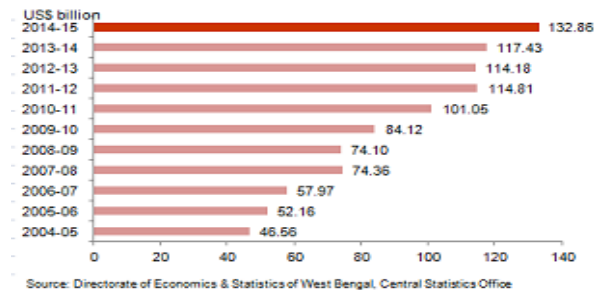


## West Bengal and its Sectors

### West Bengal

- West Bengal is **India's sixth largest economy** and recorded a **gross state domestic product (GSDP)** of **US\$ 132.86 billion** in **2014-15** (See Chart No. 1)<sup>1</sup>
- The **state's GSDP** expanded at a compound annual growth rate (**CAGR**) of **11.06 per cent** from **2004-05** to **2014-15**.

**Chart No. 1**

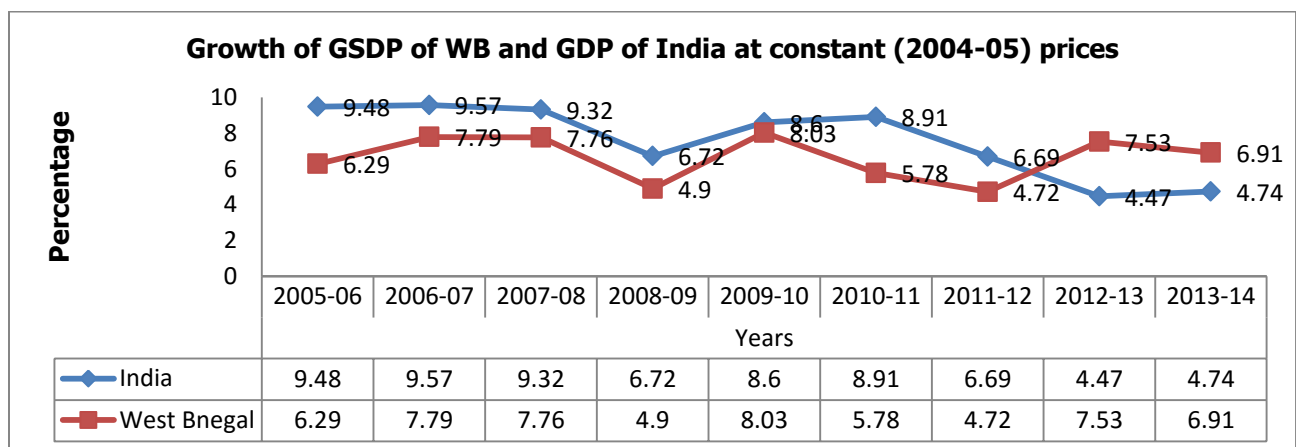


- Going by the Statistics it can be inferred that the GSDP growth of West Bengal is comparatively higher when compared to the GDP growth of India. This is further illustrated through the next Chart (Chart no. 2) which shows the increasing trend of West Bengal's GSDP in comparison to that of Whole of India, for a period of 10 years.

**Chart No. 2**

**Net District Domestic Product for the 4 selected sectors of West Bengal at Constant (2004-2005)**

**Prices**



Source: Ministry of Statistics and Programme Implementation, Government of India, Last Updated on 19<sup>th</sup> August 2015

<sup>1</sup> <http://www.ibef.org/states/west-bengal.aspx>, Accessed on 13<sup>th</sup> May, 2016.

- To arrive at the sectors, that arguably have the highest potential for green transformation in the state of West Bengal, we have started by looking at sectors that contribute majorly to the state economy. As evident from Table No. I, the four sectors that have majorly contributed to West Bengal GSDP consistently over the last decade are:
  - i) Agriculture
  - ii) Tourism
  - iii) Industry and
  - iv) Other Services<sup>2</sup>
- The Sectors that have been sorted above mainly comprise of the Primary, Secondary and Tertiary Sectors of an economy as defined under the *three-sector theory*<sup>3</sup> developed by Colin Clark and Jean Fourastié.

The following tables and Charts would further clarify as to which sectors can be taken into context for further analysis in this current Project.

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<sup>2 2</sup> The concept of “ Other Services” includes in itself the following four categories:

- Sewage and refuse disposal, sanitation and similar activities.
- Activities of Membership organization
- Recreational, cultural and Sporting Activities and
- Other Service Activities.

<sup>3</sup> Three Sector Theory: Is an economic theory which divides economies into three sectors of activity: extraction of raw materials (primary), manufacturing (secondary), and services (tertiary); available at <https://www.quora.com/Which-sector-i-e-primary-secondary-tertiary-contributes-the-most-to-the-GDP-of-India-Why>

**Table No. I****Sectoral Composition of Gross State Domestic Product (GSDP) in West Bengal at Constant (2004-2005) Prices**

(Per cent)

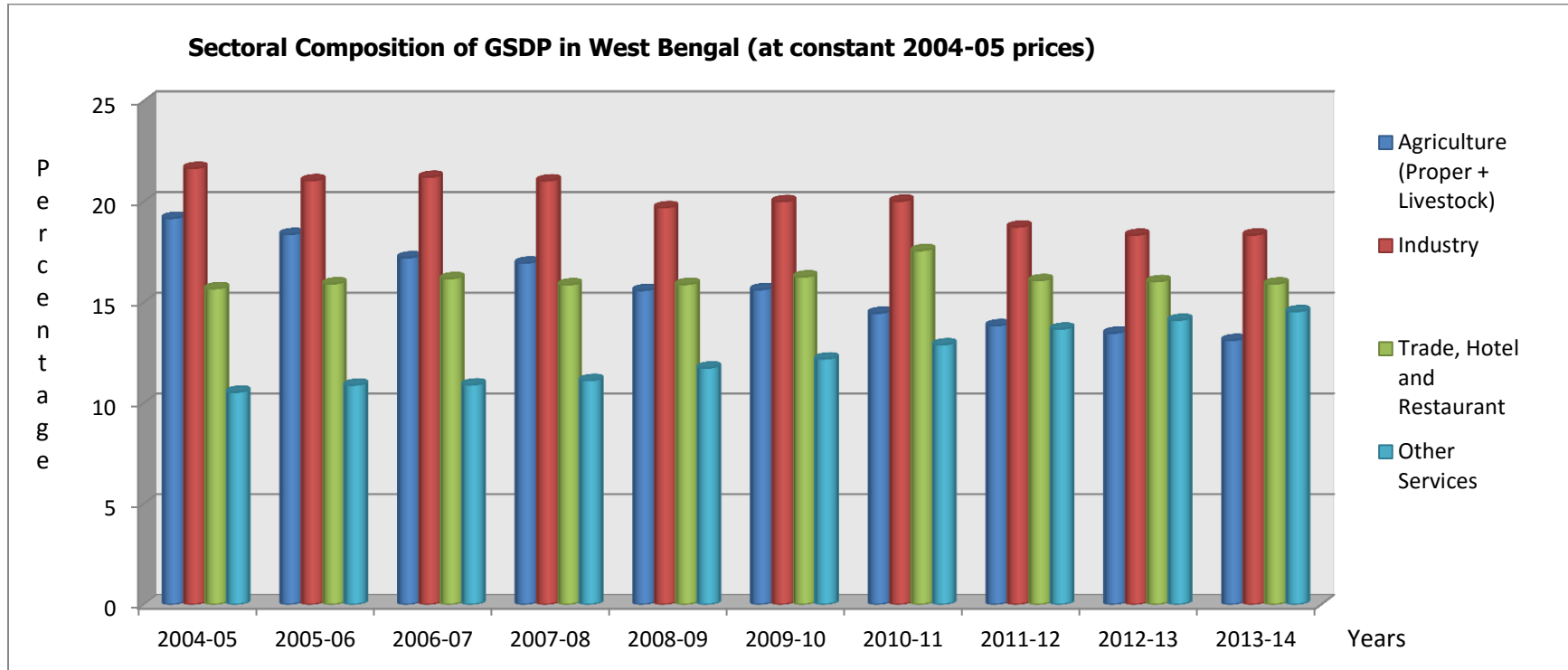
Sl. No.	Sector	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14
<b>1.1</b>	<b>Agriculture (Proper + Livestock)</b>	<b>19.18</b>	<b>18.38</b>	<b>17.22</b>	<b>16.96</b>	<b>15.60</b>	<b>15.64</b>	<b>14.47</b>	<b>13.85</b>	<b>13.48</b>	<b>13.12</b>
1.2	Forestry	1.14	1.08	1.04	1.02	0.98	0.92	0.84	0.83	0.81	0.81
1.3	Fishery	3.61	3.55	3.54	3.51	3.43	3.24	3.01	2.96	2.82	2.68
<b>1</b>	<b>Agriculture and allied</b>	<b>23.93</b>	<b>23.01</b>	<b>21.80</b>	<b>21.49</b>	<b>20.01</b>	<b>19.80</b>	<b>18.32</b>	<b>17.64</b>	<b>17.11</b>	<b>16.61</b>
2.1	Mining and Quarrying	1.37	1.29	1.25	1.01	0.99	0.91	0.82	0.89	0.91	0.90
2.2	Manufacturing (Regd. + Unregd.)	11.14	10.25	10.63	11.15	10.73	11.10	11.17	10.32	10.29	9.99
2.3	Construction	7.16	7.46	7.40	7.02	6.13	6.18	6.21	5.72	5.26	5.39
2.4	Electricity, gas and water supply	1.99	2.05	1.94	1.86	1.86	1.82	1.83	1.82	1.88	2.07
<b>2</b>	<b>Industry</b>	<b>21.66</b>	<b>21.05</b>	<b>21.22</b>	<b>21.04</b>	<b>19.71</b>	<b>20.01</b>	<b>20.03</b>	<b>18.75</b>	<b>18.34</b>	<b>18.35</b>
3	Transport, Storage and Communication	8.91	9.11	9.52	9.89	10.51	9.63	9.92	10.81	11.16	11.23
<b>4</b>	<b>Trade, Hotel and Restaurant</b>	<b>15.69</b>	<b>15.93</b>	<b>16.19</b>	<b>15.88</b>	<b>15.90</b>	<b>16.27</b>	<b>17.58</b>	<b>16.09</b>	<b>16.04</b>	<b>15.92</b>
5.1	Banking and Insurance	6.23	6.70	7.46	8.07	8.07	8.08	8.45	10.01	10.34	10.80
5.2	Real Estate, Ownership of Dwellings and business services	7.53	7.80	7.94	8.02	8.38	8.24	7.68	8.01	8.24	8.32
5	Financing, Insurance, Real Estate and Business services	13.76	14.50	15.40	16.09	16.45	16.32	16.13	18.02	18.58	19.12
6.1	Public Administration	5.50	5.50	4.96	4.48	5.67	5.77	5.12	5.01	4.65	4.22
<b>6.2</b>	<b>Other Services</b>	<b>10.55</b>	<b>10.90</b>	<b>10.91</b>	<b>11.13</b>	<b>11.75</b>	<b>12.20</b>	<b>12.90</b>	<b>13.68</b>	<b>14.12</b>	<b>14.55</b>
6	Community, Social & Personal Services	16.05	16.40	15.87	15.61	17.42	17.97	18.02	18.69	18.77	18.77
	<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

Note: Estimates as on 1<sup>st</sup> August, 2014

Source: Bureau of Applied Economics and Statistics, Department of Statistics and Program Implementation, Government of West Bengal

Live Stock in "Agriculture (Proper+Livestock) includes: Production of Milk, Egg, Meat & Wool and number of animals slaughtered, Sericulture Products, some items of Livestock product/By-product & Slaughtering charges and honey

**Chart No.3**



- Going by the analysis from the Table I, four sectors namely:
  - Agriculture;
  - Trade, Hotel and Restaurant;
  - Industry and
  - Other Services

can be considered for the study, as they have been contributing largely towards the economic growth of the state of West Bengal, over a period of ten years.

- We intend to finally select two sectors for the project. For further shortlisting the sectors, which can be selected for the Green Growth Initiative in the state, we have used two more parameters, namely:
  1. State Budget Allocation
  2. Energy Consumption of the Sectors

### **1. State Budget Allocation and Government focus:**

Following are the state budget allocations for the selected sectors in West Bengal:

**Table No. II**

**State Budget Allocations for the selected sectors in West Bengal:**

Year	Agriculture	Tourism <sup>4</sup>	Industry		
			Small and Medium Scale Industries	Large Industries	Industry (Total)
<b>Budget Allocation (in crores)</b>					
2011-12	40.00	44.00	162.20	286.00	448.20
2012-13	150.46	90.00	286.20	500.00	786.20
2013-14	585.00	120.00	326.20	540.00	866.20
2014-15	1157.72	223.00	536.28	594.00	1130.28
2015-16	1500.00	257.00	618.00	653.50	1271.50

(Source: Available from the State Budget Speeches from 2011-2016 at [www.wbfin.nic.in](http://www.wbfin.nic.in))

The definition of “Other Services” includes in itself the following four categories:

- Sewage and refuse disposal, sanitation and similar activities.
- Activities of Membership organization
- Recreational, cultural and Sporting Activities and

<sup>4</sup> For our study we have selected Trade, Hotels and Restaurants which is a sub sector of the Tourism Sector. This sub-sector has contributed immensely towards the Economic growth of the state, which is pertinent from table no. I. However, there is a dearth of data when it comes to this sub-sector.

- Other Service Activities

The overall state budget allocation in the ‘Other Services Sector’ is not publicly available. However, the same is available for Sports, Youth and Cultural Activities. The table is as follows:

**Table No. III**

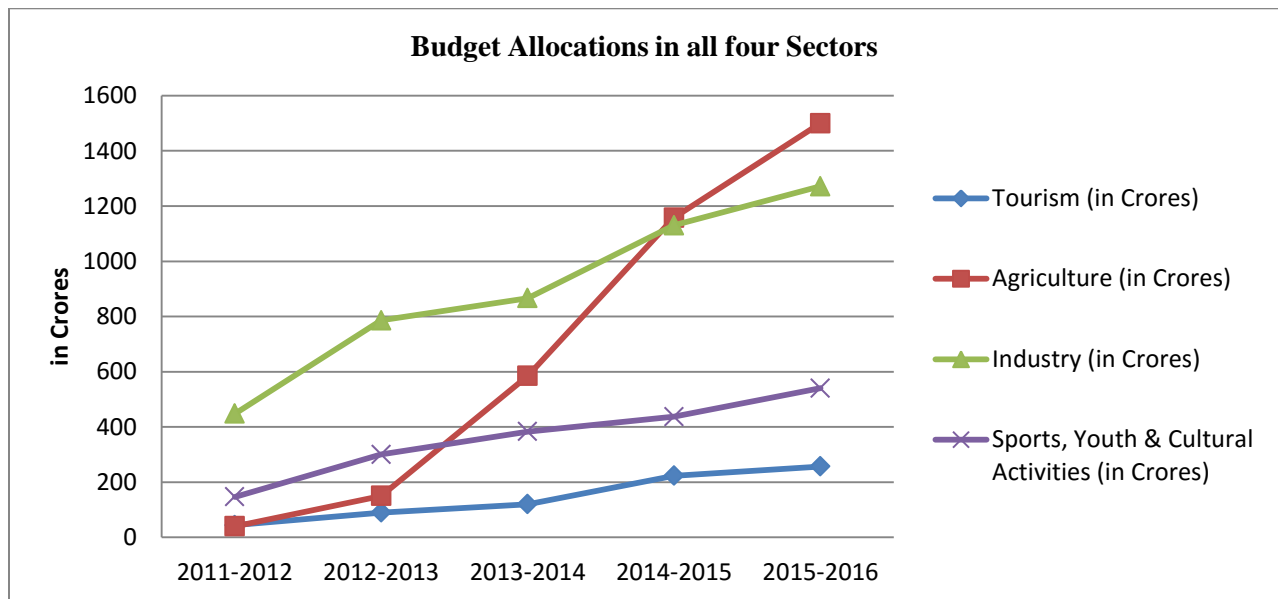
**State Budget Allocations for other services sector in West Bengal:**

<b>Budget Allocation in “Other Service Sector” (in Rs. Crores)</b>			
<b>Year</b>	<b>Sports</b>	<b>Youth</b>	<b>Cultural</b>
2011-12	55.00	30.80	61.00
2012-13	90.01	100.00	110.00
2013-14	113.00	120.00	150.00
2014-15	142.00	130.00	165.00
2015-16	180.00	160.00	200.00

Source: Available from the Budget Speeches from 2011-2016 at [www.wbfin.nic.in](http://www.wbfin.nic.in)

**Chart No.: 3**

**Graphical Representation of the state Budget Allocation for the selected four sectors**



**Table No. IV**

**Comparison of top 7 state outlays and expenditure for 11<sup>th</sup> and 12<sup>th</sup> Plan in the Agriculture Sector:**

(In crore at current prices)

<b>Rank</b>	<b>Name of State</b>	<b>Increase in 12<sup>th</sup> Plan over 11<sup>th</sup> Plan Exp. (%)</b>
1	Bihar	225
2	Goa	221
3	J & K	218
4	Kerala	201
5	Madhya Pradesh	182
6	Manipur	175
<b>7</b>	<b>West Bengal</b>	<b>157</b>

Source: 12<sup>th</sup> Five year plan, Volume II

**Key Facts:**

- West Bengal **ranks 7<sup>th</sup>** (amongst all the 28 states) for the percentage increase in the Agriculture Sector in the 12<sup>th</sup> Five year plan over the 11<sup>th</sup> Plan expenditure. **Planned Expenditure of agriculture in West Bengal** has experienced a threefold increase: **1145 crores (2010-11) to 3748 crores (2015-16)**.
- **India's Industrial Growth Rate in 2012-13 was 3.12%**, whereas **West Bengal's Industrial Growth Rate in 2012-13 was 6.24%**.
- Current Statistics depict that in **2014**, the **Tourism Industry** has generated an income which amounted for **9%** of the **India's Total GDP<sup>1</sup>**. Further this sector has also been noted to have provided with lots of job opportunities amounting to **27.7 crore** job profiles as of **2014<sup>1</sup>**.
- The "**other Service Sector**" in **2014-15**, contributed **60.2 per cent** to the **state's GSDP** at factor cost (including Tourism).

**Conclusion:**

- Going by the state budget allocations for the state of West Bengal, it can be said that the Agriculture sector over the years have been in good focus of the state government. From a meagre budget allocation of **INR 40 crores** in **2011-'12**, the sector got a massive

budget allocation of **INR 1500 crores** in **2015-'16**. No other sectors in West Bengal have seen such a massive increase in budget allocation over the last five years.

- The industry sector comes a close second, experiencing a state budget allocation of **INR 1271.50 crores** in **2015-'16**. In the state of West Bengal, the **small and medium scale industries** have been in good focus of the state, which is quite pertinent from the fact that almost **49%** of the **state budget allocation** in **2015-'16**, which amounted to **INR 618 crores**, has been allocated to this sub-sector. This is a considerable rise from the share of state budget allocation for this sub-sector in **2011-'12** which was **INR 162.20 crores** (Approx. 36% of the total share of budget allocation of the industry sector for that year).
- The tourism sector too experienced an **almost six (6) folds increase** in its state budget share from **2011-'12**, when it was **INR 44 crores**, to **INR 257 crores** in **2015-'16**.

## **2. Energy Consumption:**

- As is expected, the recorded sales of power in the state have been the maximum for the industry sector.
- The same data for the tourism sector and the other services sector are not publicly available.

**Table No. V**

### **Total Sales of Power in West Bengal: Share of Agriculture and Industry Sector**

	<b>Agriculture Sector</b>		<b>Industry Sector</b>	
	<b>West Bengal</b>	<b>India</b>	<b>West Bengal</b>	<b>India</b>
2007-08	6.99	22.54	32.68	34.51
2008-09	4.80	22.41	32.14	33.68
2009-10	6.72	23.17	29.09	32.17
2010-11	8.35	21.58	29.27	32.98
2011-12 (P)	5.84	22.70	31.68	32.73
2012-13 (RE)	5.05	23.28	27.58	31.43
2013-14 (AP)	6.47	22.45	30.76	30.93

**Abbr: RE- Revised Estimate, AP- Annual Plan, P-Provisional.**

**Source: Power and Energy Division, Planning Commission, GoI**



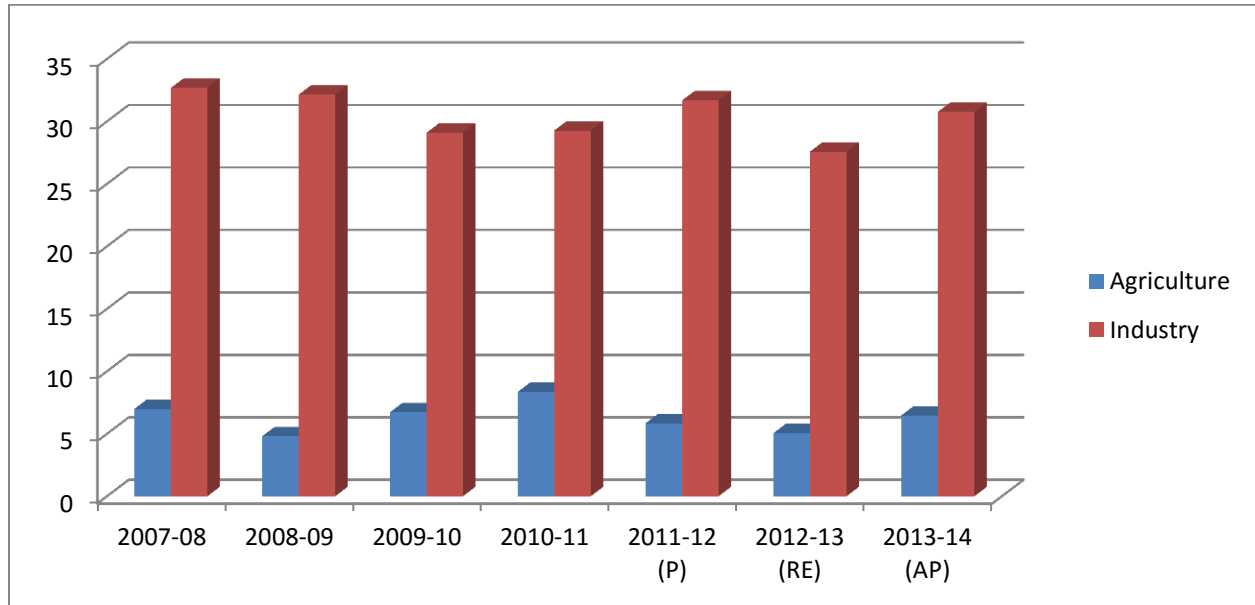
**Table No. VI**

<b>Forecast of Electrical Energy Consumption in Agriculture sector in WB as a percentage of National Electrical Energy Consumption (in MU)</b>	
<b>Years</b>	<b>% share of West Bengal</b>
2012-13	1.12
2013-14	1.14
2014-15	1.15
2015-16	1.17
2016-17	1.17

Source: Lok Sabha Unstarred Question No. 5856, dated on 02.05.2013

**Chart No.: 4**

**Graphical Representation of the sales of power in Industry and Agriculture sectors of West Bengal**



As per the tariff notification of the West Bengal State Electricity Regulatory Commission (WBERC) dated: 10.08.2015, for the year 2015-16, the energy charges and the fixed charges of the selected sectors are as follows:

Type of Consumer	Name of Tariff scheme	Applicable tariff scheme			
		Monthly consumption in kWh		Energy Charge ps/kWH	Fixed charge/Demand Charge* in Rs/kVA/month
Irrigation pumping for Agriculture (Metered)	Normal TOD <sup>5</sup>	06.00 hrs to 17.00 hrs	All units	403	20
		17:00 hrs to 23:00 hrs	All units	778	
		23:00 hrs to 06:00 hrs	All units	261	
Public Water Works & Sewerage System	Normal	On all Units		675	30
Industry (Rural)	Normal	First	500	600	30
		Next	1500	720	
		Above	2000	745	
Industry (Urban)	Normal	First	500	610	30
		Next	1500	735	
		Above	2000	765	
Industrial consumers (50 KVA and above but upto 125 KVA)	Normal	All Units		657	255
Industries (11 KV)	Normal	All Units	Summer	687	320
			Monsoon	686	
			Winter	685	
Industries (33 KV)	Normal	All Units	Summer	669	320
			Monsoon	667	
			Winter	665	
Industries (132 KV)	Normal	All Units	Summer	667	320
			Monsoon	665	
			Winter	663	

<sup>5</sup> TOD – Time of Day

## **Conclusion:**

- In West Bengal, the agriculture sector has recorded much lesser sales of power as compared to the industry sector.
- The major power consumption in the agriculture sector happens in irrigation, which includes pumping.
- In West Bengal, the agriculture still enjoys more benefits when it comes to the power tariff, and the tariff is expectedly lesser as compared to the public water works & sewerage system (under the other services sector) and the industries sector.
- Our analysis suggests that the selected four sectors have been immensely crucial to the economic development of our state. The energy consumption and usage pattern of these sectors will be the key towards further shortlisting the sectors. However, as only the sales of power of two sectors (Agriculture and Industry) are available, further shortlisting will be done after the Round Table Conference to be held on 18<sup>th</sup> June in Kolkata.