

# A Study of Northern Region Discoms: Performance Trends and Insights



By Vasudha Foundation, 08th April 2026

# Objective:

The presentation will focus on:

- I. Interactive Discussion & Presentation on India Climate & Energy Dashboard (ICED) focusing on Distribution Sector
- II. Deep-dive into Operational & Financial Parameters of each Distribution Companies in the Northern Region

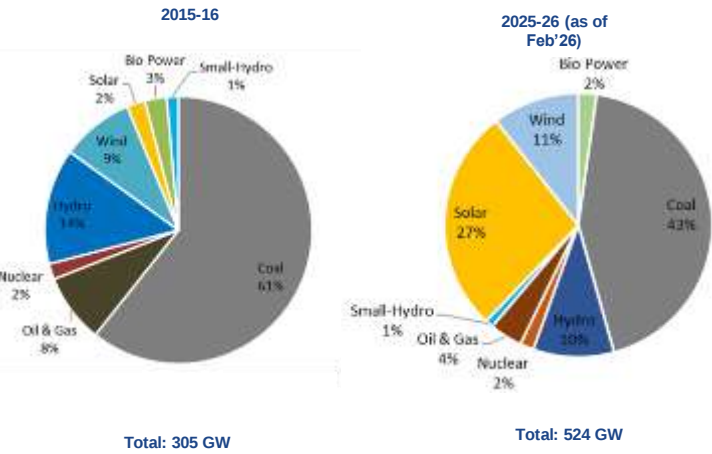
## Power Sector – the foundational engine for Viksit Bharat Goals

- **Decarbonisation:** Generate over 80% of installed capacity and two-thirds of total from non-fossil fuel sources by 2047.
- **Electrification:** Double electricity's share in final energy consumption, driven by large-scale electrification of transport, industry and cooking.
- **Energy Storage:** Achieve 300 GWh storage capacity target by 2030 and dedicated green energy transmission corridors to integrate high shares of variable renewables without grid instability – the essential enabling layer for the 60% target
- **Low carbon anchors:** Target 100 GW of nuclear power by 2047 and 100 GW of Pumped Storage capacity by 2035–36 to ensure grid stability against intermittent renewables.
- **Investments:** A massive capital infusement of ₹200 lakh crore needed by 2047 for generation, transmission, and distribution strengthening.
- **Energy Security:** Need for building resilient energy sector through renewable led direct and indirect electrification, nuclear and strategic reserves to reduce the dependence on imported fuels and safeguard against global disruptions.

# India's Energy Transition Story

Source-Wise Electricity Installed Capacity (in GW)

In 2025, **49 GW** of RE is added



Net Capacity Addition Trend from 2015-16 to 2025-26 (as of Feb'26)



India's Electricity Demand vs. Deficit



FY26 is upto February 2026.

Mainstreaming Access and Clean Energy



Source: ICED & CEA

# Peak Demand Regional Comparison

Northern-Region

| Year | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2012 | 33.087 | 33.167 | 31.870 | 34.242 | 36.431 | 40.648 | 41.790 | 38.469 | 37.174 | 36.518 | 34.389 | 34.743 |
| 2013 | 35.516 | 33.962 | 34.581 | 35.764 | 40.738 | 41.606 | 42.523 | 41.750 | 42.774 | 38.385 | 35.526 | 36.717 |
| 2014 | 38.227 | 38.330 | 35.829 | 38.555 | 41.007 | 47.232 | 47.367 | 47.642 | 43.931 | 44.618 | 39.070 | 42.592 |
| 2015 | 40.774 | 38.586 | 38.423 | 40.003 | 42.357 | 49.545 | 49.028 | 50.230 | 50.622 | 45.940 | 40.187 | 41.090 |
| 2016 | 42.109 | 41.195 | 40.282 | 44.934 | 49.977 | 52.612 | 51.658 | 50.081 | 51.816 | 48.514 | 41.082 | 44.389 |
| 2017 | 44.447 | 43.098 | 45.659 | 49.643 | 51.820 | 54.890 | 55.865 | 58.448 | 54.649 | 50.289 | 42.390 | 45.360 |
| 2018 | 46.252 | 46.578 | 43.777 | 48.367 | 56.243 | 60.715 | 61.726 | 57.975 | 55.649 | 49.635 | 44.899 | 44.899 |
| 2019 | 47.210 | 45.227 | 47.210 | 47.210 | 59.343 | 64.838 | 65.865 | 61.367 | 62.023 | 49.615 | 44.189 | 51.159 |
| 2020 | 50.780 | 50.519 | 45.531 | 40.680 | 56.620 | 64.885 | 67.578 | 64.836 | 67.806 | 57.975 | 48.083 | 55.345 |
| 2021 | 56.513 | 56.513 | 52.576 | 51.852 | 52.885 | 70.691 | 72.935 | 72.935 | 63.326 | 57.491 | 49.319 | 55.546 |
| 2022 | 56.213 | 56.213 | 53.577 | 62.217 | 68.399 | 76.561 | 74.143 | 74.143 | 75.674 | 60.710 | 54.006 | 59.004 |

Western-Region

| Year | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2012 | 34.038 | 35.535 | 36.509 | 36.247 | 35.629 | 35.259 | 31.836 | 32.471 | 35.781 | 39.486 | 37.363 | 37.246 |
| 2013 | 37.331 | 36.382 | 38.263 | 37.361 | 37.216 | 35.077 | 32.817 | 33.930 | 36.818 | 37.358 | 40.006 | 40.304 |
| 2014 | 39.731 | 40.331 | 39.768 | 42.365 | 41.050 | 40.731 | 41.170 | 38.019 | 42.757 | 42.614 | 42.462 | 43.035 |
| 2015 | 41.553 | 42.750 | 43.145 | 42.690 | 43.240 | 41.884 | 42.689 | 41.781 | 43.325 | 48.199 | 44.645 | 44.902 |
| 2016 | 45.204 | 45.071 | 44.225 | 44.940 | 44.957 | 43.998 | 38.709 | 39.903 | 46.010 | 46.090 | 46.865 | 47.463 |
| 2017 | 47.844 | 47.821 | 48.313 | 49.788 | 49.048 | 47.034 | 41.280 | 45.174 | 45.710 | 46.392 | 49.569 | 49.635 |
| 2018 | 50.085 | 48.691 | 48.924 | 50.434 | 52.442 | 50.922 | 44.574 | 49.629 | 52.895 | 55.821 | 54.171 | 53.292 |
| 2019 | 53.544 | 54.292 | 52.965 | 56.222 | 57.093 | 56.768 | 52.509 | 47.633 | 46.261 | 50.631 | 54.375 | 56.739 |
| 2020 | 58.643 | 59.416 | 56.851 | 43.729 | 51.148 | 47.627 | 47.860 | 46.427 | 49.368 | 52.702 | 57.890 | 61.199 |
| 2021 | 61.692 | 61.242 | 59.885 | 60.966 | 56.071 | 52.294 | 58.995 | 58.608 | 52.195 | 54.891 | 60.856 | 63.140 |
| 2022 | 63.829 | 64.608 | 65.205 | 69.350 | 68.091 | 65.826 | 53.550 | 56.976 | 57.709 | 58.367 | 66.739 | 71.677 |

Southern-Region

| Year | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2012 | 28.258 | 29.962 | 31.188 | 31.985 | 31.271 | 31.281 | 30.044 | 29.008 | 29.595 | 28.291 | 27.188 | 29.012 |
| 2013 | 29.743 | 31.189 | 31.586 | 32.507 | 32.890 | 31.456 | 30.895 | 34.051 | 31.181 | 32.968 | 31.796 | 33.541 |
| 2014 | 34.129 | 34.544 | 36.888 | 35.898 | 34.489 | 34.578 | 34.541 | 36.162 | 35.238 | 36.208 | 33.033 | 34.127 |
| 2015 | 35.446 | 36.818 | 37.841 | 36.789 | 38.529 | 39.005 | 36.964 | 35.801 | 35.544 | 34.778 | 34.111 | 34.868 |
| 2016 | 36.745 | 37.378 | 38.875 | 40.473 | 38.687 | 38.817 | 34.179 | 40.352 | 41.259 | 41.818 | 40.191 | 38.528 |
| 2017 | 40.744 | 41.155 | 42.252 | 42.536 | 42.881 | 38.844 | 42.484 | 40.989 | 40.812 | 38.995 | 40.720 | 42.608 |
| 2018 | 43.115 | 45.328 | 47.210 | 45.684 | 43.234 | 42.656 | 44.715 | 44.617 | 45.428 | 45.326 | 43.837 | 45.302 |
| 2019 | 44.615 | 48.006 | 49.534 | 49.101 | 47.481 | 44.844 | 45.250 | 45.350 | 44.591 | 41.492 | 42.827 | 48.864 |
| 2020 | 49.105 | 52.993 | 53.865 | 45.767 | 45.646 | 43.943 | 41.178 | 48.108 | 44.625 | 49.718 | 44.344 | 49.956 |
| 2021 | 53.830 | 54.215 | 58.206 | 56.498 | 47.784 | 51.046 | 50.123 | 52.558 | 53.388 | 67.729 | 41.188 | 48.806 |
| 2022 | 53.070 | 57.132 | 59.781 | 60.876 | 53.689 | 50.979 | 48.810 | 51.829 | 52.335 | 49.413 | 48.013 | 54.600 |

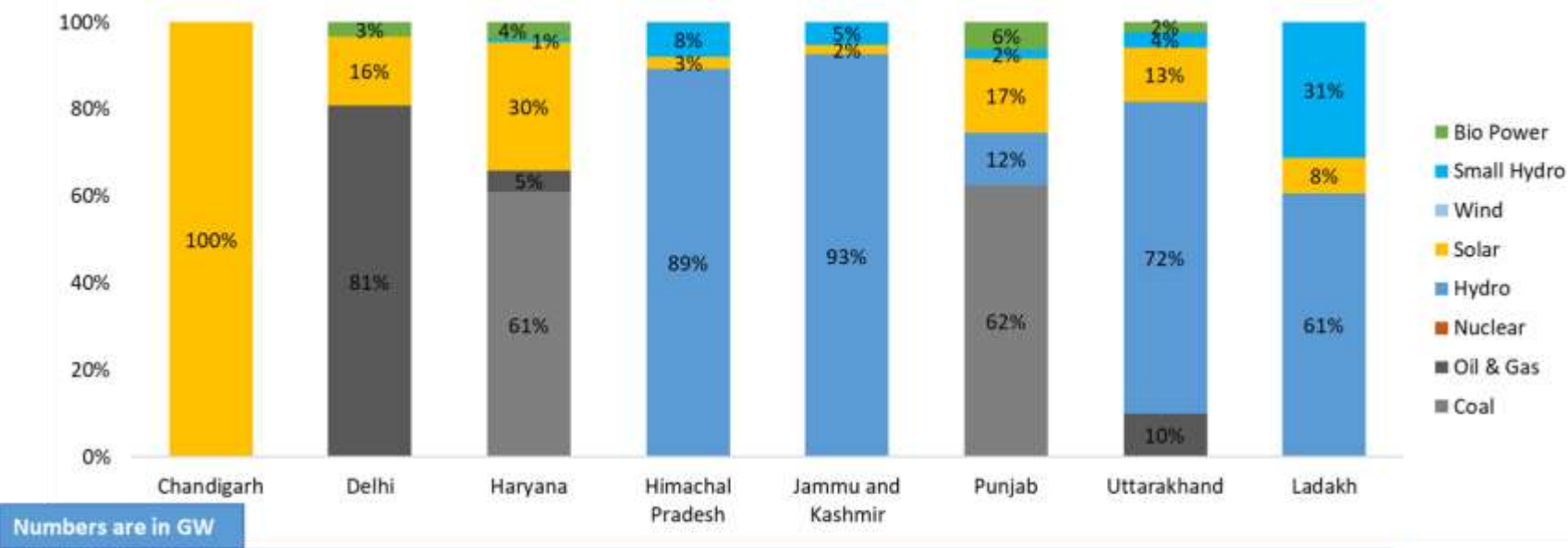
Eastern-Region

| Year | Jan    | Feb    | Mar    | Apr    | May    | Jun    | Jul    | Aug    | Sep    | Oct    | Nov    | Dec    |
|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| 2012 | 12.160 | 12.545 | 13.999 | 14.541 | 15.415 | 14.130 | 14.256 | 14.345 | 14.288 | 14.324 | 14.253 | 13.056 |
| 2013 | 13.340 | 13.988 | 14.592 | 15.052 | 15.110 | 15.071 | 15.518 | 15.023 | 15.075 | 14.870 | 14.318 | 13.501 |
| 2014 | 14.082 | 14.499 | 15.598 | 16.109 | 16.342 | 16.094 | 16.086 | 16.050 | 16.808 | 16.546 | 15.684 | 14.950 |
| 2015 | 15.573 | 15.882 | 16.932 | 17.384 | 17.221 | 17.730 | 17.842 | 17.349 | 17.573 | 17.971 | 17.068 | 16.382 |
| 2016 | 17.043 | 17.061 | 18.056 | 18.345 | 18.596 | 18.213 | 18.075 | 18.024 | 18.176 | 18.571 | 17.997 | 16.792 |
| 2017 | 17.438 | 17.436 | 18.788 | 19.191 | 19.032 | 18.987 | 19.141 | 19.220 | 19.208 | 19.816 | 18.181 | 17.728 |
| 2018 | 18.254 | 18.757 | 20.485 | 21.275 | 21.249 | 21.487 | 21.790 | 22.290 | 22.100 | 22.713 | 20.322 | 18.013 |
| 2019 | 18.702 | 20.341 | 21.245 | 22.378 | 22.781 | 22.808 | 23.154 | 23.188 | 23.126 | 21.706 | 19.212 | 18.068 |
| 2020 | 18.705 | 18.852 | 18.670 | 18.031 | 20.169 | 21.832 | 22.643 | 22.192 | 23.143 | 23.374 | 20.402 | 19.546 |
| 2021 | 20.496 | 20.943 | 24.016 | 24.405 | 24.191 | 23.494 | 25.345 | 24.157 | 25.010 | 23.675 | 20.561 | 20.631 |
| 2022 | 21.204 | 21.188 | 24.582 | 25.490 | 25.070 | 26.196 | 26.609 | 27.218 | 26.650 | 26.120 | 23.741 | 20.720 |

North Eastern-Region

| Year | Jan   | Feb   | Mar   | Apr   | May   | Jun   | Jul   | Aug   | Sep   | Oct   | Nov   | Dec   |
|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| 2012 | 1.630 | 1.622 | 1.621 | 1.704 | 1.698 | 1.770 | 1.782 | 1.789 | 1.805 | 1.884 | 1.815 | 1.851 |
| 2013 | 1.815 | 1.845 | 1.752 | 1.718 | 1.810 | 1.900 | 1.973 | 1.920 | 1.987 | 1.988 | 1.984 | 1.890 |
| 2014 | 1.825 | 1.829 | 1.895 | 1.945 | 1.968 | 1.998 | 1.996 | 2.053 | 2.112 | 2.141 | 2.125 | 2.176 |
| 2015 | 2.100 | 2.135 | 2.111 | 2.114 | 2.185 | 2.190 | 2.258 | 2.283 | 2.295 | 2.301 | 2.352 | 2.320 |
| 2016 | 2.132 | 2.128 | 2.187 | 2.258 | 2.401 | 2.475 | 2.381 | 2.387 | 2.373 | 2.439 | 2.334 | 2.231 |
| 2017 | 2.320 | 2.284 | 2.350 | 2.209 | 2.261 | 2.387 | 2.429 | 2.442 | 2.320 | 2.499 | 2.380 | 2.214 |
| 2018 | 2.317 | 2.310 | 2.250 | 2.552 | 2.611 | 2.564 | 2.794 | 2.795 | 2.850 | 2.700 | 2.620 | 2.511 |
| 2019 | 2.552 | 2.460 | 2.515 | 2.780 | 2.674 | 2.861 | 2.861 | 2.861 | 2.861 | 2.879 | 2.839 | 2.530 |
| 2020 | 2.588 | 2.592 | 2.529 | 2.483 | 2.676 | 2.884 | 2.828 | 2.869 | 3.004 | 3.027 | 2.832 | 2.690 |
| 2021 | 2.640 | 2.644 | 2.841 | 2.938 | 2.987 | 3.053 | 3.053 | 3.115 | 3.231 | 3.193 | 2.751 | 2.707 |
| 2022 | 2.781 | 2.794 | 2.679 | 2.900 | 3.112 | 3.193 | 3.171 | 3.093 | 3.407 | 3.405 | 2.905 | 2.911 |

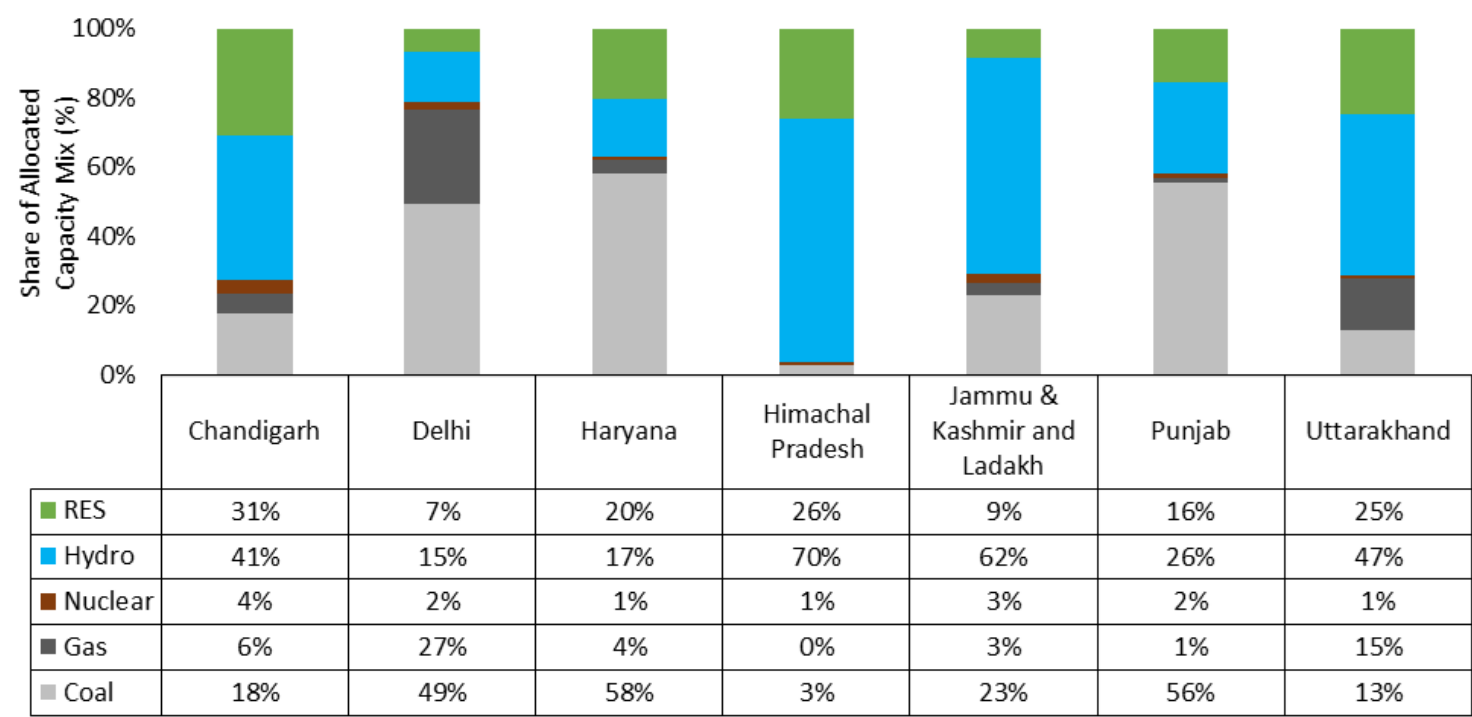
# Northern Region States/ UTs: Installed Capacity Mix (as on February 2026)



Numbers are in GW

| Parameters               | CH   | DL   | HR   | HP    | JK   | PB   | UK   | LD   |
|--------------------------|------|------|------|-------|------|------|------|------|
| Total Installed Capacity | 0.08 | 2.60 | 8.75 | 12.79 | 3.63 | 9.10 | 6.67 | 0.15 |
| Total RE Capacity        | 0.08 | 0.50 | 2.98 | 12.79 | 3.63 | 3.42 | 6.01 | 0.15 |
| RE Share                 | 100% | 19%  | 34%  | 100%  | 100% | 38%  | 90%  | 100% |

# Northern Region States/ UTs: Allocated Capacity Mix (as on February 2026)



- Himachal Pradesh has a highly renewable-heavy power mix, with only 3% allocated coal capacity, 96% from renewable energy and 1% from nuclear.
- Haryana (58%), Punjab (56%) and Delhi (49%) have highest coal allocated capacity.
- Among all the states in the northern region, Delhi (27%) and Uttarakhand (15%) has the highest gas allocated capacity.

# A Snapshot of Integrated Ratings and Scores for Northern-Region DISCOMs

| State             | DISCOM | 2020-21 | 2021-22 | 2022-23 | 2023-24 | 2024-25 |
|-------------------|--------|---------|---------|---------|---------|---------|
| Chandigarh        | CPDL   | A       | B       |         |         |         |
| Delhi             | BRPL   | B-      | B-      | B-      | B-      | B-      |
|                   | BYPL   | B-      | B-      | B-      | B-      | B-      |
|                   | NDMC   |         |         | B       | A+      | A+      |
|                   | TPDDL  | A       | A       | A       | B-      | B-      |
| Haryana           | DHBVN  | A+      | A+      | A+      | A+      | A       |
|                   | UHBVN  | A       | A+      | A+      | A+      | A       |
| Himachal Pradesh  | HPSEB  | B-      | B       | C       | B-      | B       |
| Jammu and Kashmir | JPDC   | C-      |         |         |         |         |
|                   | KPDCL  | C-      |         |         |         |         |
| Ladakh            | LPDD   | C-      | C       | C       | C       | A       |
| Punjab            | PSPCL  | B       | A       | B       | A       | A+      |
| Uttarakhand       | UPCL   | B       | A       | B-      | B       | B       |

N.A. C- C B- B A A+

Score Range for 2024-25

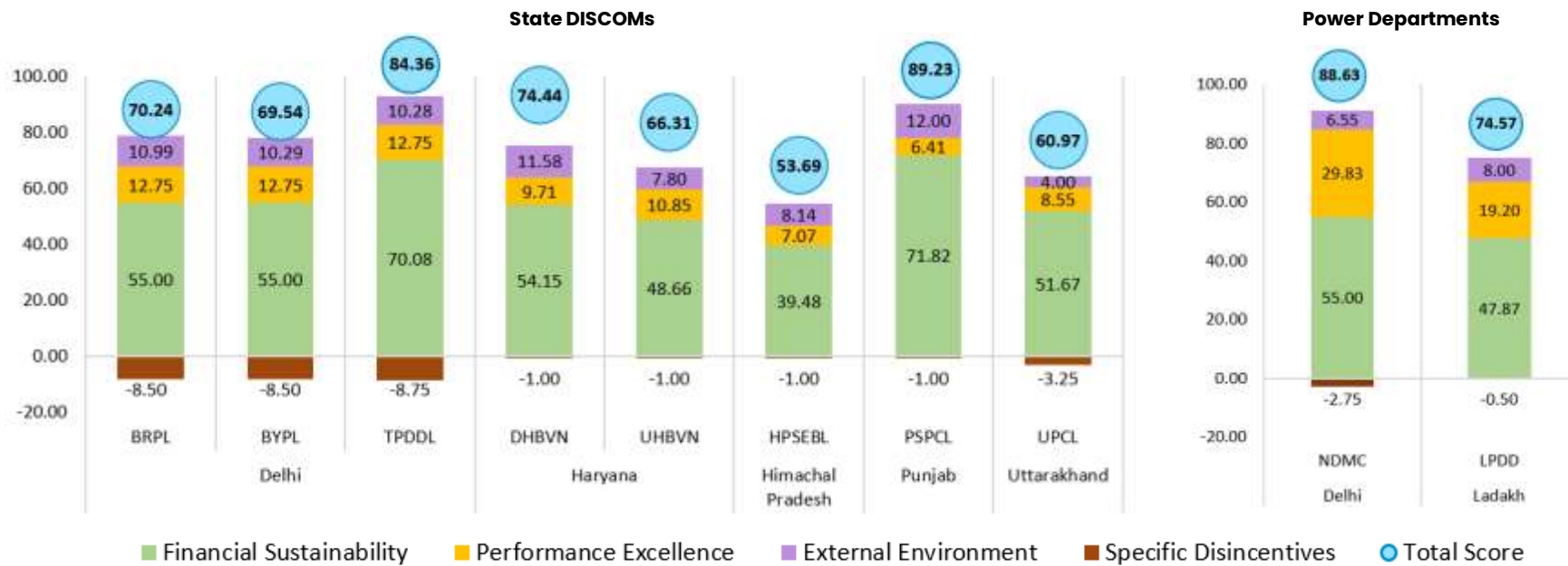
A+ : 86 to 96  
A : 66 to 75  
B : 50 to 61  
B- : 37 to 48

Source: PFC

North-region DISCOMs exhibit a mixed performance trend.

- State DISCOMs such as PSPCL (Punjab) and NDMC (Delhi) have achieved **A+** ratings in 2024-25 from B rating in 2022-23
- Private DISCOMs such as BRPL (Delhi), BYPL (Delhi) and TPDDL (Delhi) remain in the **B- category due to an increase in regulatory assets, which has led to a grade override.**
- In contrast, Haryana’s DISCOMs rating declined from A+ in 2023-24 to A in 2024-25.** The State recorded higher AT&C losses and a decline in profits in 2024-25. This downward trend indicates the need for significant improvements in both operational efficiency and financial performance.

# A Snapshot of Integrated Ratings (IR) and Scores for Northern-Region DISCOMs for 2024-25



| Parameter                | State DISCOMs | Power Departments |
|--------------------------|---------------|-------------------|
| Financial Sustainability | 75            | 55                |
| Performance Excellence   | 13            | 35                |
| External Environment     | 12            | 10                |
| Total Score              | 100           | 100               |

| Parameter                | Indicator                           |
|--------------------------|-------------------------------------|
| Financial Sustainability | ARs-ARs Gap (cash adjusted)         |
|                          | Days Receivable                     |
|                          | Days Payable to Gen Cos & Trans Cos |
|                          | Approved Quick Ratio                |
| Performance Excellence   | ARs (cash adjusted)                 |
|                          | Leverage (cash adjusted)            |
|                          | Billing Efficiency                  |
|                          | Collection Efficiency               |
| External Environment     | Contribution Loss (ARs approved)    |
|                          | Corporate Governance                |
|                          | Indebtedness (last 3 yrs)           |
|                          | State takeover by state government  |
| Specific Disincentives   | Government Guarantee (last 3 yrs)   |
|                          | Tariff Cycle Timeliness             |
|                          | Auto Reti Through of Fuel Costs     |
|                          | Regulatory Assets                   |

| Specific Disincentives                                              |
|---------------------------------------------------------------------|
| Auditor's Adverse Opinion                                           |
| Availability of Audited Accounts                                    |
| Default to Banks/FIs                                                |
| Audit Qualifications                                                |
| Government (Audit Committee, Executive MD & Co, Quarterly Accounts) |
| Tariff Cycle Delays                                                 |
| Tariff independent of Subsidy                                       |
| Uncovered Revenue Gap (Current Year)                                |
| Regulatory Assets                                                   |

Source: PFC

# A Snapshot of Integrated Ratings (IR) and Scores for Northern-Region DISCOMs

## Himachal Pradesh receives lowest score in the NR region due to Poor Financial Health

- Financial sustainability score is very low (~39/75).
- The low Debt Service Coverage Ratio (0.27) of the Company and Adjusted Quick Ratio (0.46) are one of the main reasons for decline in credit rating.
- Delays in getting subsidy from the Government of Himachal Pradesh, unpaid dues from government departments, and liabilities under the UDAY Scheme have worsened its financial position and ratios.
- The Collection efficiency dropped from 99.3%(FY24) to 89.2% (FY25) also contributed in low score of DISCOM.

## Deterioration of Rating in DHBVN and UHBVN from A+ in 13th IR report to A in the latest 14th IR report

- State Government did not release ₹1,136.93 crore of due subsidy (UHBVN: ₹491.07 Cr | DHBVN: ₹645.86 Cr) till March 2025.
- This unpaid subsidy caused direct cash losses, adversely impacting key financial ratios: ACS-ARR Gap (cash adjusted), Debt Service Coverage Ratio, Collection Efficiency, Debt to Assets Ratio and Adjusted Quick Ratio.
- Revenue Gap left by HERC to be met through efficiency gains. the DISCOMs could not bridge this gap, resulting in cash losses and subsequent rating downgrade.

## Punjab

- Punjab achieved a perfect score in almost all financial parameters and external environment parameters, except Days Receivable and Adjusted Quick Ratio.
- PSPCL has the highest receivable days (81 days) in the northern region.
- PSPCL collection efficiency dropped sharply from 99.7% in 2023-24 to 92% in 2024-25, resulting in AT&C losses rising from 11% to 19%.

## Uttarakhand Decline in Scores

- Adjusted Quick Ratio stood at a low 0.27 in 2024-25, indicating weak liquidity and lack of concrete efforts to address inefficiencies.
- Major reasons include low collection efficiency and high losses, which directly hamper revenue realisation.
- No subsidy support from the government, nor any takeover of losses (unlike other states).
- After Delhi, Uttarakhand recorded the highest negative scores primarily due to tariff cycle delays, non-availability of audited accounts, and tariffs being independent of subsidy support.

## Grades overridden in Delhi (BRPL, BYPL and TPDDL)

- The main reason for Delhi are increasing regulatory asset, no tariff revision from 2021 and delayed tariff orders.

Utilities of Haryana (DHBVN and UHBVN), Himachal Pradesh and Punjab all have received negative score of 1 due to Audit Qualifications.

# A Snapshot of Northern-Region Distribution Utilities Ranking (DUR) Report for 2024-25

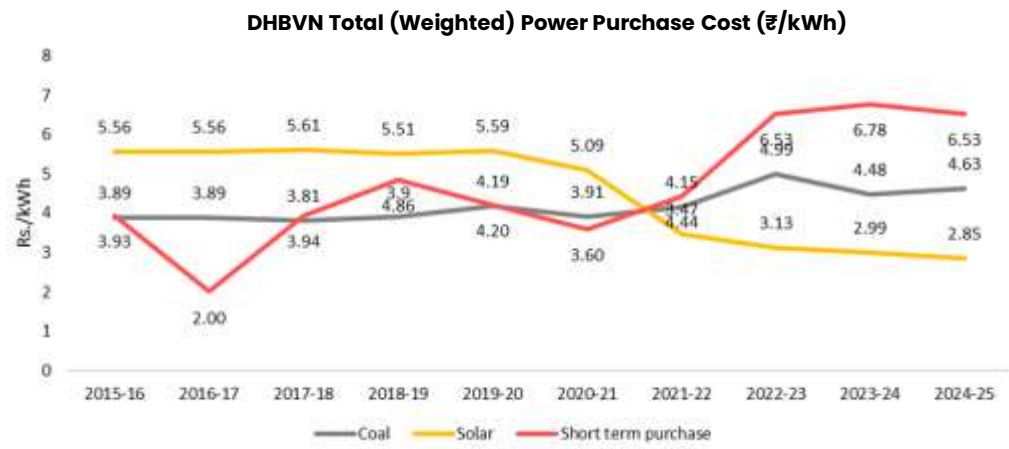
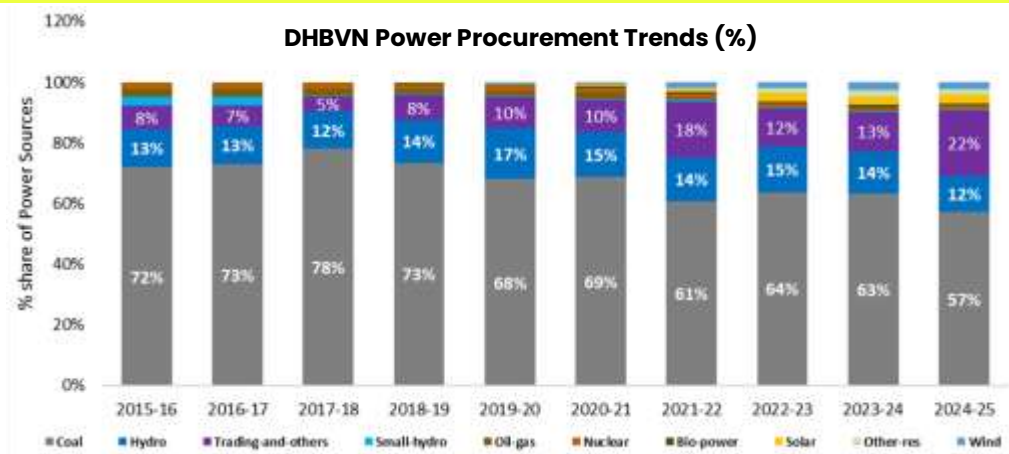
| State/UT         | DISCOM/<br>Power<br>Department | IR Report | Consumer<br>Service Rating<br>of DISCOMs | RPO<br>Achievement | Communicable<br>System Metering | Demand-side<br>Response | Resource<br>Adequacy | Combined<br>Score |
|------------------|--------------------------------|-----------|------------------------------------------|--------------------|---------------------------------|-------------------------|----------------------|-------------------|
|                  | (Score)                        | 35        | 35                                       | 5                  | 5                               | 5                       | 15                   | 100               |
| Delhi            | TPDDL                          | 29.5      | 32.6                                     | 3.5                | 3.8                             | 3.2                     | 15.0                 | 87.6              |
|                  | BRPL                           | 24.6      | 32.7                                     | 3.0                | 2.5                             | 4.4                     | 13.5                 | 80.7              |
|                  | BYPL                           | 24.3      | 32.9                                     | 1.5                | 2.5                             | 3.5                     | 14.4                 | 79.1              |
|                  | NDMC                           | 31.0      | 26.7                                     | 1.0                | 0.0                             | 3.0                     | 13.1                 | 74.8              |
| Haryana          | DHBVNL                         | 26.0      | 26.7                                     | 5.0                | 2.5                             | 1.1                     | 15.0                 | 76.4              |
|                  | UHBVNL                         | 23.2      | 28.5                                     | 5.0                | 2.5                             | 1.1                     | 15.0                 | 75.3              |
| Himachal Pradesh | HPSEBL                         | 18.8      | 25.4                                     | 4.0                | 1.3                             | 2.4                     | 14.7                 | 66.5              |
| Jammu & Kashmir  | KPDCL                          | -         | 24.6                                     | 3.0                | 2.5                             | 1.1                     | 10.0                 | 41.1              |
|                  | JPDCL                          | -         | 22.6                                     | 4.5                | 1.3                             | 1.0                     | 10.0                 | 39.3              |
| Ladakh           | Ladakh PDD                     | 26.1      | 24.7                                     | 4.5                | 2.5                             | 3.9                     | 10.0                 | 71.7              |
| Punjab           | PSPCL                          | 31.2      | 26.1                                     | 3.0                | 0.0                             | 2.7                     | 12.8                 | 75.9              |
| Uttarakhand      | UPCL                           | 21.4      | 28.1                                     | 5.0                | 1.3                             | 0.2                     | 7.5                  | 63.5              |

Source: REC Limited

# A Snapshot of Northern-Region Distribution Utilities Ranking (DUR) Report for 2024-25

- TPDDL (Delhi) leads in the northern region and second across India in DUR with highest score in Resource Adequacy.
- TPDDL, BYPL and BRPL scores highest in Operational Reliability and Fault Rectification and Grievance Redressal.
- Consumer Service Rating of DISCOMs: Leading DISCOMs are BYPL & TPDDL (Delhi) with 24 hours average hours of supply (HoS) followed by BRPL with 23.99 HoS
- Haryana utilities (DHBVNL and UHBVNL) achieved perfect scores in both RPO achievement and Resource Adequacy. The state ensures reliable power supply through mandated 10-year resource adequacy plans, proactive regulatory oversight by HERC, and strict compliance with reserve margins to meet peak demand.
- Utilities of Jammu & Kashmir (JPDCL & KPDCL) are in the bottom. This is primarily due to non-participation of these utilities in the IR rating assessment and poor performance in demand side response.
- Uttarakhand, Jammu & Kashmir (JPDCL & KPDCL) and Haryana (DHBVNL and UHBVNL) have scored poorly in Demand Side response parameter showing need for improvement in demand side management strategies, which are crucial for optimising energy use and reducing peak demand.

# Renewable Mix Optimization and its Impact on Procurement Cost - DHBVN



**Facts:**

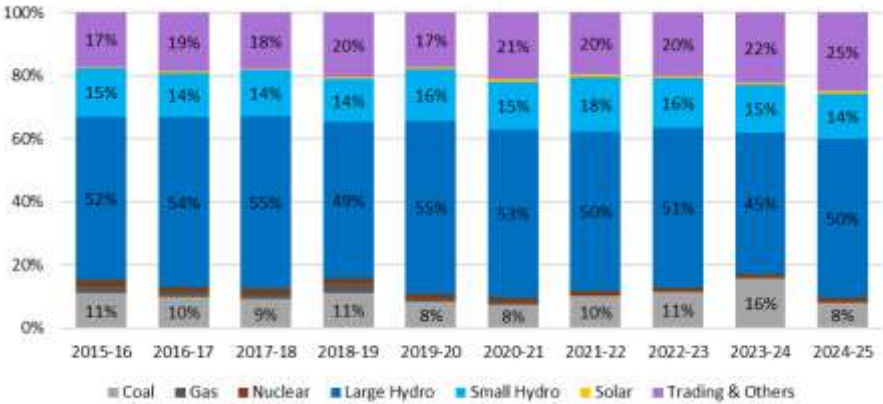
- While coal-based procurement has declined, DHBVN has simultaneously increased its reliance on other sources, ( including medium-term purchases, short-term purchases, banking, and market-based procurement) from 8% to 22% over a decade.
- Tariff orders provide no clear breakdown of these trading sources, leaving procurement origins unclear
- Short-term purchase costs have increased from ₹3.93/kWh to ₹6.53/kWh over the decade.

**Reflection:**

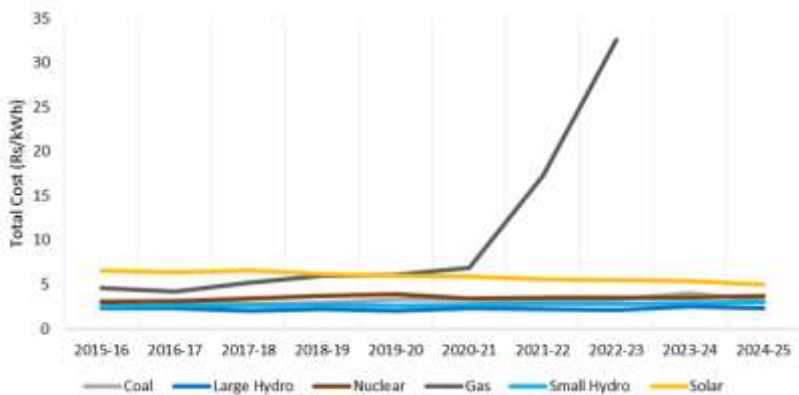
- DHBVN does not provide in-detail information of its short-term power procurement, resulting in ambiguity over actual source of power purchases.

# Renewable Mix Optimization and its Impact on Procurement Cost - HPSEBL

HPSEBL Power Procurement Trends (%)



HPSEBL Total (Weighted) Power Purchase Cost (₹/kWh)

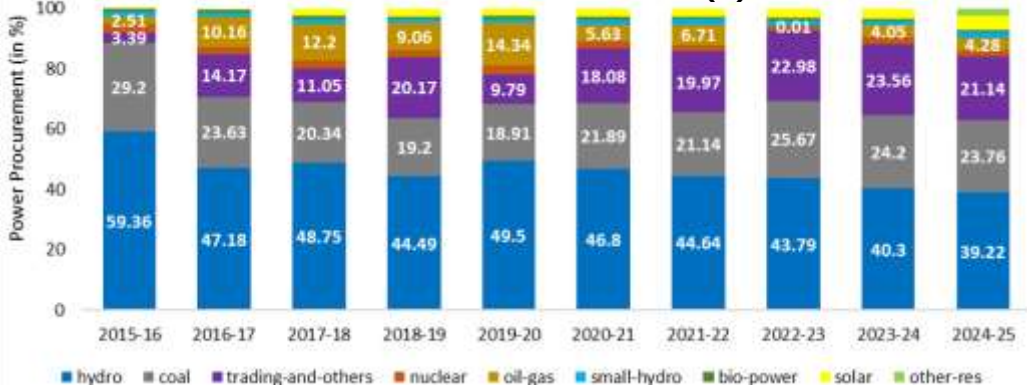


- High cost of gas-based power led HPSEBL to stop scheduling power from these plants
- Despite zero drawal, the DISCOM continued paying ₹33.03 crore as fixed capacity charges under long-term PPAs in 2023-24
- 25% of power procurement comes from short term, trading and other sources, but lacks source-wise breakup, making optimal resource adequacy assessment difficult.
- Inadequate long-term planning for rising demand; focus shifting to solar tie-ups, small modular reactors (350 MW), and pumped storage hydro

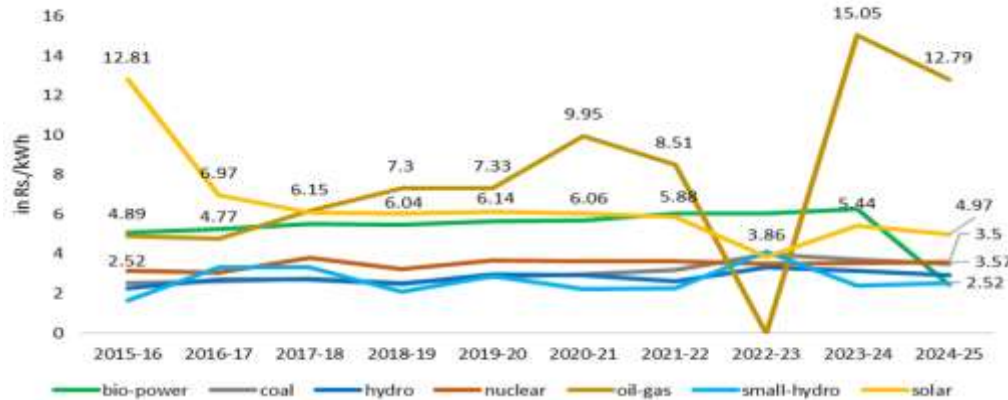
How to optimise fixed capacity charges on under-utilised long-term PPAs and to improve source-wise transparency in short-term and trading power purchases?

# Renewable Mix Optimization and its Impact on Procurement Cost - UPCL

UPCL Power Procurement Trends (%)



Source-wise Total (Weighted) Cost



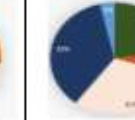
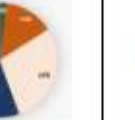
- UPCL depends on 80% of its power from Long Term PPAs, while 20% of its power comes from Short Term PPAs. which is decided to reduce to 5% (in MYT 2025-26 to 2027-28)
- Notably, UPCL spent about ₹13/kWh in 2024-25 just to procure 4.28% of its power from oil and gas-based plants.
- **Short-term gas-based PPAs** are costly, with rates such as Anta Gas Plant at ₹20.84/kWh, Auraiya Gas Plant at ₹13.02/kWh, and Dadri Gas Plant at ₹12.15/kWh.
- **Long-term PPAs** with plants like **Gama Gas Plant** (₹11.21/kWh) and **Shravanti Gas Plant** (₹13.76/kWh) obligate UPCL to procure power at high rates, adding further pressure to its financial performance.
- Steps are taken to identify cheaper sources of power from open markets and UPCL is trying to purchase power from cheaper sources through (IEX/PXIL/DEEP Portal) whenever the energy charges are less than the variable charges of Gas based plants.

## Reflection:

- Review on how UPCL is looking at managing this costly gas power purchase and whether they continue to pay fixed costs despite plant availability due to limited gas availability.

# Consumer Profile

## Category-wise Electricity Sales (MU) for the year 2024-25

| Consumer Category  | Chandigarh                                                                        | Delhi                                                                             | Haryana                                                                           | Himachal Pradesh                                                                   | Jammu & Kashmir                                                                     | Punjab                                                                              | Uttarakhand                                                                         | Ladakh                                                                              |
|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Agriculture                                                                                         | 2                                                                                 | 42                                                                                | 9,478                                                                             | 92                                                                                 | 484                                                                                 | 15,258                                                                              | 284                                                                                 | 1                                                                                   |
| Commercial                                                                                          | 498                                                                               | 8,312                                                                             | 4872                                                                              | 770                                                                                | 2,406                                                                               | 4,821                                                                               | 2,081                                                                               | 113                                                                                 |
| Domestic                                                                                            | 818                                                                               | 19,004                                                                            | 17,950                                                                            | 2,937                                                                              | 4,871                                                                               | 20,778                                                                              | 4,239                                                                               | 84                                                                                  |
| Industrial                                                                                          | 248                                                                               | 2,854                                                                             | 22926                                                                             | 6,966                                                                              | 1,975                                                                               | 24,403                                                                              | 7,091                                                                               | 4                                                                                   |
| Others                                                                                              | 111                                                                               | 2,585                                                                             | 3,831                                                                             | 1,275                                                                              | 1,462                                                                               | 2,475                                                                               | 1,152                                                                               | 7                                                                                   |
| <b>Total</b>                                                                                        | <b>1,677</b>                                                                      | <b>32,797</b>                                                                     | <b>59,057</b>                                                                     | <b>12,040</b>                                                                      | <b>11,197</b>                                                                       | <b>67,735</b>                                                                       | <b>14,848</b>                                                                       | <b>209</b>                                                                          |
| <b>Dominant Sector</b>                                                                              | <b>Domestic (49%)</b>                                                             | <b>Domestic (58%)</b>                                                             | <b>Industrial (39%)</b>                                                           | <b>Industrial (58%)</b>                                                            | <b>Domestic (48%)</b>                                                               | <b>Industrial (36%)</b>                                                             | <b>Industrial (48%)</b>                                                             | <b>Commercial (54%)</b>                                                             |
|                                                                                                     |  |  |  |  |  |  |  |  |

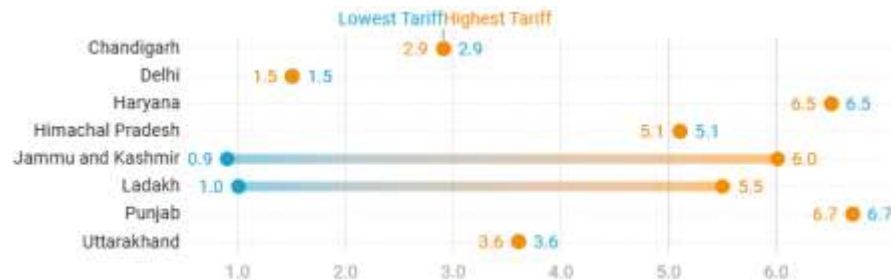
Source: India Climate and Energy Dashboard (ICED)

# State-wise Tariff Comparison for Different Consumer Categories for the year 2024-25 (in ₹/kWh)

## Domestic



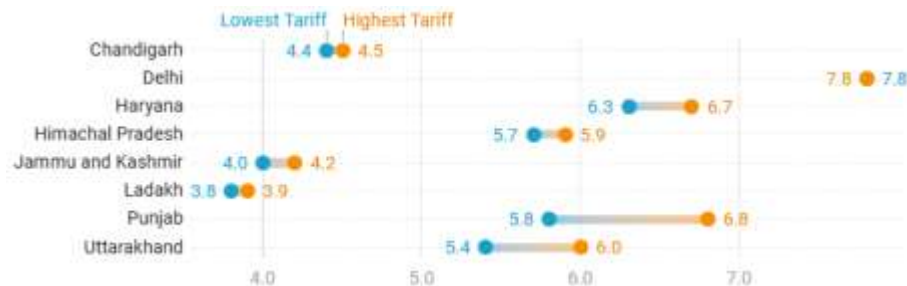
## Agricultural



## Commercial



## Industrial



# Operational Parameters

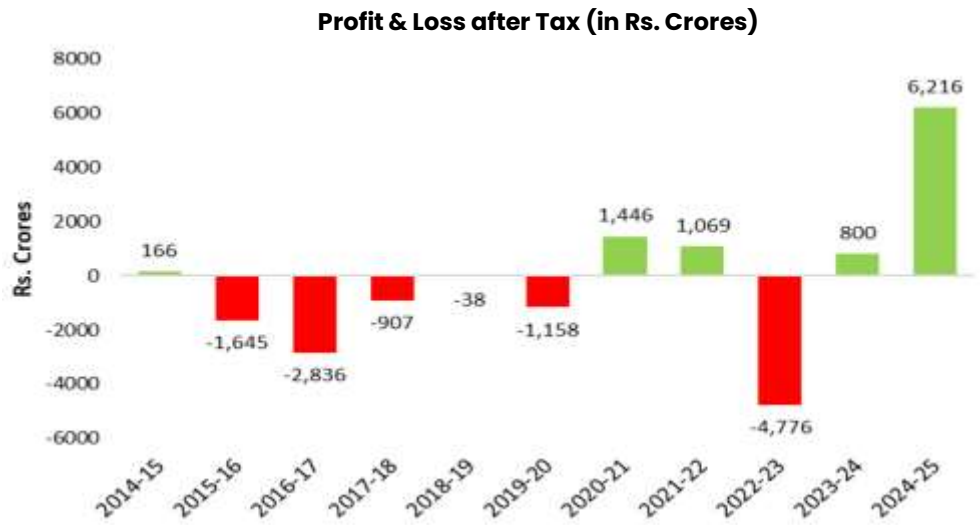
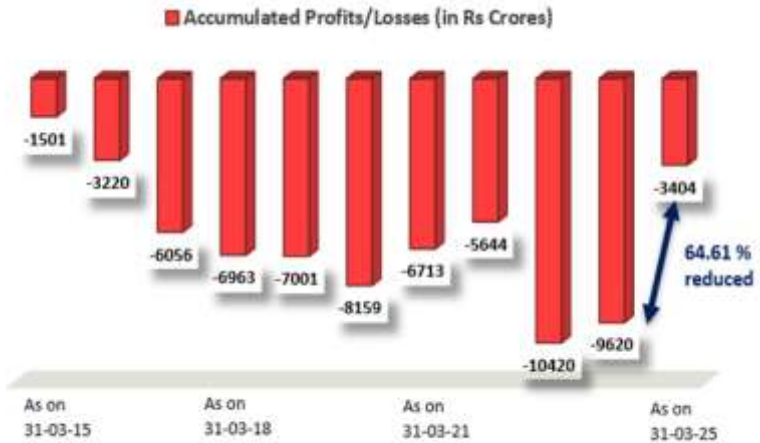


- UHBVN tremendously declined its AT&C Losses from ~35% in 2014-15 to 11% in 2024-25.
- The utility has Vigilance Department that plays a critical role in ensuring integrity and dealing with the electricity theft cases
- The DISCOM has Scheduled Outage Information System to inform the users in advance for any power cut.

While PSPCL recorded an 8% increase in profit in 2024-25 compared to 2023-24, it continues to face high technical losses. This indicates that despite DISCOM showing the improved profitability, operational efficiency challenges persist.

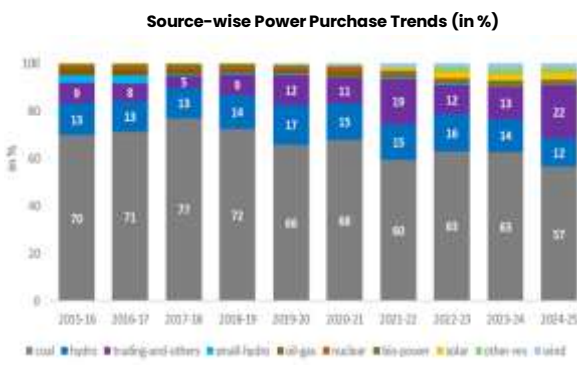
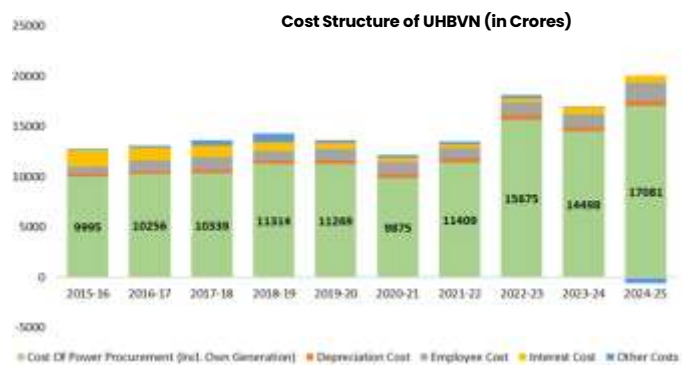
**Reflection:**  
Evaluation of the measures taken by the Distribution Companies to improve their operational efficiency. Also, assess the allocation of funds.

# Financial Parameter: Strong Profit Growth of PSPCL,Punjab in 2024-25



- PSPCL earned a profit (at subsidy booked) of Rs. 6216 crores in 2024-25, a significant rise of almost 8% as compared to the previous year (Rs. 800 crores in 2023-24).
- Government of Punjab (GoaP) used its extra borrowing (0.5% of its GSDP) headroom under the 15th Financial Commission scheme to fund these losses, thereby avoiding the creation of regulatory assets or deferred liabilities

# Financial Parameter: UHBVN's Sudden Loss in 2024-25



- In 2024-25, UHBVN faced a loss due to:
  - **Power Purchase Costs** Exceeded Approved Estimates- Approved by commission was Rs. 15718.54 Crores and actual cost incurred as Rs. 17081 Crores. Results in widening the revenue gap after true-up.
  - Subsidy billed (Rs. 3028 Crores) ➤ Subsidy Received (Rs. 2537 Crores)
  - Increase in AT&C losses and Collection Inefficiencies compound the revenue shortfall
  - Limited Tariff Revisions

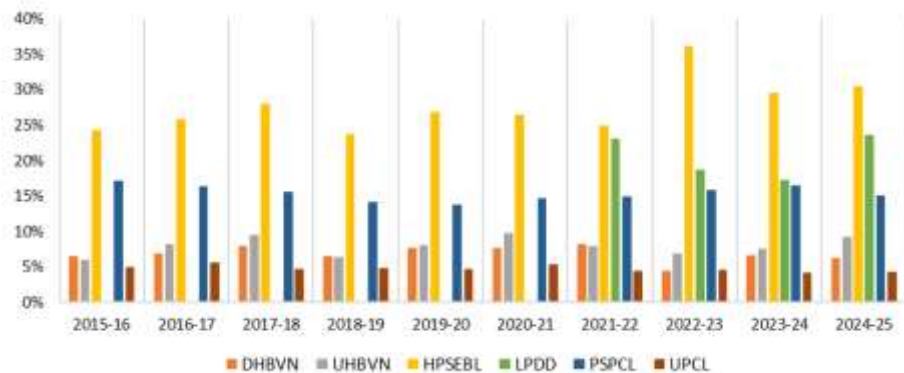
Reflection:

- Power Purchase cost mismanagement
- Power procurement management, why to depend on short term power purchase when there is cheaper long term PPAs are signed.

The short term trading has increased without clear breakdown of sources. With increase in short-term power procurement, the actual power purchase cost increased than estimated, resulting in losses.

# Financial Parameter: High Employee Cost in HPSEBL (Key Issues & Actions)

Share of Employee Cost in Total Cost of DISCOMs Trends



Key Observations:

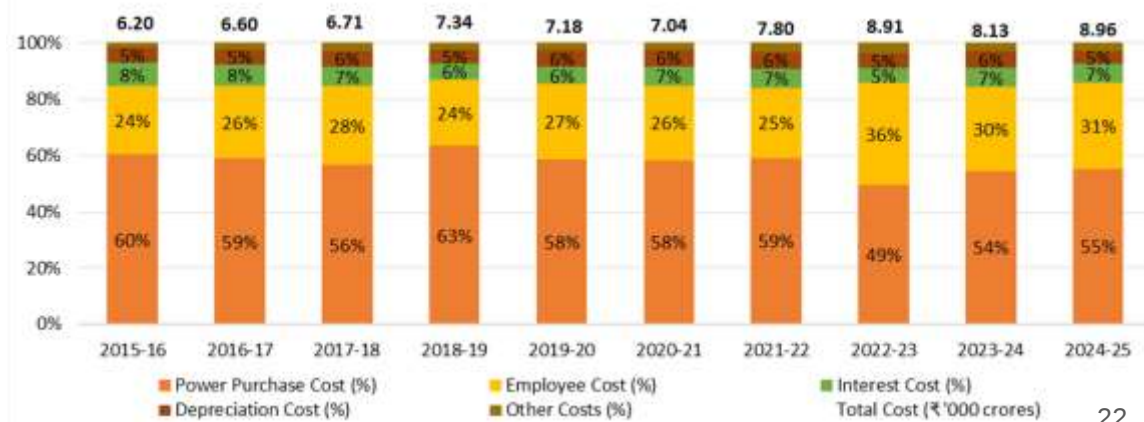
- Employee cost for HPSEBL remains significantly high even after adjusting for terminal liabilities, compared to other DISCOMs in northern region.
- Despite heavy CAPEX on IT (SAP ERP, Smart Metering), expected manpower cost reduction has not materialized.
- Most IT projects are underutilized due to lack of in-house expertise and frequent employee transfers.

Optimisation of employee cost under Cost Structure.

Key Actions Proposed:

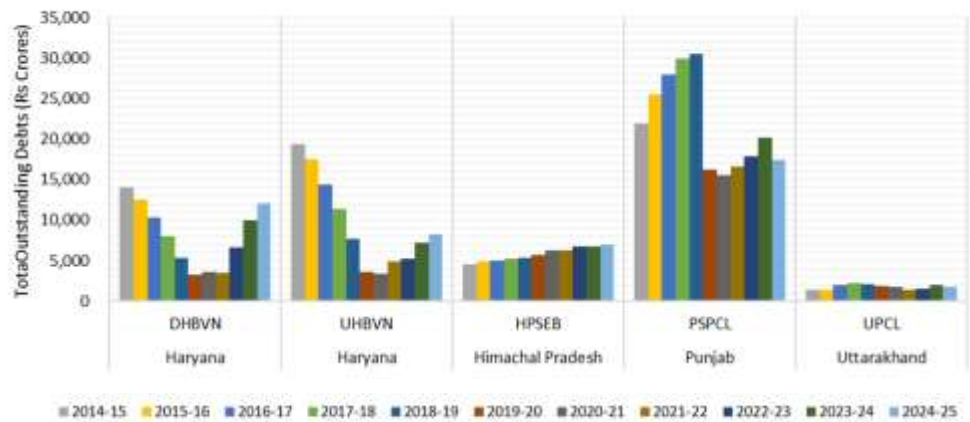
- Restructuring of offices and centralisation of salaries through automation.
- Prioritise automation in sub-station operations.
- Outsource activities instead of hiring outsourced employees.
- Evaluate RoI of IT projects with focus on manpower cost reduction.
- Develop strategies to build and retain specialized IT personnel while selectively outsourcing.

Share of Cost Components in HPSEBL



# Financial Parameter: Total Outstanding Debts

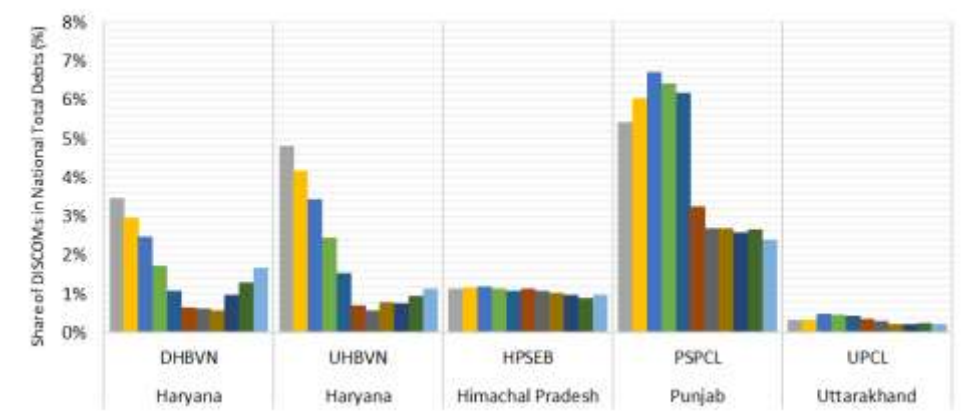
Total Outstanding Debts in DISCOMs of Northern Region



## Facts:

- **Punjab** has the **highest outstanding debt** among Northern Region DISCOMs, yet it has significantly reduced its share in national total debt from **7% to 2%** over the last decade.
- **Haryana** has also successfully reduced its total outstanding debt in recent years.
- **Himachal Pradesh** and **Uttarakhand** have maintained relatively stable debt levels over the years.

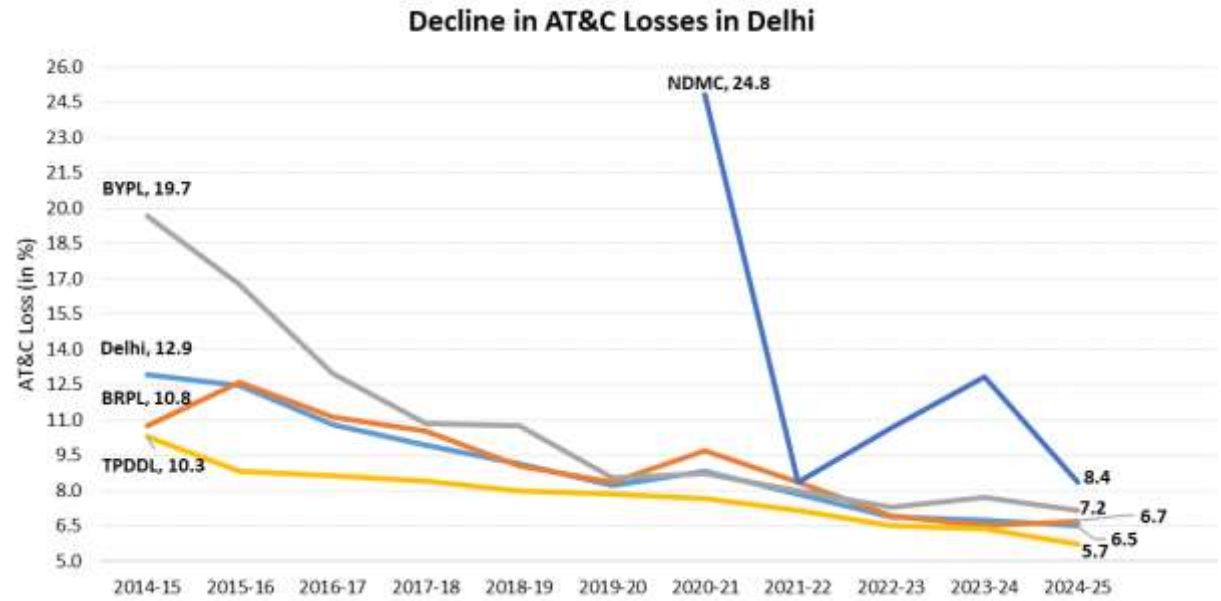
Share of Individual DISCOMs in Total National Outstanding Debts



## Reason for Reductions:

- Under the UDAY scheme (followed by RDSS), the Punjab Government took over a significant portion of PSPCL's debt, converting loans into equity/grants and lowering interest rates, thereby easing the balance sheet.
- Similarly, the Haryana Government restructured the debts of DHBVN and UHBVN under UDAY by converting short-term high-interest liabilities into equity or long-term loans, significantly reducing debt pressure.

# Operational Parameters:



Source: ICED

- Delhi's AT&C losses declined from 12.9% in 2014-15 to a single digit 6.5% in 2024-25 (comparable to world-class cities such as New York or London).
- AI/ML-driven Predictive Maintenance: Proactive asset health monitoring that minimizes failures, downtime and maintenance costs.
- GIS-SCADA Integration Complete coverage of service area for geospatial asset management, real-time monitoring, quick fault resolution and higher network reliability.
- BRPL Drone-Based Predictive Maintenance: Drones deployed across divisions for proactive asset inspection; full rollout planned to minimize outages and extend equipment life.
- TPDDL India's Leading Smart Metering Scale-up: First private DISCOM to deploy ~5.9 Lakh smart meters, enabling real-time two-way communication and consumer empowerment.
- Customer-centric Digital Services have provides seamless self-service, real-time alerts and remote interactions at scale.

# Key aspects to be considered

- Resource Planning
- PPA Structures
- Financial Management and Payments
- Under Utilization and Stranded Capacity Assets
- Transparency and Disclosures
- Regulatory and Legal Compliance

## Reflections:

1. How effectively are DISCOMs aligning power purchase strategies, including long-term PPAs, short-term trading, and evening peak procurement with demand forecasts to ensure adequacy of supply, cost efficiency, and transparency?
  - DHBVN does not provide in-detail information of its short-term power procurement, resulting in ambiguity over actual source of power purchases.
  - How to optimise fixed capacity charges on under-utilised long-term PPAs and to improve source-wise transparency in short-term and trading power purchases?
  - Resource Planning and Power purchase
    - Evaluation of PPAs and market purchases (including evening peak procurement), with cost, source, and time-of-day optimization.
    - Power purchase strategies alignment with demand forecasts, ensuring adequacy of supply and effective planning.
1. What measures can be taken to optimize fixed capacity charges, employee costs, and operational expenses, while ensuring timely payments to GENCOs and minimizing interest liabilities from delayed dues?
  - Optimisation of employee cost under the cost structure for HPSEBL
  - Review of timeliness and adequacy of payments to GENCOs and other stakeholders, including management of outstanding dues.
    - Total Interest Liability accrued due to delayed payments

## Reflections:

3. How accurate and transparent is the voltage-wise cost accounting and how are regulators ensuring that cross-subsidization remains within permissible limits?
  - A detailed timeline for the adoption of voltage-wise cost accounting.
  - A comparative analysis showing the difference between current category-wise tariffs and the actual VCoS to determine the real extent of cross-subsidization.
3. Whether DISCOMs meeting Renewable Purchase Obligation (RPO) targets and adhering to Merit Order Despatch principles, avoiding procurement of expensive power when cheaper options are available?
4. Are smart meter rollouts and IT/SCADA implementations delivering measurable improvements in metering, billing, collection, and consumer engagement, or are they functioning merely as automated billing tools without advanced features?
  - A sampled report for circles whether the installed smart meters are able to demonstrate improvement in Metering, Billing and Collection practices.
  - Comparison of smart meter rollout versus conventional meters. Whether smart features really active such as TOD tariff, remote disconnection, hourly consumption profile or just providing for automated billing.
  - Technology & digitalisation – assessment of IT/SCADA implementation, adoption of digital billing and collection platforms.
  - A status report on the implementation of digital platforms for automated tariff filing and transparent approvals as envisioned in the Draft NEP 2026.

## Reflections:

6. How well are DISCOMs planning and prioritizing capital investments, and do these projects demonstrate a favorable benefit-to-cost ratio with tangible improvements in AT&C losses and reliability indices (SAIDI/SAIFI)?
  - Evaluation of planning and prioritization for new asset purchases and ongoing asset management.
    - Is the DISCOM intentionally neglecting maintenance to justify a full replacement that earns a higher return on equity?
    - What is the Benefit-to-Cost Ratio for major CAPEX projects?
    - Did the investment result in a proportionate reduction in AT&C losses or an improvement in SAIDI/SAIFI metrics?
7. What are the underlying reasons for the widening ACS-ARR gap, and how dependent are DISCOMs on regulatory assets, subsidies, and delayed government payments for sustaining profitability?
8. How responsive are DISCOMs to consumer-centric performance needs in terms of quality of supply, grievance redressal, compensation for SOP violations, and timely provision of new connections, load enhancements, and GEOA applications?
  - Effectiveness of RTI response mechanisms and proactive disclosure practices.
  - Review performance against key reliability indices such as SAIFI, SAIDI, and CAIDI, including trend analysis and benchmarking against regulatory targets.
  - Compensation paid to consumers for SOP violations, complaints reaching CGRF/Ombudsman etc
  - Aging analysis of pending requests for load enhancement, specifically for industrial units and EV charging stations
  - Percentage of GEOA applications rejected or delayed beyond 15 days and their reasons.