2            |                              |                       |          | 70            |                       |
|        | EPPL                                       |              |              |                              |                       |          |               |                       |
| 22     | MALANA-II                                  | 1            | 2            | (2X50)                       | MALANA                | KULLU    | 100           | 2011-12               |
|        | TOTAL EPPL                                 | 1            | 2            |                              |                       |          | 100           |                       |
|        | IA ENERGY                                  |              |              |                              |                       |          |               |                       |
| 23     | CHANJU-I                                   | 1            | 3            | (3X12)                       | RAVI                  | CHAMBA   | 36            | 2017                  |
|        | TOTAL IA ENERGY                            | 1            | 3            |                              |                       |          | 36            |                       |
| 24     | ALLAIN DUHANGAN (ALLAIN NALLAH & DUHANGAN) | 1            | 2            | (2X96)                       | ALLAIN NALLAH         |          | 192           | 2010-11               |
|        | TOTAL ADHPL                                | 1            | 2            |                              |                       |          | 192           |                       |
|        | JSWHEL                                     |              |              |                              |                       |          |               |                       |
| 25     | BASPA (BASPA-II)                           | 1            | 3            | (3X100)                      | BASPA                 | KINNAUR  | 300           | 2003                  |
| 26     | KARCHAM WANGTOO                            | 1            | 4            | (4X250)                      | SATLAJ                | KINNAUR  | 1000          | 2011-12               |
|        | TOTAL JSWHEL                               | 2            | 7            |                              |                       |          | 1300          |                       |
|        | TOTAL PVT                                  | 7            | 18           |                              |                       |          | 1784          |                       |
|        | TOTAL HP                                   | 26           | 94           |                              |                       |          | 9809.02       |                       |

\* ALL PROJECTS EXCEPT GIRI BATA (GANGA BASIN) ARE IN INDUS BASIN

2. H.E. Projects Under Construction:

| Sl. No. | Name of Project               | Agency                                | District | River               | Basin | I.C. (MW) | Likely Commissioning        |
|---------|-------------------------------|---------------------------------------|----------|---------------------|-------|-----------|-----------------------------|
| 1       | Parbati St--II (Parbati -II)  | NHPC                                  | Kullu    | Parbati/Beas        | Indus | 800       | 2021-22 (Dec.'21)           |
| 2       | Uhl- III                      | Beas Valley Power Corp. Ltd. (BVPC)   | Mandi    | Uhl/Beas            | Indus | 100       | 2019-20 (Mar.'20)           |
| 3       | Sorang                        | Himachal Sorang Power                 | Kinnaur  | Sorang/Satluj       | Indus | 100       | 2019-20 (Mar.'20) Critical  |
| 4       | Tidong-I                      | M/s NSL Tidong                        | Kinnaur  | Tidong/Satluj       | Indus | 100       | 2021-22 (Oct.'21)           |
| 5       | Shontong Karcham              | HPPCL                                 | Kinnaur  | Satluj              | Indus | 450       | 2023-25 (Apr.'24)           |
| 6       | Sawara Kuddu (Pangula Sanail) | HPPCL                                 | Shimla   | Pabbar/Tons/ Yamuna | Ganga | 111       | 2019-20 (Mar.'20)           |
| 7       | Tangu Romai-I                 | Tangu Romai Power Generation          | Shimla   | Pabbar/Tons/ Yamuna | Ganga | 44        | 2021-22*                    |
| 8       | Bajoli Holi                   | GMR Bajoli Holi Hydro Power Pvt. Ltd. | Chamba   | Ravi                | Indus | 180       | 2019-20 (March'20) Critical |
|         | Total                         |                                       |          |                     |       | 1885      |                             |

\* Subject to re-start of works

**3. H.E. Projects Cleared/Appraised by CEA:**

| Sl. No. | Name of Project        | Agency                                        | River                | District       | I.C. (MW)  | Date of CEA Concurrence                   | Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------|------------------------|-----------------------------------------------|----------------------|----------------|------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Chhatru                | DCM Shriram Infrastructure Company Ltd. (DSC) | Chenab /Chandra      | Lahul & Spiti  | 126        | 15.1.2015                                 | EC recommended by EAC on 24.02.15, Letter will be issued after FC-I. FC-I & FC-II yet to be obtained. Land acquisition under process. <b>As per MoEF&amp;CC, developer is not responding.</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2       | Miyar (Udaipur)        | Miyar Hydro Power Company Ltd. (MHPCL)        | Chenab /Miyar Nallah | Lahul & Spiti  | 120        | 07.02.2013                                | EC accorded on 30.07.2012. FC-I accorded on 27.07.2012. For FC-II, Compliance Report is awaited from State Govt. Financial closure is in process.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 3       | Kutehr (Machhetri)     | JSW Energy (Kutehr) Power Ltd. (JSWEPL)       | Ravi                 | Chamba         | 240        | 31.08.10<br>Revalidation up to 03.03.2019 | EC accorded on 05.07.2011. FC-I accorded on 22.06.2011 & FC-II accorded on 19.02.2013. Validity of earlier bids has expired due to delay in obtaining FC-II and acquisition of Pvt. Land. Award of main works is almost finalized but contract is not signed in absence of PPA. Registry of 6.46 ha land out of 7.82 ha land completed. Award of balance land of 17 Bigha announced by LAO on 30th Sept and Rs. 246 lakhs deposited on 06.10.2015. LoI issued to L-I bidder. Financial closure and financial tie-up is under process. Construction work of 33/11 KV (3 MVA) electrical sub-station for construction power is almost completed. R&R plan submitted to HP Govt. for approval. PPA is under progress. |
| 4       | Luhri Stage-I (Luhri ) | Satluj Jal Vidyut Nigam Ltd. (SJVNL)          | Satluj               | Shimla & Kullu | 210        | 01.05.18                                  | EC was recommended in EAC meeting held on 27.08.2018. EC is kept pending by MoEF&CC and linking it with outcome of cumulative Impact Assessment studies of Satluj Basin. Cumulative EIA study report of Satluj basin was presented in EAC meeting held on 28.01.19 and EAC suggested additional points for incorporation in the report. All requisite data submitted to ICFRE, Dehradun on 14.10.2019. Final Report of cumulative EIA study of Satluj basin put up in EAC meeting held on 5.12.2019<br>FC-I accorded by MoEF&CC on 19.09.18 and FC-II accorded on 28.03.2019.                                                                                                                                      |
|         | <b>Total</b>           |                                               |                      |                | <b>696</b> |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

**Note: All projects are in Indus basin**

4. H.E. Projectss Under Examination/Scrutiny in CEA:

| Sl. No. | Name of Project | Sector  | I.C. (MW) | Agency | Month of receipt |
|---------|-----------------|---------|-----------|--------|------------------|
| 1       | Thana Plaun     | State   | 191       | HPPCL  | 18-Feb           |
| 2       | Sunni Dam       | Central | 382       | SJVNL  | 01-Sep           |
|         | Total           |         | 573       |        |                  |

5. H.E. Projects Returned to Project Authorities for re-submission after compliance of observations:

| Sl. No. | Name of Project       |          | I.C. (MW) | Reason of Return                                                                                                   |
|---------|-----------------------|----------|-----------|--------------------------------------------------------------------------------------------------------------------|
|         | Ravi Basin            | Agency   |           |                                                                                                                    |
| 1       | Bara Banghal (Chulan) | MPCL     | 200       | DPR returned due to inadequate geological investigations, environmental & wild life issues, review of I.C. & Cost. |
| 2       | Reoli Dugli (Raoli)   | L&T HHPL | 430       |                                                                                                                    |
| 3       | Seli                  | SHPCL    | 400       |                                                                                                                    |
| 4       | Dugar                 | DHPL     | 449       |                                                                                                                    |
| 5       | Sach Khas             | L&T HHPL | 267       |                                                                                                                    |
|         | Total                 |          | 1746      |                                                                                                                    |

**6. H.E. Projects Under Survey & Investigation:**

| Sl. No. | Name of Project      | Basin*/River | Agency for DPR          | I.C. (MW)   | Date of MOA                                                             | Target date of Preparation of DPR |
|---------|----------------------|--------------|-------------------------|-------------|-------------------------------------------------------------------------|-----------------------------------|
| 1       | Tidong-II            | Tidong       | Tidong Hydro Power Ltd. | 60          | 20.1.2012                                                               |                                   |
| 2       | Luhri St.-II (Luhri) | Satluj       | SJVNL                   | 172         | Project allocated to SJVN on standalone basis. MoA yet to be finalized. | Feb-20                            |
| 3       | Jangi Thopan Powari  | Satluj       | SJVNL                   | 800         |                                                                         |                                   |
|         | <b>Total</b>         |              |                         | <b>1032</b> |                                                                         |                                   |

\* All projects are in Indus Basin

**7. H.E. Projects allotted for development on which Survey & Investigation is held up/ yet to be taken up:**

| Sl. No. | Project                    | I.C.        | Agency              | Date of Allotment/ MoA | Status                                                                                                                                                                                                                                                                                                                             |  |  |
|---------|----------------------------|-------------|---------------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
|         |                            | (MW)        |                     |                        |                                                                                                                                                                                                                                                                                                                                    |  |  |
|         | <b>Satluj Basin</b>        |             |                     |                        |                                                                                                                                                                                                                                                                                                                                    |  |  |
| 1       | Khab (Khab-I & Khab-II)    | 636         | HPPCL               | 22.09.2009             | Govt. of HP has confirmed the TWL of Upstream project i.e. Yangthang Khab and FRL of Downstream project Jhangi Thopan vide letter dated 15.06.2017. Accordingly a revised PFR for Khab HEP is being prepared considering the Project to be single stage RoR and considering the virgin stretch of river as per MoEF&CC guidelines. |  |  |
| 2       | Sumte Kothang (Thibda)     | 130         | Reliance Power Ltd. | 31.12.2012             | S&I held up due to opposition from locals and NGOs.<br><b>Project stands terminated on 28.07.2017.</b>                                                                                                                                                                                                                             |  |  |
| 3       | Lara Sumta                 | 104         | Reliance Power Ltd. | 31.12.2012             | S&I held up due to opposition from locals and NGOs.<br><b>Project stands terminated on 28.07.2017.</b>                                                                                                                                                                                                                             |  |  |
|         | <b>Sub Total</b>           | <b>870</b>  |                     |                        |                                                                                                                                                                                                                                                                                                                                    |  |  |
|         | <b>Chenab Basin</b>        |             |                     |                        |                                                                                                                                                                                                                                                                                                                                    |  |  |
| 1       | Gyspa Dam (Gyspa)          | 300         | HPPCL               | 22.09.2009             | S&I held up due to local agitation                                                                                                                                                                                                                                                                                                 |  |  |
|         | <b>Sub Total</b>           | <b>300</b>  |                     |                        |                                                                                                                                                                                                                                                                                                                                    |  |  |
|         | <b>Beas Basin</b>          |             |                     |                        |                                                                                                                                                                                                                                                                                                                                    |  |  |
| 1       | <b>Nakhtan (Parbati-I)</b> | 460         | HPPCL               | 22.09.2009             | Request of HPPCL for monitoring of Nakthan HEP to be put on hold received on 31.12.18 on account of CEIA study of Beas Basin & Hearing of court case on regular basis.                                                                                                                                                             |  |  |
|         | <b>Sub-Total</b>           | <b>460</b>  |                     |                        |                                                                                                                                                                                                                                                                                                                                    |  |  |
|         | <b>Total</b>               | <b>1630</b> |                     |                        |                                                                                                                                                                                                                                                                                                                                    |  |  |

**8. Projects dropped due to Basin studies/ Other reasons:**

| Sl. No. | Project          | I.C. (MW)  | River  | Basin | Remarks                                                                                                                                            |
|---------|------------------|------------|--------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Chango Yangthang | 180        | Spiti  | Indus | Project has been surrendered by developer vide letter dated 11.07.2017 as the project became unviable due to increased e-flow, local protests etc. |
| 2       | Chiroti Saichu   | 26         | Chenab | Indus | Projects dropped after final report of basin studies on cumulative impact                                                                          |
| 3       | Saichu           | 58         | Chenab | Indus |                                                                                                                                                    |
| 4       | Saichu Sach Khas | 117        | Chenab | Indus |                                                                                                                                                    |
| 5       | Tinget           | 145        | Chenab | Indus |                                                                                                                                                    |
| 6       | Stingiri         | 98         | Chenab | Indus |                                                                                                                                                    |
| 7       | Patam            | 65         | Chenab | Indus |                                                                                                                                                    |
|         | <b>Total</b>     | <b>689</b> |        |       |                                                                                                                                                    |

## 9. H. E. Projects yet to be allotted by the State for development

| Sl.No.    | Name of Project       | River                      | Type | I.C.(MW)    |
|-----------|-----------------------|----------------------------|------|-------------|
| 1         | Kyurik                | Spiti                      | R    | 41          |
| 2         | Ropa                  | Ropa                       | S    | 31          |
| 3         | Taiti-I               | Taiti                      | S    | 50          |
| 4         | Homte                 | Bhaba                      | R    | 60          |
| 5         | Gandharni             | Beas                       | R    | 49          |
| 6         | Gharopa               | Beas                       | R    | 85          |
| 7         | Tirthan-I             | Tirthan                    | R    | 32          |
| 8         | Tirthan-III           | Tirthan                    | R    | 26          |
| 9         | Rana Khad             | Rana Khad                  | R    | 29          |
| 10        | Tundah                | Tundah                     | R    | 34          |
| 11        | Baroti                | Siul                       | S    | 40          |
| 12        | Chhota Dara           | Chandra                    | R    | 50          |
| 13        | Khoksar               | Chandra                    | R    | 80          |
| 14        | Telling (Railing)     | Chandra                    | S    | 155         |
| 15        | Gondhala              | Chandra                    | R    | 90          |
| 16        | Jhalma                | Chenab                     | R    | 275         |
| 17        | Bardang               | Chenab                     | R    | 145         |
| 18        | Baspa-I               | Baspa                      | S    | 335         |
| 19        | Manali                | Manalasu                   | R    | 37          |
| 20        | Kulu                  | Beas                       | R    | 90          |
| 21        | Sainj Kartah-II       | Sainj                      | R    | 45          |
| 22        | Sainj-4               | Sainj                      | R    | 27          |
| 23        | Uhl                   | Uhl                        | R    | 70          |
| 24        | Uhl at Joginder Nagar | Uhl                        | R    | 90          |
| 25        | Gaj                   | Gaj Khad                   | R    | 34          |
| <b>25</b> | <b>Total</b>          | <b>25 Nos. of Projects</b> |      | <b>2000</b> |

Note: R –Run off the River & S- storage

## Hydro Power Development in Jammu and Kashmir

### Identified Hydro Power Potential and its status of Development:

|                                                                                                                                      |                                                                    |                                                                                          | Nos.      | Capacity (MW) |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|------------------------------------------------------------------------------------------|-----------|---------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW)#</b> |                                                                    |                                                                                          | 31        | 11497         |
| <b>I</b>                                                                                                                             | <b>Projects in operation</b>                                       |                                                                                          | 10        | 3360          |
| <b>II</b>                                                                                                                            | <b>Projects under construction</b>                                 |                                                                                          | 4         | 1935.5        |
| <b>III</b>                                                                                                                           | <b>Projects allotted by States for development</b>                 |                                                                                          |           |               |
|                                                                                                                                      | (i)                                                                | <b>Projects cleared by CEA and yet to be taken up for construction</b>                   | 5         | 4043          |
|                                                                                                                                      | (ii)                                                               | <b>Multi purpose Projects approved by MoWR</b>                                           | 2         | 996           |
|                                                                                                                                      | (iii)                                                              | <b>Projects under Examination in CEA</b>                                                 | 1         | 390           |
|                                                                                                                                      | (iv)                                                               | <b>Projects allotted for development on which S&amp;I is held up/ yet to be taken up</b> | 1         | 370           |
| <b>IV</b>                                                                                                                            | <b>Projects dropped as per Reconciliation Study by CEA in 2014</b> |                                                                                          | 4         | 1030          |
| <b>V</b>                                                                                                                             | <b>Projects yet to be allotted by the State for development*</b>   |                                                                                          | <b>10</b> | <b>1472</b>   |

**\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition/deletion of the projects, etc.**

# Dunadi (60 MW) has been developed below 25 MW as Ranjala Dunadi (15 MW) as per Reconciliation Study by CEA in 2014.

**1. Identified Projects during Reassessment study:**

| Sl.No.    | Name of Project | River                      | Type | I.C. (MW)    |
|-----------|-----------------|----------------------------|------|--------------|
| 1         | Shuas           | Chenab                     | R    | 505          |
| 2         | Berinaum        | Chenab                     | R    | 435          |
| 3         | Sho             | Chenab                     | R    | 215          |
| 4         | Naunut          | Chenab                     | R    | 1120         |
| 5         | Kiru            | Chenab                     | R    | 295          |
| 6         | Kwar            | Chenab                     | R    | 440          |
| 7         | Pakaldul        | Marsudar                   | R    | 765          |
| 8         | Bursar          | Marsudar                   | S    | 195          |
| 9         | Dulhasti        | Chenab                     | R    | 1120         |
| 10        | Naga            | Kal Nai                    | R    | 29           |
| 11        | Kiwa            | Kal Nai                    | R    | 37           |
| 12        | Tipri           | Kal Nai                    | R    | 36           |
| 13        | Dunadi          | Kagune Garh                | R    | 60           |
| 14        | Ratle           | Chenab                     | R    | 515          |
| 15        | Shamnot         | Chenab                     | R    | 200          |
| 16        | Baglihar        | Chenab                     | R    | 750          |
| 17        | Bichlari        | Bichlari                   | R    | 75           |
| 18        | Sawalkot        | Chenab                     | R    | 1350         |
| 19        | Salal           | Chenab                     | R    | 780          |
| 20        | Sonmarg         | Sind                       | S    | 155          |
| 21        | Upper Sindh-I   | Sind                       | R    | 65           |
| 22        | Upper Sindh-II  | Sind                       | R    | 140          |
| 23        | Gangbal         | Kankanag                   | S    | 55           |
| 24        | Ganderbal       | Sind                       | R    | 75           |
| 25        | Karalpur        | Kishan Ganga               | S    | 280          |
| 26        | Wangam          | Bonar                      | R    | 60           |
| 27        | Lower Jhelum    | Jhelam                     | R    | 170          |
| 28        | Uri             | Jhelam                     | R    | 600          |
| 29        | Chakothi        | Jhelam                     | R    | 285          |
| 30        | Chinari         | Jhelam                     | R    | 475          |
| 31        | Hatian          | Jhelam                     | R    | 215          |
| <b>31</b> | <b>Total</b>    | <b>31 Nos. of Projects</b> |      | <b>11497</b> |

Note: R –Run off the River &amp; S- storage

2. H.E. Projects in Operation:

| Sl.No. | UTILITY/STATIONS        | NO. OF STATIONS | NO. OF UNITS X CAPACITY (MW) | RIVER/BASIN* | DISTRICT        | CAPACITY (MW) | YEAR OF COMMISSIONING |
|--------|-------------------------|-----------------|------------------------------|--------------|-----------------|---------------|-----------------------|
|        | JKSPDC                  |                 |                              |              |                 |               |                       |
| 1      | BAGLIHAR                | 1               | (3X150)                      | CHENAB       | RAMBAN          | 450           | 2008                  |
| 2      | BAGLIHAR II [BAGLIHAR]  | 1               | (3X150)                      | CHENAB       | RAMBAN          | 450           | 2015                  |
| 3      | LOWER JHELUM            | 1               | (3X35)                       | JHELUM       | BARAMULLAH      | 105           | 1978-1979             |
| 4      | UPPER SINDH-II          | 1               | (3X35)                       | SINDH        | GANDERBAL       | 105           | 2001-2002             |
|        | TOTAL JKSPDC            | 4               |                              |              |                 | 1110          |                       |
|        | NHPC                    |                 |                              |              |                 |               |                       |
| 1      | DULHASTI                | 1               | (3X130)                      | CHENAB       | KISTWAR         | 390           | 2007                  |
| 2      | SALAL - I&II (SALAL)    | 1               | (6X115)                      | CHENAB       | REASI & UDAMPUR | 690           | 1987-95               |
| 3      | URI-I (URI)             | 1               | (4X120)                      | JHELUM       | BARAMULA        | 480           | 1996-1997             |
| 4      | URI-II (URI)            | 1               | (4X60)                       | JHELUM       | BARAMULA        | 240           | 2013-14               |
| 5      | SEWA-II # [Seawa]       | 1               | (3X40)                       | SEWA II      | MAHСКА          | 120           | 2010-11               |
| 6      | KISHENGANGA (KARAL PUR) | 1               | (3X110)                      | KISHENGANGA  |                 | 330           | 2018                  |
|        | SUB-TOTAL NHPC          | 6               |                              |              |                 | 2250          |                       |
|        | TOTAL J&K               | 10              |                              |              |                 | 3360          |                       |

\* ALL PROJECTS ARE IN INDUS BASIN. # Sewa-II was identified in HP.

3. H.E. Projects Under Construction:

| Sl.No. | Name of Project | Agency | District | I.C. (MW) | River            | Basin | Likely Commissioning |
|--------|-----------------|--------|----------|-----------|------------------|-------|----------------------|
| 1      | Pakal Dul       | CVPPL  | Kishtwar | 1000      | Marusadar/Chenab | Indus | 2023-24 (Aug.'23)    |
| 2      | Parnai          | JKSPDC | Poonch   | 37.5      | Jhelum           | Indus | 2021-22 (Mar'22)     |
| 3      | Lower Kalnai    | JKSPDC | Kishtwar | 48        | Chenab           | Indus | 2022-23**            |
| 4      | Ratle           | RHEPPL | Kishtwar | 850       | Chenab           | Indus | 2023-24 **           |
| 4      | Total           |        |          | 1935.5    |                  |       |                      |

\*\* Subject to restart of works

4. H.E. Projects Cleared/Appraised by CEA:

| Sl No. | Name of Project     | Agency | River                | District          | I.C. (MW) | Date of CEA Concurrence | Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------|---------------------|--------|----------------------|-------------------|-----------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | New Ganderwal       | JKSPC  | Jhelum/Sindh         | Ganderwal         | 93        | 10.06.14                | EC obtained on 27.9.13 and FC obtained on 02.04.2012.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2      | Kiru                | CVPPL  | Chenab               | Doda              | 624       | 13.06.16                | EC accorded on 24.06.2016 & FC accorded on 19.05.2016.<br>CCEA sanctioned the proposal of Kiru HEP amounting to Rs. 4287.59 at July PL in the meeting held on 07.03.2019.Tendering for all the packages issued and packages will be awarded soon. Issue of letter of award is pending for want of sanction of Rs. 1500 Crs. subordinate debt from GOI. MOP, GoI vide letter dated 11.12.2019 has intimated to furnish fresh PIB proposal incorporating subordinate debt of Rs. 1500 crs. Draft PIB proposal has been submitted by NHPC to MOP, GoI vide letter dated 13.12.2019 |
| 3      | Kwar                | CVPP   | Chenab               | Kishtwar          | 540       | 23.02.17                | EC accorded on 10.04.17. FC accorded on 08.08.14. For Civil Works pckage, technical evaluation of bids completed and price bids are under evaluation. For E&M, HM Works Package, tenders shall be reinvited through online mode shortly. Works will be awarded after investment approval by Government.                                                                                                                                                                                                                                                                         |
| 4      | Kirthai-II (Naunut) | JKPDC  | Chandrabhaga /Chenab | Kishtwar          | 930       | 14.06.2019              | EC & FC awaited                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5      | Sawalkot            | JKSPC  | Chenab               | Ramban & Udhampur | 1856      | 18.04.18                | EC recommended by EAC on 31.01.17 subject to FC-I clearance. FC yet to be obtained. Joint survey under process.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 5      | Total               |        |                      |                   | 4043      |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

Note: Two projects namely Bursar (800 MW) & Ujh (196 MW) have been cleared as Multi purpose project (MPP).

5. Multipurpose projects approved by MoWR:

| Sl. No. | Name of Project            | Sector  | I.C. (MW) | Month of receipt | Status                  |
|---------|----------------------------|---------|-----------|------------------|-------------------------|
| 1       | Bursar                     | Central | 800       | Jan-17           | Cleared: PPS (14.12.16) |
| 2       | Ujh (Including Dam Toe PH) | State   | 196       | Jan-18           | Cleared: PPS (29.10.18) |
| 2       | Total                      |         | 996       |                  |                         |

6. Hydro Projects Under Examination in CEA:

| Sl. No. | Name of Project  | Sector | I.C. (MW) | Agency | Month of receipt |
|---------|------------------|--------|-----------|--------|------------------|
| 1       | Kirthai -I (Sho) | State  | 390       | JKSPDC | 17-Jul-18        |
| 1       | Total            |        | 390       |        |                  |

7. H.E. Projects allotted for development on which Survey & Investigation is held up/ yet to be taken up:

| Sl. No. | Project | I. C. (MW) | Agency | Date of Allotment/ MoA | Status                                                     |
|---------|---------|------------|--------|------------------------|------------------------------------------------------------|
| 1       | Shamnot | 370        | NHPC   | -                      | S&I held up as the project will submerge National Highway. |
| 1       | Total   | 370        |        |                        |                                                            |

**8. Projects dropped as per Reconciliation Study by CEA in 2014**

| Sl. No. | Project Name | River    | Type | I.C. (MW)   | Remarks                                  |
|---------|--------------|----------|------|-------------|------------------------------------------|
| 1       | Chakothi     | Jhelam   | R    | 285         | Project located in POK.<br>Hence dropped |
| 2       | Chinari      | Jhelam   | R    | 475         |                                          |
| 3       | Hatian       | Jhelam   | R    | 215         |                                          |
| 4       | Gangbal      | Kankanag | S    | 55          | Dropped due to<br>Environmental issue    |
| 4       | <b>Total</b> |          |      | <b>1030</b> |                                          |

**9. H. E. Projects yet to be allotted by the State for development**

| Sl.No. | Name of Project | River                      | Type | I.C. (MW)   |
|--------|-----------------|----------------------------|------|-------------|
| 1      | Shuas           | Chenab                     | R    | 505         |
| 2      | Berinaum        | Chenab                     | R    | 435         |
| 3      | Naga            | Kal Nai                    | R    | 29          |
| 4      | Kiwa            | Kal Nai                    | R    | 37          |
| 5      | Tipri           | Kal Nai                    | R    | 36          |
| 6      | Bichlari        | Bichlari                   | R    | 75          |
| 7      | Sonmarg         | Sind                       | S    | 155         |
| 8      | Upper Sindh-I   | Sind                       | R    | 65          |
| 9      | Ganderbal       | Sind                       | R    | 75          |
| 10     | Wangam          | Bonar                      | R    | 60          |
| 10     | <b>Total</b>    | <b>10 Nos. of Projects</b> |      | <b>1472</b> |

Note: R –Run off the River & S - Storage

## Hydro Power Development in Ladakh

### Identified Hydro Power Potential and its status of Development:

|                                                                                                                                     |                                                                        | Nos.      | Capacity (MW) |
|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------|---------------|
| <b>Identified Hydro Power Potential as per Reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW)</b> |                                                                        | 23        | 2046          |
| <b>Project Identified below 25 MW capacity in Reassessment Study and developed above 25 MW capacity</b>                             |                                                                        | 1         | 44            |
| <b>Total</b>                                                                                                                        |                                                                        | <b>24</b> | <b>2090</b>   |
| <b>I</b>                                                                                                                            | <b>Projects in operation</b>                                           | 2         | 89            |
| <b>II</b>                                                                                                                           | <b>Projects yet to be allotted by U.T. of Laddakh for development*</b> | 22        | 1866          |

\*The capacity yet to be allotted by U.T. of Laddakh for development is different from arithmetic calculation from the potential assessed due to change in capacity of the projects, addition of the projects, etc.

**1A. Hydro Power Development in Ladakh**

| Sl.No. | Name of Project                    | River                      | Type | I.C. (MW)   |
|--------|------------------------------------|----------------------------|------|-------------|
| 1      | Kiari                              | Indus                      | R    | 28          |
| 2      | Parfila                            | Zaskar                     | R    | 45          |
| 3      | Paidar                             | Zaskar                     | R    | 46          |
| 4      | Tillarchu                          | Zaskar                     | R    | 39          |
| 5      | Nurla (Ulitopo)                    | Indus                      | R    | 65          |
| 6      | Khalsi (Khalsti)                   | Indus                      | R    | 170         |
| 7      | Takmaching                         | Indus                      | R    | 75          |
| 8      | Dumkar                             | Indus                      | R    | 130         |
| 9      | Achinthang                         | Indus                      | R    | 140         |
| 10     | Kanyunche                          | Indus                      | R    | 105         |
| 11     | Batalik (Sunit)                    | Indus                      | R    | 235         |
| 12     | Parkhachik<br>(Parkhachik Panikar) | Suru                       | R    | 110         |
| 13     | Dandal (Drass Suru-I)              | Drass                      | R    | 26          |
| 14     | Khabru (Drass Suru-II)             | Drass                      | R    | 30          |
| 15     | Tahanus                            | Shingo                     | R    | 120         |
| 16     | Karkit                             | Shingo                     | R    | 190         |
| 17     | Gunderman                          | Suru                       | R    | 120         |
| 18     | Chalunka                           | Shyok                      | R    | 45          |
| 19     | Chechesna                          | Suru                       | R    | 47          |
| 20     | Leh                                | Indus                      | R    | 29          |
| 21     | Kesar                              | Indus                      | R    | 42          |
| 22     | Thambas                            | Suru                       | R    | 29          |
| 23     | Nimu                               | Indus                      | S    | 180         |
| 23     | <b>Total</b>                       | <b>23 Nos. of Projects</b> |      | <b>2046</b> |

**1B. Project Identified below 25 MW capacity in Reassessment Study and developed above 25 MW capacity:**

| Sl.No. | Name of Project | River | Type | I.C. (MW) |
|--------|-----------------|-------|------|-----------|
| 1      | Chutak (Suru)   | Suru  | R    | 44        |

Note: R –Run off the River & S- storage

**2. H.E. Projects in Operation:**

| Sl.No. | UTILITY/STATIONS      | NO. OF STATIONS | NO. OF UNITS X CAPACITY (MW) | RIVER/BASIN* | DISTRICT | TYPE | CAPACITY (MW) | YEAR OF COMMISSIONING |
|--------|-----------------------|-----------------|------------------------------|--------------|----------|------|---------------|-----------------------|
|        | <b>NHPC</b>           |                 |                              |              |          |      |               |                       |
| 1      | CHUTAK                | 1               | 23                           | INDUS        | KARGIL   | R    | 44            | 2012-13               |
| 2      | NIMOO BAZGO (NIMU)    | 1               | (3X15)                       | INDUS        | LEH      | R    | 45            | 2013                  |
|        | <b>SUB-TOTAL NHPC</b> | <b>2</b>        |                              |              |          |      | <b>89</b>     |                       |
|        | <b>TOTAL LADAKH</b>   | <b>2</b>        |                              |              |          |      | <b>89</b>     |                       |

**3. H. E. Projects yet to be allotted by U.T. of Laddakh for development**

| Sl.No.    | Name of Project                 | River                      | Type | I.C. (MW)   |
|-----------|---------------------------------|----------------------------|------|-------------|
| 1         | Kiari                           | Indus                      | R    | 28          |
| 2         | Parfila                         | Zaskar                     | R    | 45          |
| 3         | Paidar                          | Zaskar                     | R    | 46          |
| 4         | Tillarchu                       | Zaskar                     | R    | 39          |
| 5         | Nurla (Ulitopo)                 | Indus                      | R    | 65          |
| 6         | Khalsi (Khalsti)                | Indus                      | R    | 170         |
| 7         | Takmaching                      | Indus                      | R    | 75          |
| 8         | Dumkar                          | Indus                      | R    | 130         |
| 9         | Achinthang                      | Indus                      | R    | 140         |
| 10        | Kanyunche                       | Indus                      | R    | 105         |
| 11        | Batalik (Sunit)                 | Indus                      | R    | 235         |
| 12        | Parkhachik (Parkhachik Panikar) | Suru                       | R    | 110         |
| 13        | Dandal (Drass Suru-I)           | Drass                      | R    | 26          |
| 14        | Khabru (Drass Suru-II)          | Drass                      | R    | 30          |
| 15        | Tahanus                         | Shingo                     | R    | 120         |
| 16        | Karkit                          | Shingo                     | R    | 190         |
| 17        | Gunderman                       | Suru                       | R    | 120         |
| 18        | Chalunka                        | Shyok                      | R    | 45          |
| 19        | Chechesna                       | Suru                       | R    | 47          |
| 20        | Leh                             | Indus                      | R    | 29          |
| 21        | Kesar                           | Indus                      | R    | 42          |
| 22        | Thambas                         | Suru                       | R    | 29          |
| <b>22</b> | <b>Total</b>                    | <b>22 Nos. of Projects</b> |      | <b>1866</b> |

Note: R –Run of the River

## Hydro Power Development in Punjab

### Identified Hydro Power Potential and its status of Development:

|                                                                                                                                     |                                                                  | Nos. | Capacity (MW) |
|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|------|---------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW)</b> |                                                                  | 5    | 971           |
| <b>I</b>                                                                                                                            | <b>Projects in operation</b>                                     | 9    | 1096.3        |
| <b>II</b>                                                                                                                           | <b>Projects under construction</b>                               | 1    | 206           |
| <b>III</b>                                                                                                                          | <b>Projects held up due to Inter-State aspects</b>               | 1    | 50            |
| <b>IV</b>                                                                                                                           | <b>Projects yet to be allotted by the State for development*</b> | 1    | 90            |

**\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition of projects, etc.**

#### 1. Identified Projects during Reassessment study:

| Sl.No.       | Name of Project                                 | River  | I. C.(MW)  |
|--------------|-------------------------------------------------|--------|------------|
| 1            | Mukerian-I,II, III & IV [Mukerian Canal]        | Beas   | 207        |
| 2            | Anadpur Sahib-I & II [Anadpur Sahib, Ph-I & II] | Sutlej | 134        |
| 3            | Ranjit Sagar [Thein]                            | Ravi   | 325        |
| 4            | Shahpurkandi [Shahpur]                          | Ravi   | 215        |
| 5            | UBDC                                            | Ravi   | 90         |
| <b>TOTAL</b> |                                                 |        | <b>971</b> |

2. H.E. Projects in Operation:

| S.No | UTILITY/<br>STATIONS                                  | NO. OF<br>STATIONS | NO. OF UNITS<br>X CAPACITY<br>(MW) | RIVER/<br>BASIN*             | DISTRICT   | I.C.<br>(MW)  | YEAR OF<br>COMMISSIONING |
|------|-------------------------------------------------------|--------------------|------------------------------------|------------------------------|------------|---------------|--------------------------|
|      | <b>PSPCL</b>                                          |                    |                                    |                              |            |               |                          |
| 1    | ANANDPUR<br>SAHIB-I<br>[Anadpur Sahib,<br>Ph-I & II]  | 1                  | (2X33.5)                           | AHC (CANAL)                  | RUPNAGAR   | 67            | 1985                     |
| 2    | ANANDPUR<br>SAHIB-II<br>[Anadpur Sahib,<br>Ph-I & II] | 1                  | (2X33.5)                           | AHC (CANAL)                  | RUPNAGAR   | 67            | 1985                     |
| 3    | MUKERIAN-I<br>[Mukerian Canal]                        | 1                  | (3X15)                             | TAIL WATER<br>OF PONG<br>DAM | HOSHIARPUR | 45            | 1983                     |
| 4    | MUKERIAN-II<br>[Mukerian Canal]                       | 1                  | (3X15)                             | TAIL WATER<br>OF PONG<br>DAM | HOSHIARPUR | 45            | 1988-89                  |
| 5    | MUKERIAN-III<br>[Mukerian Canal]                      | 1                  | (3X19.5)                           | TAIL WATER<br>OF PONG<br>DAM | HOSHIARPUR | 58.5          | 1989                     |
| 6    | MUKERIAN-IV<br>[Mukerian Canal]                       | 1                  | (3X19.5)                           | TAIL WATER<br>OF PONG<br>DAM | HOSHIARPUR | 58.5          | 1989                     |
| 7    | RANJIT SAGAR<br>[Thein]                               | 1                  | (4X150)                            | Reservoir on<br>River Ravi   | PATHANKOT  | 600           | 2000                     |
|      | <b>TOTAL PSPCL</b>                                    | <b>7</b>           |                                    |                              |            | <b>941</b>    |                          |
|      | <b>BBMB</b>                                           |                    |                                    |                              |            |               |                          |
| 8    | GANGUWAL                                              | 1                  | (2X24.2)+<br>(1X29.25)             | SATLUJ                       | RUPNAGAR   | 77.65         | 1955-1962                |
| 9    | KOTLA                                                 | 1                  | (2X24.2)+<br>(1X29.25)             | SATLUJ                       | RUPNAGAR   | 77.65         | 1956-1961                |
|      | <b>SUB-TOTAL<br/>BBMB<br/>(PUNJAB)</b>                | <b>2</b>           |                                    |                              |            | <b>155.3</b>  |                          |
|      | <b>TOTAL<br/>PUNJAB</b>                               | <b>9</b>           |                                    |                              |            | <b>1096.3</b> |                          |

\* ALL PROJECTS ARE IN INDUS BASIN

**3. H.E. Projects under Construction:**

| Sl. No. | Name of Project        | Implementing Agency | District  | River /Basin | I. C. (MW) | Likely Commissioning |
|---------|------------------------|---------------------|-----------|--------------|------------|----------------------|
| 1       | Shahpurkandi [Shahpur] | Irr. Deptt. & PSPCL | Gurdaspur | Ravi /Indus  | 206        | 2021-22 (Nov.'21)    |
|         | <b>Total</b>           |                     |           |              | <b>206</b> |                      |

**4. H.E. Projects held up due to Inter-State aspects:**

| Sl. No. | Name of Project       | I.C. (MW) | Location (State) | States Involved             | Status                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------|-----------------------|-----------|------------------|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | SYL (2x18+2x7 =50 MW) | 50        | Punjab           | Punjab/ Haryana/ Rajasthan. | <ul style="list-style-type: none"> <li>•Cleared by CEA in 12/1987 at an estimated cost of Rs.101.28 crores (5/1985 PL).</li> <li>•Work on the canal on which project is located is held up.</li> <li>• Haryana and Rajasthan have raised question regarding their shares of power as it envisages utilizing common facilities and water belonging to all three states, viz. Haryana, Punjab &amp; Rajasthan.</li> </ul> |

**5. H. E. Projects yet to be allotted by the State for development**

| Sl.No. | Name of Scheme | River                   | Type | I.C. (MW) |
|--------|----------------|-------------------------|------|-----------|
| 1.     | UBDC           | Ravi                    | R    | 90        |
|        | <b>Total</b>   | <b>1 No. of Project</b> |      | <b>90</b> |

Note: R –Run off the River

## Hydro Power Development in Rajasthan

### Identified Hydro Power Potential and its status of Development:

|                                                                                                                                     |                                            | Nos.    | Capacity (MW) |
|-------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|---------|---------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW)</b> |                                            | 5       | 483           |
| <b>I</b>                                                                                                                            | <b>Projects in operation</b>               | 4       | 411           |
|                                                                                                                                     |                                            |         |               |
| <b>Note: Gandhi Sagar (115 MW) was identified in Rajasthan but has been developed in Madhya Pradesh.</b>                            |                                            |         |               |
| <b>1. Identified Projects during Reassessment study:</b>                                                                            |                                            |         |               |
| Sl. No.                                                                                                                             | Name of Project                            | River   | I. C.         |
|                                                                                                                                     |                                            |         | (MW)          |
| 1                                                                                                                                   | Gandhi Sagar                               | Chambal | 115           |
| 2                                                                                                                                   | Rana Pratap Sagar                          | Chambal | 172           |
| 3                                                                                                                                   | Jawahar Sagar                              | Chambal | 99            |
| 4                                                                                                                                   | Mahi Bajaj - I<br>[Mahi Bajaj Sagar St-II] | Mahi    | 60            |
| 5                                                                                                                                   | Mahi Bajaj - I<br>[Mahi Bajaj Sagar St-I]  | Mahi    | 37            |
|                                                                                                                                     | <b>TOTAL</b>                               |         | <b>483</b>    |

2. H.E. Projects in Operation:

| SL. NO. | UTILITY/ STATIONS                         | NO. OF STATIONS | NO. OF UNITS X CAPACITY (MW) | RIVER   | BASIN | DISTRICT    | I.C. (MW) | YEAR OF COMMISSIONING |
|---------|-------------------------------------------|-----------------|------------------------------|---------|-------|-------------|-----------|-----------------------|
| 1       | JAWAHAR SAGAR                             | 1               | (3X33)                       | CHAMBAL | GANGA | BUNDI       | 99        | 1972-1973             |
| 2       | MAHI BAJAJ-I<br>[Mahi Bajaj Sagar St-I]   | 1               | (2X25)                       | MAHI    | CIR   | BANSWARA    | 50        | 1986                  |
| 3       | MAHI BAJAJ-II<br>[Mahi Bajaj Sagar St-II] | 1               | (2X45)                       | MAHI    | CIR   | BANSWARA    | 90        | 1989                  |
| 4       | R P SAGAR                                 | 1               | (4X43)                       | CHAMBAL | GANGA | CHITTORGARH | 172       | 1968                  |
|         | TOTAL RRVUNL                              | 4               |                              |         |       |             | 411       |                       |

Note: Mahi Bajaj Sagar I & II (140 MW) were identified for I.C. of 97 MW.

Hydro Power Development in Uttar Pradesh

| Identified Hydro Power Potential and its status of Development:                                                              |                                             |      |               |
|------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|------|---------------|
|                                                                                                                              |                                             | Nos. | Capacity (MW) |
| Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW) |                                             | 6    | 664           |
| I                                                                                                                            | Projects in operation                       | 4    | 501.6         |
| II                                                                                                                           | Projects held up due to Inter-State aspects | 1    | 90            |

1. Identified Projects during Reassessment study:

| Sl. No. | Name of Project         | River  | Type | I. C. (MW) |
|---------|-------------------------|--------|------|------------|
| 1       | Khara                   | Yamuna | R    | 160        |
| 2       | Matatila                | Betwa  | S    | 31         |
| 3       | Orchha #                | Betwa  | R    | 39         |
| 4       | Rihand                  | Rihand | S    | 300        |
| 5       | Obra                    | Rihand | R    | 99         |
| 6       | Eastern Yamuna Canal ## | Yamuna | R    | 35         |
| TOTAL   |                         |        |      | 664        |

# Orchha is under Inter-State issue in the State of M.P. for 90 MW.

## Eastern Yamuna Canal project (35 MW) has been developed in 2 stages each having Installed Capacity below 25 MW

**2. H.E. Projects in Operation:**

| SL. NO. | STATIONS            | NO. OF STATIONS | NO. OF UNITS X CAPACITY (MW) | RIVER/ BASIN*            | DISTRICT   | I. C. (MW)   | YEAR OF COMMISSIONING |
|---------|---------------------|-----------------|------------------------------|--------------------------|------------|--------------|-----------------------|
| 1       | KHARA               | 1               | (3X24)                       | YAMUNA LINK CHANNEL      | SUNEBHADRA | 72           | 1992                  |
| 2       | MATATILLA           | 1               | (3X10.2)                     | BETWA                    | LALITPUR   | 30.6         | 1965                  |
| 3       | OBRA                | 1               | (3X33)                       | RIHAND                   | SUNEBHADRA | 99           | 1970-1971             |
| 4       | RIHAND              | 1               | (6X50)                       | GOVIND BALLAB PANT NAGAR | SINGRAULI  | 300          | 1961-1965             |
|         | <b>TOTAL UPJVNL</b> | <b>4</b>        |                              |                          |            | <b>501.6</b> |                       |

\* ALL PROJECTS ARE IN GANGA BASIN.

**3. H.E. Projects held up due to Inter-State aspects:**

| Sl. No. | Name of Project            | I.C. ( MW) | Location (State) | States Involved     | Status                                                                                                           |
|---------|----------------------------|------------|------------------|---------------------|------------------------------------------------------------------------------------------------------------------|
| 1       | Panchnad MPP (6x15 = 90MW) | 90         | U.P.             | U.P./M.P/ Rajasthan | DPR with Project estimated cost of Rs 559 Crores (6/1983 PL) returned. Involves submergence in MP and Rajasthan. |

## Status of Hydro Power Development in Uttarakhand

### Identified Hydro Power Potential and its status of Development:

|                                                                                                                                     |                                                                  |                                                                                      | Nos. | Capacity (MW) |
|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|--------------------------------------------------------------------------------------|------|---------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW)</b> |                                                                  |                                                                                      | 84   | 17998         |
| <b>I</b>                                                                                                                            | <b>Projects in operation</b>                                     |                                                                                      | 16   | 3756.4        |
| <b>II</b>                                                                                                                           | <b>Projects under construction</b>                               |                                                                                      | 7    | 1490          |
| <b>III</b>                                                                                                                          | <b>Projects allotted by States for development</b>               |                                                                                      |      |               |
|                                                                                                                                     | (i)                                                              | Projects cleared by CEA and yet to be taken up for construction                      | 4    | 1067          |
|                                                                                                                                     | (ii)                                                             | Projects under Examination in CEA                                                    | 2    | 450           |
|                                                                                                                                     | (iii)                                                            | Projects returned to project authorities                                             | 5    | 489           |
|                                                                                                                                     | (iv)                                                             | Multi purpose projects (International Projects) under examination by India and Nepal | 2    | 2400          |
|                                                                                                                                     | (v)                                                              | Projects under S&I                                                                   | 2    | 320           |
|                                                                                                                                     | (vi)                                                             | Projects allotted for development on which S&I is held up/ yet to be taken up        | 15   | 2402          |
| <b>IV</b>                                                                                                                           | <b>Projects dropped due to Basin studies/ Other reasons</b>      |                                                                                      | 5    | 2012          |
| <b>V</b>                                                                                                                            | <b>Projects yet to be allotted by the State for development*</b> |                                                                                      | 25   | 3394          |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition/deletion of the projects and merger of more than one projects into one etc.

1. H.E. Projects in Operation:

| S. NO. | UTILITY/<br>STATIONS                      | NO. OF STNS. | NO. OF UNITS<br>X CAPACITY<br>(MW) | RIVER                                           | DISTRICT             | I.C. (MW) | YEAR OF<br>COMMISSIONING |
|--------|-------------------------------------------|--------------|------------------------------------|-------------------------------------------------|----------------------|-----------|--------------------------|
|        | CENTRAL SECTOR                            |              |                                    |                                                 |                      |           |                          |
|        | NHPC                                      |              |                                    |                                                 |                      |           |                          |
| 1      | DHAULI GANGA<br>[ KHET TAWAGHAT]          | 1            | (4X70)                             | DHAULIGANGA                                     | PITHORAGARH          | 280       | 2005                     |
| 2      | TANAKPUR                                  | 1            | (3X31.4)                           | SARDA                                           | CHAMPAVAT            | 94.2      | 1992                     |
|        | SUB-TOTAL NHPC                            | 2            |                                    |                                                 |                      | 374.2     |                          |
|        | THDC                                      |              |                                    |                                                 |                      |           |                          |
| 3      | TEHRI ST-I<br>[TEHRI DAM ST-I]            | 1            | (4X250)                            | BHAGIRATHI                                      | TEHRI GARHWAL        | 1000      | 2006-2007                |
| 4      | KOTESHWAR                                 | 1            | (4X100)                            | BHAGIRATHI                                      | TEHRI GARHWAL        | 400       | 2010-12                  |
|        | TOTAL THDC                                | 2            |                                    |                                                 |                      | 1400      |                          |
|        | SUB TOTAL CENTRAL                         | 4            |                                    |                                                 |                      | 1774.2    |                          |
|        | STATE SECTOR                              |              |                                    |                                                 |                      |           |                          |
|        | UJVNL                                     |              |                                    |                                                 |                      |           |                          |
| 5      | CHIBRO (YAMUNA)<br>[CHIBRO]               | 1            | (4X60)                             | Tons River at Ichari<br>Dam                     | DEHRADUN             | 240       | 1975-1976                |
| 6      | CHILLA [RISHIKESH<br>HARDWAR]             | 1            | (4X36)                             | GANGA                                           | HARIDWAR             | 144       | 1980-1981                |
| 7      | DHAKRANI                                  | 1            | (3X11.25)                          | Tons & Yamuna<br>Rivers at Dakpathar<br>Barrage | DEHRADUN             | 33.75     | 1965-1970                |
| 8      | DHALIPUR                                  | 1            | (3X17)                             | Tons & Yamuna<br>Rivers at Dakpathar<br>Barrage | DEHRADUN             | 51        | 1965-1970                |
| 9      | KHATIMA                                   | 1            | (3X13.8)                           | SHARDA                                          | UDHAM SINGH<br>NAGAR | 41.4      | 1955-1956                |
| 10     | KHODRI                                    | 1            | (4X30)                             | TONS                                            | DAK PATHAR           | 120       | 1984                     |
| 11     | KULHAL                                    | 1            | (3X10)                             | TONS                                            | DEHRADUN             | 30        | 1975                     |
| 12     | MANERI BHALI- I                           | 1            | (3X30)                             | BHAGIRATHI                                      | UTTARKASHI           | 90        | 1984                     |
| 13     | MANERI BHALI- II                          | 1            | (4X76)                             | BHAGIRATHI                                      | UTTARKASHI           | 304       | 2008                     |
| 14     | RAMGANGA<br>[ RAMGANGA DAM<br>(KALAGARH)] | 1            | (3X66)                             | RAMGANGA                                        | PAURI GARHWAL        | 198       | 1975-1977                |
|        | TOTAL UJVNL                               | 10           |                                    |                                                 |                      | 1252.15   |                          |
|        | PRIVATE                                   |              |                                    |                                                 |                      |           |                          |
|        | AHPC                                      |              |                                    |                                                 |                      |           |                          |
| 15     | SHRINAGAR                                 | 1            | (4X82.50)                          | ALAKNANDA                                       | TRHRI & PAURI        | 330       | 2015                     |
|        | JPPVL                                     |              |                                    |                                                 |                      |           |                          |
| 16     | VISHNU PRAYAG                             | 1            | (4X100)                            | ALAKNANDA                                       |                      | 400       | 2006                     |
|        | SUB TOTAL PRIVATE                         | 2            |                                    |                                                 |                      | 730       |                          |
|        | TOTAL<br>UTTARAKHAND                      | 16           |                                    |                                                 |                      | 3756.35   |                          |

Note: ALL PROJECTS ARE IN GANGA BASIN

**2. H.E. Projects under Construction:**

| Sl. No. | Name of Project                    | Agency | District    | I.C. (MW)   | River                    | Basin | Likely Commissioning        |
|---------|------------------------------------|--------|-------------|-------------|--------------------------|-------|-----------------------------|
| 1       | Lata Tapovan                       | NTPC   | Chamoli     | 171         | Dhauliganga / Alaknanada | Ganga | 2023-24 *                   |
| 2       | Tapovan Vishnugad [Tapovan Chunar] | NTPC   | Chamoli     | 520         | Dhauliganga / Alaknanada | Ganga | 2020-21 (Dec'20)            |
| 3       | Vishnugad Pipalkoti                | THDC   | Chamoli     | 444         | Alaknanada               | Ganga | 2022-23 (Dec'22)            |
| 4       | Naitwar Mori                       | SJVNL  | Uttarkashi  | 60          | Tons/ Yamuna             | Ganga | 2021-22 (Dec-21)            |
| 5       | Vyasi [Lakhwar Vyasi - II]         | UJVNL  | Dehradun    | 120         | Yamuna/Ganga             | Ganga | 2020-21 (Dec'20)            |
| 6       | Phata Byung                        | LANCO  | Rudraprayag | 76          | Mandakini/ Alaknanda     | Ganga | 2021-22 *                   |
| 7       | Singoli Bhatwari [Mandankini]      | L&T    | Rudraprayag | 99          | Mandakini/ Alaknanda     | Ganga | 2019-20 (Mar'20) Critical @ |
|         | <b>Sub-total: Uttarakhand</b>      |        |             | <b>1490</b> |                          |       |                             |

\* Subject to restart of works @ Slipping into 2020-21

**3. H.E. Projects Concurred by CEA:**

| Sl. No. | Name of Project               | River      | Agency | District              | I.C. (MW)   | Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------|-------------------------------|------------|--------|-----------------------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Kotlibhel St-IA # [Kotlibhel] | Bhagirathi | NHPC   | Tehri Garhwal         | 195         | EC accorded on 9.05.07. FC-I accorded on 13.10.11 & for FC-II, Compliance Report is awaited from State Govt. <b>The project is included in the list of 24 projects under review by Hon'ble Supreme Court.</b> Hon'ble Supreme Court vide order dated 13.08.2013 directed the MoEF&CC as well as State of Uttarakhand not to grant any further Environmental Clearance for any hydropower projects in the State of Uttarakhand until further orders. In compliance to the above order, MoEF & CC constituted an Expert Body vide order dated 12.05.2015. Expert Body has given its report to MoEF&CC in Sept, 2017. The expert Body has recommended the project should operate to run one turbine continuously during lean season to minimize peaking impact at Devprayag.<br>In compliance of directions of Hon'ble SC of India for arriving at a common policy framework amongst three ministries viz. MoP, MoWR,RD&GR and MoEF&CC, additional time sought by MoEF&CC for the eighth time from Hon'ble SC of India for arriving a a policy framework has lapsed on 06.02.2019.<br>Meanwhile, a committee constituted by MoWR,RD&GR visited the project site on 24.03.2019 for assessment of the project. A meeting was held at MoP on 24.05.2019 under the chairmanship of Secretary (Power) to discuss the way forward on the reports of the committee constituted by MoWR,RD&GR for 'On the spot assessment of HEP's in Uttarakhand'. |
| 2       | Kotlibhel St-IB # [Kotlibhel] | Alaknanda  | NHPC   | Pauri & Tehri Garhwal | 320         | EC accorded earlier on 14.08.07 is withdrawn on 15.09.10. MoEF&CC declined FC-I on 7.07.11.<br>The project is included in the list of 24 projects under review by Hon'ble Supreme Court. Hon'ble Supreme Court vide order dated 13.08.2013 directed the MoEF&CC as well as State of Uttarakhand not to grant any further Environmental Clearance for any hydropower projects in the State of Uttarakhand until further orders.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3       | Devsari [Devasari Dam]        | Pindar     | SJVNL  | Chamoli               | 252         | EC was recommended by EAC on 27.03.2018 with additional conditions.<br>FC-I accorded by MoEF&CC on 26.02.18. FC-II Pending.<br>The Developer has informed that the DPR of the project is being revised considering e-flows notified in the Gazette notification no.4009 issued by NMCG under Ministry of Jal Shakti dated 09.10.2018. Revised chapter on PPS submitted by Developer on 18.10.2019                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 4       | Alaknanda # [Badri Nath]      | Alaknanda  | GMR    | Chamoli               | 300         | 08.08.08/ Revalidation up to 07.08.19<br>E.C. - Obtained on 12.3.08<br>F.C. - St-I obtained on 8.11.11. St-II obtained on 09.11.2012.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|         | <b>Total</b>                  |            |        |                       | <b>1067</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

**Note: All projects are in Ganga Basin****# Matter is sub judiced in Hon'ble Supreme Court.**

4. Hydro Projects Under Examination in CEA:

| Sl. No. | Name of Project                          | River     | Sector  | I.C. (MW) | Agency |
|---------|------------------------------------------|-----------|---------|-----------|--------|
| 1       | Bowala Nand Paryag                       | Alaknanda | State   | 300       | UJVNL  |
| 2       | Goriganga-III A<br>[Devi Bagar Khartoli] | Goriganga | Central | 150       | NHPC   |
|         | Total                                    |           |         | 450       |        |

5. Multi purpose projects (International Projects) under examination by India and Nepal

| Sl.No. | Name of Project                                  | River | Type | I.C.(MW) |
|--------|--------------------------------------------------|-------|------|----------|
| 1.     | Pancheshwar MPP<br>[Pancheshwar - I]             | Sarda | S    | 1335     |
| 2.     | Rupali Garh Regulating<br>Dam [Pancheshwar - II] | Sarda | S    | 1065     |
|        | Total                                            |       |      | 2400     |

Note: S- storage

6. Hydro Projects Returned to Project Authorities for re-submission after compliance of observations:

| Sl. No. | Name of Project         | River       | Agency  | Sector  | I.C. | Month of Return |
|---------|-------------------------|-------------|---------|---------|------|-----------------|
|         |                         |             |         |         | (MW) |                 |
| 1       | Nand Prayag Langasu     | Alaknanda   | UJVNL   | State   | 100  | Apr-11          |
| 2       | Mori Hanol<br>[Ugmir]   | Tons        |         | Private | 63   | Jan-10          |
| 3       | Bogudiyar Sirkari Bhyol | Gori Ganga  | GVK L&T | Private | 146  | Sep-10          |
| 4       | Tiuni Plasu<br>[Tiuni]  | Tons        | UID     | State   | 72   | Oct-10          |
| 5       | Jhelum Tamak #          | Dhauliganga | THDCIL  | Central | 108  | Aug-19          |
|         | Total                   |             |         |         | 489  |                 |

# Matter is sub judiced in Hon’ble Supreme Court.

NOTE: As per MoP letter dated 24.12.2010 in the meeting of NGRBA held on 1.11.2010 under the chairmanship of Hon’ble Prime Minister, it was decided to discontinue Loharinag Pala, Pala Maneri and Bhaironghati H.E. Projects on Bhagirathi.

**7. H.E. Projects under Survey & Investigation:**

| Sl. No. | Name of Project              | Basin/River | I.C. (MW)  | Agency | Target date of preparation of DPR |
|---------|------------------------------|-------------|------------|--------|-----------------------------------|
| 1       | Sirkari Bhyol<br>Rupsiabagar | Gori Ganga  | 120        | UJVNL  | Dec-19                            |
| 2       | Bokang Bailing               | Dhauliganga | 200        | THDC   | Oct-20                            |
|         | <b>Total</b>                 |             | <b>320</b> |        |                                   |

**8. H.E. Projects allotted for development on which Survey & Investigation is held up/ yet to be taken up:**

| Sl. No. | Project                                        | River        | I. C. (MW) | Agency              | Date of Allotment/ MoA | Status                                                                                                                                                  |
|---------|------------------------------------------------|--------------|------------|---------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Arakot Tiuni<br>[Nakot Patlasu]                | Pabar , Tons | 72         | UID                 | -                      | MOEF clearance awaited. S&I yet to be taken up.                                                                                                         |
| 2       | Chhunger - Chal                                | Dhauliganga  | 120        | NHPC                | 21.11.2005             | S&I held up due to non-clearance of MOEF                                                                                                                |
| 3       | Garba Tawaghat                                 | Goriganga    | 630        | NHPC                | 21.11.2005             | S&I held up. MoP approached MEA for taking up the matter of dev. of Garba Tawaghat H.E. Project under the aegis of Mahakali treaty.                     |
| 4       | Urthing Sobla                                  | Dhauliganga  | 280        | Reliance Power Ltd. | -                      | MoEF Clearance awaited. S7I heldup as the project area falls under ASkot Musk deer Sanctuary                                                            |
| 5       | Sela Urthing                                   | Dhauliganga  | 230        | UJVNL               | 09.12.2004             | Road connectivity is not proper upto the project site. S&I shall be taken up after carrying out detail survey at project site & confirmation of levels. |
| 6       | Jadh Ganga                                     | Jadh Ganga   | 50         | THDC                | 21.11.2005             | S&I yet to be taken up.· Located in Eco sensitive Zone of Gangotri National Park.                                                                       |
| 7       | Karmoli                                        | Jadh Ganga   | 140        | THDC                | 21.11.2005             | S&I yet to be taken up.· Located in Eco sensitive Zone of Gangotri National Park.                                                                       |
| 8       | Rishi Ganga - I                                | Rishi Ganga  | 70         | UJVNL               | 09.12.2004             | &I yet to be taken up.· Located in Nanda Devi National Park. MoEF Clearance awaited.                                                                    |
| 9       | Rishi Ganga - II                               | Rishi Ganga  | 35         | UJVNL               | 09.12.2004             | S&I yet to be taken up.· Located in Nanda Devi National Park. MoEF Clearance awaited.                                                                   |
| 10      | Taluka Sankri<br>[Taluka Saul + Sankri Kunare] | Tons         | 140        | UJVNL               | 09.12.2004             | S&I yet to be taken up. Project falls under Govind Pashu Vihar WLS.                                                                                     |

| Sl. No. | Project                                    | River        | I. C. (MW)  | Agency  | Date of Allotment/ MoA | Status                                                                                                                                                                                                                                  |
|---------|--------------------------------------------|--------------|-------------|---------|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11      | Gohana Tal                                 | Birahi Ganga | 50          | THDC    | 21.11.2005             | Project included in the list of 24 HE project named in PIL under consideration by Hon'ble Supreme court                                                                                                                                 |
| 12      | Karmoli Lumti Tulli [Khartoli Lumti Talli] | Goriganga    | 40          | NHPC    | 07.04.2005             | S & I was held up.PCCF (Wildlife) and chief Warden Wildlife, Dehradun has since granted permission for S& I on 13. 12. 2016.Preparation of PFR is in progress for obtaining approval of ToR from MoEF & CC for carrying out S& I works. |
| 13      | Maleri Jhelam [Malari Jhelam]              | Dhauliganga  | 65          | THDC    | 21.11.2005             | Project included in the list of 24 HE project named in PIL under consideration by Hon'ble Supreme court                                                                                                                                 |
| 14      | Mapang - Bogidiyar                         | Goriganga    | 200         | GVK-L&T | 07.05.2005             | S&I held up due to Supreme Court order directing MoEF and State of Uttarakhand not to grant any Environmental Clearance or Forest Clearance for any hydroelectric project in the State of Uttarakhand until further orders.             |
| 15      | Tamak Lata                                 | Dhauliganga  | 280         | UJVNL   | 09.12.2004             | Project included in the list of 24 HE project named in PIL under consideration by Hon'ble Supreme court                                                                                                                                 |
|         | <b>Total</b>                               |              | <b>2402</b> |         |                        |                                                                                                                                                                                                                                         |

**9. Pumped Storage Projects under Construction:**

| Sl. No. | Name of Project | I. C.       | Remarks                                    |
|---------|-----------------|-------------|--------------------------------------------|
|         |                 | (MW)        |                                            |
| 1       | Tehri St.II     | 4x250=1000  | Likely commissioning by 2021-23* (June'22) |
|         | <b>Total</b>    | <b>1000</b> |                                            |

\* Subject to restsrt works

**10. Projects dropped due to Basin studies/ Other reasons:**

| Sl. No. | Project                                                   | I.C. (MW)   | River       | Basin | Remarks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------|-----------------------------------------------------------|-------------|-------------|-------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Pala Maneri *<br>[Pala Bhela Tipri + Bhela Tipri]         | 480         | Bhagirath   | Ganga | The project has been discontinued by Govt. of Uttarakhand due to additional conditions for environmental safeguards vide order dated 3.01.11.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2       | Kotlibhel St-II<br>[Kotlibhel]                            | 530         | Bhagirath   | Ganga | MoEF on 22.11.2010 has withdrawn the environment clearance. FC-I declined on 5.07.11.<br>The project is included in the list of 24 projects under review by Hon'ble Supreme Court. Hon'ble Supreme Court vide order dated 13.08.2013 directed the MoEF&CC as well as State of Uttarakhand not to grant any further Environmental Clearance for any hydropower projects in the State of Uttarakhand until further orders. In compliance to the above order, MoEF&CC constituted an Expert Body vide order dated 12.05.2015. Expert Body has given its report to MoEF&CC in Sept, 2017. The expert Body has recommended to drop the project to preserve Mahseer. |
| 3       | Loharinagpala *<br>[Lohari Nag Tharang]                   | 360         | Bhagirath   | Ganga | Project discontinued by NGRBA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 4       | Bhaironghati *<br>[Gangotri + Bhairon ghati + Harsil Dam] | 381         | Bhagirath   | Ganga | Project discontinued by NGRBA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 5       | Rupsiyabagar Khasiyabara                                  | 261         | Gauri Ganga | Ganga | EC accorded on 26.03.09. FC-I accorded on 17.06.2006 and FC-II yet to be obtained. MoEF&CC declined FC due to project location in highly sensitive wild life habitat.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|         | <b>Total</b>                                              | <b>2012</b> |             |       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

\* As per MoP letter dated 24.12.2010 in the meeting of NGRBA held on 1.11.2010 under the chairmanship of Hon'ble Prime Minister, it was decided to discontinue Loharinag Pala, Pala Maneri and Bhaironghati H.E. Projects on Bhagirathi.

**11. H. E. Projects yet to be allotted by the State for development**

| Sl.No. | Name of Project                    | River                      | Type | I.C.(MW)    |
|--------|------------------------------------|----------------------------|------|-------------|
| 1.     | Kishau Dam                         | Tons                       | S    | 350         |
| 2.     | Pisha Naitwar                      | Rupin                      | R    | 30          |
| 3.     | Ram Ganga Dam                      | Ram Ganga                  | S    | 75          |
| 4.     | Kuwa ford                          | Yamuna                     | R    | 42          |
| 5.     | Nelang                             | Jadh Ganga                 | R    | 190         |
| 6.     | Ganga Canal                        | Ganga                      | R    | 31          |
| 7.     | Diulong Sumangaon                  | Bhagirathi                 | R    | 26          |
| 8.     | Dhargaoon Jhandarwali              | Bhagirathi                 | R    | 29          |
| 9.     | Jamolna Ghansyali                  | Bhagirathi                 | R    | 44          |
| 10.    | Nayar Dam                          | Nayar                      | S    | 34          |
| 11.    | Benakuli                           | Alaknanda                  | R    | 40          |
| 12.    | Khel Kuran Neti                    | Dhauli Ganga               | R    | 49          |
| 13.    | Niti Ghansali                      | Dhauli Ganga               | R    | 32          |
| 14.    | Bampa Kurkuti                      | Dhauli Ganga               | R    | 60          |
| 15.    | Girithi Ganga                      | Girithi Ganga              | R    | 34          |
| 16.    | Deodi                              | Rishi Ganga                | R    | 65          |
| 17.    | Tikh Gurupha                       | Pindar                     | R    | 26          |
| 18.    | Malkhet Dam                        | Pindar                     | S    | 37          |
| 19.    | Banoli Nalgam                      | Pindar                     | R    | 55          |
| 20.    | Lakhwar MPP<br>(Lakhwar Vyasi - I) | Yamuna                     | S    | 115         |
| 21.    | Uttyasu Dam                        | Alaknanda                  | S    | 1140        |
| 22.    | Sobla Jhimirigaon                  | Dhauli Ganga               | R    | 145         |
| 23.    | Tawaghat Dharchula                 | Sarda                      | R    | 310         |
| 24.    | Kalika Dantu                       | Sarda                      | R    | 140         |
| 25.    | Garjia Dam                         | Gori Ganga                 | S    | 295         |
|        | <b>Total</b>                       | <b>25 nos. of projects</b> |      | <b>3394</b> |

**Note: R –Run off the River & S- storage**

## Hydro Power Development in Chhattisgarh

### Identified Hydro Power Potential and its status of Development:

|                                                                                                                                     |                                                                  | Nos. | Capacity (MW) |
|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|------|---------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW)</b> |                                                                  | 15   | 2202          |
| <b>I</b>                                                                                                                            | <b>Projects in operation</b>                                     | 1    | 120           |
| <b>II</b>                                                                                                                           | <b>Projects dropped due to Basin studies/ Other reasons</b>      | 1    | 60            |
| <b>III</b>                                                                                                                          | <b>Projects yet to be allotted by the State for development*</b> | 13   | 2109          |

\*The capacity, yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the Projects.

#### 1. Identified Projects during Reassessment study:

| Sl.No.       | Name of Project               | River       | I. C. (MW) |
|--------------|-------------------------------|-------------|------------|
| 1            | Joka                          | Kanhar      | 28         |
| 2            | Kharauli                      | Mahan       | 46         |
| 3            | Pasal                         | Rihand      | 55         |
| 4            | Duniadhih (Duniadhin)         | Rihand      | 80         |
| 5            | Rehar-II (Karri)              | Rihand      | 70         |
| 6            | Hasdeo Bango [Hasdeo (Bango)] | Hasdeo      | 55         |
| 7            | Konta                         | Sabari      | 65         |
| 8            | Matnar (Chitrakot)            | Indravati   | 38         |
| 9            | Bodhghat                      | Indravati   | 295        |
| 10           | Kutru-I                       | Indravati   | 100        |
| 11           | Kutru-II                      | Indravati   | 155        |
| 12           | Nugur-I                       | Indravati   | 160        |
| 13           | Bhopalapatnam                 | Indravati   | 715        |
| 14           | Nugur-II                      | Indravati   | 270        |
| 15           | Kotri                         | Kotri       | 70         |
| <b>Total</b> |                               | <b>2202</b> |            |

**2. H.E. Projects in Operation:**

| S. No.   | Utility/<br>Stations                     | No. of<br>Station | No. of units<br>x Capacity<br>(MW) | River /Basin           | District     | I.C.<br>(MW) | Year of<br>commissioning |
|----------|------------------------------------------|-------------------|------------------------------------|------------------------|--------------|--------------|--------------------------|
|          | <b>CSPGCL</b>                            |                   |                                    |                        |              |              |                          |
| <b>1</b> | <b>HASDEO BANGO<br/>[Hasdeo (Bango)]</b> | <b>1</b>          | <b>(3X40)</b>                      | <b>HASDEO/<br/>CIR</b> | <b>KORBA</b> | <b>120</b>   | <b>1994-1995</b>         |
|          | <b>TOTAL CSPGCL</b>                      | <b>1</b>          |                                    |                        |              | <b>120</b>   |                          |

**3. H.E. Projects dropped due to Basin studies/ Other reasons:**

| Sl. No. | Name of Project       | I.C.<br>(MW) | River     | Basin | Remarks                                                                                                                                         |
|---------|-----------------------|--------------|-----------|-------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Matnar<br>[Chitrakot] | 60           | Indravati | EFR   | As per MoEF&CC, matter of FC is closed. As per developer, project seems not to viable with revised IC of 40 MW and it is expected to be dropped |
|         | <b>Total</b>          | <b>60</b>    |           |       |                                                                                                                                                 |

**4. H. E. Projects yet to be allotted by the State for development**

| Sl. No. | Name of Project          | River                      | Type | I.C. (MW)   |
|---------|--------------------------|----------------------------|------|-------------|
| 1       | Joka                     | Kanhar                     | S    | 28          |
| 2       | Kharauli                 | Mahan                      | R    | 46          |
| 3       | Pasal                    | Rihand                     | S    | 55          |
| 4       | Duniadhih<br>(Duniadhin) | Rihand                     | S    | 80          |
| 5       | Rehar-II (Karri)         | Rihand                     | R    | 70          |
| 6       | Konta                    | Sabari                     | R    | 65          |
| 7       | Bodhghat                 | Indravati                  | S    | 295         |
| 8       | Kutru-I                  | Indravati                  | S    | 100         |
| 9       | Kutru-II                 | Indravati                  | S    | 155         |
| 10      | Nugur-I                  | Indravati                  | S    | 160         |
| 11      | Bhopalapatnam            | Indravati                  | S    | 715         |
| 12      | Nugur-II                 | Indravati                  | S    | 270         |
| 13      | Kotri                    | Kotri                      | S    | 70          |
|         | <b>Total</b>             | <b>13 Nos. of Projects</b> |      | <b>2109</b> |

**Note: R –Run off the River & S- storage**

Hydro Power Development in Goa

Identified Hydro Power Potential and its status of Development :

|                                                                                                                                 |     |           |
|---------------------------------------------------------------------------------------------------------------------------------|-----|-----------|
|                                                                                                                                 | No. | I.C. (MW) |
| Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects<br>(Projects having capacity above 25 MW) | 1   | 55        |
| Projects yet to be allotted by the State for development                                                                        | 1   | 55        |

1. Identified Project during Reassessment study :

| Sl.No. | Name of Scheme | River   | I. C. (MW) |
|--------|----------------|---------|------------|
| 1      | Sonal          | Mandavi | 55         |
| TOTAL  |                |         | 55         |

2. H. E. Project yet to be taken up for development

| Sl.No. | Name of Project | River            | Type | I.C. (MW) |
|--------|-----------------|------------------|------|-----------|
| 1      | Sonal           | Mandavi          | S    | 55        |
|        | Total           | 1 No. of Project |      | 55        |

Note: S- storage

## Hydro Power Development in Gujarat

### Identified Hydro Power Potential and its status of development:

|                                                                                                                                         |                              | Nos. | Capacity (MW) |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------|---------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects<br/>(Projects having capacity above 25 MW)</b> |                              | 2    | 590           |
| <b>I</b>                                                                                                                                | <b>Capacity in operation</b> | 2    | 550           |

### 1. Identified Projects during Reassessment study:

| Sl.No.       | Name of Project                         | River   | I. C.<br>(MW) |
|--------------|-----------------------------------------|---------|---------------|
| 1            | Ukai<br>[Ukai Dam PH]                   | Tapti   | 120           |
| 2            | Sardar Sarovar CHPH<br>[Sardar Sarovar] | Narmada | 470           |
| <b>TOTAL</b> |                                         |         | <b>590</b>    |

**2. H.E. Projects in Operation:**

| S. No. | Utility/<br>Stations                          | No. of<br>Stns. | No. of units x<br>Capacity (MW) | River /<br>Basin* | District | I.C.<br>(MW) | Year of<br>commissioning |
|--------|-----------------------------------------------|-----------------|---------------------------------|-------------------|----------|--------------|--------------------------|
|        | <b>GSECL</b>                                  |                 |                                 |                   |          |              |                          |
| 1      | UKAI<br>[Ukai Dam PH]                         | 1               | (4X75)                          | TAPI              | TAPI     | 300          | 1974-1976                |
|        | <b>SUB-TOTAL<br/>GSECL</b>                    | <b>1</b>        |                                 |                   |          | <b>300</b>   |                          |
|        | <b>SSNNL</b>                                  |                 |                                 |                   |          |              |                          |
| 2      | SARDAR<br>SAROVAR<br>CHPH<br>[Sardar Sarovar] | 1               | (5X50)                          | NARMADA           | NARMADA  | 250          | 2004                     |
|        | <b>SUB-TOTAL<br/>SSNNL</b>                    | <b>1</b>        |                                 |                   |          | <b>250</b>   |                          |
|        | <b>TOTAL<br/>GUJARAT</b>                      | <b>2</b>        |                                 |                   |          | <b>550</b>   |                          |

\* All projects are in CIR Basin

**3. Pumped Storage Projects in operation:**

| Sl. No. | Name of Project        | I. C.<br>(MW) | Year of<br>Commissioning |
|---------|------------------------|---------------|--------------------------|
| 1       | Kadana<br>St. I & II # | 240           | 1990-98                  |
| 2       | Sardar Sarovar *       | 1200          | 2005-06                  |
|         | <b>Total</b>           | <b>1440</b>   |                          |

\* Not operational in pumping mode because Garudeshwar weir is under construction. This will work as Lower reservoir. As per information available in CEA the project has been awarded in 2012.

# Not operating in pumping mode due to vibration problem.

## Hydro Power Development in Maharashtra

### Identified Hydro Power Potential and its status of Development:

|           |                                                                                                                                     | Nos. | Capacity (MW) |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------|------|---------------|
|           | <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW)</b> | 25   | 3314          |
| <b>I</b>  | <b>Projects in operation</b>                                                                                                        | 12   | 2647          |
| <b>II</b> | <b>Projects yet to be allotted by the State for development*</b>                                                                    | 14   | 1932          |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition of the projects, etc.

#### 1. Identified Projects during Reassessment study

| Sl.No. | Name of Project             | River     | I. C. (MW) |
|--------|-----------------------------|-----------|------------|
| 1      | Vaitarna (Vaitarna I)       | Vaitarna  | 28         |
| 2      | Bhira Tail Race             | Kundalik  | 55         |
| 3      | Tillari                     | Tillari   | 39         |
| 4      | Pench                       | Pench     | 85         |
| 5      | Gosikhurd (Pathri)          | Wainganga | 40         |
| 6      | Wainganga                   | Wainganga | 150        |
| 7      | Samda                       | Pranhita  | 95         |
| 8      | Chichdoh Barrage (Ghargaon) | Pranhita  | 105        |
| 9      | Kunghara                    | Pranhita  | 115        |

| Sl.No.       | Name of Project                | River    | I. C.<br>(MW) |
|--------------|--------------------------------|----------|---------------|
| 10           | Pranhita                       | Pranhita | 310           |
| 11           | Sahasrakund (Sahasrakund I)    | Penganga | 29            |
| 12           | Bhivpuri                       | Andhra   | 85            |
| 13           | Khopoli                        | Ganga    | 70            |
| 14           | Bhira                          | Mula     | 215           |
| 15           | Koyna St-IV                    | Koyna    | 350           |
| 16           | Koyna St-III                   | Koyna    | 145           |
| 17           | Koyna St-I & II                | Koyna    | 245           |
| 18           | Koyna Dam PH                   | Koyna    | 65            |
| 19           | Patharpunj                     | Varna    | 29            |
| 20           | Kadvi                          | Varna    | 215           |
| 21           | Warna (Varna)                  | Varna    | 27            |
| 22           | Kasari (Kasari-I)              | Kasari   | 215           |
| 23           | Kumbhi (Kubhi-I)               | Penganga | 170           |
| 24           | Kumbhi (Kumbhi-II)             | Penganga | 27            |
| 25           | Hiranyakeshi (Hiranyakeshi II) | Vedganga | 405           |
| <b>TOTAL</b> |                                |          | <b>3314</b>   |

2. H.E. Projects in Operation:

| S. No. | Utility/                                     | No. Of stns. | No. Of units x Capacity (MW) | River                                                | Basin | District  | I.C. (MW) | Year of commissioning |
|--------|----------------------------------------------|--------------|------------------------------|------------------------------------------------------|-------|-----------|-----------|-----------------------|
|        | MAHAGENCO                                    |              |                              |                                                      |       |           |           |                       |
| 1      | BHIRA TAIL RACE                              | 1            | (2X40)                       | KUNDALIKA                                            | WFR   | RAIGAD    | 80        | 1987-1988             |
| 2      | KOYNA DPH                                    | 1            | (2X18)                       | KOYNA                                                | EFR   | SATARA    | 36        | 1980-1981             |
| 3      | KOYNA-I&II                                   | 1            | (4X70)+ (4X80)               | KOYNA                                                | EFR   | PATAN     | 600       | 1962-1967             |
| 4      | KOYNA-III                                    | 1            | (4X80)                       | Water let out through ulestward units (St-I,II & IV) | EFR   | RATNAGIRI | 320       | 1975-1978             |
| 5      | KOYNA-IV                                     | 1            | (4X250)                      | KOYNA                                                | EFR   | SATARA    | 1000      | 1999-2000             |
| 6      | TILLARI                                      | 1            | (1X60)                       | TILLARI                                              | WFR   | KOLHAPUR  | 60        | 1986                  |
| 7      | VAITARNA (Vaitarna I)                        | 1            | (1X60)                       | VAITARNA                                             | WFR   | NASIK     | 60        | 1976                  |
|        | SUB-TOTAL MAHAGENCO                          | 7            |                              |                                                      |       |           | 2156      |                       |
|        | MPPGCL                                       |              |                              |                                                      |       |           |           |                       |
| 8      | PENCH                                        | 1            | (2X80)                       | PENCH                                                | EFR   | CHINDWARA | 160       | 1986-1987             |
|        | SUB-TOTAL MPPGCL                             | 1            |                              |                                                      |       |           | 160       |                       |
|        | TOTAL STATE SECTOR                           | 8            |                              |                                                      |       |           | 2316      |                       |
|        | PRIVATE                                      |              |                              |                                                      |       |           |           |                       |
|        | DODSON-LINDBLOM HYDRO POWER PVT. LTD. (DLHP) |              |                              |                                                      |       |           |           |                       |
| 9      | BHANDARDHARA ST-II                           | 1            | (1X34)                       | PRAVARA                                              | EFR   |           | 34        | 1996                  |
|        | SUB-TOTAL DLHP                               | 1            |                              |                                                      |       |           | 34        |                       |
|        | TATA POWER COMPANY (PVT.)                    |              |                              |                                                      |       |           |           |                       |
| 10     | BHIRA                                        | 1            | (6X25)                       | NEELA & MULA                                         | EFR   | RAIGAD    | 150       | 1927-1949             |
| 11     | BHIVPURI                                     | 1            | (3X24) + (2X1.5)             | ANDHRA                                               | EFR   | RAIGAD    | 75        | 1997-1999             |
| 12     | KHOPOLI                                      | 1            | (3X24)                       | INDRAYANI                                            | EFR   | RAIGAD    | 72        | 2001-2003             |
|        | SUB-TOTAL TPCL                               | 3            |                              |                                                      |       |           | 297       |                       |
|        | TOTAL PVT (MAHARASHTRA)                      | 4            |                              |                                                      |       |           | 331       |                       |
|        | TOTAL MAHARASHTRA                            | 12           |                              |                                                      |       |           | 2647      |                       |

3. Pumped storage H.E Projects in operation:

| Sl. No. | Name of Project | I. C. (MW) | Remarks               |
|---------|-----------------|------------|-----------------------|
| 1       | Bhira           | 1x150 =150 | Pumping Mode- Working |
| 2       | Ghatgar         | 2x125 =250 | Pumping Mode- Working |
|         | Total           | 400        |                       |

**4. Pumped Storage Projects under Construction:**

| Sl. No. | Name of Project | I. C. (MW) | Remarks                                                                                                                                                                                                                                |
|---------|-----------------|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Koyna Left Bank | 2x40=80    | The current expenditure on the project has already reached to original administrative approved cost level hence expenditure on the project is stopped & project works are stalled. Revised cost is under approval by State Government. |
|         | <b>Total</b>    | <b>80</b>  |                                                                                                                                                                                                                                        |

**5. H. E. Projects yet to be allotted by the State for development**

| Sl .No. | Name of Project                | River                      | Type | I.C.(MW)    |
|---------|--------------------------------|----------------------------|------|-------------|
| 1       | Gosikhurd (Pathri)             | Wainganga                  | S    | 40          |
| 2       | Wainganga                      | Wainganga                  | S    | 150         |
| 3       | Samda                          | Pranhita                   | R    | 95          |
| 4       | Chichdoh Barrage (Ghargaon)    | Pranhita                   | R    | 105         |
| 5       | Kunghara                       | Pranhita                   | R    | 115         |
| 6       | Pranhita                       | Pranhita                   | S    | 310         |
| 7       | Sahasrakund (Sahasrakund I)    | Penganga                   | S    | 29          |
| 8       | Patharpunj                     | Varna                      | S    | 29          |
| 9       | Kadvi                          | Varna                      | S    | 215         |
| 10      | Kesari (Kasari-I)              | Kasari                     | S    | 215         |
| 11      | Kumbhi (Kubhi-I)               | Penganga                   | S    | 170         |
| 12      | Kumbhi (Kubhi-II)              | Penganga                   | R    | 27          |
| 13      | Warna (Varna)                  | Varna                      | S    | 27          |
| 14      | Hiranyakeshi (Hiranyakeshi II) | Vedganga                   | S    | 405         |
|         | <b>Total</b>                   | <b>14 Nos. of Projects</b> |      | <b>1932</b> |

**Note: R –Run off the River & S- storage**

## Hydro Power Development in Madhya Pradesh

### Identified Hydro Power Potential as per reassessment Study:

|                                                                                                                                     |                                                                  |                                                 | Nos. | Capacity (MW) |
|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------|------|---------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW)</b> |                                                                  |                                                 | 13   | 1970          |
| <b>I</b>                                                                                                                            | <b>Projects in operation</b>                                     |                                                 | 9    | 2235          |
| <b>II</b>                                                                                                                           | <b>Projects under construction</b>                               |                                                 | 1    | 400           |
| <b>III</b>                                                                                                                          | <b>Projects allotted by States for development</b>               |                                                 |      |               |
|                                                                                                                                     | (i)                                                              | <b>Projects returned to project authorities</b> | 1    | 100           |
| <b>IV</b>                                                                                                                           | <b>Projects held up due to Inter-State aspects</b>               |                                                 | 2    | 140           |
| <b>V</b>                                                                                                                            | <b>Projects yet to be allotted by the State for development*</b> |                                                 | 4    | 191           |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential assessed due to change in capacity of the projects, addition of the projects, etc.

| <b>1. Identified Projects during Reassessment study</b> |                               |              |                      |
|---------------------------------------------------------|-------------------------------|--------------|----------------------|
| <b>Sl.No.</b>                                           | <b>Name of Project</b>        | <b>River</b> | <b>I.C.<br/>(MW)</b> |
| 1                                                       | Sone (Chorhat)                | Sone         | 55                   |
| 2                                                       | Bansagar-III (Bansagar)       | Sone         | 45                   |
| 3                                                       | Bansagar-II (Beehar)          | Tons         | 30                   |
| 4                                                       | Bansagar-I (Tons HE Projects) | Tons         | 315                  |
| 5                                                       | Rajghat                       | Betwa        | 29                   |
| 6                                                       | Dhurwara                      | Betwa        | 28                   |
| 7                                                       | Burhner                       | Burhner      | 28                   |
| 8                                                       | Basania                       | Narmada      | 60                   |
| 9                                                       | Bargi                         | Narmada      | 115                  |
| 10                                                      | Hoshangabad (Jahanpur)        | Narmada      | 75                   |
| 11                                                      | Indira Sagar (Narmada Sagar)  | Narmada      | 675                  |
| 12                                                      | Omkareshwar                   | Narmada      | 290                  |
| 13                                                      | Maheshwar                     | Narmada      | 225                  |
|                                                         | <b>Total</b>                  |              | <b>1970</b>          |

**2. H.E. Projects in Operation:**

| S. No. | Utility/<br>Stations            | No. of<br>Stns. | No. Of<br>units x<br>Capacity<br>(MW) | River      | Basin | District       | I.C.<br>(MW) | Year of<br>commissioning |
|--------|---------------------------------|-----------------|---------------------------------------|------------|-------|----------------|--------------|--------------------------|
|        | <b>NHDC</b>                     |                 |                                       |            |       |                |              |                          |
| 1.     | INDIRA SAGAR<br>(NARMADA SAGAR) | 1               | (8X125)                               | NARMADA    | CIR   | KHANDWA        | 1000         | 2004-2005                |
| 2.     | OMKARESHWAR                     | 1               | (8X65)                                | NARMADA    | CIR   | KHANDWA        | 520          | 2007                     |
|        | <b>SUB-TOTAL NHDC</b>           | <b>2</b>        |                                       |            |       |                | <b>1520</b>  |                          |
|        | <b>TOTAL CENTRAL</b>            | <b>2</b>        |                                       |            |       |                | <b>1520</b>  |                          |
|        | <b>MPPGCL</b>                   |                 |                                       |            |       |                |              |                          |
| 3.     | BANSAGAR TONS-I<br>(TONS)       | 1               | (3X105)                               | TONS       | GANGA | SATNA          | 315          | 1991-1992                |
| 4.     | BANSAGAR-II<br>(BEEHAR)         | 1               | (2X15)                                | TONS       | GANGA | REWA           | 30           | 2002                     |
| 5.     | BANSAGAR-III<br>(BANSAGAR)      | 1               | (3X20)                                | SONE       | GANGA | SATNA          | 60           | 2000-2002                |
| 6.     | BARGI                           | 1               | (2X45)                                | NARMADA    | CIR   | JABALPUR       | 90           | 1988                     |
| 7.     | GANDHI SAGAR                    | 1               | (5X23)                                | CHAMBAL    | GANGA | MANDSAUR       | 115          | 1960-1966                |
| 8.     | MADHIKHERA                      | 1               | (3X20)                                | KALI SINDH | GANGA | SHIVPURI       | 60           | 2006-2007                |
| 9.     | RAJGHAT                         | 1               | (3X15)                                | BETWA      | GANGA | ASHOK<br>NAGAR | 45           | 1999                     |
|        | <b>SUB-TOTAL<br/>MPPGCL</b>     | <b>7</b>        |                                       |            |       |                | <b>715</b>   |                          |
|        | <b>TOTAL MP</b>                 | <b>9</b>        |                                       |            |       |                | <b>2235</b>  |                          |

**3. H.E. Projects Under Construction:**

| Sl. No. | Name of Project    | I. C. (MW) | District           | River   | Basin | Agency | Likely Commissioning |
|---------|--------------------|------------|--------------------|---------|-------|--------|----------------------|
| 1       | Maheshwar (Pvt.) # | 400        | Khargone & Khandwa | Narmada | CIR   | SMHPCL | 2020-22*             |
|         | <b>Total</b>       | <b>400</b> |                    |         |       |        |                      |

# PFC as lead lender have acquired majority i.e 51% in the SMHPCL w.e.f. 1st June, 2016. Matter Sub-judice.

\* Subject to restart of works

**4. Hydro Projects Returned to Project Authorities for re-submission after compliance of observations:**

| Sl. No. | Name of Project | Sector     | I.C. (MW) | Month of Return |
|---------|-----------------|------------|-----------|-----------------|
| 1       | Sone (Chorhat)  | State      | 100       | Apr-03          |
|         | <b>Total</b>    | <b>100</b> |           |                 |

**5. H.E. Projects held up due to Inter-State aspects:**

| Sl. No.      | Name of Project                         | I.C. (MW)  | Location (State) | States Involved | Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|--------------|-----------------------------------------|------------|------------------|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1            | <b>Orcha MPP</b><br>(2x30+2x15 = 90 MW) | 90         | M.P.             | U.P./M.P.       | <ul style="list-style-type: none"> <li>· DPR with estimated cost of Rs. 89.01 crores (3/1980 PL) returned in 07/1985.</li> <li>· Inter-state aspects mainly relate to submergence under the reservoir as well as sharing of water below Orcha.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 2            | <b>Ken</b><br>(2x15+2x10 =50 MW)        | 50         | M.P.             | U.P./M.P.       | <ul style="list-style-type: none"> <li>· DPR with estimated cost of Rs 202.06 crores returned in 2/1987.</li> <li>· The yield at the project site and sharing of water u/s &amp; d/s of the project has been agreed between U.P. &amp; M.P. Both the States have also agreed for preparation of DPR for the Ken MPP and NWDA proposal for transfer of surplus water of Ken to Betwa u/s of Rajghat Dam.</li> <li>· DPR for Ken-Betwa River Linking Project has been prepared by NWDA in Dec., 2008, copies of which were forwarded by them to Govt. of M.P. and Govt. of U.P. The status of the project was discussed by the respective Govts./NWDA/ MOWR in the meeting taken by Secretary (WR) on 04.08.2010 and it was decided that S&amp;I works will be taken up by NWDA on priority.</li> </ul> |
| <b>Total</b> |                                         | <b>140</b> |                  |                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

| <b>6. H. E. Projects yet to be allotted by the State for development:</b> |                           |              |             |                      |
|---------------------------------------------------------------------------|---------------------------|--------------|-------------|----------------------|
| <b>Sl.No.</b>                                                             | <b>Name of Project</b>    | <b>River</b> | <b>Type</b> | <b>I.C.<br/>(MW)</b> |
| 1                                                                         | Dhurwara                  | Betwa        | R           | 28                   |
| 2                                                                         | Burhner                   | Burhner      | S           | 28                   |
| 3                                                                         | Basania                   | Narmada      | R           | 60                   |
| 4                                                                         | Hoshangabad<br>(Jahanpur) | Narmada      | S           | 75                   |
|                                                                           | <b>Total</b>              |              |             | <b>191</b>           |

Note: R –Run off the River & S- storage

### Hydro Power Development in Andhra Pradesh

| Identified Hydro Power Potential and its status of Development:                                                                         |                                                                  |      |               |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|------|---------------|
|                                                                                                                                         |                                                                  | Nos. | Capacity (MW) |
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects<br/>(Projects having capacity above 25 MW)</b> |                                                                  | 10   | 2341          |
| <b>I</b>                                                                                                                                | <b>Projects in operation</b>                                     | 5    | 1610          |
| <b>II</b>                                                                                                                               | <b>Projects under construction</b>                               | 1    | 960           |
| <b>III</b>                                                                                                                              | <b>Projects held up due to Inter-State aspects</b>               | 1    | 975           |
| <b>IV</b>                                                                                                                               | <b>Projects yet to be allotted by the State for development*</b> | 3    | 192           |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition/deletion of the projects, etc.

#### 1. Identified Projects during Reassessment study:

| Sl.No.       | Name of Project                                   | River       | I. C. (MW) |
|--------------|---------------------------------------------------|-------------|------------|
| 1            | Machkund #                                        | Machkund    | 205        |
| 2            | Balimela                                          | Sileru      | 65         |
| 3            | Upper Sileru I&II (Upper Sileru)                  | Sileru      | 150        |
| 4            | Lower Sileru                                      | Sileru      | 385        |
| 5            | Donkarayi Dam Canal ##<br>(Donkarai Canal)        | Sileru      | 44         |
| 6            | Polavaram                                         | Godavari    | 545        |
| 7            | Pondugala                                         | Krishna     | 95         |
| 8            | Nagarjunasagar RBC & Ext.<br>(Nagarjunasagar RBC) | Krishna     | 45         |
| 9            | Srisaillam                                        | Krishna     | 775        |
| 10           | Tungabhadra HLC<br>(Tungbhadra HLC)               | Bhadra      | 32         |
| <b>TOTAL</b> |                                                   | <b>2341</b> |            |

# This project has been in operation in Odisha State for 114.75 MW

## This project has been in operation but developed with capacity less than 25 MW

2. H.E. Projects in Operation:

| S. No. | Utility/<br>Stations                                   | No. Of<br>stns. | No. of units x<br>Capacity<br>(MW) | River /<br>Basin* | District      | I.C.<br>(MW) | Year of<br>commissioning |
|--------|--------------------------------------------------------|-----------------|------------------------------------|-------------------|---------------|--------------|--------------------------|
|        | <b>APGENCO</b>                                         |                 |                                    |                   |               |              |                          |
| 1      | LOWER SILERU                                           | 1               | (4X115)                            | SILERU            | KHAMMAM       | 460          | 1976-1978                |
| 2      | NAGARJUNA SGR<br>RBC & EXT.<br>(NAGARJUNA SGR<br>RBC ) | 1               | (3X30)                             | KRISHNA           | SATRASALA     | 90           | 1983-90                  |
| 3      | SRISAILAM                                              | 1               | (7X110)                            | KRISHNA           | MAHABUBNAGAR  | 770          | 1982-1987                |
| 4      | UPPER SILERU-I&II<br>(UPPER SILERU)                    | 1               | (4X60)                             | SILERU            | VISHAKAPATNAM | 240          | 1967-1995                |
| 5      | NJ SAGAR TPD                                           | 1               | (2X25)                             | KRISHNA           | GUNTUR        | 50           | 2017                     |
|        | <b>TOTAL APGENCO</b>                                   | <b>5</b>        |                                    |                   |               | <b>1610</b>  |                          |

\* All projects are in EFR Basin

3. H.E. Projects under Construction:

| Sl. No. | Name of Project | Agency                            | District                | River/ Basin     | I. C.<br>(MW) | Likely<br>Commissioning | Issues /<br>Constraints                                                                                                                                |
|---------|-----------------|-----------------------------------|-------------------------|------------------|---------------|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Polavaram       | Polavaram<br>Project<br>Authority | East & West<br>Godavari | Godavari/<br>EFR | 960           | 2021-23<br>(Mar'23)     | Public hearing for<br>construction of<br>protective<br>embankment to be<br>held in Odisha and<br>Chhattisgarh as<br>desired by MOEF<br>at later stage. |
|         | <b>Total</b>    |                                   |                         |                  | <b>960</b>    |                         |                                                                                                                                                        |

4. H.E. Projects held up due to Inter-State aspects:

| Sl. No. | Name of Project                   | I.C.<br>(MW) | Location<br>(State) | States<br>Involved                         | Status                                                                                                                                                                                 |
|---------|-----------------------------------|--------------|---------------------|--------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Inchampalli MPP<br>(13x75= 975MW) | 975          | A.P.                | A.P./M.P./Ch<br>hattisgarh/Ma<br>harashtra | DPR with estimated cost of Rs.1110 crores (1987-88 PL)<br>returned in 05/1989.<br>Requires Resolution of inter-state aspects and submergence<br>with MP, Chhattisgarh and Maharashtra. |

5. Pump Stoarge Projects in Under S&I:

| S. No. | Name of Project | No. of Stations | Capacity (MW) | River / Basin*      | District | Agency  |
|--------|-----------------|-----------------|---------------|---------------------|----------|---------|
|        |                 |                 |               |                     |          |         |
| 1      | Pinnapuram      |                 | 1200          | Off the river / EFR | Kurnool  | Greenko |
|        |                 |                 |               |                     |          |         |
|        | TOTAL           |                 | 1200          |                     |          |         |

6. H. E. Projects yet to be allotted by the State for development:

| Sl.No. | Name of Project | River   | Type | I. C. (MW) |
|--------|-----------------|---------|------|------------|
| 1      | Balimela        | Sileru  | S    | 65         |
| 2      | Pondugala       | Krishna | S    | 95         |
| 3      | Tungbhadra HLC  | Bhadra  | R    | 32         |
| TOTAL  |                 |         |      | 192        |

Note: R –Run off the River & S- storage

Hydro Power Development in Karnataka

Identified Hydro Power Potential and its status of Development:

|                                                                                                                              |                                                           | Nos. | Capacity (MW) |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|------|---------------|
| Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW) |                                                           | 38   | 6459          |
| I                                                                                                                            | Projects in operation                                     | 16   | 3644.2        |
| II                                                                                                                           | Projects allotted by States for development               |      |               |
|                                                                                                                              | (i) Projects returned to project authorities              | 2    | 665           |
| III                                                                                                                          | Projects held up due to Inter-State aspects               | 1    | 400           |
| IV                                                                                                                           | Projects dropped due to Basin studies/ Other reasons      | 1    | 200           |
| V                                                                                                                            | Projects yet to be allotted by the State for development* | 18   | 2848          |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition/deletion of the projects, etc.

**1. Identified Projects during Reassessment study**

| <b>Sl.No.</b> | <b>Name of Project</b>                             | <b>River</b> | <b>I. C. (MW)</b> |
|---------------|----------------------------------------------------|--------------|-------------------|
| 1             | Mahadayi [Krishnapur]                              | Mandavi      | 210               |
| 2             | Kalinadi Supa<br>[Kalinadi I (Supa)]               | Kalinadi     | 140               |
| 3             | Kalinadi II (Dandeli)<br>[Kalinadi I (Dandeli II)] | Kalinadi     | 60                |
| 4             | Kalinadi (Nagjhari)<br>[Kalinadi I (Nagjhari)]     | Kalinadi     | 855               |
| 5             | Kodassali<br>[Kalinadi I (Kadassali)]              | Kalinadi     | 95                |
| 6             | Kadra [Kalinadi I (Kadra)]                         | Kalinadi     | 100               |
| 7             | Kalinadi III<br>[Kalinadi I (Mardi)]               | Kalinadi     | 175               |
| 8             | Bedthi<br>[Gangavali (Bedti) St.I]                 | Gangavali    | 380               |
| 9             | Gangavali St.II<br>[Gangavali (Sonda) St.II]       | Gangavali    | 105               |
| 10            | Aghnashini                                         | Aghnashini   | 370               |
| 11            | Bennehole [Bannehole]                              | Bannehole    | 55                |
| 12            | Lingnamakki [Linganamakki]                         | Saravathi    | 125               |
| 13            | Sharavathy [Saravathi]                             | Saravathi    | 1365              |
| 14            | Sharavathy Tail Race<br>[Saravathi Tail Race]      | Saravathi    | 157               |
| 15            | Varahi                                             | Varahi       | 305               |
| 16            | Machchattu                                         | Varahi       | 35                |
| 17            | Netravathy                                         | Netravathy   | 60                |
| 18            | Sirpadi                                            | Netravathy   | 38                |
| 19            | Kumaradhari                                        | Kumaradhari  | 49                |
| 20            | Barapole I                                         | Barapole     | 335               |
| 21            | Jaldurg                                            | Krishna      | 270               |
| 22            | Tamankal [Narayanpur]                              | Krishna      | 70                |
| 23            | Almatti                                            | Krishna      | 160               |
| 24            | Ghataprabha                                        | Tungabhadra  | 41                |
| 25            | Shivapur [Shivpur]                                 | Tungabhadra  | 26                |
| 26            | Munirabad                                          | Tungabhadra  | 41                |
| 27            | Hampi                                              | Tungabhadra  | 34                |
| 28            | T.B. Dam<br>[Tungbhadra RBC]                       | Tungabhadra  | 27                |
| 29            | Bhadra<br>[Tungbhadra Dam PH]                      | Bhadra       | 36                |
| 30            | Krishnarajasagar                                   | Cauvery      | 55                |
| 31            | Sivasamudram<br>[Shivasamudram]                    | Cauvery      | 44                |

|              |                                  |           |             |
|--------------|----------------------------------|-----------|-------------|
| 32           | Shimsa [Shimsa PH-I]             | Cauvery   | 31          |
| 33           | Sivasamudram<br>[Cauvery PH-I]   | Cauvery   | 235         |
| 34           | Shimsa [Shimsa PH-II]            | Shimsha   | 42          |
| 35           | Arkavathy [Arkavathi]            | Arkavathi | 42          |
| 36           | Mekadatu [Cauvery PH-II]         | Cuvery    | 165         |
| 37           | Rasi Manal #<br>[Cauvery PH-III] | Cauvery   | 90          |
| 38           | Hogenekkal #<br>[Cauvery PH-IV]  | Cauvery   | 36          |
| <b>TOTAL</b> |                                  |           | <b>6459</b> |

# Rasi Manal & Hogenekkal are in Inter-State issue in Tamil Nadu State

2. H.E. Projects in Operation:

| S. No. | Utility/ Stations                                            | No. Of stns. | No. Of units x capacity (MW) | River       | Basin | District       | I.C. (MW) | Year of commissioning |
|--------|--------------------------------------------------------------|--------------|------------------------------|-------------|-------|----------------|-----------|-----------------------|
|        | KPCL                                                         |              |                              |             |       |                |           |                       |
| 1      | ALMATTI                                                      | 1            | (5X55)<br>+(1X15)            | KRISHNA     | EFR   | BIJAPUR        | 290       | 2004-2005             |
| 2      | GERUSOPPA<br>(SHARAVATHY TAIL RACE)<br>[SARAVATHY TAIL RACE] | 1            | (4X60)                       | SHARAVATHY  | WFR   | UTTARA KANNADA | 240       | 2001-2002             |
| 3      | GHAT PRABHA                                                  | 1            | (2X16)                       | GHATPRABHA  | EFR   | BELGAUM        | 32        | 1992                  |
| 4      | MAHATMA GANDHI JOG                                           | 1            | (4X21.6)<br>+(4X13.2)        | SHARAVATHY  | WFR   | SHIMOGA        | 139.2     | 1949-1952             |
| 5      | KADRA<br>[Kalinadi I (Kadra)]                                | 1            | (3X50)                       | KALI        | WFR   | UTTARA KANNADA | 150       | 1997-1999             |
| 6      | KALINADI<br>(NAGJHARI)<br>[Kalinadi I (Nagjhari)]            | 1            | (3X135)<br>+(3X150)          | KALI        | WFR   | UTTARA KANNADA | 855       | 1979-1984             |
| 7      | KALINADI SUPA<br>[Kalinadi I (Supa)]                         | 1            | (2X50)                       | KALI        | WFR   | UTTARA KANNADA | 100       | 1985                  |
| 8      | KODASALI<br>[Kalinadi I (Kadassali)]                         | 1            | (3X40)                       | KALI        | WFR   | UTTARA KANNADA | 120       | 1998-1999             |
| 9      | LINGNAMAKKI<br>[Linganamakki]                                | 1            | (2X27.5)                     | SHARAVATHY  | WFR   | SHIMOGA        | 55        | 1979-1980             |
| 10     | MUNIRABAD                                                    | 1            | (2X9)<br>+(1X10)             | TUNGABHADRA | EFR   | KOPPAL         | 28        | 1962-1965             |
| 11     | SHARAVATHY<br>[Saravathi]                                    | 1            | (10X103.5)                   | SHARAVATHY  | WFR   | SHIMOGA        | 1035      | 1965-1977             |
| 12     | SIVASAMUNDRUM<br>[Shivasamudram]                             | 1            | (4X6)+(6X3)                  | CAUVERY     | EFR   | MANDYA         | 42        | 1922-1934             |
| 13     | VARAHI                                                       | 1            | (4X115)                      | VARAHI      | WFR   | UDUPI          | 460       | 1989-2009             |
| 14     | BHADRA<br>[Tungbhadra Dam PH]                                | 1            | (2x12)+(1x2)                 | BHADRA      | EFR   | CHICKMAGALUR   | 26        | 1965                  |
|        | TOTAL KPCL                                                   | 14           |                              |             |       |                | 3572.2    |                       |
|        | APGENCO                                                      |              |                              |             |       |                |           |                       |
| 15     | T B DAM *<br>[Tungbhadra RBC]                                | 1            | (4X9)                        | TUNGABHADRA |       | BELLARI        | 36        | 1957-1964             |
| 16     | HAMPI *                                                      | 1            | (4X9)                        | TUNGABHADRA | EFR   | BELLARI        | 36        | 1958-1964             |
|        | SUB-TOTAL APGENCO                                            | 2            |                              |             |       |                | 72        |                       |
|        | TOTAL KARNATAKA                                              | 16           |                              |             |       |                | 3644.2    |                       |

\* Utilities are in Andhra Pradesh

### 3. Hydro Projects Returned to Project Authorities for re-submission after compliance of observations:

| Sl. No. | Name of Project                | Agency | I.C.(MW)   | Reason of Return                                                                                                                                                                   |
|---------|--------------------------------|--------|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Sivasamudram<br>[Cauvery PH-I] | KPCL   | 345        | Presentation meeting held on 16.5.2012 as it involves interstate issues; DPR could not be processed and returned the same for resubmission after resolution of interstate aspects. |
| 2       | Mahadayi<br>[Krishnapur]       | KPCL   | 320        | Returned due to non-tie up of inputs/clearances, the project involves interstate aspects.                                                                                          |
|         | <b>Total</b>                   |        | <b>665</b> |                                                                                                                                                                                    |

### 4. Pumped Storage Projects under Survey & Investigation:

| Sl. No. | Name of Project | Basin/River        | I.C. (MW)   | Agency | Target date of preparation of DPR |
|---------|-----------------|--------------------|-------------|--------|-----------------------------------|
| 1       | Sharavathy      | WFR/<br>Sharavathy | 2000        | KPCL   | 18-Dec-18                         |
|         | <b>Total</b>    |                    | <b>2000</b> |        |                                   |

5. H.E. Projects held up due to Inter-State aspects:

| Sl. No. | Name of Project                                  | I.C. ( MW) | Location (State) | States Involved      | Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------|--------------------------------------------------|------------|------------------|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Cauvery Power Projects- Mekadatu [Cauvery PH-II] | 400        | Karnataka        | Kerala/TN/ Karnataka | <ul style="list-style-type: none"><li>• Preliminary report of Stage-I was returned in 10/1996.</li><li>• Sharing of Cauvery water awarded by CWDT.</li><li>• With the consent of GOTN and GOK, NHPC took up S&amp;I and preparation of DPR.</li><li>• In the Core Group Meeting taken by secretary (Power) on 27.10.2004, it was agreed by GOK and GOTN that Shivasamudram (Karnataka) and Hogenekkal (T.N.) should be taken up simultaneously in the first phase and remaining two projects viz. Mekadatu and Rasimanal in the next phase.</li><li>• In the Core Group Meeting taken by Secretary (Power) on 21.06.2006, it was agreed that execution of these four projects through NHPC would be most viable proposition. It was decided that representatives of both the Govts. would take up the matter with their respective Govts. and seek their approval and thereafter necessary agreement will be signed between NHPC and the two State Govts. Consent by both the State Govts. was to be communicated to MOP by 31.07.2006. The State of Karnataka in June, 2007 informed that Shivasamudram and Mekadatu will be executed by them in State sector.</li><li>• KPCL informed in April, 2009 that the tribunal award is with Supreme Court.</li><li>• Subsequently, a meting was held on 08.07.2009 under the chairmanship of Secretary (Power) to discuss the pending issue of development of Hydroelectric Projects in Cauvery Basin. Secretary (Power) expressed that Shivasamudram being a Run of River Project with in the territory of Karnataka, Tamil Nadu should not have any objection to the development of the Project by the State Government. He further opined that there should not be any problem in taking up Shivasamudram Project by the State of Karnataka provided there is joint mechanism for monitoring the water level/releases of water to Tamil Nadu. He suggested that the CWC could act as an observer in this regard and directed that the GOK would provide/share all the technical details of the Project to/with Tamil Nadu. Both the States Government were advised to consult CEA and CWC before finalization of designing of the Project.</li><li>• As regards other projects located in Tamil Nadu but whose submergence area partly falls in Karnataka, it was suggested the two Governments need to arrive at an arrangement for power sharing.</li></ul> |
|         | Total                                            | 400        |                  |                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

6. Projects dropped due to Basin studies/ Other reasons:

| Sl. No. | Name of Project | I.C. (MW) | River  | Basin | Remarks                                                                                                   |
|---------|-----------------|-----------|--------|-------|-----------------------------------------------------------------------------------------------------------|
| 1       | Gundia          | 200       | Gundia | WFR   | Due to implementation of Yethnable Drinking water Project in same catchment area, the project is stalled. |
|         | Total           | 200       |        |       |                                                                                                           |

**7. H. E. Projects yet to be allotted by the State for development:**

| Sl.No. | Name of Project                                    | River                      | Type | I.C.(MW)    |
|--------|----------------------------------------------------|----------------------------|------|-------------|
| 1      | Bennehole (Bannehole)                              | Bannehole                  | S    | 55          |
| 2      | Machchattu                                         | Varahi                     | R    | 35          |
| 3      | Netravathy                                         | Netravathy                 | S    | 60          |
| 4      | Sirpadi                                            | Netravathy                 | R    | 38          |
| 5      | Kumaradhari                                        | Kumaradhari                | S    | 49          |
| 6      | Barapole I                                         | Barapole                   | S    | 335         |
| 7      | Kalinadi II (Dandeli<br>[Kalinadi I (Dandeli II)]) | Kalinadi                   | R    | 60          |
| 8      | Kalinadi III<br>[Kalinadi I (Mardi)]               | Kalinadi                   | R    | 300         |
| 9      | Bedthi<br>[Gangavali (Bedti) St.I]                 | Gangavali                  | S    | 380         |
| 10     | Gangavali St.II<br>[Gangavali (Sonda) St.II]       | Gangavali                  | S    | 400         |
| 11     | Aghnashini                                         | Aghnashini                 | S    | 600         |
| 12     | Tamankal [Narayanpur]                              | Krishna                    | R    | 70          |
| 13     | Shivapur [Shivpur]                                 | Tungabhadra                | R    | 26          |
| 14     | Krishnarajasagar                                   | Cauvery                    | S    | 55          |
| 15     | Shimsa [Shimsa PH-I]                               | Cauvery                    | R    | 31          |
| 16     | Shimsa [Shimsa PH-II]                              | Shimsha                    | R    | 42          |
| 17     | Arkavathy [Arkavathi]                              | Arkavathi                  | R    | 42          |
| 18     | Jaldurg                                            | Krishna                    | R    | 270         |
|        | <b>Total</b>                                       | <b>18 Nos. of Projects</b> |      | <b>2848</b> |

Note: R –Run off the River &amp; S- storage

## Hydro Power Development in Kerala

### Identified Conventional Hydro Power Potential and its status of Development:

|                                                                                                                                         |                                                                        | Nos. | Capacity (MW) |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|------|---------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects<br/>(Projects having capacity above 25 MW)</b> |                                                                        | 28   | 3378          |
| <b>I</b>                                                                                                                                | <b>Projects in operation</b>                                           | 14   | 1856.5        |
| <b>II</b>                                                                                                                               | <b>Projects under construction</b>                                     | 2    | 100           |
| <b>III</b>                                                                                                                              | <b>Projects cleared by CEA and yet to be taken up for construction</b> | 1    | 163           |
| <b>IV</b>                                                                                                                               | <b>Projects held up due to Inter-State aspects</b>                     | 4    | 520           |
| <b>V</b>                                                                                                                                | <b>Projects yet to be allotted by the State for development*</b>       | 11   | 1004          |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition/deletion of the projects and merger of two projects into one etc.

**1. Identified Projects during Reassessment study**

| Sl.No. | Name of Project                                             | River         | IC          |
|--------|-------------------------------------------------------------|---------------|-------------|
| 1      | Baraple II                                                  | Barapole      | 85          |
| 2      | Kuttiyadi, Kuttityadi Ext & Kuttiyadi Add. Ext. (Kuttiyadi) | Kuttiyadi     | 80          |
| 3      | Chalipuzha                                                  | Baypore       | 50          |
| 4      | Cholathipuzha #                                             | Baypore       | 80          |
| 5      | Pandiyar Punnapuzha Tail Race (Pandiyar Punnapuzha II)      | Pandiyar      | 85          |
| 6      | Silent Valley                                               | Kundipuzha    | 130         |
| 7      | Idukki (Idukki I & II)                                      | Periyar       | 565         |
| 8      | Idukki (Iddukki III)                                        | Periyar       | 130         |
| 9      | Lower Periyar                                               | Periyar       | 145         |
| 10     | Pallivasal (Pallivasal Replacement)                         | Mudirapuzha   | 190         |
| 11     | Sengulam                                                    | W. Kallar     | 55          |
| 12     | Panniar                                                     | Panniar       | 40          |
| 13     | Neriamangalam                                               | Mudirapuzha   | 65          |
| 14     | Perinjankutty                                               | Perinjankutty | 120         |
| 15     | Manali                                                      | Idamlayar     | 36          |
| 16     | Kudal                                                       | Idamlayar     | 47          |
| 17     | Puyanukutty                                                 | Puyanukutty   | 285         |
| 18     | Idamalayar                                                  | Idamalayar    | 55          |
| 19     | Sholayar [Sholaiyar]                                        | Sholaiyar     | 75          |
| 20     | Kuriarkutty (Kuriakutty)                                    | Kuriakutty    | 65          |
| 21     | Poringalkuthu(R.B)                                          | Chalakuddi    | 65          |
| 22     | Poringalkutty (Poringalkuthu(L.B))                          | Chalakuddi    | 60          |
| 23     | Athirappilly (Adirapally)                                   | Chalakuddi    | 65          |
| 24     | Sabarigiri                                                  | Pamba         | 410         |
| 25     | Kakkad                                                      | Kakkad        | 75          |
| 26     | Lower Sabarigiri                                            | Kakkad        | 55          |
| 27     | Twin-Kallar (Twin Kallar Multipurpose)                      | Achankovil    | 65          |
| 28     | Mananthavady (Manthavadi)                                   | Kabini        | 200         |
|        | <b>Total</b>                                                |               | <b>3378</b> |

# This project is in Inter-State issue in Tamil Nadu State

**2. Hydro Electric Projects in Operation:**

| S. No. | Utility/Stations                         | No. of Stns. | No. of units x Capacity (MW) | River / Basin*   | District           | I.C. (MW)     | Year of commissioning |
|--------|------------------------------------------|--------------|------------------------------|------------------|--------------------|---------------|-----------------------|
|        | <b>KSEB</b>                              |              |                              |                  |                    |               |                       |
| 1      | IDAMALAYAR                               | 1            | (2X37.5)                     | IDAMALAYAR       | ERNAKULAM          | 75            | 1987                  |
| 2      | IDUKKI<br>[Idukki I & II + Idukki - III] | 1            | (6X130)                      | PERIYAR          | IDUKKI             | 780           | 1976-1986             |
| 3      | KAKKAD                                   | 1            | (2X25)                       | PAMBA            | PATHANAMTHI<br>TTA | 50            | 1999                  |
| 4      | KUTTIYADI<br>[Kuttiyadi]                 | 1            | (3X25)                       | KUTTIYADI        | KOZHIKODE          | 75            | 1972                  |
| 5      | KUTTIYADI EXTN .<br>[Kuttiyadi]          | 1            | (1X50)                       | KUTTIYADI        | KOZHIKODE          | 50            | 2001                  |
| 6      | KUTTIYADI ADDN EXTN<br>[Kuttiyadi]       | 1            | (2X50)                       | KUTTIYADI        | KOZHIKODE          | 100           | 2010                  |
| 7      | LOWER PERIYAR                            | 1            | (3X60)                       | PERIYAR          | IDUKKI             | 180           | 1997                  |
| 8      | NERIAMANGLAM                             | 1            | (3X15)                       | MUTHIRAPUZH<br>A | IDUKKI             | 45            | 1961-63               |
| 9      | PALLIVASAL<br>[Pallivasal Replacement]   | 1            | (3X5)<br>+(3X7.5)            | MUTHIRAPUZH<br>A | IDUKKI             | 37.5          | 1948-2001             |
| 10     | PANNIAR                                  | 1            | (2X15)                       | PANNIAR          | IDUKKI             | 30            | 1963-2001             |
| 11     | PORINGALKUTTU                            | 1            | (4X8)                        | CHALAKUDY        | COIMBATORE         | 32            | 1957-1960             |
| 12     | SABARIGIRI                               | 1            | (6X50)                       | PAMBA            | PATHANAMTHI<br>TTA | 300           | 1960-1967             |
| 13     | SENGULAM                                 | 1            | (4X12)                       | MUTHIRAPUZH<br>A | IDUKKI             | 48            | 1954-2001             |
| 14     | SHOLAYAR<br>[Sholaiyar]                  | 1            | (3X18)                       | SHOLAYAR         | COIMBATORE         | 54            | 1956-1968             |
|        | <b>TOTAL KSEB</b>                        | <b>14</b>    |                              |                  |                    | <b>1856.5</b> |                       |

\* All projects are in WFR Basin

**3. H.E. Schemes under Construction:**

| Sl. No. | Name of Project  | Agency | District | River /Sub-Basin/ Basin           | I.C.       | Likely Commissioning |
|---------|------------------|--------|----------|-----------------------------------|------------|----------------------|
|         |                  |        |          |                                   | (MW)       |                      |
| 1       | Pallivasal Extn. | KSEB   | Idukki   | Mudirapuzha/ Baypore Periyar/ WFR | 60         | 2021-22 (Dec.'21)    |
| 2       | Thottiyar        | KSEB   | Idukki   | Thottiyar/ Baypore Periyar / WFR  | 40         | 2020-21 (Dec.'20)    |
|         | <b>Total</b>     |        |          |                                   | <b>100</b> |                      |

**4. H.E. Projects Cleared/Appraised by CEA and yet to be taken up for construction:**

| Sl. No. | Name of Project          | Agency | District | River / Basin    | I.C. (MW)  | Date of CEA Concurrence | Status                                                                              |
|---------|--------------------------|--------|----------|------------------|------------|-------------------------|-------------------------------------------------------------------------------------|
| 1       | Athirapally [Adirapally] | KSEB   | Thrishur | Chalakkudy / WFR | 163        | 31.03.05                | EC restored on 9.10.15. FC accorded on 16.12.1999. Fresh tenders are under process. |
|         | <b>Total</b>             |        |          |                  | <b>163</b> |                         |                                                                                     |

5. H.E. Projects held up due to Inter-State aspects:

| Sl. No. | Name of Project/Installed Capacity                    | I.C. MW | Location (State) | States Involved        | Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------|-------------------------------------------------------|---------|------------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1*      | Kerala Bhavani (MPP)<br>(3x50= 150 MW)                | 150     | Kerala           | Kerala/T.N. /Karnataka | <ul style="list-style-type: none"><li>DPR with estimated cost of Rs 168.75 crores (1990-91 PL) returned in 01/1992.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                              |
|         |                                                       |         |                  |                        | <ul style="list-style-type: none"><li>Final award of CWDT stated that the Project involves trans- basin diversion of water of Bhavani, therefore it is not possible to allocate water for this project.</li><li>Since the tribunal has ruled out trans-basin transfer (from interstate rivers), this project remains a non-starter.</li><li>The final award of CWDT has been challenged by Kerela State before the Hon’ble Supreme Court of India.</li></ul>                                                                                               |
| 2.*     | Mananthvady MPP (Manthavadi)<br>(5x45 =225MW)         | 225     | Kerala           | Kerala/T.N. /Karnataka | <ul style="list-style-type: none"><li>Earlier DPR with estimated cost of Rs 69.17 crores (1980 PL) returned in 07/1980.</li><li>Final award of CWDT stated that the Project involves trans- basin diversion of water of Kabini, therefore it is not possible to allocate water for this project.</li><li>Since the tribunal has ruled out transbasin transfer (from interstate rivers), this project remains as a non-starter.</li><li>The final award of CWDT has been challenged by Kerela State before the Honourable Supreme Court of India.</li></ul> |
| 3       | Pandiar Punnapuzha Tail Race [Pandiyar Punnapuzha II] | 105     | Kerala           | TN/Kerala              | <ul style="list-style-type: none"><li>Earlier DPR with estimated cost of Rs 22.00 crores (12/1972 PL) returned in 07/82</li><li>Project envisages utilisation of tailrace waters of the proposed Pandiar Punnapuzha HEP of Tamil Nadu.</li><li>The project would be taken up if GOTN and Kerala come to a mutual agreement.</li><li>Inter-state issue is not resolved.</li></ul>                                                                                                                                                                           |

| Sl. No.                                | Name of Project/Installed Capacity | I.C. MW | Location (State) | States Involved        | Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------|------------------------------------|---------|------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4.*                                    | Pambar (40 MW)                     | 40      | Kerala           | T.N./Kerala /Karnataka | <ul style="list-style-type: none"><li>• Earlier DPR for 30 MW with estimated cost of Rs.65.46 crores (1989 PL) returned in 03/1990.</li><li>• The project is also entangled with Cauvery Waters Disputes Tribunal (CWDT).</li><li>• KSEB revised the Project from earlier proposal of storage Project to run-of-river Project.</li><li>• Non-Consumptive use of 5.6 TMC was proposed for power generation, which has been allowed by Tribunal subject to agreement with Tamil Nadu for schedule of water release.</li><li>• DPR is yet to be finalized.</li></ul> |
| Total                                  |                                    | 520     |                  |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| (*) Projects located in Cauvery basin. |                                    |         |                  |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

**6. H. E. Projects yet to be allotted by the State for development**

| <b>Sl. No.</b> | <b>Name of Project</b>                    | <b>River</b>               | <b>Type</b> | <b>Probable I.C.(MW)</b> |
|----------------|-------------------------------------------|----------------------------|-------------|--------------------------|
| 1              | Chalipuzha                                | Baypore                    | S           | 50                       |
| 2              | Silent Valley                             | Kundipuzha                 | S           | 130                      |
| 3              | Manali                                    | Idamlayar                  | S           | 36                       |
| 4              | Kudal                                     | Idamlayar                  | S           | 47                       |
| 5              | Puyanukutty                               | Puyanukutty                | S           | 285                      |
| 6              | Kuriarkutty (Kuriakutty)                  | Kuriakutty                 | S           | 66                       |
| 7              | Lower Sabarigiri                          | Kakkad                     | S           | 55                       |
| 8              | Twin-Kallar<br>(Twin Kallar Multipurpose) | Achankovil                 | S           | 65                       |
| 9              | Baraple II                                | Barapole                   | R           | 85                       |
| 10             | Perinjankutty                             | Perinjankutty              | S           | 120                      |
| 11             | Poringalkuthu(R.B)                        | Chalakuddi                 | S           | 65                       |
|                | <b>Total</b>                              | <b>11 Nos. of Projects</b> |             | <b>1004</b>              |

**Note: R - Run of River & S- storage**

## Hydro Power Development in Tamil Nadu

### Identified Hydro Power Development and its status of Development:

|                                                                                                                                     |                                                                  | Nos. | Capacity (MW) |
|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|------|---------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW)</b> |                                                                  | 23   | 1693          |
| <b>I</b>                                                                                                                            | <b>Projects in operation</b>                                     | 26   | 1778.2        |
| <b>II</b>                                                                                                                           | <b>Projects held up due to Inter-State aspects</b>               | 4    | 690           |
| <b>III</b>                                                                                                                          | <b>Projects yet to be allotted by the State for development*</b> | 4    | 132           |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition of the projects, etc.

#### 1. Identified Projects during Reassessment study:

| Sl.No. | Name of Project                             | River       | I. C.<br>(MW) |
|--------|---------------------------------------------|-------------|---------------|
|        |                                             |             |               |
| 1      | Pandiyar Punnapuzha (Pandiyar-Punnapuzha I) | Pandiyar    | 125           |
| 2      | Aliyar (Upper Aliyar)                       | Bharatpuzha | 90            |
| 3      | Periyar (Periyar Lake)                      | Periyar     | 145           |
| 4      | Nirar                                       | Idamalayar  | 26            |
| 5      | Sholayar- I [Sholaiyar- I]                  | Sholaiyar   | 75            |
| 6      | Sarkarpathy [Sarkarpathi]                   | Periyar     | 33            |
| 7      | Kodayar I                                   | Kodayar     | 65            |
| 8      | Kodayar II                                  | Kodayar     | 30            |
| 9      | Paraliyar                                   | Paraliyar   | 39            |
| 10     | Mettur Dam (Mettur Dam PH)                  | Cauvery     | 32            |

|              |                                                         |             |             |
|--------------|---------------------------------------------------------|-------------|-------------|
| 11           | Mettur Tunnel (Mettur Tunnel PH)                        | Cauvery     | 100         |
| 12           | Lower Mettur I, II, III & IV (Lower Mettur)             | Cauvery     | 115         |
| 13           | Bhavani Kattalai Barrage I, II & III (Bhawani Kattalai) | Cauvery     | 115         |
| 14           | Lower Bhavani (Lower Bhawani)                           | Bhavani     | 34          |
| 15           | Lower Moyar                                             | Moyar       | 33          |
| 16           | Moyar                                                   | Moyar       | 75          |
| 17           | Pykara (Pykara (Singara))                               | Moyar       | 115         |
| 18           | Pykara Ultimate (Pykara (Ultimate))                     | Moyar       | 60          |
| 19           | Kundah I (Avalanche Em'ld (Kundah-I))                   | Kundah      | 70          |
| 20           | Kundah II (Kundapallam (Kundah-II))                     | Kundah      | 160         |
| 21           | Kundah III (Pengumbahalla (Kundah-III))                 | Kundah      | 95          |
| 22           | Suruliyar (Surullar)                                    | Suruliyar   | 30          |
| 23           | Papanasam                                               | Tambraparni | 31          |
| <b>TOTAL</b> |                                                         |             | <b>1693</b> |

2. H.E. Projects in Operation:

| S. No. | Utility/<br>Stations                                  | No. Of<br>stns. | No. of<br>units x<br>Capacity<br>(mw) | River                     | Basin | District    | Capacity<br>(MW) | Year of<br>commissioning |
|--------|-------------------------------------------------------|-----------------|---------------------------------------|---------------------------|-------|-------------|------------------|--------------------------|
|        | TANGEDCO                                              |                 |                                       |                           |       |             |                  |                          |
| 1.     | ALIYAR<br>[Upper Aliyar]                              | 1               | (1X60)                                | MASONARY<br>DAM           | WFR   | COIMBATORE  | 60               | 1970                     |
| 2.     | BHAVANI KATTALAI<br>BARRAGE-I<br>[Bhawani Kattalai]   | 1               | (2X15)                                | CAUVERY                   | EFR   | ERODE       | 30               | 2006                     |
| 3      | BHAVANI KATTALAI<br>BARRAGE-II<br>[Bhawani Kattalai]  | 1               | (2X15)                                | CAUVERY                   | EFR   | ERODE       | 30               | 2013                     |
| 4      | BHAVANI KATTALAI<br>BARRAGE-III<br>[Bhawani Kattalai] | 1               | (2X15)                                | CAUVERY                   | EFR   | ERODE       | 30               | 2012                     |
| 5      | KODAYAR-I                                             | 1               | (1X60)                                | KODAYAR                   | WFR   | KANYAKUMARI | 60               | 1970                     |
| 6      | KODAYAR-II                                            | 1               | (1X40)                                | KODAYAR                   | WFR   | KANYAKUMARI | 40               | 1971                     |
| 7      | KUNDAH-I<br>[Avalanche Em'ld<br>(Kundah-I)]           | 1               | (3X20)                                | AVLANCHE<br>STREAM        | EFR   | NILGRIS     | 60               | 1960-1964                |
| 8      | KUNDAH-II<br>[Kundapallam (Kundah-<br>II)]            | 1               | (5X35)                                | KUNDAH                    | EFR   | NILGRIS     | 175              | 1960-1965                |
| 9      | KUNDAH-III<br>[Pengumbahalla (Kundah-<br>III)]        | 1               | (3X60)                                | PENGUNBA<br>HALLAH        | EFR   | COIMBATORE  | 180              | 1965-1978                |
| 10     | KUNDAH-IV                                             | 1               | (2X50)                                | BHAVANI                   | EFR   | COIMBATORE  | 100              | 1966-1978                |
| 11     | KUNDAH-V                                              | 1               | (2X20)                                | BHAVANI                   | EFR   | NILGRIS     | 40               | 1964-1988                |
| 12     | LOWER METTUR-I<br>[Lower Mettur]                      | 1               | (2X15)                                | CAUVERY                   | EFR   | SALEM       | 30               | 1988                     |
| 13     | LOWER METTUR-II<br>[Lower Mettur]                     | 1               | (2X15)                                | CAUVERY                   | EFR   | SALEM       | 30               | 1988                     |
| 14     | LOWER METTUR-III<br>[Lower Mettur]                    | 1               | (2X15)                                | CAUVERY                   | EFR   | SALEM       | 30               | 1987-1988                |
| 15     | LOWER METTUR-IV<br>[Lower Mettur]                     | 1               | (2X15)                                | CAUVERY                   | EFR   | SALEM       | 30               | 1988-1999                |
| 16     | METTUR DAM<br>[Mettur Dam PH]                         | 1               | (4X12.5)                              | CAUVERY                   | EFR   | SALEM       | 50               | 1937-1946                |
| 17     | METTUR TUNNEL<br>[Mettur Tunnel PH]                   | 1               | (4X50)                                | CAUVERY                   | EFR   | SALEM       | 200              | 1965-1966                |
| 18     | MOYAR                                                 | 1               | (3X12)                                | MOYAR                     | EFR   | NILGRIS     | 36               | 1952-1953                |
| 19     | PAPANASAM                                             | 1               | (4X8)                                 | THAMBRAP<br>ARANI         | EFR   | TIRUNELVELI | 32               | 1944-1951                |
| 20     | PARSON`S VALLEY                                       | 1               | (1X30)                                | BHAVANI                   | EFR   | NILGIRIS    | 30               | 2000                     |
| 21     | PERIYAR<br>[Periyar Lake]                             | 1               | (3X42)+<br>(1X35)                     | PERIYAR                   | WFR   | IDUKKI      | 161              | 1958-1965                |
| 22     | PYKARA<br>[Pykara (Singara)]                          | 1               | (3X7)+<br>(2X13.6)+<br>(1X11)         | Glenmorgan<br>Forebay dam | EFR   | NILGRIS     | 59.2             | 1932-2005                |
| 23     | PYKARA ULTMATE<br>[Pykara (Ultimate)]                 | 1               | (3X50)                                | PYKARA                    | EFR   | NILGRIS     | 150              | 2005                     |
| 24     | SARKARPATHY<br>[Sarkarpathi]                          | 1               | (1X30)                                | PARABIKUL<br>AM           | WFR   | KOZHIKODE   | 30               | 1966                     |
| 25     | SHOLAYAR I<br>[Sholaiyar- I]                          | 1               | (2X35)                                | SHOLAYAR                  | WFR   | COIMBATORE  | 70               | 1971                     |
| 26     | SURULIYAR<br>[Surullar]                               | 1               | (1X35)                                | ERAVANGA<br>LAR           | EFR   | TIRUNELVELI | 35               | 1978                     |
|        | TOTAL TANGEDCO                                        | 26              |                                       |                           |       |             | 1778.2           |                          |

3. Pumped Storage Projects in Operation:

| Sl. No. | Name of Project | I. C. (MW) | Remarks               |
|---------|-----------------|------------|-----------------------|
| 1       | Kadamparai PSS  | 400        | Pumping Mode- Working |
|         | Total           | 400        |                       |

4. Pumped Storage Projects Under construction:

| Sl. No. | Name of Project                           | I. C. (MW) | Remarks            |
|---------|-------------------------------------------|------------|--------------------|
|         |                                           |            |                    |
| 1       | Kundah Pumped Storage (Stage I,II,III&IV) | 500        | Under Construction |
|         | Total                                     | 500        |                    |

5. Pumped Storage H.E. Projects Under S&I:

| S.No. | Name of Project  | River      | I.C. (MW) | District |
|-------|------------------|------------|-----------|----------|
| 1     | Sillahalla St.-I | Sillahalla | 1000      |          |
| 2     | Kodayar          | Kodayar    | 500       |          |
|       | Sub Total        |            | 1500      |          |

6. H.E. Projects held up due to Inter-State aspects:

| Sl. No. | Name of Project                                                                 | I.C. (MW) | Location (Site) | States Involved       | Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|---------|---------------------------------------------------------------------------------|-----------|-----------------|-----------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Nellithorai                                                                     | 50        | T.N.            | TN/ Kerala            | <ul style="list-style-type: none"><li>Sanctioned by Planning Commission in 1974 at an estimated cost of Rs.10.04 crores.</li><li>Concurrence not issued by CEA due to objections received from Govt. of Kerala.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2       | Cauvery Power Projects [Rasimanal(90 MW) & Hogenekkal (36 MW) (from Karnataka)] | 480       | T.N.            | Kerala/ TN/ Karnataka | <ul style="list-style-type: none"><li>Returned in 2/1997.</li><li>In the Core Group Meeting taken by Secretary (Power) on 27.10.2004, it was agreed by GOK and GOTN that Shivasamudram (in Karnataka) and Hogenekkal (in TN) should be taken up simultaneously in the first phase and remaining two projects viz. Mekadatu (in Karnataka) and Rasimanal (in TN) in the next phase.</li><li>In the Core Group Meeting taken by Secretary (Power) on 21.06.2006, it was agreed that execution of these four projects through NHPC would be most viable proposition. It was decided that representatives of both the Govts. would take up the matter with their respective Govts. and seek their approval and thereafter necessary agreement will be signed between NHPC and the two State Govts. Consent by both the State Govts. was to be communicated to MOP by 31.07.2006. Tripartite agreement between Govt. of Tamil Nadu, Govt. of Karnataka and NHPC was to be signed. However, in June, 2007 the State of Karnataka informed that Shivasamudram and Mekadatu will be executed by Karnataka in State Sector.</li><li>TNEB informed in April, 2009 that Tamil Nadu has given its concurrence to MOP's draft tripartite agreement and sent it to MOP, GOI on 15.12.2008. Tamil Nadu insists the execution of the projects by neutral agency under Govt. of India. Final award of CWDT is yet to be notified in the Gazette of Govt. of India, as the case has been filed in the Supreme Court of India.</li><li>Subsequently, a meting was held on 08.07.2009 under the chairmanship of Secretary (Power) to discuss the pending issue of development of Hydroelectric Projects in Cauvery Basin. Secretary (Power) expressed that Shivasamudaram being a Run of River Project with in the territory of Karnataka, Tamil Nadu should not have any objection to the development of the Project by the State Government. He further opined that there should not be any problem in taking up Shivasamudram Project by the State of Karnataka provided there is joint mechanism for monitoring the water level/releases of water to Tamil Nadu. He suggested that the CWC could act as an observer in this regard and directed that the GOK would provide/share all the technical details of the Project to/with Tamil Nadu. Both the States Governments were advised to consult CEA and CWC before finalization of designing of the Project.</li><li>As regards other projects located in Tamil Nadu but whose submergence area partly falls in Karnataka, it was suggested that the two Governments need to arrive at an arrangement for power sharing.</li></ul> |
| 3       | Pandiyar Punnapuzha [Pandiyar-Punnapuzha I]                                     | 100       | T.N.            | TN/ Kerala            | <ul style="list-style-type: none"><li>DPR with estimated cost of Rs 73.90 crores (11/1976 PL) returned in 07/1982.</li><li>Project is located in TN on West flowing Pandiar Punnapuzha river (Chaliyar river).</li><li>Concurrence of Govt. of Kerala is required, as per agreement in 1965, for revised project proposal, which is yet to be communicated by Govt. of Kerala.</li><li>Based on Ministrial level meeting between Kerela and Tamil Nadu on 10.06.2002, modified proposal was evolved by TNEB and has been sent to Govt. of Kerela on 10.04.2007 for its consideration.</li><li>Concurrence of Govt. of Kerala is yet to be received.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 4       | Cholatipuzha (from Kerala)                                                      | 60        | T.N.            | TN/ Kerala            | <ul style="list-style-type: none"><li>DPR with estimated cost of Rs7.39 crores (1976 PL) returned in 07/1982</li><li>As per agreement between Tamil Nadu &amp; Kerala reached in Oct., 1965, cost and benefits from the project located on their border are to be shared equally by the two States.</li><li>Kerala has not communicated its concurrence to the project investigated by TNEB.</li><li>This Project will be finalized while finalizing the Project of Pandiar- Punnapuzha with Kerela.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|         | Total                                                                           | 690       |                 |                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

7. H. E. Projects yet to be allotted by the State for development

| Sl. No. | Name of Project               | River              | Type | I.C.(MW) |
|---------|-------------------------------|--------------------|------|----------|
| 1       | Nirar                         | Idamalayar         | R    | 26       |
| 2       | Paraliyar                     | Paraliyar          | R    | 39       |
| 3       | Lower Bhavani (Lower Bhawani) | Bhavani            | S    | 34       |
| 4       | Lower Moyar                   | Moyar              | S    | 33       |
|         | Total                         | 4 Nos. of Projects |      | 132      |

Note: R –Run off the River; S- Storage

## Hydro Power Development in Telangana

### Identified Hydro Power Potential and its status of Development:

|                                                                                                                                      |                                                                 |                                                 | Nos. | Capacity (MW) |
|--------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-------------------------------------------------|------|---------------|
| <b>Identified Hydro Power Potential as per re-assessment Study from Major/Medium Projects (Projects having capacity above 25 MW)</b> |                                                                 |                                                 | 8    | 2019          |
| <b>I</b>                                                                                                                             | <b>Projects in operation</b>                                    |                                                 | 6    | 800           |
| <b>II</b>                                                                                                                            | <b>Projects allotted by States for development</b>              |                                                 |      |               |
|                                                                                                                                      | (i)                                                             | <b>Projects returned to project authorities</b> | 1    | 320           |
| <b>III</b>                                                                                                                           | <b>Project yet to be allotted by the State for development*</b> |                                                 | 1    | 250           |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition/deletion of the projects etc.

**1. Identified Projects during Reassessment study:**

| <b>Sl.No.</b> | <b>Name of Project</b>                 | <b>River</b> | <b>I. C.<br/>(MW)</b> |
|---------------|----------------------------------------|--------------|-----------------------|
| 1             | Pochampad                              | Godavari     | 47                    |
| 2             | Inchampalli #                          | Godavari     | 920                   |
| 3             | Singareddi                             | Godavari     | 250                   |
| 4             | Dummugudem (Dummagudem)                | Godavari     | 360                   |
| 5             | Pulichintala                           | Krishna      | 180                   |
| 6             | Nagarjunasagar LBC                     | Krishna      | 42                    |
| 7             | Nagarjunasagar (Nagarjunasagar Dam PH) | Krishna      | 115                   |
| 8             | Priyadarshini Jurala (Priyadarshini )  | Krishna      | 105                   |
| <b>TOTAL</b>  |                                        |              | <b>2019</b>           |

# Inchampalli is under Inter-State issue in the State of Andhra Pradesh for 975 MW.

**2. H.E. Projects in Operation:**

| S. No. | Utility/<br>Stations                                | No. of<br>Stns. | No. of<br>units x<br>Capacity<br>(MW) | River<br>/ Basin* | District          | Capacity<br>(MW) | Year of<br>commissioning |
|--------|-----------------------------------------------------|-----------------|---------------------------------------|-------------------|-------------------|------------------|--------------------------|
|        | <b>TSGENCO</b>                                      |                 |                                       |                   |                   |                  |                          |
| 1      | <b>PRIYADARSHNI<br/>JURALA<br/>(PRIYADARSHNI)</b>   | 1               | (6X39)                                | KRISHNA           | MAHABOOB<br>NAGAR | 234              | 2008-2011                |
| 2      | <b>POCHAMPAD</b>                                    | 1               | (4X9)                                 | GODAVARI          | NIZAMABAD         | 36               | 1987-1988, 2010          |
| 3      | <b>NAGARJUNA SGR<br/>(NAGARJUNA SGR<br/>DAM PH)</b> | 1               | (1X110)                               | KRISHNA           |                   | 110              | 1978-85                  |
| 4      | <b>NAGARJUNA SGR<br/>LBC</b>                        | 1               | (2X30)                                | KRISHNA           | GUNTUR            | 60               | 1983                     |
| 5      | <b>LOWER JURALA</b>                                 | 1               | (6X40)                                | KRISHNA           | WANPARTHY         | 240              | 2015-16                  |
| 6      | <b>PULINCHINTHALA</b>                               | 1               | (4X30)                                | KRISHNA           | SURAPETA          | 120              | 2016-17                  |
|        | <b>TOTAL TSGENCO</b>                                | 6               |                                       |                   |                   | 800              |                          |

\* All projects are in EFR Basin

**3. Pumped Storage Projects in Operation:**

| Sl. No. | Name of Project | I. C.<br>(MW) | River/<br>Basin | District     | Year of<br>Commissioning |
|---------|-----------------|---------------|-----------------|--------------|--------------------------|
| 1       | Srisailem LBPH  | 900           | Krishna/<br>EFR | Nagarkurnool | 2000-04                  |
| 2       | Nagarjuna Sagar | 705.6         | Krishna/<br>EFR | Nalgonda     | 1978-85                  |
|         | <b>Total</b>    | <b>1605.6</b> |                 |              |                          |

**4. H.E. Projects Returned to project Authorities:**

| Sl. No. | Name of Project            | I.C.<br>(MW) | Agency  | Month of<br>Return | Reason for Return                                                                                                                            |
|---------|----------------------------|--------------|---------|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Dummugudem<br>(Dummagudem) | 320          | APGENCO | Mar-06             | Returned due to non-replying of various comments such as hydro planning, cost of E&M works, hydel civil Engineering, geological aspects etc. |
|         | <b>Total</b>               | <b>320</b>   |         |                    |                                                                                                                                              |

**5. H. E. Projects yet to be allotted by the State for development**

| Sl.<br>No. | Name of Project | River                   | Type | I.C.<br>(MW) |
|------------|-----------------|-------------------------|------|--------------|
| 1          | Singareddi      | Godavari                | R    | 250          |
|            | <b>Total</b>    | <b>1 No. of Project</b> |      | <b>250</b>   |

**Note: R –Run off the River**

## Hydro Power Development in Bihar

### Identified Hydro Power Potential and its status of Development:

|                                                                                                                                     | Nos. | I.C.<br>(MW) |
|-------------------------------------------------------------------------------------------------------------------------------------|------|--------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW)</b> | 1    | 40           |
| <b>Hydro Projects Returned to Project Authorities for re-submission after compliance of observations</b>                            | 1    | 130          |

Note: Identified project namely East Gandak Canal has been developed with installed capacity below 25 MW

### 1. Identified Projects during Reassessment study:

| Sl.No.       | Name of Project      | River     | I. C.<br>(MW) |
|--------------|----------------------|-----------|---------------|
| 1            | Eastern Gandak Canal | Gandak    | 40            |
| <b>TOTAL</b> |                      | <b>40</b> |               |

### 2. Hydroelectric Projects in operation in Bihar (above 25 MW):

At present, no hydroelectric project (above 25 MW) is under operation in Bihar. Four H.E. Projects having installed capacity of 44.9MW, consisting of Kosi (20MW), Sone Western Canal (6.6MW), Sone Eastern Canal (3.3MW) and Eastern Gandak (15MW), are in operation in Bihar which are all below 25MW capacity each.

### 3. Projects under Construction:

At present no hydro scheme is under construction in Bihar.

### 4. Hydro Projects Returned to Project Authorities for re-submission after compliance of observations:

| Sl. No. | Name of Scheme | Agency | I.C.<br>(MW) | Reason of Return                                                                                                                                                                                      |
|---------|----------------|--------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Dagmara        | BSHPCL | 130          | Returned on 29.01.2018. All the partial clearances issued till date were rescinded as no progress has been made by the developer towards resolving the issues pending with various appraising groups. |
|         | <b>Total</b>   |        | <b>130</b>   |                                                                                                                                                                                                       |

## Hydro Power Development in Jharkhand

### Identified Hydro Power Potential and its status of Development:

|                                                                                                                                                                                                                                 |                                                                  | Nos. | Capacity (MW) |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|------|---------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Schemes (Schemes having capacity above 25 MW)</b>                                                                                               |                                                                  | 8    | 582           |
| I                                                                                                                                                                                                                               | <b>Projects in operation</b>                                     | 3    | 170           |
| II                                                                                                                                                                                                                              | <b>Projects dropped due to Basin studies/ Other reasons</b>      | 1    | 710           |
| III                                                                                                                                                                                                                             | <b>Projects yet to be allotted by the State for development*</b> | 4    | 307           |
| *The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the schemes, addition/deletion of the schemes, etc. |                                                                  |      |               |

### 1. Identified Projects during Reassessment study:

| Sl.No.       | Name of Project                                 | River       | I. C. (MW) |
|--------------|-------------------------------------------------|-------------|------------|
| 1            | Panchet (Panchet Hill)                          | Damodar     | 40         |
| 2            | Maithon #                                       | Damodar     | 60         |
| 3            | Subernrekha MPP ##                              | Subernrekha | 30         |
| 4            | Koel Karo (Koel Karo St-I ### (Lumpungkhel PH)) | N.Koel      | 145        |
| 5            | Serengada                                       | N.Koel      | 37         |
| 6            | Sankh-II (Upper Sankh St-II)                    | Sankh       | 55         |
| 7            | Lower Sankh                                     | Sankh       | 55         |
| 8            | Indrapuri (Khadwan)                             | Sone        | 160        |
| <b>TOTAL</b> |                                                 | <b>582</b>  |            |

# Maithon is in operation in West Bengal State

## Subernrekha MPP has been developed below 25 MW.

### Koel Karo H.E. Project (4x172.5 + 1x20 = 710 MW), located in Ranchi, Gumla & Singhbhum Districts of Jharkhand ( in the erstwhile unified State of Bihar), envisages utilization of waters of the South Koel and North Karo rivers. Koel Karo H.E. Project was entrusted to NHPC in August 1980 for execution under central sector. The project was sanctioned by Govt. of India as a NHPC project in June 1981 at an estimated cost of Rs. 444.67 crores (gross) including cost of associated transmission line and interest during construction (IDC).

Ministry of Power vide their letter dated 30-09-2005 informed the closure of project due to non-finalization of power purchase agreement.

2. H.E. Projects in Operation:

| S. NO. | UTILITY / STATIONS | NO. OF STNS. | NO. OF UNITS X CAPACITY (MW) | RIVER / BASIN* | DISTRICT | I.C. (MW) | YEAR OF COMMISSIONING |
|--------|--------------------|--------------|------------------------------|----------------|----------|-----------|-----------------------|
|        | DVC                |              |                              |                |          |           |                       |
| 1      | PANCHET            | 1            | (1X40)                       | DAMODAR        | DHANBAD  | 40        | 1990                  |
|        | SUB-TOTAL DVC      | 1            |                              |                |          | 40        |                       |
|        | JUUNL              |              |                              |                |          |           |                       |
| 1      | SUBERNREKHA -I     | 1            | (1X65)                       | SUBERNAR EKHA  | RANCHI   | 65        | 1977                  |
| 2      | SUBERNREKHA -II    | 1            | (1X65)                       | SUBERNAR EKHA  | RANCHI   | 65        | 1980                  |
|        | TOTAL JUUNL        | 2            |                              |                |          | 130       |                       |
|        | TOTAL JHARKHAND    | 3            |                              |                |          | 170       |                       |

\* Panchet is in Ganga and Subernrekha-I & II are in CIR Basin.

3. Pumped storage Projects in Operation:

| Sl. No. | Name of Project  | I. C. (MW) | Remarks                                                                                      |
|---------|------------------|------------|----------------------------------------------------------------------------------------------|
| 1       | Panchet Hill-DVC | 40         | Not Working in Pumping Mode -Tail Pool dam not constructed. Land acquisition issue involved. |

4. Projects dropped due to Basin studies/ Other reasons:

| Sl. No. | Name of Project | River              | Type | I.C. (MW) | Remarks |
|---------|-----------------|--------------------|------|-----------|---------|
| 1       | Koel Karo       | N. Koel & S. Karto | S    | 710       | *       |
|         | Total           |                    |      | 710       |         |

\* Koel Karo H.E. Project (4x172.5 + 1x20 = 710 MW), located in Ranchi, Gumla & Singhbhum Districts of Jharkhand ( in the erstwhile unified State of Bihar), envisages utilization of waters of the South Koel and North Karo rivers. Koel Karo H.E. Project was entrusted to NHPC in August 1980 for execution under central sector. The project was sanctioned by Govt. of India as a NHPC project in June 1981 at an estimated cost of Rs. 444.67 crores (gross) including cost of associated transmission line and interest during construction (IDC). Ministry of Power vide their letter dated 30-09-2005 informed the closure of project due to non-finalization of power purchase agreement.

5. H. E. Projects yet to be allotted by the State for development

| Sl. No. | Name of Project              | River             | Type | I.C. (MW) |
|---------|------------------------------|-------------------|------|-----------|
| 1       | Serengada                    | N.Koel            | R    | 37        |
| 2       | Sankh-II (Upper Sankh St-II) | Sankh             | R    | 55        |
| 3       | Lower Sankh                  | Sankh             | S    | 55        |
| 4       | Indrapuri (Khadwan)          | Sone              | S    | 160       |
|         | Total                        | 4 Nos. of Schemes |      | 307       |

Note: R –Run off the River & S- storage

Hydro Power Development in Odisha

Identified Hydro Power Potential and its status of Development:

|                                                                                                                                                                                                                          |                                                                 | Nos. | Capacity (MW) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------|---------------|
| Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects<br>(Projects having capacity above 25 MW)                                                                                          |                                                                 | 13   | 2981          |
| I                                                                                                                                                                                                                        | Projects in operation                                           | 7    | 2142.25       |
| II                                                                                                                                                                                                                       | Projects allotted by States for development                     |      |               |
|                                                                                                                                                                                                                          | (i) Projects under S & I                                        | 2    | 128           |
|                                                                                                                                                                                                                          | (ii) Projects held up due to Inter-State aspects                | 1    | 320           |
| III                                                                                                                                                                                                                      | H. E. Projects yet to be allotted by the State for development* | 6    | 1096          |
| *The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition of the projects, etc. |                                                                 |      |               |

1. Identified Projects during Reassessment study:

| Sl.No. | Name of Project                    | River     | IC   |
|--------|------------------------------------|-----------|------|
| 1      | Bhimkund                           | Baitarni  | 29   |
| 2      | Baljori                            | Baitarni  | 230  |
| 3      | Lodani                             | Brahmani  | 42   |
| 4      | Rengali                            | Brahmani  | 135  |
| 5      | Naraj                              | Mahanadi  | 215  |
| 6      | Tikkarpara                         | Mahanadi  | 205  |
| 7      | Sindol [Hirakud St-III]            | Mahanadi  | 175  |
| 8      | Hirakud (Chiplima) [Hirakud St-II] | Mahanadi  | 155  |
| 9      | Hirakud (Burla) [Hirakud St-I]     | Mahanadi  | 150  |
| 10     | Upper Indravati                    | Indravati | 585  |
| 11     | Upper Kolab                        | Sabari    | 280  |
| 12     | Lower Kolab                        | Sabari    | 375  |
| 13     | Balimela                           | Balimela  | 405  |
|        | Total                              |           | 2981 |

**2. H.E. Projects in Operation:**

| S. NO. | UTILITY/ STATIONS                          | NO. OF STNS. | NO. OF UNITS X CAPACITY (MW)    | RIVER     | DISTRICT   | I.C. (MW)      | YEAR OF COMMISSIONING |
|--------|--------------------------------------------|--------------|---------------------------------|-----------|------------|----------------|-----------------------|
|        | <b>OHPC</b>                                |              |                                 |           |            |                |                       |
| 1      | BALIMELA                                   | 1            | (6X60)+<br>(2X75)               | SILERU    | MALKANGIRI | 510            | 1973-1977, 2008       |
| 2      | HIRAKUD<br>(BURLA)<br>[HIRAKUD ST- I]      | 1            | (3X37.5)<br>(2X49.5)<br>+(2X32) | MAHANADI  | SAMBALPUR  | 275.5          | 1956-1990             |
| 3      | HIRAKUD<br>(CHIJPLIMA)<br>[HIRAKUD ST- II] | 1            | (3X24)                          | MAHANADI  | SAMBALPUR  | 72             | 1962-1964             |
| 4      | RENGALI                                    | 1            | (5X50)                          | BRAHMANI  | ANGUL      | 250            | 1985-1992             |
| 5      | UPPER<br>INDRAVATI                         | 1            | (4X150)                         | INDRAVATI | KALAHANDI  | 600            | 1999-2001             |
| 6      | UPPER KOLAB                                | 1            | (4X80)                          | KOLAB     | KORAPUT    | 320            | 1988-1993             |
|        | <b>TOTAL OHPC</b>                          | <b>6</b>     |                                 |           |            | <b>2027.5</b>  |                       |
|        | <b>APGENCO</b>                             |              |                                 |           |            |                |                       |
| 1      | MACHKUND                                   | 1            | (3X17)+<br>(3X21.25)            | MACHKUND  | KORAPUT    | 114.75         | 1959                  |
|        | <b>SUB-TOTAL<br/>APGENCO</b>               | <b>1</b>     |                                 |           |            | <b>114.75</b>  |                       |
|        | <b>TOTAL ODISHA</b>                        | <b>7</b>     |                                 |           |            | <b>2142.25</b> |                       |

**Note: Hirakud (Burla & Chiplima) and Rengali are in CIR basin & others are in EFR Basin.**

3. H.E. Projects under Survey & Investigation:

| Sl. No. | Name of Project | Basin/River | I.C. (MW) | Agency |
|---------|-----------------|-------------|-----------|--------|
| 1       | Salki           | Salki       | 65        | OHPCL  |
| 2       | Kharag          | Kharag      | 63        | OHPCL  |
|         | Total           |             | 128       |        |

4. Pumped Storage Projects under Survey & Investigation:

| Sl. No. | Name of Project | Basin/River | I.C. (MW) | Agency |
|---------|-----------------|-------------|-----------|--------|
| 1       | Upper Indravati | Indravati   | 600       | OHPCL  |
| 2       | Balimela        | Balimela    | 500       | OHPCL  |
| 3       | Upper Kolab     | Kolab       | 320       | OHPCL  |
|         | Total           |             | 1420      |        |

**5. H.E. Projects involving Inter-State aspects:**

| Sl. No. | Name of Project                                            | I.C.<br>( MW) | Location<br>(State) | States<br>Involved                                     | Status                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------|------------------------------------------------------------|---------------|---------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Sindol<br>[HIRAKUD ST- III]<br>320 MW=<br>(5x20+5x20+6x20) | 320           | Orissa              | MP/Chhatisgarh/ Bihar/ Jharkhand/ Orissa / Maharashtra | DPR with estimated cost of Rs.2246.14 crores (1994 PL) returned in 07/96 due to non-resolution of interstate aspect. The consent of the upstream States viz. Jharkhand, Bihar, M.P, Chhatisgarh and Maharashtra is not available.DPR is being revised by reducing Installed Capacity. Revised DPR yet to be submitted to CEA. Revised hydrology of Sindol-I for 100 MW has been submitted to CWC for clearance. |

**6. H. E. Projects yet to be allotted by the State for development**

| Sl.No. | Name of Project | River                     | Type | I.C.<br>(MW) |
|--------|-----------------|---------------------------|------|--------------|
| 1      | Bhimkund        | Baitarni                  | S    | 29           |
| 2      | Baljori         | Baitarni                  | S    | 230          |
| 3      | Lodani          | Brahmani                  | S    | 42           |
| 4      | Naraj           | Mahanadi                  | S    | 215          |
| 5      | Tikkarpara      | Mahanadi                  | S    | 205          |
| 6      | Lower Kolab     | Kolab (Sabri)             | S    | 375          |
|        | <b>Total</b>    | <b>6 Nos. of Projects</b> |      | <b>1096</b>  |

Note: S- storage

## Hydro Power Development in Sikkim

### Identified Hydro Power Potential and its status of Development:

|                                                                                                                                 |                                                           |                                                                               | Nos. | Capacity (MW) |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------|------|---------------|
| Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects<br>(Projects having capacity above 25 MW) |                                                           |                                                                               | 24   | 4248          |
| <b>I</b>                                                                                                                        | Projects in operation                                     |                                                                               | 7    | 2169          |
| <b>II</b>                                                                                                                       | Projects under construction                               |                                                                               | 6    | 1133          |
| <b>III</b>                                                                                                                      | Projects allotted by States for development               |                                                                               |      |               |
|                                                                                                                                 | <b>(i)</b>                                                | Projects cleared by CEA and yet to be taken up for construction               | 1    | 520           |
|                                                                                                                                 | <b>(ii)</b>                                               | Projects returned to project authorities                                      | 2    | 576           |
|                                                                                                                                 | <b>(iii)</b>                                              | Projects allotted for development on which S&I is held up/ yet to be taken up | 2    | 92            |
|                                                                                                                                 | <b>Total (i-iii)</b>                                      |                                                                               | 5    | 1188          |
| <b>IV</b>                                                                                                                       | Projects yet to be allotted by the State for development* |                                                                               | 15   | 1434          |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition of the projects, etc.

| 1. Identified Projects during Reassessment study: |                            |          |      |      |
|---------------------------------------------------|----------------------------|----------|------|------|
| Sl.No.                                            | Name of Project            | River    | Type | IC   |
| 1                                                 | Kalep                      | Tista    | R    | 41   |
| 2                                                 | Talem                      | Tista    | R    | 65   |
| 3                                                 | Jedang                     | Lhonak   | R    | 185  |
| 4                                                 | Teesta I (Zema)            | Tista    | R    | 125  |
| 5                                                 | Serum                      | Sebokung | R    | 50   |
| 6                                                 | Lachung                    | Lachung  | R    | 30   |
| 7                                                 | Ringpi                     | Ringpi   | R    | 160  |
| 8                                                 | Lingza                     | Ringpi   | R    | 160  |
| 9                                                 | Rukel                      | Tolung   | R    | 90   |
| 10                                                | Rangyong                   | Tolung   | R    | 175  |
| 11                                                | Dikchu                     | Dikchu   | R    | 90   |
| 12                                                | Chhota Pathing             | Rongpo   | R    | 55   |
| 13                                                | Rongnichu (Rongni Storage) | Rongni   | R    | 95   |
| 14                                                | Mana                       | G.Ranjit | R    | 37   |
| 15                                                | Lethang (Yoksam)           | Rathong  | R    | 44   |
| 16                                                | Mamium                     | G.Ranjit | R    | 175  |
| 17                                                | Gompa                      | G.Ranjit | R    | 46   |
| 18                                                | Rangit-III (Ligship)       | G.Ranjit | R    | 115  |
| 19                                                | Teesta St.II (Chunthang)   | Tista    | R    | 830  |
| 20                                                | Teesta-III (Singhik)       | Tista    | R    | 685  |
| 21                                                | Panan                      | Tolung   | R    | 230  |
| 22                                                | Teesta - IV (Mangan)       | Tista    | R    | 445  |
| 23                                                | Teesta-V (Samdong)         | Tista    | R    | 280  |
| 24                                                | Lower Lagyap               | Rongpi   | R    | 40   |
|                                                   | Total                      |          |      | 4248 |

2. H.E. Projects in Operation:

| S. NO. | UTILITY/<br>STATIONS                          | NO. OF<br>STNS. | NO. OF UNITS<br>X CAPACITY<br>(MW) | RIVER /<br>BASIN*  | DISTRICT                  | I.C.<br>(MW) | YEAR OF<br>COMMISSIONING |
|--------|-----------------------------------------------|-----------------|------------------------------------|--------------------|---------------------------|--------------|--------------------------|
|        | NHPC                                          |                 |                                    |                    |                           |              |                          |
| 1      | RANGIT-III (Ligship)                          | 1               | (3X20)                             | RANGIT             | GANGTOK                   | 60           | 2000                     |
| 2      | TEESTA-V (Samdong)                            | 1               | (3X170)                            | TEESTA             | EAST SIKKIM               | 510          | 2008                     |
|        | SUB-TOTAL NHPC                                | 2               |                                    |                    |                           | 570          |                          |
|        | STATE                                         |                 |                                    |                    |                           |              |                          |
|        | TEESTA URJA LTD. (TUL)                        |                 |                                    |                    |                           |              |                          |
| 3      | TEESTA-III (Singhik)                          | 1               | (6X200)                            | TEESTA             | NORTH<br>SIKKIM           | 1200         | 2017                     |
|        | SUB-TOTAL TUL                                 | 1               |                                    |                    |                           | 1200         |                          |
|        | PRIVATE                                       |                 |                                    |                    |                           |              |                          |
|        | GIPL (GATI INFRA<br>PRIVATE LTD.)             |                 |                                    |                    |                           |              |                          |
| 4      | CHUZACHEN                                     | 1               | (2*55)                             | RONGLI &<br>RANGPO | EAST SIKKIM               | 110          | 2013                     |
|        | SNEHA KINETIC POWER PROJECTS PVT LTD (SKPPPL) |                 |                                    |                    |                           |              |                          |
| 5      | DIKCHU                                        | 1               | (2*48)                             |                    | EAST &<br>NORTH<br>SIKKIM | 96           | 2017                     |
|        | SHIGA ENERGY PVT LTD (SEPL)                   |                 |                                    |                    |                           |              |                          |
| 6      | TASHIDING                                     | 1               | (2*48.50)                          | RATHANG CHU        |                           | 97           | 2017                     |
|        | DANS ENERGY PVT LTD. (DEPL)                   |                 |                                    |                    |                           |              |                          |
| 7      | JORETHANG LOOP                                | 1               | (2*48)                             | RANGIT             | SOUTH<br>/WEST            | 96           | 2015                     |
|        | SUB-TOTAL<br>PRIVATE                          | 4               |                                    |                    |                           | 399          |                          |
|        | TOTAL SIKKIM                                  | 7               |                                    |                    |                           | 2169         |                          |

\* All projects are in Brahmaputra Basin

**3. H.E. Projects under Construction:**

| Sl. No. | Name of Project            | Agency              | District     | I.C. (MW)   | River/ Basin            | Likely Commissioning |
|---------|----------------------------|---------------------|--------------|-------------|-------------------------|----------------------|
| 1       | Bhasmey                    | Gati Infrastructure | East Sikkim  | 51          | Rangpo/ Teesta/         | 2022-23 *            |
|         |                            |                     |              |             | Brahmaputra             |                      |
| 2       | Rangit-IV                  | JAL Power           | West Sikkim  | 120         | Rangit/ Teesta/         | 2023-23 *            |
|         |                            |                     |              |             | Brahmaputra             |                      |
| 3       | Rangit-II                  | Sikkim Hydro        | West Sikkim  | 66          | Greater Rangit/ Teesta/ | 2021-22*             |
|         |                            |                     |              |             | Brahmaputra             |                      |
| 4       | Rongnichu (Rongni Storage) | Madhya Bharat       | East Sikkim  | 96          | Rongnichu/ Teesta/      | 2020-21 (Sep.'20)    |
|         |                            |                     |              |             | Brahmaputra             |                      |
| 5       | Teesta St. VI              | NHPC                | South Sikkim | 500         | Teesta/                 | 2023-24 *            |
|         |                            |                     |              |             | Brahmaputra             |                      |
| 6       | Panan                      | Himagiri            | North Sikkim | 300         | Rangyongchu/ Teesta/    | 2023-24 *            |
|         |                            |                     |              |             | Brahmaputra             |                      |
|         | <b>Total</b>               |                     |              | <b>1133</b> |                         |                      |

\* Subject to re-start of works

4. H.E. Projects Cleared/Appraised by CEA:

| Sl. No | Name of Project       | Agency | District     | River/ Basin*       | I.C. (MW) | Date of CEA Concurrence | Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------|-----------------------|--------|--------------|---------------------|-----------|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Teesta St-IV (Mangan) | NHPC   | North Sikkim | Teesta/ Brahamputra | 520       | 13.05.10                | EC accorded on 09.01.14.<br>FC-I accorded on 26.02.13. FC-II is yet to be obtained.<br>MoU with State Govt. to be amended by developer.<br>State Forest Department on 31.01.2018 submitted compliance report of FC-I to MoEF&CC for issuance of FC-II. MoEF&CC, vide letter dated 05.02.2019, has furnished observations on the compliance report to State Govt. NHPC vide letter dated 23.07.2019,14.09.2019, 24.09.2019 & 16.10.2019 has requested DC, North Sikkim to resolve the issue of pending consent from 3 GPUs required for obtaining FC-II and also nomination of members of concerned GPUs for constitution of expert group at the earliest. DFO (North) on 15.09.2019 submitted reply to observations of MoEF&CC wrt CA and KML files to CCF (FC), Govt. of Sikkim for further submission to MoEF&CC. |
|        |                       | Total  |              |                     | 520       |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

5. H.E. Projects Returned to Project Authorities for re-submission after compliance of observations:

| Sl. No. | Name of Project           | Agency | I.C. (MW) | Month of return/Reason of Return                                                                                             |
|---------|---------------------------|--------|-----------|------------------------------------------------------------------------------------------------------------------------------|
| 1       | Teesta St.-II (Chunthang) | HUIPL  | 480       | Returned on 05/17 due to Incomplete geological investigations. Review of dam location. Back water studies to be carried out. |
| 2       | Lethang (Yoksam)          | KHCHPL | 96        | Returned on 04/2010 due to lack of barrage v/s dam design, review of I.C.,review of spillway capacity etc.                   |
|         | Total                     |        | 576       |                                                                                                                              |

6. H.E. Projects on which Survey & Investigation held up:

| Sl. No. | Name of Project | Basin/River         | Agency                        | Original I.C. (MW) | Date of MOA       |
|---------|-----------------|---------------------|-------------------------------|--------------------|-------------------|
| 1       | Kalez khola     | Kalez khola/ Rangit | CWC                           | 52                 | 12.2.2007         |
| 2       | Suntaleytar     | Rangpochu           | Hindustan Electric Power Ltd. | 40                 | LOI date 23.02.12 |
|         | Total           |                     |                               | 92                 |                   |

| <b>7. H.E. Projects yet to be allotted by the State for development:</b> |                        |              |             |             |
|--------------------------------------------------------------------------|------------------------|--------------|-------------|-------------|
| <b>Sl.No.</b>                                                            | <b>Name of Project</b> | <b>River</b> | <b>Type</b> | <b>IC</b>   |
| 1                                                                        | Kalep                  | Tista        | R           | 41          |
| 2                                                                        | Talem                  | Tista        | R           | 65          |
| 3                                                                        | Jedang                 | Lhonak       | R           | 185         |
| 4                                                                        | Teesta-I (Zema)        | Tista        | R           | 125         |
| 5                                                                        | Serum                  | Sebokung     | R           | 50          |
| 6                                                                        | Lachung                | Lachung      | R           | 30          |
| 7                                                                        | Ringpi                 | Ringpi       | R           | 160         |
| 8                                                                        | Lingza                 | Ringpi       | R           | 160         |
| 9                                                                        | Rukel                  | Tolung       | R           | 90          |
| 10                                                                       | Rangyong               | Tolung       | R           | 175         |
| 11                                                                       | Chhota Pathing         | Rongpo       | R           | 55          |
| 12                                                                       | Mana                   | G.Ranjit     | R           | 37          |
| 13                                                                       | Mamium                 | G.Ranjit     | R           | 175         |
| 14                                                                       | Gompa                  | G.Ranjit     | R           | 46          |
| 15                                                                       | Lower Lagyap           | Rongpi       | R           | 40          |
|                                                                          | <b>Total</b>           |              |             | <b>1434</b> |

Note: R –Run off the River

## Hydro Power Development in West Bengal

### Identified Hydro Power Potential and its status of Development:

|                                                                                                                                     |                                                                  |                                          | Nos. | Capacity (MW) |
|-------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|------------------------------------------|------|---------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW)</b> |                                                                  |                                          | 6    | 2829          |
| <b>I</b>                                                                                                                            | <b>Projects in operation</b>                                     |                                          | 5    | 441.2         |
| <b>II</b>                                                                                                                           | <b>Projects under construction</b>                               |                                          | 1    | 120           |
| <b>III</b>                                                                                                                          | <b>Projects allotted by States for development</b>               |                                          |      |               |
|                                                                                                                                     | (i)                                                              | <b>Projects on which S&amp;I held up</b> | 1    | 81            |
| <b>IV</b>                                                                                                                           | <b>Projects yet to be allotted by the State for development*</b> |                                          | 2    | 103           |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition of projects, etc.

### 1. Identified Projects during Reassessment study

| Sl.No.       | Name of Project                     | River    | I. C. (MW)  |
|--------------|-------------------------------------|----------|-------------|
| 1            | Balason                             | Balason  | 33          |
| 2            | Teesta Low Dam-IV (Teesta High Dam) | Teesta   | 2505        |
| 3            | Rammam-I                            | Rammam   | 70          |
| 4            | Rammam-II                           | Rammam   | 85          |
| 5            | Rammam-III                          | Rammam   | 100         |
| 6            | Jaldhaka (Jaldhaka-I)               | Jaldhaka | 36          |
| <b>TOTAL</b> |                                     |          | <b>2829</b> |

**2. H.E. Projects in Operation:**

| Sl.No. | Name of Project                     | Agency  | District     | River /Basin*                      | I. C.        | Year of Commissioning |
|--------|-------------------------------------|---------|--------------|------------------------------------|--------------|-----------------------|
| 1      | Jaldhaka (Jaldhaka-I)               | WBSEDCL | KALIMPONG    | Di chu, Ni chu & Bindu Khola River | 36           | 1967- 72,2012         |
| 2      | Rammam-II                           | WBSEDCL | DARJEELING   | Rammam                             | 50           | 1995-96               |
| 3      | Teesta Low Dam-III                  | NHPC    | DARJEELING   | Teesta                             | 132          | 2013-14               |
| 4      | Maithon                             | DVC     | WEST DHANBAD | Basakar                            | 63.2         | 1957-58               |
| 5      | Teesta Low Dam-IV (Teesta High Dam) | NHPC    | DARJEELING   | Teesta Kalikhola confluence        | 160          | 2016                  |
|        | <b>Total</b>                        |         |              |                                    | <b>441.2</b> |                       |

\* Maithon is in Ganga and others are in Brahmaputra Basin.

**3. Pumped Storage Projects in Operation:**

| Sl. No. | Name of Project | I. C. (MW) | Remarks               |
|---------|-----------------|------------|-----------------------|
| 1       | Purulia         | 900        | Pumping Mode- Working |
|         | <b>Total</b>    | <b>900</b> |                       |

**4. H.E. Projects under Construction:**

| Sl. No. | Name of Project | Agency | District   | River / Basin   | I. C. (MW) | Likely Commissioning |
|---------|-----------------|--------|------------|-----------------|------------|----------------------|
| 1       | Rammam-III      | NTPC   | Darjeeling | Rammam/ Rangit/ | 120        | 2020-21              |
|         |                 |        |            |                 | <b>120</b> |                      |

**5. Pumped Storage Projects concurred by CEA:**

| Sl. No. | Name of Project | I. C. (MW)  | Remarks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------|-----------------|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Turga           | 1000        | EC recommended by EAC in its meeting held on 02.07.2018. FRA compliance completed and In-Principle FC-I clearance accorded on 12.04.2018. However, in a Constitutional Writ Petition filed in Hon'ble High Court of Calcutta, the Hon'ble High Court of Calcutta (single bench) has passed a verdict on 02.07.2019 quashing the 'in-principle' stage-I forest clearance granted by MoEF&CC, Govt. of India. An appeal against this verdict has been submitted before the Hon'ble Division bench, High Court of Calcutta on 09.08.2019. FC-II is awaited. |
|         | <b>Total</b>    | <b>1000</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

**6. H.E Projects on which Survey & Investigation held up:**

| Sl.No. | Name of Project | Basin /River               | Agency | I.C. (MW) | Date of MOA | Status                                                                                                                                                                                                                                                                                                                                                                    |
|--------|-----------------|----------------------------|--------|-----------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | TLDP-I&II       | Teesta/Badi (Great Rangit) | NHPC   | 81        | 30.07.15    | S&I held up due to withdrawal of consent for the project by Govt. of Sikkim on 30.01.2017. NHPC handed over the TLDP I&II HEP back to Govt. of West Bengal due to Non-availability of the consent from Govt. of Sikkim and also due to commercial unviability of the project. NHPC informed vide their letter dated 21.11.2019 that project handed over to WBSEDCL, GoWB. |
|        | <b>Total</b>    |                            |        | <b>81</b> |             |                                                                                                                                                                                                                                                                                                                                                                           |

7. H. E. Projects yet to be allotted by the State for development:

| Sl.No. | Name of Project | River      | Type | I.C.(MW) |
|--------|-----------------|------------|------|----------|
| 1      | Balason         | Balason    | R    | 33       |
| 2      | Rammam-I        | Rammam     | R    | 70       |
|        | Total           | 2 Projects |      | 103      |

Note: R –Run off the River

## Hydro Power Development in Arunachal Pradesh

### Identified Hydro Power Potential and its status of Development:

|                                                                                                                                         |                                                                  |                                                                               | Nos. | Capacity (MW) |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------------------|------|---------------|
| <b>Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects<br/>(Projects having capacity above 25 MW)</b> |                                                                  |                                                                               | 87   | 50064         |
| <b>I</b>                                                                                                                                | <b>Projects in operation</b>                                     |                                                                               | 2    | 515           |
| <b>II</b>                                                                                                                               | <b>Projects under construction</b>                               |                                                                               | 2    | 2600          |
| <b>III</b>                                                                                                                              | <b>Projects allotted by States for development</b>               |                                                                               |      |               |
|                                                                                                                                         | (i)                                                              | Projects cleared by CEA and yet to be taken up for construction               | 18   | 18578         |
|                                                                                                                                         | (ii)                                                             | Projects returned to project authorities                                      | 14   | 6403          |
|                                                                                                                                         | (iii)                                                            | Projects under S&I                                                            | 21   | 3407          |
|                                                                                                                                         | (iv)                                                             | Projects allotted for development on which S&I is held up/ yet to be taken up | 17   | 7252          |
| <b>IV</b>                                                                                                                               | <b>Projects dropped due to basin studies</b>                     |                                                                               | 20   | 3998          |
| <b>V</b>                                                                                                                                | <b>Projects yet to be allotted by the State for development*</b> |                                                                               | 43   | 15045         |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition/deletion of the projects and merger of two projects into one etc.

1. H.E. Projects in Operation:

| S. No. | Name of Project            | No. Of units | No. of units x capacity (MW) | River       | District        | Capacity (MW) | Year of commissioning |
|--------|----------------------------|--------------|------------------------------|-------------|-----------------|---------------|-----------------------|
|        | NEEPCO                     |              |                              |             |                 |               |                       |
| 1      | RANGANADI [Yazali Div.-II] | 3            | (3X135)                      | RANGANADI   | LOWER SUBANSIRI | 405           | 2002                  |
| 2      | PARE                       | 2            | (2X55)                       | BRAHAMPUTRA |                 | 110           | 2018                  |
|        | Total                      | 5            |                              |             |                 | 515           |                       |

Note: All projects are in Brahmaputra Basin

2. H.E. Projects Under Construction:

| Sl. No. | Name of Project           | Agency | District             | I.C. (MW) | River                   | Likely Commissioning |
|---------|---------------------------|--------|----------------------|-----------|-------------------------|----------------------|
| 1       | Kameng                    | NEEPCO | West Kameng          | 600       | Bichom & Tenga / Kameng | 2019-21 (July 2020)  |
| 2       | Subansiri [Subansiri Dam] | NHPC   | L.Subansiri/ Dhemaji | 2000      | Subansiri               | 2023-24              |
|         | Total                     |        |                      | 2600      |                         |                      |

Note: All projects are in Brahmaputra Basin

### 3. H.E. Projects Cleared/Appraised by CEA:

| Sl No. | Name of Project | Agency  | District    | River         | I.C. (MW) | Date of CEA Concurrence | Status                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------|-----------------|---------|-------------|---------------|-----------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Dibbin          | KSKDHPL | West Kameng | Bichomchhu    | 120       | 04.12.09                | EC accorded on 23.7.2012. FC-I accorded on 07.02.2012. FC-II yet to be obtained. Project is under consideration for transferr to State Govt./ NEEPCO.                                                                                                                                                                                                                                                                                     |
| 2      | Lower Siang *   | JAVL    | East Siang  | Siang         | 2700      | 16.02.10                | EC & FC yet to be obtained by developer. MoEF&CC in Jan'2016 closed the proposal due to non-response of developer. Developer is required to carry out fresh EIA/EMP studies.                                                                                                                                                                                                                                                              |
| 3      | Nafra           | SNEL    | West Kameng | Bichom        | 120       | 11.02.11                | EC accorded on 19.08.2013. FC-I accorded on 12.07.2011 & FC-II accorded on 26.06.2012. Financial closure yet to be achieved by the developer.                                                                                                                                                                                                                                                                                             |
| 4      | Nyamjang Chhu   | NJCHPL  | Tawang      | Nyamjang Chhu | 780       | 24.03.11                | EC accorded on 19.04.2012. FC-I accorded on 09.04.2012. NGT vide judgement dated 07.04.2016, has suspended EC till the time the studies as directed are to be carried out. WII report on Black Necked Crane was submitted to MoEF&CC and is under its review.                                                                                                                                                                             |
| 5      | Tawang St-I     | NHPC    | Tawang      | Tawang Chu    | 600       | 10.10.11                | EC accorded on 10.06.2011. FC-I & FC-II are pending. FRA is under process. In the review meeting held on 29.05.2019 in CEA, Developer stated that FC-II of Tawang-I will be taken up after obtaining FC-II of Tawang-II. There is issue of habitation of Black Necked Crane in the project area. MoEF&CC informed that the report of WII on Black Necked Crane for the project is submitted to MoEF&CC and is under review.               |
| 6      | Tawang St-II    | NHPC    | Tawang      | Tawang Chu    | 800       | 22.09.11                | EC accorded on 10.06.2011. FC-I accorded on 08.01.2014. FC-II yet to be obtained. For FC-II, additional information sought by MoEF&CC vide letter 23.02.2017. NHPC informed that local resident are not cooperating. Minister of State (I/C), MOP through DO letter dated 02.02.2018 requested Hon'ble CM, Ar. Pr. to intervene in the matter for submitting compliance report under FRA 2006 by State Govt. to MoEF for accord of FC-II. |
| 7      | Demwe Lower **  | ADPL    | Lohit       | Lohit         | 1750      | 20.11.09                | EC accorded on 12.02.2010. FC-I accorded. FC-II accorded on 03.05.2013. As per NGT order dated 24.10.2017, NBWL issue to be reconsidered by MoEF&CC. Developer informed that the project is under NCLT since 2017 and fate of project will be decided after NCLT proceedings are over.                                                                                                                                                    |

### 3. H.E. Projects Cleared/Appraised by CEA:

| Sl No. | Name of Project | Agency    | District      | River        | I.C. (MW) | Date of CEA Concurrence | Status                                                                                                                                                                                                                                                                                                      |
|--------|-----------------|-----------|---------------|--------------|-----------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8      | Hirong          | JAPL      | West Siang    | Siang        | 500       | 10.04.2013              | EC & FC yet to be obtained by developer. EIA/EMP report being revised as per Siang BSR. FC-I under process at state level. However, as per MoEF&CC, matter of FC is closed vide letter dated 02.12.2015.                                                                                                    |
| 9      | Talanga Londa   | GMR       | East Kameng   | Kameng       | 225       | 16.08.2013              | EC accorded on 07.08.2015. FC-I & FC-II yet to be obtained.                                                                                                                                                                                                                                                 |
| 10     | Etalin          | EHEPCL    | Dibang Valley | Dri & Tangon | 3097      | 12.07.2013              | EC recommended by EAC on 31.01.2017. Letter will be issued after FC-I. FC-I & FC-II yet to be obtained. WII report on bio-diversity is awaited. MoEF&CC will consider for accord of FC-I after aforesaid report.                                                                                            |
| 11     | Naying HEP      | NDSCPL    | West Siang    | Siang        | 1000      | 11.09.2013              | EC & FC yet to be obtained by developer. EC is linked with Siang BSR, which is completed and accepted by MoEF&CC. FC-I pending with State Govt. MoEF&CC stated that developer needs to apply afresh for EC online as old proposal is not valid anymore. DISCOMs are reluctant to sign PPA.                  |
| 12     | Kalai –II ***   | Kalai PPL | Anjaw         | Lohit        | 1200      | 27.3.2015               | EC accorded 20.05.2015. FC-I and FC-II yet to be obtained. Land acquisition under process.                                                                                                                                                                                                                  |
| 13     | Heo             | HHPPL     | West Siang    | Yarjep       | 240       | 28.07.2015              | EC accorded on 10.11.2015. FC-I accorded on 27.10.2015. FC-II yet to be obtained.<br>The issue of shifting of quarry is pending with FAC which is linked with Pauk, Heo and Tato-I and needs to be resolved for accord of FC-II. Observations of Regional Office awaited.                                   |
| 14     | Tato-I          | SHPPL     | West Siang    | Yarjep       | 186       | 28.10.2015              | EC accorded on 10.11.2015. FC-I accorded on 27.10.2015. FC-II yet to be obtained.<br>MoEF&CC stated that the matter of shifting of quarry area was considered by FAC and observations of Regional office are being sought & thereafter it will be again considered by FAC. Land acquisition is in progress. |

### 3. H.E. Projects Cleared/Appraised by CEA:

| Sl No. | Name of Project         | Agency | District            | River  | I.C. (MW)    | Date of CEA Concurrence | Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------|-------------------------|--------|---------------------|--------|--------------|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 15     | Dibang [Dibang Storage] | NHPC   | lower Dibang Valley | Dibang | 2880         | 18.09.2017              | EC accorded on 19.05.2015. FC-I accorded on 15.04.2015. FC-II: Pending. CCEA at its meeting held on 17.07.2019 has accorded approval for incurring expenditure of Rs. 1600 crore on Pre-investment activities for the project including NPV, CA, CAT Plan and Wildlife Management. Additional payment of Rs. 2.11 Cr. made in Adhoc CAMPA on 30.12.2019 towards avifauna conservation and Zonal Wildlife management plan. Approved R&R Plan submitted to PCCF (RE) & NO (FCA), Itanagar on 02.12.2019, for further submission to MoEF&CC. |
| 16     | Attunli                 | AHEPCL | Dibsng Valley       | Tangon | 680          | 15.03.18                | Both EC and FC are yet to be obtained. MoEF&CC stated that fresh ToR was issued in May'2019. Forest survey under progress.                                                                                                                                                                                                                                                                                                                                                                                                                |
| 17     | Tato-II                 | THPPL  |                     |        | 700          | 22.05.12                | EC accorded on 27.6.2011. FC is linked to Cumulative Impact Assessment Study of Siang Basin which has been carried out and accepted by MoEF&CC. IC of the project will get revised due to change in e-flows recommended in BSR and hence fresh DPR to be prepared by developer.                                                                                                                                                                                                                                                           |
| 18     | Siyom (Middle Siang)*   | SHPPL  |                     | Siang  | 1000         | 17.12.13                | EC accorded 31.01.2008. FC is linked to Cumulative Impact Assessment Study of Siang Basin which has been carried out and accepted by MoEF&CC. IC of the project will get revised due to change in e-flows recommended in BSR and hence fresh DPR to be prepared by developer.                                                                                                                                                                                                                                                             |
|        | <b>Total</b>            |        |                     |        | <b>18578</b> |                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

**Note: All projects are in Brahmaputra Basin**

**\* Part of Passighat (as per re-assessment)**

**\*\* Part of Demwe (as per re-assessment)**

**\*\*\* Part of Kalai (as per re-assessment)**

#### 4. H.E. Projects Returned to Project Authorities for re-submission after compliance of observations:

| Sl. No. | Name of Project          | Agency        | I.C. (MW)   | Month of Return/Reason of Return                                                                                                                                                                                                                                                                                                            |
|---------|--------------------------|---------------|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Ranganadi St-II          | NEEPCO        | 130         | Returned on 04/06 and NEEPCO has been asked to review the Project and resubmit DPR after cost and tariff are brought down. MOU with State Govt. yet to be signed.                                                                                                                                                                           |
| 2       | Yamne St-II              | SSYEVPL       | 84          | DPR returned on 05/11 due to inadequate geological investigations at dam site, diversion tunnel, surge shaft & power house etc.                                                                                                                                                                                                             |
| 3       | Hutong –II *             | MEIPL         | 1200        | The DPR was returned on 5.12 as the Project is now to be developed as storage Project. Hydrology & PPS cleared on 9.5.2011 & 27.3.2012.                                                                                                                                                                                                     |
| 4       | Kalai-I **               | MFIPL         | 1352        | Returned on 05/12 and STC decided that M/S MFIPL should carry out the detailed investigation for the revised DPR as per CEA's letter dt 24.5.2012.                                                                                                                                                                                          |
| 5       | Pemashelphu HEP          | MHPL          | 90          | Returned on 02/13 due to non-replying of the comments and likely change in location of Dams benefits from the project, DPR of project has been returned.                                                                                                                                                                                    |
| 6       | Sissiri HEP [Sesseri]    | SSHPL         | 100         | Returned on 06/13 reason being DPR could not be accepted to detailed examination as representation of State Govt. pointed out that irrigation and drinking water component should be internal part of two project and cost of same should be included in cost of project. DPR returned to developer for sort out the issue with State Govt. |
| 7       | Gimiliang                | SKI Pvt. Ltd. | 80          | DPR returned on 06/13 during presentation meeting held on 03.5.2013 due to inadequate geological investigation. Developer was told to submit revised DPR after carrying out necessary investigation and IC got fixed by CEA.                                                                                                                |
| 8       | Raigam                   | SKI Pvt. Ltd. | 141         | DPR returned on 06/13 during presentation meeting held on 03.5.2013 due to inadequate geological investigation. Developer was told to submit revised DPR after carrying out necessary investigation and IC got fixed by CEA.                                                                                                                |
| 9       | Kangtangshiri            | KHPPL         | 80          | Returned on 29.07.2013 due to inadequate investigation and in proper layout etc.                                                                                                                                                                                                                                                            |
| 10      | Demwe Upper ***          | LUPL          | 1080        | Returned on 03/15 as developer informed that due to lack of confidence in constructability of Dam considering its deep foundation, they are not in a position to finalize the type of dam and are still in consultation with the contractors in this regard. Hence the project was returned vide secretary CEA ltr. Dtd.26/03/2015          |
| 11      | Nyukcharong Chu          | SNCPCL        | 96          | Returned on 04/15 due to non-submission of investigation suggested by GSI.                                                                                                                                                                                                                                                                  |
| 12      | Subansiri Middle (Kamla) | KHEPCL        | 1800        | Returned on 29.01.2018. All the partial clearances issued till date were rescinded as no progress has been made by the Developer towards resolving the issues pending with various appraising groups.                                                                                                                                       |
| 13      | Magochu                  | SMCPCL        | 96          |                                                                                                                                                                                                                                                                                                                                             |
| 14      | Tagurshit                |               | 74          | Returned in 06/19.                                                                                                                                                                                                                                                                                                                          |
|         | <b>Total</b>             |               | <b>6403</b> |                                                                                                                                                                                                                                                                                                                                             |

\* Part of Hutong (as per re-assessment)

\*\* Part of Kalai (as per re-assessment)

\*\*\* Part of Demwe (as per re-assessment)

## 5. H.E. Projects Under Survey & Investigation:

| Sl. No. | Name of Project               | Basin/River | Agency for DPR             | Original I.C. (MW) | Date of MOA                                                                          | Target date of Preparation of DPR |
|---------|-------------------------------|-------------|----------------------------|--------------------|--------------------------------------------------------------------------------------|-----------------------------------|
| 1       | Oju [Oju-I + Oju-II]          | Subansiri   | Navayuga Engg. Co. Ltd.    | 1878               | June'2010 for Oju-I & Oju-II, Revised MoU for Single Project is received in April'13 | Dec-20                            |
| 2       | Pauk                          | Siang       | Velcan Energy Pvt Ltd      | 145                | 30.06.2007 (rev MOA-31.07.09)                                                        | Dec-20                            |
| 3       | Chomi                         | Subansiri   | Adveta Power               | 80                 | 14.2.2013                                                                            | Dec-21                            |
| 4       | Chela                         | Subansiri   | Adveta Power               | 75                 | 14.2.2013                                                                            | Dec-21                            |
| 5       | Para                          | Kameng      | Coastal Projects Pvt. Ltd. | 45                 | 19.11.2008                                                                           | -                                 |
| 6       | Pachuk-II                     | Kameng      | Energy development Co. Ltd | 61                 | 27.08.2010                                                                           | Sep-19                            |
| 7       | Tsa Chu - I Lower             | Tawang      | Energy development Co. Ltd | 77                 | 27.08.2010                                                                           | Sep-19                            |
| 8       | Tsa Chu - II                  | Tawang      | Energy development Co. Ltd | 67                 | 27.08.2010                                                                           | Sep-19                            |
| 9       | Pachuk-II Lower [Kapak Leyak] | Kameng      | Energy development Co. Ltd | 51                 | 27.8.2010                                                                            | Sep-19                            |
| 10      | Marijingla                    | Kameng      | Energy development Co. Ltd | 39                 | 12.1.2008 (Amended on 27.8.2010)                                                     | Sep-19                            |
| 11      | Marijingla Lower              | Kameng      | Energy development Co. Ltd | 37                 | 27.8.2010                                                                            | Sep-19                            |
| 12      | Rego                          | Siang       | Greenko Energies Ltd.      | 97                 | 25.09.2012                                                                           | -                                 |

## 5. H.E. Projects Under Survey & Investigation:

| Sl. No. | Name of Project       | Basin/River | Agency for DPR                    | Original I.C. (MW) | Date of MOA | Target date of Preparation of DPR |
|---------|-----------------------|-------------|-----------------------------------|--------------------|-------------|-----------------------------------|
| 13      | Rapum                 | Siang       | Greenko Energies Ltd.             | 66                 | 27.12.2007  | -                                 |
| 14      | Pango (Minniying)     | Siang       | Meenakshi Power Ltd.              | 96                 | 27.08.2010  | Jan-20                            |
| 15      | Sippi                 | Siang       | Meenakshi Power Ltd.              | 96                 | 20.7.2011   | Nov-19                            |
| 16      | Jidu (Yangsang)       | Siang       | Meenakshi Power Ltd.              | 96                 | 20.7.2011   | Dec-19                            |
| 17      | Panyor                | Dikrong     | Rajratna Energy Holding Pvt. Ltd. | 80                 | 25.02.2009  | Oct-19                            |
| 18      | Tidding-I             | Lohit       | Sai Krishnodaya Ind. (P) Ltd.     | 84                 | 26.02.2009  | Sep-19                            |
| 19      | Tidding-II            | Lohit       | Sai Krishnodaya Ind. (P) Ltd.     | 75                 | 26.02.2009  | Sep-19                            |
| 20      | Lower Yamne-II        | Siang       | Yamne Power Pvt. Ltd.             | 87                 | 29.11.2008  | -                                 |
| 21      | Lower Yamne -I [Jaru] | Siang       | Yamne Power Pvt. Ltd              | 75                 | 29.11.2009  | -                                 |
|         | <b>Total</b>          |             |                                   | <b>3407</b>        |             |                                   |

## 6. H.E. Projects allotted for development on which Survey & Investigation is held up/ yet to be taken up:

| Sl. No. | Name of Project | I.C. (MW) | Agency                           | Date of Allotment/ MoA | Status                                                                                                                                                                                                                                                                                                                                                   |
|---------|-----------------|-----------|----------------------------------|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Papu            | 90        | CESC Ltd.                        | 16.05.2012             | Issue of interference of levels with the Upstream project of M/s Vensar Energy Ltd, i.e Papu Valley HEP (45MW) requires to be resolved. Both Vensar constructions and CESC Ltd clarified that there is no overlapping at ground vide letter dtd 29/12/16. Re-survey and DPR submission was targetted to be completed in May 2019,which is still awaited. |
| 2       | Kameng Dam      | 420       | KSK Energy Ventures Ltd.         | 25.01.2007             | MoEF did not issue ToR due to proximity to Pakke Tiger Reserve. All possible alternative site(s), the said proximity of tiger reserve persists due to which the project has been dropped. The Developer had already written for refund of upfront premium for surrendering the project.                                                                  |
| 3       | Emra-I          | 275       | Athena Energy Ventures Pvt. Ltd. | 02.02.2008             | No proper approach road to the project site. No progress is shown till date. Intent to Terminate by GoAP under process since 25/07/2018.                                                                                                                                                                                                                 |
| 4       | Nalo            | 635       | Indus Hydro Power                | 16.11.2010             | First consultaion meeting held on 27.11.2013. Intent to terminate under proocess since 19.03/2018                                                                                                                                                                                                                                                        |
| 5       | Rho             | 93        | SEW Energy                       | 2.3.2009               | First consultation meeting held on 30.10.2013. No visible progress since 2015. Drift Work pending. Letter issued to the developer to resolve issues with CEA/CWC/GSI on 17/9/19.                                                                                                                                                                         |
| 6       | Dardu           | 60        | KVK Energy & Infrastructure Ltd. | 26.12.2007             | No activity/progress in the project. Local public are demanding to hand over the project to CPSU. Dikrong basin study not yet finalised. Intention to terminate by GoAP is under process since 10/04/2018.                                                                                                                                               |

## 6. H.E. Projects allotted for development on which Survey & Investigation is held up/ yet to be taken up:

| Sl. No. | Name of Project | I.C. (MW) | Agency                          | Date of Allotment/ MoA | Status                                                                                                                                                                                                                                                                        |
|---------|-----------------|-----------|---------------------------------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7       | Naba            | 1000      | Abir Infrastructre Pvt. Ltd.    | 21.06.2010             | S&I held up due to unapproachable area/difficult & inhospitable terrain & local law & order problem. There is no activity in the project. 2nd show cause notice was issued by GoAP on 26/06/2015.                                                                             |
| 8       | Dengser         | 552       | Coastal Infrastructre Pvt. Ltd. | 26.04.2011             | S&I held up due to unapproachable area/difficult & inhospitable terrain & local law & order problem. No activity in the project. 1st show cause notice was issued on 12/05/2015.                                                                                              |
| 9       | Niare           | 800       | Coastal Infrastructre Pvt. Ltd. | 26.04.2011             | S&I held up due to unapproachable area/difficult & inhospitable terrain & local law & order problem. There is no Activity in the project. 5th Show cause notice was issued by GoAP on 12/05/2015.                                                                             |
| 10      | Anjaw           | 270       | Athena Energy Ventures Ltd.     | 09.07.2007             | First consultaion meeting held on 30.07.2014. S&I held up. No progress is shown by the Developer. The project will be considered for issuing of Intent to terminate.                                                                                                          |
| 11      | Emra-II         | 390       | Athena Energy Ventures Ltd.     | 02.02.2009             | S&I held up. No road connectivity to project site. Local issues, communication problem. Facing local problem. developer was asked to complete the drilling work by march 2014. Till now no progress in Submission of DPR. Intent to Terminate under process since 25/07/2018. |
| 12      | Yamne-I         | 111       | S.S. Yamne Power Pvt Ltd        | 05.03.2009             | First consultation meeting held on 30.07.2014. S&I held up. Local Problems in Siang Valley. Problems of law and order. Reply to final showcause notice not submitted. Hence under process for termination since 18/05/2018.                                                   |

## 6. H.E. Projects allotted for development on which Survey & Investigation is held up/ yet to be taken up:

| Sl. No. | Name of Project                            | I.C. (MW)   | Agency                   | Date of Allotment/ MoA | Status                                                                                                                                                                                                                                                                          |
|---------|--------------------------------------------|-------------|--------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 13      | Dinchang                                   | 252         | KSK Energy Ventures Ltd  | 11.9.2007              | DPR preparation is in advanced stage of completion but not completed due to various reasons. Project under process for termination by GoAP since 13.03.2018.                                                                                                                    |
| 14      | Ithun-I                                    | 84          | JVKIL Consortium         | 29.8.2008              | Non-operationalization of Hunli-Desali road. Very slow progress, hence under process for Intent to Terminate by GoAP since 19/07/2018                                                                                                                                           |
| 15      | Subansiri Upper                            | 1800        | KSK Energy Ventures Ltd. | 18.03.2010             | S&I held up due to lack of clarity on funding of Flood Moderation cost. Second show cause notice was issued on 26/06/2015.                                                                                                                                                      |
| 16      | Kurung<br>[Kurung Dam - I + Kurung Dam-II] | 330         | NEEPCO                   | 27.01.2015             | S&I held up as the proposal for sanction of Pre-Investment expenditure is on hold. Meeting of Delegated Investment Board(DIB) for pre-investment approval held on 18/01/2018 wherein Secy(Power), MoP expressed concern over some of the clauses of MoA between NEEPCO and GoAP |
| 17      | New Melling                                | 90          | SEW Energy               | 02.03.2009             | S&I held up due to no activity/progress in the project. Due to poor progress an intent to terminate is under process since 03/07/18                                                                                                                                             |
|         | <b>Total</b>                               | <b>7252</b> |                          |                        |                                                                                                                                                                                                                                                                                 |

## 7. Projects dropped due to basin studies:

| Sl. No. | Name of Project                      | I.C. (MW)   | River             | Basin       | Remarks                                                                                                                                                                                                                                                                                                |
|---------|--------------------------------------|-------------|-------------------|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Jarong                               | 90          | Siang             | Brahmaputra | It is recommended not to allot the project again as this will ensure that 5.1 Km of Siyom river stretch between upstream Taiyong HEP and downstream Hirong HEP will remain a free flowing river stretch.                                                                                               |
| 2       | Hirit Korong                         | 42          | Siang             | Brahmaputra | Fish species like Mahseer( <i>Tor putitora</i> ) migrates for spawning and breeding. <i>Labeo pangusia</i> is another fish which prefers waters of Hirit river for spawning.All the projects in Hirit basin are in eco-sensitive zone i.e. within 10 km radius of Yordi rabe Supse Wildlife sanctuary. |
| 3       | Soying Korong                        | 48          | Siang             | Brahmaputra |                                                                                                                                                                                                                                                                                                        |
| 4       | Siri Korong                          | 58          | Siang             | Brahmaputra |                                                                                                                                                                                                                                                                                                        |
| 5       | Sipit Upper                          | 45          | Siang             | Brahmaputra | Dropped due to biodiversity richness of the basin.                                                                                                                                                                                                                                                     |
| 6       | Gameng                               | 37          | Siang             | Brahmaputra | Sike flow is not sufficient to sustain a project and still have adequate environment flow through out the year.                                                                                                                                                                                        |
| 7       | Yemsing                              | 38          | Siang             | Brahmaputra | This is in biodiversity rich area and would be affecting 8.8 Km of the river length for 38 MW.                                                                                                                                                                                                         |
| 8       | Tammu                                | 55          | Subansiri         | Brahmaputra | Doesn't meet the requirement of minimum e-flow.Dropping of this project will keep free flowing of Siu tributary of subansiri basin and provide lateral connectivity for aquatic fauna and conserve migratory fish species.                                                                             |
| 9       | Nazong                               | 60          | Bichom            | Brahmaputra | Dropped to ensure free flow of natural river .                                                                                                                                                                                                                                                         |
| 10      | Hutong Stage-I *                     | 750         | Lohit             | Brahmaputra | Dropped as it is at the elevation where both <i>Mahaseer</i> and <i>Snow Trout</i> are observed.The dropping of the project will provide the free stretch of 19.1 km for migration of both these species.The site is also not geologically stable                                                      |
| 11      | Kameng-I<br>[Bharela Lift Dam - I]   | 1120        | Kameng            | Brahmaputra |                                                                                                                                                                                                                                                                                                        |
| 12      | Kameng-II<br>[Bharela Lift Dam - II] | 600         | Kameng            | Brahmaputra | The project has been deleted from S&I Held up list as the project has been dropped as per Kameng Basin study report.                                                                                                                                                                                   |
| 13      | Pakke                                | 110         | Kameng            | Brahmaputra |                                                                                                                                                                                                                                                                                                        |
| 14      | Seba                                 | 80          | Kameng            | Brahmaputra |                                                                                                                                                                                                                                                                                                        |
| 15      | Pasar                                | 32          | Kameng            | Brahmaputra |                                                                                                                                                                                                                                                                                                        |
| 16      | Bichom St-I                          | 190         | Bichom/<br>Kameng | Brahmaputra |                                                                                                                                                                                                                                                                                                        |
| 17      | Bichom-II                            | 205         | Bichom/<br>Kameng | Brahmaputra |                                                                                                                                                                                                                                                                                                        |
| 18      | Malinye<br>[Mulinye]                 | 335         | Dibang            | Brahmaputra | Falls within Dibang Wildlife Sanctuary.                                                                                                                                                                                                                                                                |
| 19      | Tsa Chu-I                            | 43          | Tawang            | Brahmaputra |                                                                                                                                                                                                                                                                                                        |
| 20      | Thingbu Chu                          | 60          | Tawang            | Brahmaputra |                                                                                                                                                                                                                                                                                                        |
|         | <b>Total</b>                         | <b>3998</b> |                   |             |                                                                                                                                                                                                                                                                                                        |

\* Part of Hutong (as per re-assessment)

**8. H. E. Projects yet to be allotted by the State for development**

| Sl.No. | Name of Project              | River   | Type | I.C.(MW) | Remarks                                                                                                                                                                                                                                                                                                                                                  |
|--------|------------------------------|---------|------|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Siang Upper St. I *          | Siang   | S    | 6000     |                                                                                                                                                                                                                                                                                                                                                          |
| 2      | Siang Upper St. II *         | Siang   | S    | 3750     | Issue of interference of levels with the Upstream project of M/s Vensar Energy Ltd, i.e Papu Valley HEP (45MW) requires to be resolved. Both Vensar constructions and CESC Ltd clarified that there is no overlapping at ground vide letter dtd 29/12/16. Re-survey and DPR submission was targetted to be completed in May 2019,which is still awaited. |
| 3      | Agoline                      | Dibang  | R    | 235      |                                                                                                                                                                                                                                                                                                                                                          |
| 4      | Elango                       | Ahi     | R    | 180      |                                                                                                                                                                                                                                                                                                                                                          |
| 5      | Rigong                       | Rigong  | R    | 130      |                                                                                                                                                                                                                                                                                                                                                          |
| 6      | Mirak                        | Sigong  | R    | 160      |                                                                                                                                                                                                                                                                                                                                                          |
| 7      | Hegio                        | Kurung  | R    | 250      |                                                                                                                                                                                                                                                                                                                                                          |
| 8      | Doimukh<br>[Dudmukh Storage] | Dikrong | S    | 170      | The project has been surrendered by developer to the State Govt.                                                                                                                                                                                                                                                                                         |
| 9      | Kimi                         | Bichom  | R    | 535      |                                                                                                                                                                                                                                                                                                                                                          |
| 10     | Chanda                       | Kameng  | R    | 110      |                                                                                                                                                                                                                                                                                                                                                          |
| 11     | Yapin                        | Yamne   | R    | 95       |                                                                                                                                                                                                                                                                                                                                                          |
| 12     | Pengging                     | Yamne   | R    | 60       |                                                                                                                                                                                                                                                                                                                                                          |
| 13     | Milli                        | Kurung  | R    | 75       |                                                                                                                                                                                                                                                                                                                                                          |
| 14     | Sape                         | Kurung  | R    | 38       |                                                                                                                                                                                                                                                                                                                                                          |
| 15     | Nyepin                       | Payam   | R    | 32       |                                                                                                                                                                                                                                                                                                                                                          |
| 16     | Hiya                         | Payam   | R    | 41       |                                                                                                                                                                                                                                                                                                                                                          |
| 17     | Kamla (Tamen)                | Kamala  | R    | 175      |                                                                                                                                                                                                                                                                                                                                                          |
| 18     | Turu (Par)                   | Dikrong | R    | 65       |                                                                                                                                                                                                                                                                                                                                                          |
| 19     | Yazali Storage               | Ranga   | S    | 95       |                                                                                                                                                                                                                                                                                                                                                          |
| 20     | Tago-I                       | Yarjap  | R    | 55       |                                                                                                                                                                                                                                                                                                                                                          |
| 21     | Tenga                        | Tenga   | S    | 275      |                                                                                                                                                                                                                                                                                                                                                          |

**8. H. E. Projects yet to be allotted by the State for development**

| Sl.No.    | Name of Project | River                      | Type | I.C.(MW)     | Remarks                                                                                                                                                                 |
|-----------|-----------------|----------------------------|------|--------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 22        | Rebby           | Kameng                     | R    | 30           |                                                                                                                                                                         |
| 23        | Satuk           | Pachuk                     | R    | 47           |                                                                                                                                                                         |
| 24        | Lachung         | Pachi                      | R    | 41           |                                                                                                                                                                         |
| 25        | Phanchung       | Pachi                      | R    | 90           |                                                                                                                                                                         |
| 26        | Utung           | Bichom                     | R    | 110          |                                                                                                                                                                         |
| 27        | Khuitam         | Digen                      | R    | 29           |                                                                                                                                                                         |
| 28        | But             | Digen                      | R    | 26           |                                                                                                                                                                         |
| 29        | Mathithing      | Digen                      | R    | 40           |                                                                                                                                                                         |
| 30        | Pichang         | Kuru                       | S    | 31           |                                                                                                                                                                         |
| 31        | Tarang Warang   | Pacha                      | R    | 65           |                                                                                                                                                                         |
| 32        | Sepla           | Pacha                      | R    | 46           |                                                                                                                                                                         |
| 33        | Yangman Storage | Burhi Dihing               | S    | 60           |                                                                                                                                                                         |
| 34        | Tirap (Tipang)  | Tirap                      | S    | 80           |                                                                                                                                                                         |
| 35        | Jameri          | Tenga                      | R    | 60           | State Govt. terminated the agreement with developer for execution of the project which was earlier allotted to KSK Energy Ventures                                      |
| 36        | Meyong          | Timkong Rong               | R    | 38           | State Govt. terminated the agreement with developer for execution of the project which was earlier allotted to Patel Engineering Ltd.                                   |
| 37        | Gongri          | Gongri                     | R    | 144          | State Govt. terminated the agreement with developer for execution of Gongri project which was earlier allotted to Patel Engineering Ltd. from under construction stage. |
| 38        | Talong          | Kameng                     | S    | 150          |                                                                                                                                                                         |
| 39        | Badao           | Kameng                     | R    | 66           | Moved from S&I                                                                                                                                                          |
| 40        | Digin           | Kameng                     | R    | 46           | Moved from S&I                                                                                                                                                          |
| 41        | Amulin          | Mathun                     | R    | 420          | Moved from S&I held up                                                                                                                                                  |
| 42        | Emini           | Mathun                     | R    | 500          | Moved from S&I held up                                                                                                                                                  |
| 43        | Mihumdon        | Dri                        | R    | 400          | Moved from S&I held up                                                                                                                                                  |
| <b>43</b> | <b>Total</b>    | <b>43 Nos. of Projects</b> |      | <b>15045</b> |                                                                                                                                                                         |

**\* Part of Passighat (as per re-assessment)**

**Note: R –Run off the River & S- Storage**

Hydro Power Development in Assam

Identified Hydro Power Potential and its status of Development:

|                                                                                                                              |                                                            |                                                                 | Nos. | Capacity (MW) |
|------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|-----------------------------------------------------------------|------|---------------|
| Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW) |                                                            |                                                                 | 9    | 650           |
| I                                                                                                                            | Projects in operation                                      |                                                                 | 3    | 350           |
| II                                                                                                                           | Projects allotted by States for development                |                                                                 |      |               |
|                                                                                                                              | (i)                                                        | Projects cleared by CEA and yet to be taken up for construction | 1    | 120           |
|                                                                                                                              | (ii)                                                       | Projects returned to project authorities                        | 1    | 60            |
| III                                                                                                                          | Projects yet to be allotted by the State for development * |                                                                 | 5    | 185           |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition, etc.

1. Identified Projects during Reassessment study:

| Sl.No. | Name of Project              | River   | I. C. (MW) |
|--------|------------------------------|---------|------------|
| 1      | Dilli Stor.                  | Disang  | 33         |
| 2      | Jamuna Dam P/H               | Jamuna  | 28         |
| 3      | Diyung Dam P/H               | Diyung  | 47         |
| 4      | Langey                       | Borpani | 37         |
| 5      | Khondong [Kopili I]          | Kopili  | 50         |
| 6      | Kopili [Kopili II]           | Kopili  | 265        |
| 7      | Karbi Langpi [Lower Borpani] | Borpani | 90         |
| 8      | Amring                       | Amring  | 40         |
| 9      | Karbi Langpi [Upper Borpani] | Borpani | 60         |
| TOTAL  |                              |         | 650        |

2. H.E. Projects in Operation:

| S.No | UTILITY/<br>STATIONS               | NO. OF<br>STATIONS | No. of<br>Units | NO. OF<br>UNITS X<br>CAPACITY<br>(MW) | RIVER/<br>BASIN* | DISTRICT      | CAPACITY (MW) | YEAR OF<br>COMMISSIONING |
|------|------------------------------------|--------------------|-----------------|---------------------------------------|------------------|---------------|---------------|--------------------------|
|      | NEEPCO                             |                    |                 |                                       |                  |               |               |                          |
| 1    | KOPILI<br>[Kopili-II]              | 1                  | 4               | (4X50)                                | KOPILI           | DIMA HASAO    | 200           | 1988                     |
| 2    | KHONDONG<br>[Kopili-I]             | 1                  | 2               | (2X25)                                | KOPILI           | DIMA HASAO    | 50            | 1984                     |
|      | SUB-TOTAL<br>NEEPCO                | 2                  | 6               |                                       |                  |               | 250           |                          |
|      | APGCL                              |                    |                 |                                       |                  |               |               |                          |
| 3    | KARBI<br>LANGPI<br>[Lower Borpani] | 1                  | 2               | (2X50)                                | BORPANI          | KARBI ANGLONG | 100           | 2007                     |
|      | SUB-TOTAL<br>APGCL                 | 1                  | 2               |                                       |                  |               | 100           |                          |
|      | TOTAL<br>ASSAM                     | 3                  | 8               |                                       |                  |               | 350           |                          |

\* All projects are in Brahmaputra Basin

3. H.E. Projects Cleared/Appraised by CEA:

| Sl No. | Name of<br>Project | Agency | District                            | River /<br>Basin*       | I.C.(MW) | Date of CEA<br>Concurrence | Status                                                                                                                                           |  |
|--------|--------------------|--------|-------------------------------------|-------------------------|----------|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|--|
| 1      | Lower Kopili       | APGCL  | Karbi<br>Anglong &<br>Dima<br>Hasao | Kopili /<br>Brahmaputra | 120      | 24.05.2016                 | EC accorded on 4.09.2019.<br>FC-I accorded on: 05.02.2019. FC-II: Pending.<br>Catchment Area Treatment Plan is yet to be<br>finalized for FC-II. |  |
|        | Total              |        |                                     |                         | 120      |                            |                                                                                                                                                  |  |

4. H.E. Projects Returned to Project Authorities for re-submission after compliance of observations:

| Sl. No | Name of Project              | Agency | I.C. (MW) | Month of Return/Reason of Return                                                                                                                                                                                                             |
|--------|------------------------------|--------|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Karbi Langpi (Upper Borpani) | ASEB   | 60        | Returned on 12/08 due to involvement of interstate aspects with Meghalaya, updated hydrology not been utilized for carrying out power potential study, cost estimates not framed at current PL and inadequate geological investigations etc. |

5. H. E. Projects yet to be allotted by the State for development

| Sl.No. | Name of Project | River              | Type | I.C.(MW) |
|--------|-----------------|--------------------|------|----------|
| 1      | Dilli Stor.     | Disang             | S    | 33       |
| 2      | Jamuna Dam P/H  | Jamuna             | S    | 28       |
| 3      | Diyung Dam P/H  | Diyung             | S    | 47       |
| 4      | Langey          | Borpani            | R    | 37       |
| 5      | Amring          | Amring             | S    | 40       |
|        | Total           | 5 Nos. of Projects |      | 185      |

Note: R –Run off the River & S- storage

Hydro Power Development in Manipur

Identified Hydro Power Potential and its status of Development:

|                                                                                                                              |                                                           |                                                                 | Nos. | Capacity (MW) |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-----------------------------------------------------------------|------|---------------|
| Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW) |                                                           |                                                                 | 15   | 1761          |
| I                                                                                                                            | Projects in operation                                     |                                                                 | 1    | 105           |
| II                                                                                                                           | Projects allotted by States for development               |                                                                 |      |               |
|                                                                                                                              | (i)                                                       | Projects cleared by CEA and yet to be taken up for construction | 1    | 66            |
| III                                                                                                                          | Projects dropped due to Basin studies/ Other reasons      |                                                                 | 1    | 1500          |
| IV                                                                                                                           | Projects yet to be allotted by the State for development* |                                                                 | 12   | 936           |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition/deletion of the projects, etc.

**1. Identified Projects during Reassessment study:**

| Sl.No.       | Name of Project         | River    | I. C. (MW)  |
|--------------|-------------------------|----------|-------------|
| 1            | Laniye-II               | Laniye   | 27          |
| 2            | Laniye-I                | Laniye   | 34          |
| 3            | Khongnem Chakha-II      | Barak    | 90          |
| 4            | Khongnem Chakha-III     | Barak    | 48          |
| 5            | Nungnag (Nungnang)      | Irang    | 70          |
| 6            | Nunglieban (Nungliban)  | Leimatek | 85          |
| 7            | Khunou                  | Leimatek | 115         |
| 8            | Thinghat                | Tuivai   | 41          |
| 9            | Sinjal                  | Tuivai   | 39          |
| 10           | Bungpuilong             | Tuivai   | 80          |
| 11           | Tipaimukh               | Barak    | 510         |
| 12           | Irang                   | Irang    | 75          |
| 13           | Pabaram (Pabaram Stor.) | Barak    | 232         |
| 14           | Loktak                  | Loktak   | 105         |
| 15           | Tuivai*                 | Tuivai   | 210         |
| <b>TOTAL</b> |                         |          | <b>1761</b> |

\*Tuivai is being developed in Mizoram

**2. H.E. Projects in Operation:**

| Sl.No.      | Name of Project | Agency | I. C. (MW) | River/Basin                 | District      | Year of Commissioning |
|-------------|-----------------|--------|------------|-----------------------------|---------------|-----------------------|
| <b>NHPC</b> |                 |        |            |                             |               |                       |
| 1           | Loktak          | NHPC   | 105        | Loktak Lake/<br>Brahmaputra | Churachandpur | 1983                  |
|             | <b>Total</b>    |        | <b>105</b> |                             |               |                       |

**3. H.E. Projects cleared by CEA:**

| Sl No | Name of Project | Agency | River/<br>Basin          | District   | I.C.<br>(MW) | Date of concurrence                     | Status                                                                                                                                                                                                                                                                                                                                                                                                        |
|-------|-----------------|--------|--------------------------|------------|--------------|-----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Loktak D/S      | LDHCL  | Leimatak/<br>Brahmaputra | Tamenglong | 66           | 4.11.2016<br>(concurrence meeting date) | EC accorded on 16.01.2013. FC-I accorded on 03.03.2011 & FC-II accorded on 22.12.2014. Due to no response from bidders, retendering of main packages are under process. PIB proposal returned by MoP on 11.07.17 seeking firm commitment regarding grant from State Government. Draft PIB memo with JICA financing Debt Equity ratio of 80:20 and Rs. 400 Crs. grant from DoNER submitted to MoP on 9.04.2018 |
|       | <b>Total</b>    |        |                          |            | <b>66</b>    |                                         |                                                                                                                                                                                                                                                                                                                                                                                                               |

**4. Projects dropped due to Basin studies/ Other reasons:**

| Sl. No. | Name of Project | I.C. (MW)   | River | Basin       | Remarks                                                                                                                                                                                                                                                          |
|---------|-----------------|-------------|-------|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Tipaimukh       | 1500        | Barak | Brahmaputra | MoEF&CC vide 29.08.2013 has declined diversion of 22777.50 ha to forest land falling in Manipur and vide letter dated 26.09.2013 has rejected diversion of 1551.30 ha of forest land falling in Mizoram for the project.<br><b>Project likely to be dropped.</b> |
|         | <b>Total</b>    | <b>1500</b> |       |             |                                                                                                                                                                                                                                                                  |

5. H. E. Projects yet to be allotted by the State for development

| Sl.No. | Name of Project         | River                      | Type | I.C.(MW)   |
|--------|-------------------------|----------------------------|------|------------|
| 1      | Laniye-II               | Laniye                     | R    | 27         |
| 2      | Laniye-I                | Laniye                     | S    | 34         |
| 3      | Khongnem Chakha-II      | Barak                      | S    | 90         |
| 4      | Khongnem Chakha-III     | Barak                      | R    | 48         |
| 5      | Nungnag (Nungnang)      | Irang                      | S    | 70         |
| 6      | Nunglieban (Nungliban)  | Leimatek                   | S    | 85         |
| 7      | Khunou                  | Leimatek                   | R    | 115        |
| 8      | Thinghat                | Tuivai                     | S    | 41         |
| 9      | Sinjal                  | Tuivai                     | S    | 39         |
| 10     | Bungpulong              | Tuivai                     | S    | 80         |
| 11     | Irang                   | Irang                      | S    | 75         |
| 12     | Pabaram (Pabaram Stor.) | Barak                      | S    | 232        |
|        | <b>Total</b>            | <b>12 Nos. of Projects</b> |      | <b>936</b> |

Note: R –Run off the River & S- storage

Hydro Power Development in Meghalaya

Identified Hydro Power Potential as per reassessment Study:

|                                                                                                                              |                                                           |                                                                               | Nos. | Capacity (MW) |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------------------------------|------|---------------|
| Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW) |                                                           |                                                                               | 25   | 2298          |
| I                                                                                                                            | Projects in operation                                     |                                                                               | 5    | 322           |
| II                                                                                                                           | Projects allotted by States for development               |                                                                               |      |               |
|                                                                                                                              | (i)                                                       | Projects cleared by CEA and yet to be taken up for construction               | 1    | 270           |
|                                                                                                                              | (ii)                                                      | Projects under Examination in CEA                                             | 1    | 85            |
|                                                                                                                              | (iii)                                                     | Projects returned to project authorities                                      | 1    | 210           |
|                                                                                                                              | (iv)                                                      | Projects under S&I                                                            | 1    | 210           |
|                                                                                                                              | (v)                                                       | Projects allotted for development on which S&I is held up/ yet to be taken up | 2    | 620           |
| III                                                                                                                          | Projects yet to be allotted by the State for development* |                                                                               | 18   | 1312          |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition, etc.

**1. Identified Projects during Reassessment study**

| <b>Sl.No.</b> | <b>Name of Project</b>               | <b>River</b> | <b>I. C. (MW)</b> |
|---------------|--------------------------------------|--------------|-------------------|
| 1             | Umlamphang                           | Umiam        | 28                |
| 2             | Kyrdamkulai (Umiam Umtru-III)        | Umiam        | 41                |
| 3             | Umiam Umtru-IV                       | Umiam        | 38                |
| 4             | Umiam Umtru-V                        | Umiam        | 27                |
| 5             | Umiam Umtru-VI                       | Umiam        | 145               |
| 6             | Simsang Dam P.H.                     | Someshri     | 65                |
| 7             | Kynshi-I (Kynshi-I Stor.)            | Kynshi       | 295               |
| 8             | Sushen                               | Myntdu       | 150               |
| 9             | Selim                                | Myntdu       | 125               |
| 10            | Umjaut                               | Umjaut       | 85                |
| 11            | Umduna (Umduma)                      | Umtrew       | 95                |
| 12            | Mawhu (Manhu)                        | Umtru        | 90                |
| 13            | Umiew (Mawphu- II)<br>[Nonglyngkien] | Umtru        | 47                |
| 14            | Umngi Stage-I (Umngi Storage)        | Umngi        | 35                |
| 15            | Rangmaw                              | Umngi        | 42                |
| 16            | Nongkolait                           | Umngi        | 180               |
| 17            | Nongnam                              | Umngi        | 36                |
| 18            | Mawpat                               | Umngi        | 55                |
| 19            | Kynshi-II                            | Umrilang     | 175               |
| 20            | Nangmawlar (Nongmawlar)              | Kynshi       | 29                |
| 21            | Mawsyrpat                            | Kynshi       | 45                |
| 22            | Mawthaba                             | Kynshi       | 70                |
| 23            | Mawblei Storage                      | Kynshi       | 100               |
| 24            | Amagam Storage                       | Rongdi       | 35                |
| 25            | Umanghot (Umngot Stor.)              | Umngot       | 265               |
|               | <b>TOTAL</b>                         |              | <b>2298</b>       |

2. H.E. Projects in Operation:

| S. No. | Utility/Stations             | No. of Stns. | No. of units x Capacity (MW) | River / Basin*                             | District      | I.C. (MW) | Year of commissioning |
|--------|------------------------------|--------------|------------------------------|--------------------------------------------|---------------|-----------|-----------------------|
|        | MePGCL                       |              |                              |                                            |               |           |                       |
| 1.     | KYRDEMKULAI [Uiam Umtru-III] | 1            | (2X30)                       | Tail water of Uiam stage-II & Umtru river  | RI-BHOI       | 60        | 1979                  |
| 2.     | UMIAM ST-I                   | 1            | (4X9)                        | UMIAM                                      | RI-BHOI       | 36        | 1965                  |
| 3.     | NEW UMTRU                    | 1            | (2X20)                       | UMTRU                                      | RI-BHOI       | 40        | 2017                  |
| 4.     | UMIAM ST-IV                  | 1            | (2X30)                       | Tail water of Stage-III PH & own catchment | RI-BHOI       | 60        | 1992                  |
| 5.     | MYNTDU ST-I                  | 1            | (3X42)                       | MYNTDU                                     | JAINTIA HILLS | 126       | 2012                  |
|        | TOTAL MePGCL                 | 5            |                              |                                            |               | 322       |                       |

\* All projects are in Brahmaputra Basin

3. H.E. Projects Cleared/Appraised by CEA:

| Sl No. | Name of Project           | Agency | District         | River / Basin | I.C. (MW) | Date of CEA Concurrence | Status                                                                        |
|--------|---------------------------|--------|------------------|---------------|-----------|-------------------------|-------------------------------------------------------------------------------|
| 1      | Kynshi-I [Kynshi-I Stor.] | AKPPL  | West Kashi Hills | Kynshi /      | 270       | 31.3.2015               | EC: Pending. EIA/EMP studies are under process.<br><br>FC-I & FC-II: Pending. |
|        |                           |        |                  | Brahmaputra   |           |                         |                                                                               |
|        | Total                     |        |                  |               | 270       |                         |                                                                               |

4. H.E. Projects Under Examination/Scrutiny in CEA:

| Sl. No. | Name of Project                      | Agency                | I.C. (MW) | Month of receipt |
|---------|--------------------------------------|-----------------------|-----------|------------------|
| 1       | Wah Uiam Satge-III (Mawphu Stage-II) | Umiew (Mawphu St.-II) | 85        | 08-08-17         |
|         | Total                                |                       | 85        |                  |

5. H.E. Projects Returned to Project Authorities for re-submission after compliance of observations:

| Sl. No. | Name of Project            | Agency | I.C. (MW) | Month of Return |
|---------|----------------------------|--------|-----------|-----------------|
| 1       | Umangot HEP [Umngot Stor.] | MePGCL | 210       | Jan-18          |
|         | Total                      |        | 210       |                 |

**6. H.E. Projects Under Survey & Investigation:**

| Sl. No. | Name of Project     | Basin /River | Agency | I.C. (MW)  | Date of MOA | Target date of Preparation of DPR |
|---------|---------------------|--------------|--------|------------|-------------|-----------------------------------|
| 1       | Myntdu Leshka st-II | Myntdu       | MePGCL | 210        | 20.4.12     | May-20                            |
|         | <b>Total</b>        |              |        | <b>210</b> |             |                                   |

**7. H.E. Projects allotted for development on which Survey & Investigation is held up/yet to be taken up:**

| Sl. No. | Name of Project | I. C.(MW)  | Agency                                    | Date of Allotment/ MoA | Status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------|-----------------|------------|-------------------------------------------|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1       | Kynshi-II       | 450        | GoMe & Jaiprakash Power Venture Ltd. (JV) | 11.12.2007             | S&I held up on account of non-finalisation of dam location/height due to deposit of Uranium. I.C. revised to 325 MW. GoMe informed vide their letter dated 28.11.2019 that project has been kept in abeyance since 2012 due to presence of Uranium deposits within the Dam & Reservoir areas of the project.                                                                                                                                                                                                           |
| 2       | Selim           | 170        | MePGCL                                    | 2008                   | First Consultation meeting held on 28.05.2014. STC has given clearance for conversion from Storage to Run-of-River Scheme in its 10th meeting held on 11.06.2015. The installed capacity is revised to 80 MW. CWC has furnished comments on Hydrologic Studies on 07.06.2019. S&I held up due to irregular allocation/release of funds, the hostile terrain, non and non-availability of geologists from GSI, India. MePGCL vide their letter dated 01.11.2019 informed that installed capacity is likely to be 60 MW. |
|         | <b>Total</b>    | <b>620</b> |                                           |                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

8. H. E. Projects yet to be allotted by the State for development

| Sl.No. | Name of Project               | River                      | Type | I.C. (MW)   |
|--------|-------------------------------|----------------------------|------|-------------|
| 1      | Umlamphang                    | Umiam                      | R    | 28          |
| 2      | Umiam Umtru-V                 | Umiam                      | R    | 27          |
| 3      | Umiam Umtru-VI                | Umiam                      | S    | 145         |
| 4      | Simsang Dam P.H.              | Someshri                   | S    | 65          |
| 5      | Sushen                        | Myntdu                     | R    | 150         |
| 6      | Umjaut                        | Umjaut                     | R    | 85          |
| 7      | Umduna (Umduma)               | Umtrew                     | R    | 95          |
| 8      | Mawhu (Manhu)                 | Umtru                      | R    | 90          |
| 9      | Umngi Stage-I (Umngi Storage) | Umngi                      | S    | 35          |
| 10     | Rangmaw                       | Umngi                      | R    | 42          |
| 11     | Nongkolait                    | Umngi                      | R    | 180         |
| 12     | Nongnam                       | Umngi                      | R    | 36          |
| 13     | Mawpat                        | Umngi                      | R    | 55          |
| 14     | Nangmawlar (Nongmawlar)       | Kynshi                     | R    | 29          |
| 15     | Mawsyrpat                     | Kynshi                     | R    | 45          |
| 16     | Mawthaba                      | Kynshi                     | S    | 70          |
| 17     | Mawblei Storage               | Kynshi                     | S    | 100         |
| 18     | Amagam Storage                | Rongdi                     | S    | 35          |
|        | <b>Total</b>                  | <b>18 Nos. of Projects</b> |      | <b>1312</b> |

Note: R –Run off the River & S- storage

Hydro Power Development in Mizoram

Identified Hydro Power Potential and its status of Development:

| S.No                                                                                                                         |                                                                 | Nos. | Capacity (MW) |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------|---------------|
| Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW) |                                                                 | 7    | 2131          |
| I                                                                                                                            | Projects in operation                                           | 1    | 60            |
| II                                                                                                                           | Projects dropped due to Basin studies/ Other reasons            | 1    | 460           |
| III                                                                                                                          | H. E. Projects yet to be allotted by the State for development* | 6    | 2076          |

\*The numbers and capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects, addition, etc.

1. Identified Projects during reassessment study.

| S. No. | Name of Project           | River       | I.C. (MW) |
|--------|---------------------------|-------------|-----------|
| 1      | Lungleng (Lunglang Stor.) | Tyao        | 690       |
| 2      | Boinu (Boinu Stor.)       | Kaldan      | 635       |
| 3      | Mat                       | Mat         | 90        |
| 4      | Tuirial [Sonai]           | Sonai       | 55        |
| 5      | Deh                       | Deh         | 26        |
| 6      | Bhairabi                  | Dhaleshwari | 90        |
| 7      | Kaldan (Kaldan Stor.)     | Kaldan      | 545       |
| TOTAL  |                           |             | 2131      |

**1. H.E. Projects in Operation:**

| S. No.        | Utility/Stations     | No. Of stns. | No. of units x Capacity (MW) | River / Basin*       | District | I.C. (MW) | Year of commissioning |
|---------------|----------------------|--------------|------------------------------|----------------------|----------|-----------|-----------------------|
| <b>NEEPCO</b> |                      |              |                              |                      |          |           |                       |
| 1             | TUIRIAL [Sonai]      | 1            | (2X30)                       | TUIRIAL/ BRAHAMPUTRA | KOLASIB  | 60        | 2017                  |
|               | <b>TOTAL MIZORAM</b> | <b>1</b>     |                              |                      |          | <b>60</b> |                       |

Note: Tuivai scheme (210 MW) was identified in Manipur during the reassessment study. The scheme was concurred by CEA during 1999. The scheme is yet to be taken up under construction.

**2. H.E. Projects dropped due to Basin studies/ Other reasons**

| Sl. No. | Name of Scheme | I.C. (MW)  | River    | Basin       | Remarks                                                                                                                |
|---------|----------------|------------|----------|-------------|------------------------------------------------------------------------------------------------------------------------|
| 1       | Kolodyne St-II | 460        | Kolodyne | Brahmaputra | Forest proposal submitted to State Govt. on 20.12.2010. <b>The project is likely to be drooped due to high tariff.</b> |
|         | <b>Total</b>   | <b>460</b> |          |             |                                                                                                                        |

**3. H. E. Projects yet to be allotted by the State for development**

| Sl.No. | Name of Project           | River                     | Type | I.C.(MW)    |
|--------|---------------------------|---------------------------|------|-------------|
| 1      | Lungleng (Lunglang Stor.) | Tyao                      | S    | 690         |
| 2      | Boinu (Boinu Stor.)       | Kaldan                    | S    | 635         |
| 3      | Kaldan (Kaldan Stor.)     | Kaldan                    | S    | 545         |
| 4      | Bhairabi                  | Dhaleshwari               | S    | 90          |
| 5      | Mat                       | Mat                       | S    | 90          |
| 6      | Deh                       | Deh                       | S    | 26          |
|        | <b>Total</b>              | <b>6 Nos. of Projects</b> |      | <b>2076</b> |

Note: S- storage

Hydro Power Development in Nagaland

Identified Hydro Power Potential and its status of Development:

|                                                                                                                              |                                                                 |                                                                 | Nos. | Capacity (MW) |
|------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------|------|---------------|
| Identified Hydro Power Potential as per reassessment Study from Major/Medium Projects (Projects having capacity above 25 MW) |                                                                 |                                                                 | 11   | 1452          |
| I                                                                                                                            | Capacity in operation                                           |                                                                 | 1    | 75            |
| II                                                                                                                           | Projects allotted by States for development                     |                                                                 |      |               |
|                                                                                                                              | (i)                                                             | Projects cleared by CEA and yet to be taken up for construction | 1    | 186           |
| III                                                                                                                          | H. E. Projects yet to be allotted by the State for development* |                                                                 | 9    | 1272          |

\*The capacity yet to be allotted by the State for development is different from arithmetic calculation from the potential accessed due to change in capacity of the projects.

1. Identified Projects during Reassessment study:

| Sl.No. | Name of Project            | River  | I. C.<br>(MW) |
|--------|----------------------------|--------|---------------|
| 1      | Dikhu (Dikhu Lift Dam)     | Dikhu  | 125           |
| 2      | Yangnyu<br>(Yangnyu Stor.) | Dikhu  | 135           |
| 3      | Jhanji storage             | Jhanji | 75            |
| 4      | Doyang (Doyang-V)          | Doyang | 55            |
| 5      | Dikhu Dam P.H.             | Dikhu  | 470           |
| 6      | Sakhai-II                  | Tizu   | 31            |
| 7      | Khuzami                    | Tizu   | 32            |
| 8      | Rurrur                     | Zangki | 36            |
| 9      | Zungki                     | Zangki | 48            |
| 10     | Laruri                     | Tizu   | 80            |
| 11     | Tizu                       | Tizu   | 365           |
| TOTAL  |                            |        | 1452          |

**2. H.E. Projects in Operation:**

| S. No. | Utility/Stations      | No. of Stns. | No. of units x Capacity (MW) | River / Basin        | District | I.C.(MW)  | Year of commissioning |
|--------|-----------------------|--------------|------------------------------|----------------------|----------|-----------|-----------------------|
|        | <b>NEEPCO</b>         |              |                              |                      |          |           |                       |
| 1      | DOYANG (Doyang-V)     | 1            | (3X25)                       | DOYANG / Brahmaputra | WOKHA    | 75        | 2000                  |
|        | <b>TOTAL NAGALAND</b> | <b>1</b>     |                              |                      |          | <b>75</b> |                       |

**3. H.E. Projects Cleared/Appraised by CEA:**

| Sl No. | Name of Project        | Agency | District | River / Basin                   | I.C. (MW)  | Date of CEA Concurrence | Status                                                                                                                                                     |
|--------|------------------------|--------|----------|---------------------------------|------------|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1      | Dikhu (Dikhu Lift Dam) | NMPPL  | Longleng | Dikhu and Yangnyu / Brahmaputra | 186        | 31.03.2014              | EC yet to be obtained by developer. FC not applicable as forest land is not involved. EIA/EMP studies are in progress and are likely to be completed soon. |
|        | <b>Total</b>           |        |          |                                 | <b>186</b> |                         |                                                                                                                                                            |

4. H. E. Projects yet to be allotted by the State for development

| Sl.No. | Name of Scheme             | River              | Type | I.C.(MW) |
|--------|----------------------------|--------------------|------|----------|
| 1      | Yangnyu<br>(Yangnyu Stor.) | Dikhu              | S    | 135      |
| 2      | Jhanji storage             | Jhanji             | S    | 75       |
| 3      | Sakhai-II                  | Tizu               | R    | 31       |
| 4      | Khuzami                    | Tizu               | S    | 32       |
| 5      | Rurrur                     | Zangki             | S    | 36       |
| 6      | Zungki                     | Zangki             | S    | 48       |
| 7      | Laruri                     | Tizu               | R    | 80       |
| 8      | Tizu                       | Tizu               | S    | 365      |
| 9      | Dikhu Dam P.H.             | Dikhu              | R    | 470      |
|        | Total                      | 9 Nos. of Projects |      | 1272     |

Note: R –Run off the River & S- Storage

Hydro Power Development in Tripura

Identified Hydro Power Potential and its status of Development:

No major/medium hydroelectric project has been identified in the Tripura State. However, a small Hydel power station in south Tripura named Gumti Hydel project having only 3x5 MW capacities. The details are as under:

| Name of Project    | Unit     | Installed Capacity (MW) | Year of Installation | Phase    |
|--------------------|----------|-------------------------|----------------------|----------|
| Gumti H.E. Project | Unit-I   | 5.00 MW                 | 1976                 | Phase I  |
|                    | Unit-II  | 5.00 MW                 | 1976                 |          |
|                    | Unit-III | 5.00 MW                 | 1984                 | Phase II |