

Submitted to Rajasthan Electricity Regulatory Commission

**COMMENTS ON PETITION SEEKING APPROVAL OF TRUE-UP (2021-22),  
AND ARR, TARIFF AND INVESTMENT PLAN BY JVVNL FOR 2023-24  
AT THE RAJASTHAN ELECTRICITY REGULATORY COMMISSION**

February 2023



CENTRE FOR ENERGY, ENVIRONMENT & PEOPLE

Jaipur Vidyut Vitran Nigam Limited (“JVVNL”) filed a petition for approval of True-up for 2021-22, and ARR, Tariff, and Investment Plan for 2023-24 at the Rajasthan Electricity Regulatory Commission as per the provisions of RERC (Terms and Conditions for Determination of Tariff) Regulations, 2019.

Following comments are submitted by CEEP with regards to the above petitions

## A. Comments on True-up Petition For 2021-22

### 1. Performance of Distribution Franchises

We would like to highlight the issues with the performance of the distribution franchisee in the petition area. As per the data from the petition, the Discom billed the DFs - BESL (Bharatpur), and KEDL (Kota) a total of 1480.42 MUs in 2021-22. And the DFs end consumer sale as per the petition documents is 1214 MUs (254 MUs by BESL, and 960 MUs by KEDL). This indicates that the DFs incurred a combined distribution loss of almost 18% (266.42 MUs) as computed in Table 1. This is significantly higher than the approved loss for the Petitioner (15%) and overshoots the actual distribution losses of the Petitioner for 2021-22 (16.81%).

*Table 1: Distribution losses for DFs based on data from tariff petition*

Particulars	Total (MUs)
Sales by DF (A)	1214
BESL, Bharatpur (MUs)	254
KEDL, Kota (MUs)	960
Energy input (B)	1480.42
Distribution Loss (B - A)	266.42
Distribution Loss %	18.00%

This indicates that the performance efficiency of distribution franchises is lower than that of JVVNL, which has successfully limited the distribution losses to 16.81%. Accordingly, we request the Commission to order a detailed performance review of JVVNL’s distribution franchises, BESL (Bharatpur) and KEDL (Kota) and take appropriate action.

### 2. Collection Efficiency and Details of Receivables

While the collection efficiency of JVVNL is reported as 100%, information regarding total receivables from different consumers categories is not provided. This information is required to understand a holistic picture of the collection efficiency of Discoms with a breakdown of total collection in amount collected towards the dues from previous years, and that for the current year. Thus, we request the Petitioner to furnish details regarding the status of

receivables due and collected from consumers in the current year and the previous year. We request the Petitioner to also provide data of month-wise collection efficiency.

### 3. Details of Payment of Late Payment Surcharge

We request the Petitioner to provide month-wise details of late payment surcharge paid by the Petitioner to generating companies in the control period, as while the late payment surcharge is not a pass-through, the same shall provide an insight in the operational efficiency of the Petitioner.

### 4. Feeder Segregation Status

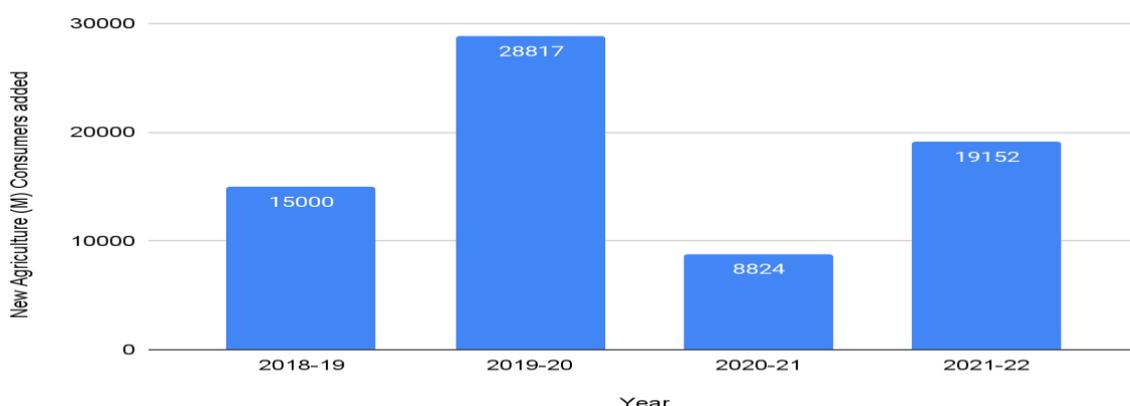
Feeder segregation is important for better load management including peak load, and reduction of losses and theft. Various central and state level schemes floated over the last decade in this regard are described in the petition, however, the data provided does not inform the status implementation of the feeder segregation schemes, and the percentage of feeder segregation achieved by JVVNL. We request the Petitioner to provide details of feeder segregation achieved, and the status of implementation of schemes in this regard.

### 5. Trends of New Agriculture (Metered) Consumers

Data from previous years' true-up petition indicates an uneven trend in the addition of new consumers in the agriculture (metered) category, as illustrated in Figure 1. Based on the data from multi-year ARR and tariff petition, JVVNL estimated that 25,000 new customers would be added in Agriculture (metered) category in 2021-22. However, data from the true-up petition indicates that only 19,152 customers were added.

We request that JVVNL should provide details of the reasons for reduced new agricultural connection issues in the year and provide the zone-wise current pending agriculture plan and action plan to complete, and the Commission should pass appropriate directions to enable completion of 100% access within a stipulated timeline.

Figure 1: New Agriculture (M) Consumers added between 2018-19 and 2021-22 (based on data from true-up petitions)



## 6. BEE Accounting Standards

The Ministry of Power mandated periodic energy accounting for distribution companies on 11.10.2021. Pursuant to this, the Bureau of Energy Efficiency issued regulations for quarterly periodic energy accounting standards for distribution companies as per the Energy (Conservation) Act, 2002. The submissions made by JVVNL pursuant to these regulations are analysed, and key inconsistencies are found in terms of T&D losses and quality of data published in the public domain.

First, in the report submitted for the quarter between April 2022 to June 2022, the Petitioner has reported *negative* T&D losses for multiple feeders, leading to an unclear picture of the zone-wise losses, and the impact of loss reduction plans. The top ten highest (negative) feeder-level T&D losses are reproduced from the Petitioner's report to the Bureau of Energy Efficiency for the quarter ending in June 2022.

Figure 2: Top 10 highest (negative) T&D losses at the feeder level (based on data from quarterly energy accounts filed with the BEE, April - June 2022)

No.	Zone	Received at Circle (In MU)	Received at Division (In MU)	Received at Sub-division (In MU)	Name of the Station	Feeder Code/ID	Feeder Name	Type of Feeder (Urban/Mixed/Industrial/Agricultural/Rural)	Type of feeder meter (AM/AMR/Other)	Received at Feeder (Final in MU)	Feeder Consumption (In MU)	Final Net Export at Feeder Level (In MU)	T&D losses
7988	Kota	Jhalawar	Bhawani Mandi	B. MANDI	Mishroli	1032048	JHIANI (OLD SAGDIYA)	Rural		0.00	0.34		-11966.81
7111	Kota	BARAN	BARAN CD	Anta	Bundi bijora	1008605	Joyalal	rural		0.00	0.53		-13455.18
7245	Kota	BARAN	BARAN CD	BARAN A-II	kalmanda	1040797	Dolatpura/durjanpura	rural		0.01	0.84		-14193.76
2325	JAIPUR	ALWAR	HTM CITY	A-4	220KV KALI MORI ALWAR	2266051	FEEDER NO. 1 SETCC	RURAL		0.00	0.03		-15666.00
7806	Kota	Jhalawar	BHAWANIMANDI	PIRAWA	PIRAWA	2263267	GARDAN KHERI(PIRAWA)	Rural		0.00	0.04		-18884.65
9507	BHARATPUR	KARAUJI	XEN_OM_HINDAUN	AEN_A-2_HINDAUN		1009953	JAGAR	RURAL/AG		0.00	0.69		-28750.90
7636	Kota	BARAN	ATRU	Atru -II	Badora	2265898	Achrava	Rural		0.00	0.23		-33667.56
7061	Kota	Bundi	XEN D-I Bundi	AEN TALERA	132 KV GSS DABI	BD30	J.S.DAM	rural		0.00	0.28		-71088.00
4437	JAIPUR	Dausa	Mahuwa	Mahuwa	Thekda Britki	1014664	Samaspur	Rural		0.00	0.22		-97722.68
1766	JAIPUR	JPDC	XEN(O&M, Kotputli)	Nareda	paneda	1030195	2.Banethi/Churi Rural	RURAL		0.00	1.06		-153329.62

Second, the data reported to BEE and made available in the public domain is not in a user-friendly form ending September 2021 and December 2021 is not available in a machine-readable format, along with the issue of negative T&D losses. An illustration is provided in Figure 3.

Subsequently, we request the Petitioner to address the inaccuracies resulting in negative estimates of T&D losses in certain circles and provide consistent data on zone-wise details of losses, and loss reduction action plans with outcomes in a user-friendly, machine-readable format for a comprehensive assessment of distribution losses and the efficacy of the loss reduction interventions.

Figure 3: Division-wise losses reported by JVVNL to the BEE in the quarter ending December 2021; (divisions reporting negative T&D losses are encircled in red)

S.No	Name of circle	Circle code	Name of Division	Consumer profile (as per MS)										Energy parameters (as per Accounts)					Distribution losses (as per Accounts)					AT & C Loss (%)
				Consumer category	No of connections metered (Nos)	No of connections Unmetered (Nos)	Number of connections (Nos)	% of number of connections	Connected Load metered (KW)	Connected Load Unmetered (KW)	Connected Load (KW)	% of connected load	Input energy (kWh)	Metered energy	Unmetered/estimated energy	% of energy consumption	T&D loss (MWh)	T&D loss (%)	Billed Amount to No. Couse	Collected Amount to No. Couse	Collection Efficiency			
10	JCC	2104	CD 6	Residential	176286	0	176286	82.50	629032	47.88														
				Agricultural	844	0	844	0.39	5862	0.43														
				Commercial/Industrial/IT	33000	0	33000	15.53	322084	24.66														
				Commercial/Industrial/HT	2247	0	2247	1.05	18899	0														
				Others	507	0	507	0.23	33039	25.86														
<b>Sub-total</b>				<b>214612</b>	<b>0</b>	<b>214612</b>	<b>100.00</b>	<b>1036880</b>	<b>100.00</b>	<b>207049</b>	<b>33.58</b>	<b>207049</b>	<b>100.00</b>	<b>50.25</b>	<b>1.81</b>	<b>22744</b>	<b>20728</b>	<b>91.19</b>	<b>99.81</b>	<b>-2.01</b>				
11	JCC	2104	CD 7	Residential	120089	0	120089	80.72	290249	47.88														
				Agricultural	447	0	447	0.33	4460	0.52														
				Commercial/Industrial/IT	26234	0	26234	17.43	179182	17.91														
				Commercial/Industrial/HT	1889	0	1889	1.54	158523	0														
				Others	177	0	177	0.13	14073	0.27														
<b>Sub-total</b>				<b>148776</b>	<b>0</b>	<b>148776</b>	<b>100.00</b>	<b>608633</b>	<b>100.00</b>	<b>304815</b>	<b>20.78</b>	<b>304815</b>	<b>100.00</b>	<b>-117.34</b>	<b>-5.64</b>	<b>22744</b>	<b>20728</b>	<b>91.19</b>	<b>99.81</b>	<b>-8.40</b>				
12	JCC	2104	CD 8	Residential	757206	0	757206	80.11	2179042	47.88														
				Agricultural	2465	0	2465	0.28	12769	0.42														
				Commercial/Industrial/IT	177274	0	177274	18.76	1460737	36.89														
				Commercial/Industrial/HT	5189	0	5189	0.55	499990	0														
				Others	2989	0	2989	0.30	27938	1.55														
<b>Sub-total</b>				<b>945058</b>	<b>0</b>	<b>945058</b>	<b>100.00</b>	<b>4726288</b>	<b>100.00</b>	<b>1097846</b>	<b>23.14</b>	<b>1097846</b>	<b>100.00</b>	<b>-337.81</b>	<b>-3.08</b>	<b>10000</b>	<b>10000</b>	<b>100.00</b>	<b>100.00</b>	<b>-8.95</b>				
13	JHALAWAR	2106	DD-1	Residential	42844	0	42844	77.27	19001	47.88														
				Agricultural	4996	0	4996	12.58	47329	0														
				Commercial/Industrial/IT	4985	0	4985	6.87	28008	0														
				Commercial/Industrial/HT	586	0	586	1.05	8380	0														
				Others	183	0	183	0.33	1503	0.31														
<b>Sub-total</b>				<b>55982</b>	<b>0</b>	<b>55982</b>	<b>100.00</b>	<b>219468</b>	<b>100.00</b>	<b>109784</b>	<b>23.14</b>	<b>109784</b>	<b>100.00</b>	<b>100.00</b>	<b>11.80</b>	<b>10000</b>	<b>10000</b>	<b>100.00</b>	<b>100.00</b>	<b>7.48</b>				
14	JHALAWAR	2106	DD-2	Residential	5904	0	5904	74.87	5873	47.88														
				Agricultural	15076	1	15077	20.68	129948	60.82														
				Commercial/Industrial/IT	3974	0	3974	5.03	19796	7.43														
				Commercial/Industrial/HT	144	0	144	0.25	8056	0														
				Others	183	0	183	0.18	1504	0.49														
<b>Sub-total</b>				<b>79676</b>	<b>1</b>	<b>79677</b>	<b>100.00</b>	<b>211068</b>	<b>100.00</b>	<b>112836</b>	<b>24.82</b>	<b>112836</b>	<b>100.00</b>	<b>174.07</b>	<b>15.43</b>	<b>10000</b>	<b>10000</b>	<b>100.00</b>	<b>100.00</b>	<b>22.78</b>				
14	JHALAWAR	2106	SHAHAN MAND	Residential	13579	0	13579	68.78	61370	47.88														
				Agricultural	4286	0	4286	5.83	10000	11.80														
				Commercial/Industrial/IT	144	0	144	0.18	8056	0														
				Commercial/Industrial/HT	183	0	183	0.24	1504	0.49														
				Others	183	0	183	0.24	1504	0.49														
<b>Sub-total</b>				<b>154440</b>	<b>0</b>	<b>154440</b>	<b>100.00</b>	<b>234664</b>	<b>100.00</b>	<b>120625</b>	<b>26.80</b>	<b>120625</b>	<b>100.00</b>	<b>425.80</b>	<b>26.65</b>	<b>10000</b>	<b>10000</b>	<b>100.00</b>	<b>100.00</b>	<b>31.59</b>				
15	JPDCC	2105	Omni	Residential	42087	0	42087	73.18	170344	47.88														
				Agricultural	13245	0	13245	6.28	58834	0														
				Commercial/Industrial/IT	729	0	729	0.34	13124	0														
				Commercial/Industrial/HT	508	0	508	0.24	5096	0.77														
				Others	2189	0	2189	3.00	68919	0														
<b>Sub-total</b>				<b>57448</b>	<b>0</b>	<b>57448</b>	<b>100.00</b>	<b>234664</b>	<b>100.00</b>	<b>120625</b>	<b>26.80</b>	<b>120625</b>	<b>100.00</b>	<b>425.80</b>	<b>26.65</b>	<b>10000</b>	<b>10000</b>	<b>100.00</b>	<b>100.00</b>	<b>31.59</b>				
16	JPDCC	2105	DD-1	Residential	7024	0	7024	18.89	32408	9.64														
				Agricultural	11962	0	11962	31.38	56336	15.26														
				Commercial/Industrial/IT	637	0	637	0.67	17175	0														
				Commercial/Industrial/HT	218	0	218	0.23	1951	0														
				Others	6938	0	6938	18.82	34845	9.50														
<b>Sub-total</b>				<b>15631</b>	<b>0</b>	<b>15631</b>	<b>100.00</b>	<b>174625</b>	<b>100.00</b>	<b>174625</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>				
17	JPDCC	2105	DD-4	Residential	12601	4460	17061	11.57	117425	33.20														
				Agricultural	13723	0	13723	10.11	50603	0														
				Commercial/Industrial/IT	1280	0	1280	0.95	17889	0														
				Commercial/Industrial/HT	116	0	116	0.09	969	0														
				Others	11282	0	11282	8.29	36817	0														
<b>Sub-total</b>				<b>29470</b>	<b>4460</b>	<b>33930</b>	<b>100.00</b>	<b>116000</b>	<b>100.00</b>	<b>116000</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>				
18	JPDCC	2105	KIN BASU	Residential	15002	651	15653	15.42	154900	47.88														
				Agricultural	819	0	819	0.51	40335	0														
				Commercial/Industrial/IT	476	0	476	0.30	40230	0														
				Commercial/Industrial/HT	137	0	137	0.09	10209	0														
				Others	34428	651	35079	22.18	174519	15.26														
<b>Sub-total</b>				<b>16494</b>	<b>651</b>	<b>17149</b>	<b>100.00</b>	<b>309005</b>	<b>100.00</b>	<b>309005</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>				
19	JPDCC	2105	DD-8	Residential	6428	0	6428	78.63	7493	47.88														
				Agricultural	5490	2364	7854	8.50	41929	13.20														
				Commercial/Industrial/IT	303	0	303	0.35	34029	0														
				Commercial/Industrial/HT	184	0	184	0.22	1993	0														
				Others	7869	2364	10233	12.50	34005	13.20														
<b>Sub-total</b>				<b>80764</b>	<b>2364</b>	<b>83128</b>	<b>100.00</b>	<b>572005</b>	<b>100.00</b>	<b>572005</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>				

## 7. Energy Input and Transmission Losses

The energy balance as provided by the Petitioner in paragraph 5.1 is recalculated based on the normative loss level of 15% as approved by the Commission, instead of the actual loss levels of 16.81%.

Table 2: Computation of energy balance and power purchase to be disallowed by the Commission based on data from true-up petition for FY 2022 (note: NCES is also considered towards energy sourced within the state)

<b>Energy balance</b>	<b>Amount</b>
Total Sales (MUs)	26,534
Distribution Loss %	15%
Distribution Loss (MUs)	4,682.47
<u>Gross energy required at Discom periphery (MUs)</u>	<u>31,216.47</u>
Intra state Transmission loss %	3.31%
Intra-state Transmission Losses (MUs)	1,068.64
<u>Gross Energy Required at State periphery (MUs)</u>	<u>32,285.11</u>
Energy sourced within state (MUs)	20,413.11
Energy required at state Periphery from inter-state sources (MUs)	11,872.00
Inter-state Transmission Losses (%)	2.79%
Inter-state Transmission Losses (MU)	340.74
<u>Energy sourced outside state (MUs)</u>	<u>12,212.73</u>
Gross energy required to be purchased (MUs)	32,625.84
Gross energy purchased by Discom (MUs)	34,291.84
Purchase to be disallowed (MUs)	1,666.00
Short term power purchased (MU)	1613.66
Short term power to be disallowed (MU)	1,613.66
Price of short term power purchased (Rs. per unit)	4.64
Cost Short term power to be disallowed (Rs. Crores)	748.74
Other disallowed power purchase quantum (MUs)	52.34
Price of other power purchased (Rs. per unit)	4.04
Cost of other disallowed power purchase (Rs.)	21.14
Total cost of disallowed power (Rs. Crores)	769.88

Based on our calculations, 1666 MUs of power purchase is to be disallowed by the Commission, where the entire quantum of unapproved (short-term) power purchase of

1613.66 MUs for Rs. 748.73 Crores is to be disallowed; additionally, 52.34 MUs of power purchase from approved sources amounting to Rs. 21.14 Crores is to be disallowed. We submit the commission to accept our submissions to approve the costs as per our suggested methodology.

Further, JVVNL has provided a combined Figure for inter-state and intra-state transmission losses. As this limit the ability to analyse the performance of the intra and inter-state transmission system, we recommend that JVVNL should provide a breakdown of inter-state and intra-state transmission losses.

#### 8. Significant Deviation from Approved Power Purchase

The data from the petition indicates a significant deviation from approved power purchase for some of the power sources (paragraph 6.1 of the true-up petition for FY 2022). Deviations in excess of 25% is collated in Table 3 based on data submitted by the Petitioner. We request the Petitioner to provide detailed reasons for such significant escalation in the cost of power purchase from approved sources.

*Table 3: Deviations from approved power purchase, based on data from true up petition*

Source	Percentage deviation
Tala through PTC	32.31%
Others	26%

#### 9. Significant Deviation in R&M Expenses

The Petitioner's actual R&M expenses at Rs. 304.96 Crores are higher than the allowed expenses of Rs. 197 Crores by Rs. 107.96 Crores We request the Petitioner to explain the reasons for 54.8% increase from the approved amount. We also request the Petitioner to provide a detailed list of the R&M activities undertaken for the control period and the outcomes of the same in terms of improvement in reliability or other similar metrics.

#### 10. Consumer Awareness Expenditure

The Petitioner has reported Rs. 17.71 Crores as expenses towards consumer awareness as a part of Administrative and General Expenses. We request the Petitioner to provide a list of activities undertaken for improving consumer awareness with associated costs, and details of impact analysis conducted to assess the improvement of consumer awareness.

#### 11. Breakdown of Interest on Unfunded Gap in Actuals

The Petitioner provides details of interest and finance charges for FY 2022 in paragraph 6.22 of the present petition. However, the data on actual expenses incurred by the Petitioner clubs together the 'interest on unfunded gap' and 'interest on short-term borrowings/interest on

working capital (including LPS paid to generators).’ We request the Petitioner to provide granular data on the approved vs. actual expenditure, specifically, a breakdown of actual expenses incurred for ‘interest on unfunded gap’ and ‘interest on short-term borrowings/interest on working capital (including LPS paid to generators).’ Further, we request details from the Petitioner to provide a time-bound plan to liquidate the unfunded gap. We further submit the Commission shall not create of any new regulatory assets while truing up of accounts.

## 12. Construction of HVDS System

The Petitioner notes the execution of a High Voltage Distribution System on a priority basis as a loss reduction measure in paragraph 4.5(A) and 11.5 of the present petition. We request the Petitioner to provide details of the areas identified for the implementation of HVDS, along with the timeline, and details of whether any priority areas are identified for implementation.

## B. Comments On ARR, Tariff, and Investment Plan For 2023-24

### 1. Separate Sales Projections for Distribution Franchise (DF) Area

The Petitioner provides combined sales projections for the areas served by JVVNL and its distribution franchises. However, sales projections by Petitioner in paragraph 11.8 merges the sales to consumers in JVVNL’s area with that of the DF areas. Consequently, the sales projections do not account for the distribution losses incurred by the DF and instead, focus only on sales to various categories of consumers in the DF area. We request the Petitioner to project sales for JVVNL’s area separately from that of the DF, by considering the power sold to DF as a single sale. Escalations in the sales to DF can be computed based on trends of previous years. We further request the Commission to order a detailed performance review of distribution franchises.

The sales data (exclusive of DF sales) is also essential to compute the normative O&M expenses (employee expenses, A&G expenses, and R&M expenses) of the Discom as the Commission has been approving the O&M expenses in the true up based on sales made consumers exclusive of DF area.

### 2. Inefficiency in Projecting Energy Sales

The Petitioner has calculated the CAGR% of energy sales between FY 2014 to FY 2022 as ~7.5%, and has projected category-wise sales for FY 2023 and 2024 based on the same, with “appropriate modifications” where required, and states the following in paragraph 11.5:

“The Petitioner would further like to submit that this growth trend of increase in sales has been considered as it signifies the best possible projections as per the experience of the Petitioner and latest available data. Also, wherever the trend has seemed unreasonable or

unsustainable, the growth factors have been appropriately modified to arrive at more realistic projections.”

We request the petitioner to clearly state the methodology and assumptions considered for the modification of the sales projections.

*Table 4: Trends of Category-wise sales (MUs) between 2013-14 to 2021-22, based on data submitted by the Petitioner in the present petition*

Category	FY-14	FY-15	FY-16	FY-17	FY-18	FY-19	FY-20	FY-21	FY-22
Domestic	3,761	4,068	4,418	4,803	5,172	5,404	5,776	5,964	5,877
Non-Domestic	1,573	1,805	1,966	2,130	2,262	2,397	2,519	1,936	2,231
Public St. Lights	143	168	175	188	175	172	181	178	180
Agri (metered)	4,258	4,715	5,238	5,664	6,667	6,741	7,787	8,970	8,833
Agri (Flat-rate)	581	530	517	468	364	330	293	296	274
Small Industry	274	335	301	315	289	321	292	299	363
Medium Industry	722	770	735	727	767	811	821	729	837
Large Industry	3,482	4,294	3,775	3,939	5,369	6,657	6,039	5,477	6,687
PWW (Small)	195	218	229	241	302	304	409	405	360
PWW (Medium)	32	37	41	41	37	30	30	35	43
PWW (Large)	200	218	259	304	331	324	313	390	391
Mixed Load	565	337	197	425	243	189	200	162	189
EV									1
Sum Total	15,786	17,495	17,851	19,245	21,978	23,680	24,660	24,841	26,266
<b>Total</b>	<b>15,784</b>	<b>17,494</b>	<b>17,852</b>	<b>19,244</b>	<b>21,978</b>	<b>23,679</b>	<b>24,660</b>	<b>24,841</b>	<b>26,268</b>

We would like to highlight that, the category-wise CAGR% calculated (in cognisance 2) based on data provided by the Petitioner for FY 2014 to FY 2022 (Table 4 is 6.57%, which is lower than the CAGR of ~7.5% quoted by the Petitioner. This overestimation of CAGR shall likely lead to an inflated sales projection for the consumers and adds burden to consumers.

*Table 5: CAGR based on category-wise sales (MUs) between 2013-14 to 2021-22, based on data submitted by the Petitioner in the present petition*

Category	8-year CAGR	5-year CAGR	3-year CAGR
Domestic	5.74%	4.12%	2.84%
Non-Domestic	4.47%	0.93%	-2.36%
Public St. Lights	2.92%	-0.87%	1.53%
Agri (metered)	9.55%	9.29%	9.43%
Agri (Flat-rate)	-8.97%	-10.15%	-6.01%

Small Industry	3.58%	2.88%	4.18%
Medium Industry	1.86%	2.86%	1.06%
Large Industry	8.50%	11.17%	0.15%
PWW (Small)	7.97%	8.36%	5.80%
PWW (Medium)	3.76%	0.96%	12.75%
PWW (Large)	8.74%	5.16%	6.47%
Mixed Load	-12.79%	-14.96%	0.00%
EV	-	-	-
<b>Total</b>	<b>6.57%</b>	<b>6.42%</b>	<b>3.52%</b>

Our computations based on different CAGR are tabulated in Table 6. Our calculations indicate that the Petitioner’s projections exceed our highest CAGR estimates (even after accounting for the rooftop generation).

*Table 6: Category-wise sales projections based on 8-year, 5-year, and 3-year CAGR% and projected sales for FY 2023 and FY 2024 based on category-wise sales by JVVNL from FY 2017 to FY 2022*

Category	2023			2024		
	8-year CAGR	5-year CAGR	3-year CAGR	8-year CAGR	5-year CAGR	3-year CAGR
Domestic	6,214.23	6,119.05	6,043.69	6,570.81	6,371.08	6,215.12
Non-Domestic	2,330.62	2,251.77	2,178.26	2,434.68	2,272.73	2,126.77
Public St. Lights	185.25	178.44	182.75	190.66	176.90	185.54
Agri (metered)	9,676.56	9,653.95	9,665.76	10,600.68	10,551.21	10,577.04
Agri (Flat-rate)	249.43	246.18	257.53	227.06	221.18	242.05
Small Industry	375.99	373.44	378.19	389.44	384.19	394.01
Medium Industry	852.61	860.92	845.85	868.51	885.53	854.79
Large Industry	7,255.32	7,433.62	6,697.03	7,871.94	8,263.60	6,707.08
PWW (Small)	388.67	390.09	380.87	419.63	422.68	402.95
PWW (Medium)	44.62	43.41	48.48	46.30	43.83	54.66
PWW (Large)	425.18	411.19	416.28	462.34	432.41	443.20
Mixed Load	164.82	160.72	189.00	143.74	136.68	189.00
EV						
<b>Total</b>	<b>27,992.73</b>	<b>27,952.48</b>	<b>27,190.37</b>	<b>29,832.97</b>	<b>29,747.23</b>	<b>28,147.28</b>

We request the Commission to review the present approach of using CAGR to project energy sales, as the same does not capture a range of factors which may affect demand across categories - for instance, shift of agricultural consumption from night to daytime, consumer

migration due to open access, and rooftop solar. We further submit that a more scientific approach should be considered using granular data accounting for advancements in technology such as EV, electric cooking, cooling needs and also changing consumption patterns due to climate change and other issues.

### 3. Status and Impact of Rooftop Solar

The Petitioner has provided a detailed breakdown of the number and capacity of grid connected rooftop solar installations as of September 2022 (paragraph 11.42), and the projected generation (paragraph 11.42). We request the Petitioner to provide the methodology for accounting the projected generation from solar rooftop installations against category-wise consumer sales projections. Further, we request the Petitioner to provide circle-wise targets for rooftop solar installations and provide details of studies conducted to analyse the impact of solar rooftop on grid management.

### 4. Impact of Day-Time Agriculture Supply

We request that the Petitioner provide the details on the impact of the daytime agriculture supply on the peak load and on the grid. Further, we request the Petitioner to clarify if daytime irrigation has resulted in an increased specific consumption (requirement of running the motor for a longer duration) and consequently increased the energy sales. Additionally, we request the Petitioner to specify the infrastructure improvements made to facilitate daytime agriculture and clarify if there is an increase in transmission losses, any action plan and study for the same.

### 5. Implementation of PM-KUSUM

The Petitioner provides details regarding implementation of Component-C (pump-level solarisation) of the KUSUM scheme in paragraph 11.32, and the details of current (2022-23) and projected excess energy generation. We submit that the Petitioner submits zone-wise and circle-wise targets and progress in implementation. Further, we request the Petitioner to provide granular data on the adjustment of the projected generation from solar rooftop installations against sales projections for the agriculture category.

### 6. Distribution and AT&C Loss Reduction

The distribution loss reduction trajectory specified by the Petitioner aims for a reduction of losses by only 0.81% between FY 2022 and FY 2024. We submit that the Commission clearly states objective targets for distribution and AT&C loss reduction and considering that the distribution losses of JVVNL for 2022-23 were 16.80%, we request the Commission to approve a more ambitious Figure for loss reduction. Further, we request the Petitioner to submit circle-wise details of loss reduction initiatives undertaken, with a detailed progress report of the initiatives linked to objective outcomes and their implementation timeline. We request the Petitioner to highlight efforts to target high-loss circles.

## 7. Power Purchase Planning

We submit that consumers bear the burden of inadequacy of coal stocks at thermal power plants with higher tariffs due to power purchase from the exchange. Accordingly, we request the Petitioner to furnish details of whether any accountability measures are instituted against the generation companies for not maintaining adequate stocks of coal necessitating power purchases from the exchange. Further, given the added burden of daytime agricultural supply contributing to the peak demand, we request the Petitioner to provide information regarding the plans for peak load management for the upcoming seasonal peak demand in the summer.

## 8. Energy Balance

-Issue of Higher Intra-state Transmission Losses due to day-time supply to agriculture

The Petitioner provides for an escalation in intra-state transmission losses from 3.31% to 3.80%, pursuant to the Commission's orders on a petition filed by RVPN requesting escalation of losses due to day-time supply to agriculture. Since higher losses are a consequence of a policy decision by the state Government for day-time supply to agriculture, we submit that the State Government bears the burden of the financial impact of their policy decision, and not be allowed to socialise the financial burden across all consumer categories. Socialising the costs across all categories through ARR is against the principles of equity, as the agriculture supply tariff is already least amongst the categories. This shall also have an impact on the tariff and overall sustainability of the sector and reflect poorly on the ease of doing business with increased burden on industrial and non-domestic consumers. We submit that the Commission should not transfer this cost to consumers and direct the Petitioner to take up the issue of additional cost with the State Government.

Recalculation of the Energy Balance based on lower distribution and intra-state transmission losses

Pursuant to the recommendations in point 6 of this submission, the energy input for the Petitioner is recalculated based on the normative distribution loss level (15%) instead of the loss levels of 16.81% for FY 2023 and 16% for FY 2024 claimed by the Petitioner and the intra-state transmission loss in the previous years (3.31%) in Table 7. Higher intra-state transmission loss (3.80%) and distribution losses at (16.81% for FY 2023 and 16% for FY 2024) has resulted in the requirement of additional 986.94 MU in FY 2023, and 686.15 MUs in FY 2024. This leads to the escalation of power purchase cost to the tune of Rs. 306.46 Crores in FY 2023, and Rs. 209.27 Crores in FY 2024, as computed in Table 7.

*Table 7: recalculation of energy input based on normative distribution loss (15%) and intra-state transmission losses in the previous year and the financial impact of state government's policy decision for daytime supply to agriculture*

Energy balance	FY 2023		FY 2024	
	Discom	Our Calculation	Discom	Our Calculation
Total Sales (MUs)	29,245	29,245	32,135	32,135
Distribution Loss %	16.81%	15%	16.00%	15%
Distribution Loss (MUs)	5,909.47	5,160.88	6,121	5,671
Energy Required at Discom Periphery (MUs)	35,154.47	34,405.88	38,255.95	37,805.88
Intra state Transmission loss %	3.80%	3.31%	3.80%	3.31%
Intra-state Transmission Losses (MUs)	1,388.64	1,177.82	1,511.15	1,294.21
Gross Energy Required at State periphery (MUs)	36,543.10	35,583.70	39,767.10	39,100.10
Energy sourced within state (MUs)	28,161	28,161	30,280	30,280
Energy required at state Periphery from inter state sources (MUs)	8,382.10	7,422.70	9,487.10	8,820.10
Inter-state Transmission Losses (%)	2.79%	2.79%	2.79%	2.79%
Inter-state Transmission Losses (MU)	240.57	213.04	272.29	253.14
Energy sourced outside state (MUs)	8,622.68	7,635.74	9,759.39	9,073.24
Gross energy required to be purchased (MUs)	36,783.68	35,796.74	40,039.39	39,353.24
Difference (MUs)		986.94		686.15
Difference %		2.46%		1.74%
Average Power Purchase Cost (Rs. per unit)		3.11		3.05
Difference (Rs. Crores)		306.46		209.27

### 9. Agriculture Feeder Segregation

Feeder segregation we request the Petitioner to provide circle-wise status of the segregation of agriculture feeders as provided in paragraph 13.37 of the present petition.

### 10. Disallow O&M Expenses For Distribution Franchises

The Petitioner requests to provide O&M expenses by including sales to the distribution franchises in paragraph 14.5. However, since JVNVL does not undertake O&M in the distribution franchise area, we request the Commission to deny the same, and not allow O&M expenses for overall sales including the sales made to the distribution franchise area.

### 11. Smart Metering

We request the Petitioner to provide estimates of O&M expenses for smart meters for FY 2023, and further request the Petitioner to assess and provide details of the cost reductions due to billing and collection efficiency gains due to the implementation of smart metering.

#### 12. Schedule For Recovery of Regulatory Assets

The Petitioner has computed the interest liability on unfunded gap for FY 2023 and 2024 in Table 5 of the present petition as Rs. 2,308 Crores and Rs. 2,303 Crores respectively. We request the Petitioner to submit the schedule for recovery of the regulatory assets, and request the Commission to not allow creation of any new regulatory assets for the control period.

#### 13. Reduction of Interest Costs

A four-step approach is described by the Petitioner in paragraph 14.32 of the petition for the reduction of interest costs. We request the Petitioner to provide details of the impact (or expected impact) of these measures and provide quantified results of savings on interest costs.

#### 14. ERP Implementation

The Petitioner in paragraph 11.5 notes the implementation of Enterprise Resource Planning (ERP) for JVVNL. We request the Petitioner to kindly provide details of the status of implementation of ERP, as the same has been long overdue.