

Analysis and Interpretation of different companies in energy sector

FAC Project 2

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Power Sector: Industry Overview

- Power is one of the most important infrastructure elements, essential to national wellbeing and economic development.
- For the Indian economy to grow steadily, enough electrical infrastructure must exist and be developed.
- Indian power sector is undergoing a significant change that has redefined the industry outlook. Sustained economic growth continues to drive electricity demand in India.
- The Government of India's focus on attaining 'Power for all' has accelerated capacity addition in the country.
- India is the third-largest producer and consumer of electricity worldwide, with an installed power capacity of 401.01 GW, as of April 2022.

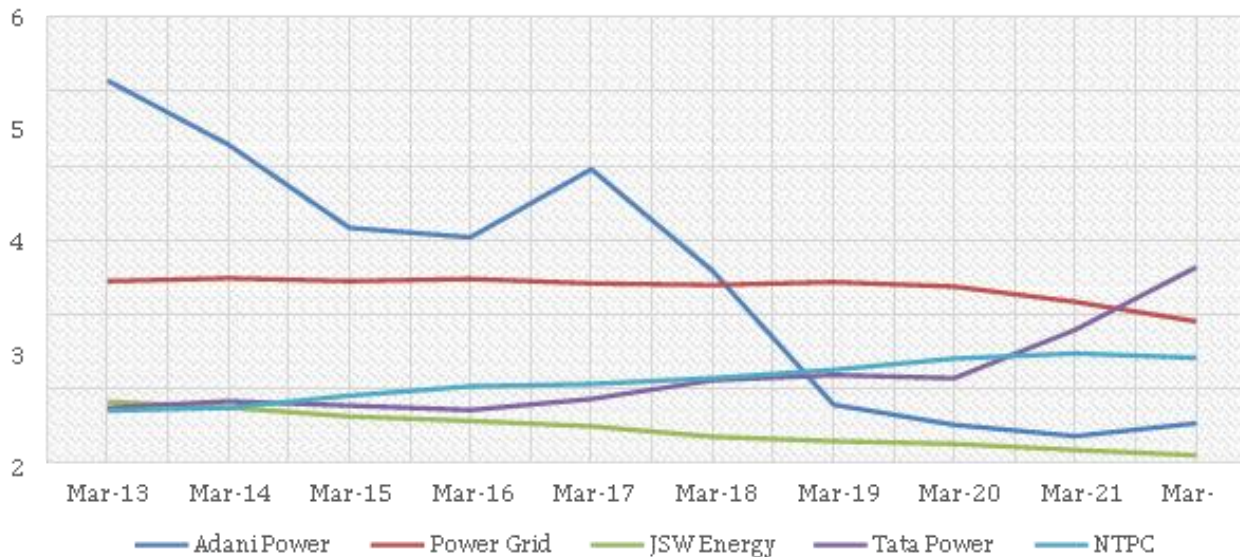
Companies under Study

- Tata Power
- Adani Power
- PowerGrid
- NTPC
- JSW Energy

1)Debt to Equity Ratio

companies	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22
Adani Power	5.15	4.29	3.17	3.04	3.96	2.59	0.79	0.52	0.37	0.54
Power Grid	2.45	2.49	2.45	2.48	2.42	2.4	2.44	2.38	2.17	1.91
JSW Energy	0.83	0.75	0.63	0.57	0.5	0.36	0.3	0.26	0.18	0.11
Tata Power	0.75	0.84	0.78	0.72	0.87	1.12	1.19	1.15	1.8	2.64
NTPC	0.71	0.75	0.91	1.04	1.07	1.15	1.26	1.41	1.48	1.42

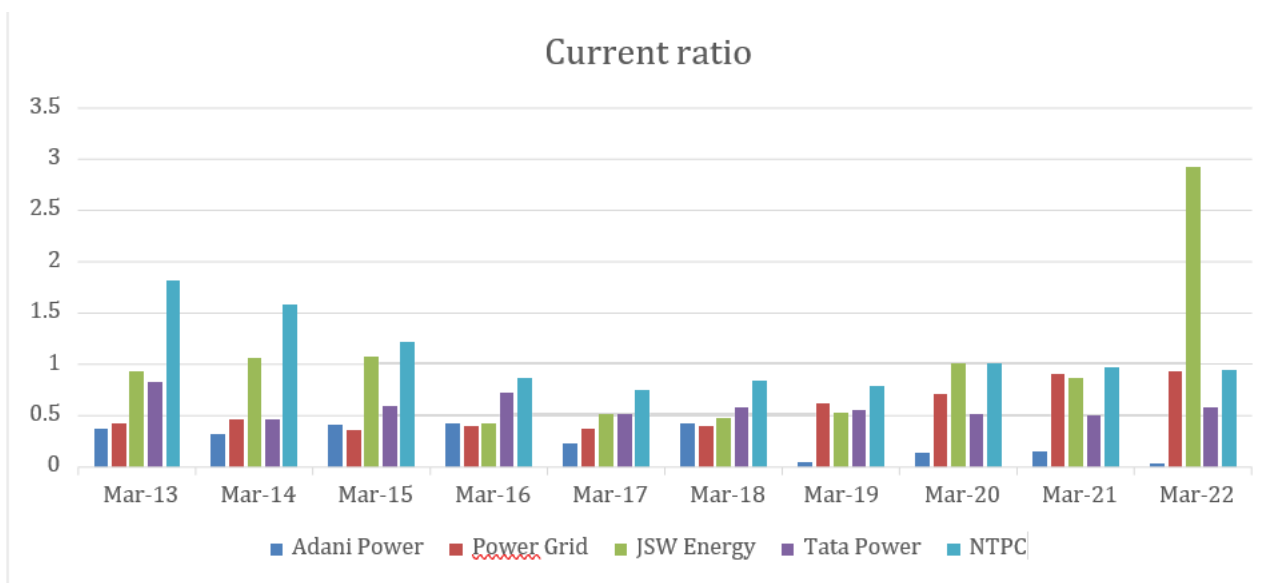
Debt to Equity Ratio



- **Adani power's D/E ratio in the year 2013 and 2017** is very high as compared to its peers. It means the company has been aggressive in its growth and is using more debt financing than equity financing.
- **D/E ratio of more than 1.0** suggests that a company has more debt than assets, while a **D/E ratio of less than 1.0** means that a company has more assets than debt.

2) Current Ratio

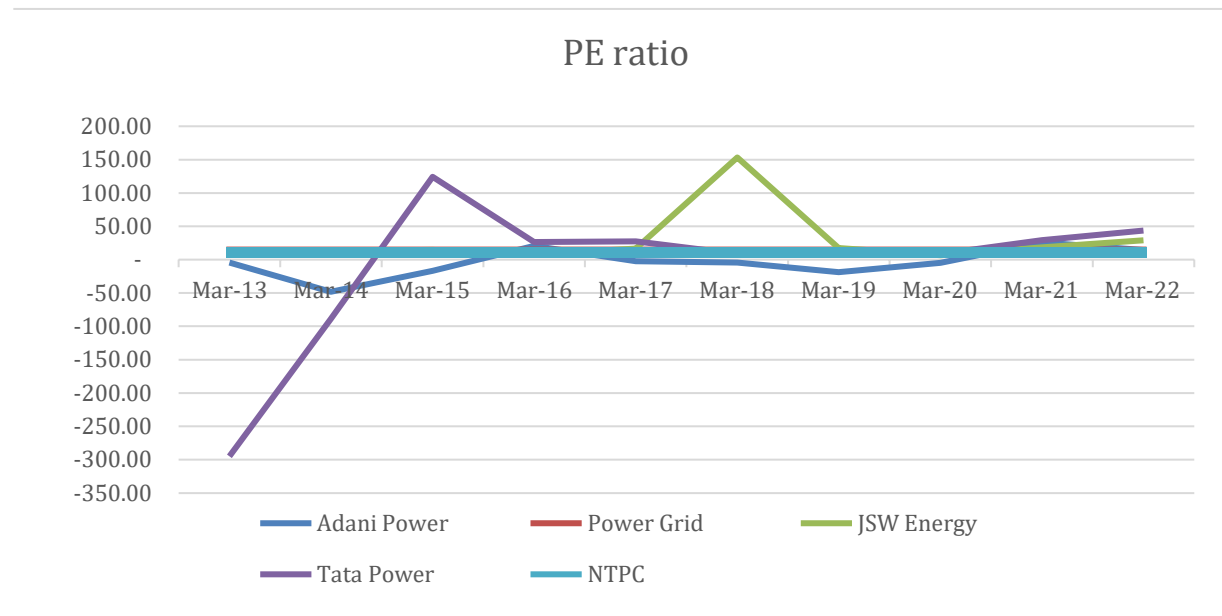
Companies	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22
Adani Power	0.37	0.32	0.41	0.42	0.23	0.43	0.05	0.14	0.15	0.04
Power Grid	0.43	0.47	0.36	0.4	0.38	0.4	0.62	0.71	0.91	0.94
JSW Energy	0.93	1.06	1.08	0.42	0.51	0.48	0.53	1.01	0.87	2.92
Tata Power	0.83	0.46	0.59	0.72	0.52	0.58	0.55	0.51	0.5	0.58
NTPC	1.82	1.58	1.22	0.87	0.75	0.84	0.79	1.01	0.97	0.95



- A ratio under **1.00** indicates that the company's due in a year or less is greater than its assets cash or other short-term assets expected to be converted to cash within a year or less.
- Adani Power is constantly below 1, meaning that the current liabilities are more than the current assets. This suggests that the company would be unable to pay off its obligations if they came due at that point.

3) Price to Earning Ratio

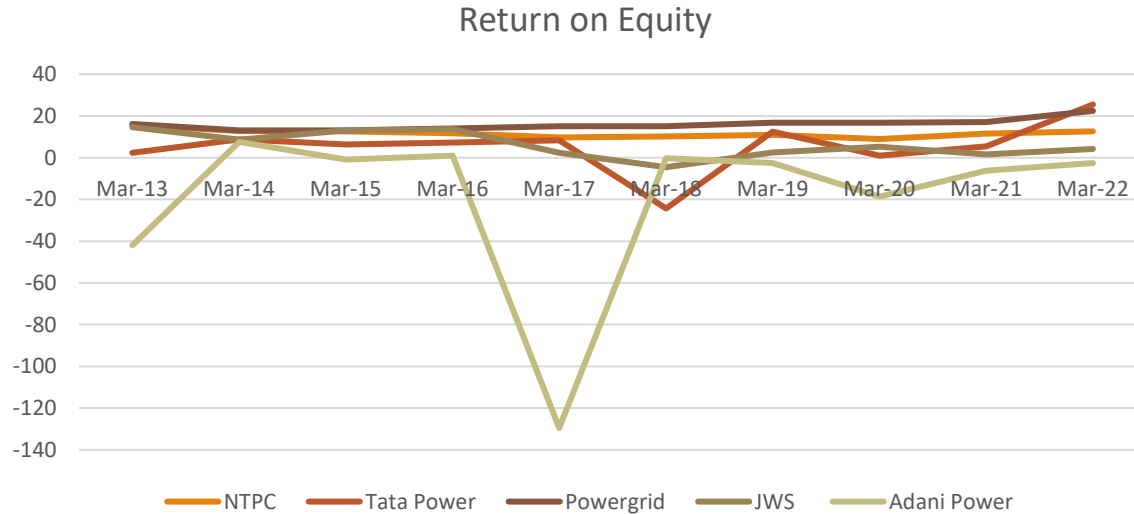
Company	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22
Adani Power	- 4.24	- 48.04	- 16.65	20.85	- 2.49	- 4.35	18.88	- 4.71	25.83	14.54
Power Grid	11.36	12.08	15.06	12.21	13.85	12.32	10.32	7.53	9.37	8.99
JSW Energy	9.93	12.88	14.49	7.88	16.35	153.13	17.14	6.38	18.14	28.74
Tata Power	-294.88	-88.61	124.25	26.4	27.26	8.87	8.47	8.73	29.26	43.79
NTPC	9.3	8.67	12.12	9.84	12.77	13.27	9.7	7.18	7.06	7.85



- Adani power's P/E ratio is negative, which means that company is losing money for all these years. Only for the year 2016, 2021, and 2022 company is in profit.
- PowerGrid's PE ratio is quite stable compared to Adani power. Also, its P/E ratio is lesser than the industry average. It means that Shareholders are not much excited about this stock.

4)Return on Equity

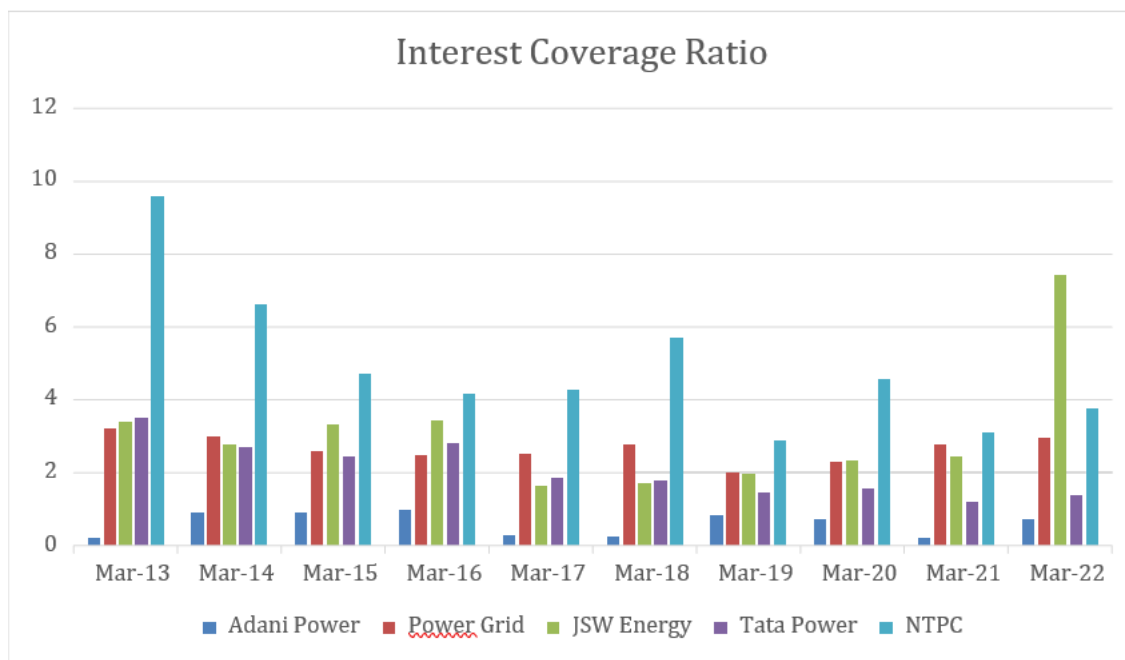
Company	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22
NTPC	15.69	12.78	12.6	11.79	9.75	10.16	10.93	8.9	11.57	12.58
Tata Power	2.39	8.82	6.42	7.26	8.35	-24.25	12.46	1.07	5.45	25.57
Powergrid	16.13	13.05	13.04	14.1	15.09	15.14	16.84	16.77	17.15	22.44
JWS	14.66	8.6	13.09	13.75	2.32	-4.49	2.47	5.29	1.6	4.22
Adani Power	-41.98	7.64	-0.88	1.06	-129.55	-0.24	-2.46	-18.68	-6.17	-2.48



- According to our research it is evident that the company which has higher ROE is performing better in the industry.

5)Interest Coverage Ratio

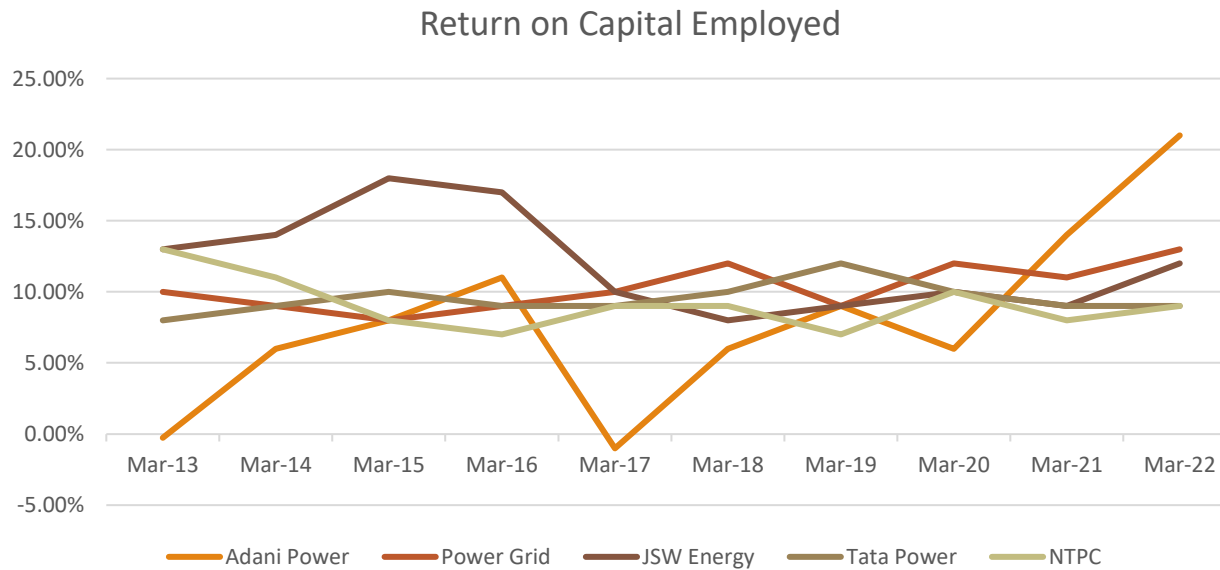
Companies	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22
Adani Power	0.2	0.9	0.89	0.99	0.28	0.24	0.82	0.71	0.22	0.73
Power Grid	3.23	2.98	2.58	2.47	2.52	2.79	1.99	2.29	2.77	2.96
JSW Energy	3.4	2.79	3.31	3.43	1.63	1.71	1.95	2.32	2.46	7.44
Tata Power	3.49	2.72	2.45	2.8	1.86	1.78	1.44	1.58	1.19	1.4
NTPC	9.58	6.64	4.71	4.17	4.26	5.71	2.87	4.55	3.1	3.77



- The interest coverage ratio is a debt and profitability ratio used to determine how easily a company can pay interest on its outstanding debt.
- The more debt principal that a company has on its balance sheet, the more interest expense the company will owe to its lenders — all else being equal.

6)Return on Capital Employed

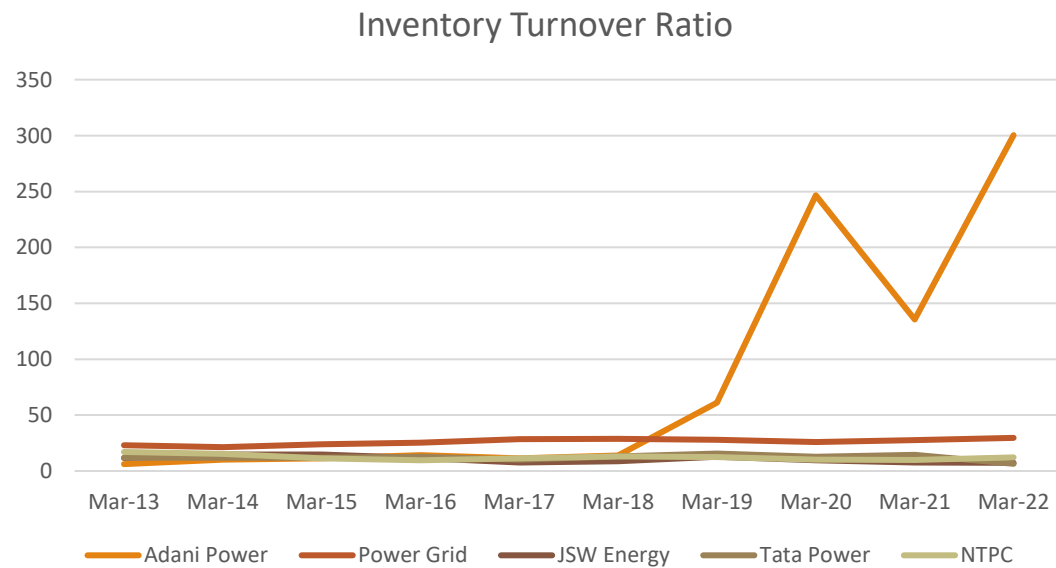
Company	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22
Adani Power	-0.26%	6%	8%	11%	-1%	6%	9%	6%	14%	21%
Power Grid	10%	9%	8%	9%	10%	12%	9%	12%	11%	13%
JSW Energy	13%	14%	18%	17%	10%	8%	9%	10%	9%	12%
Tata Power	8%	9%	10%	9%	9%	10%	12%	10%	9%	9%
NTPC	13%	11%	8%	7%	9%	9%	7%	10%	8%	9%



- Company with higher ROCE is better with converting its investment to profit.
- Excluding Adani power all above mentioned companies have a decent and stable ROCE, most of them have ROCE in the range between 7-17 over years.

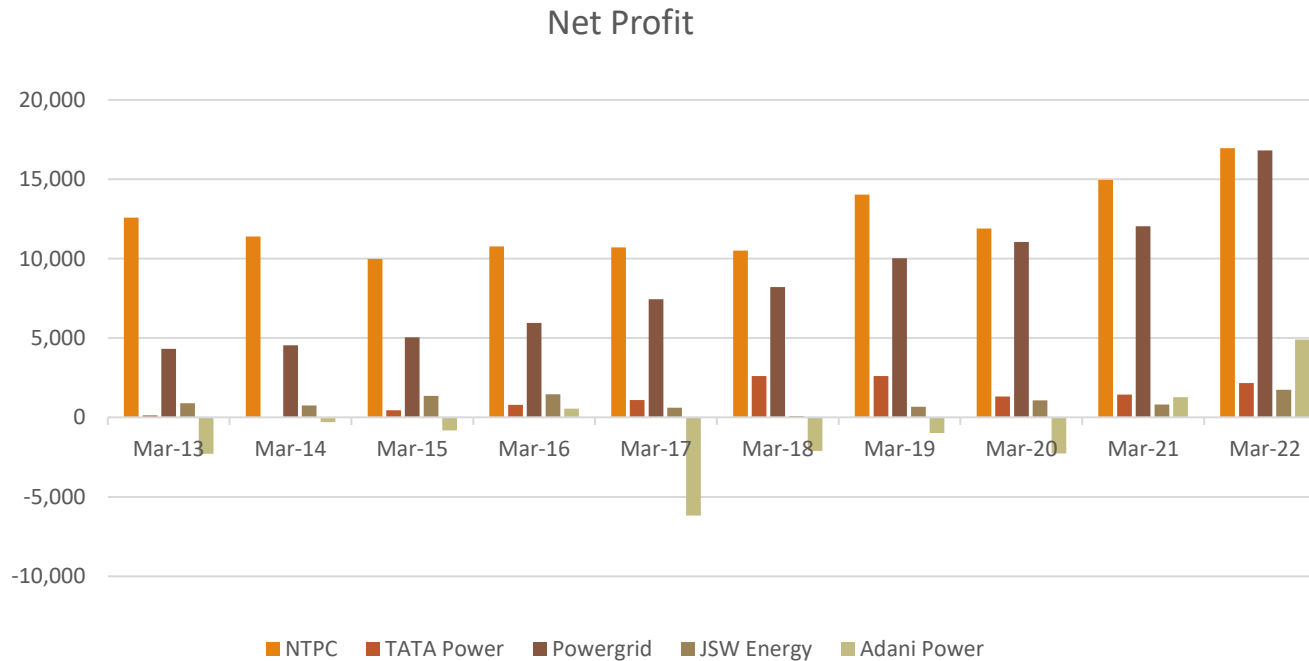
7) Inventory Turnover Ratio

Companies	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22
Adani Power	6.09	10.03	11.28	14.2	11.35	14.01	61.04	246.7	135.51	300.42
Power Grid	23.13	21.38	23.93	25.26	28.35	28.65	27.82	25.84	27.64	29.52
JSW Energy	11.46	14.78	14.83	11.52	7.73	8.81	12.82	9.7	7.46	7.2
Tata Power	11.92	11.81	11.96	12.81	10.18	13.16	15.67	12.72	14.5	6.4
NTPC	16.94	15.19	11.38	9.68	11.42	13.04	12.52	10.21	9.79	12.18



- Inventory turnover is a great indicator of how a company handles its inventory.
- **When Inventory Turnover Ratio is High** – It means that the company has been managing its inventory quite well, and there are lesser holding costs and fewer chances of obsolescence.
- **When Inventory Turnover Ratio is Low** – If a company's inventory turnover is very low, its products are not often sold in the market. As a result, the company's inventory becomes a slow-moving inventory, which leads to higher inventory costs and fewer profits.

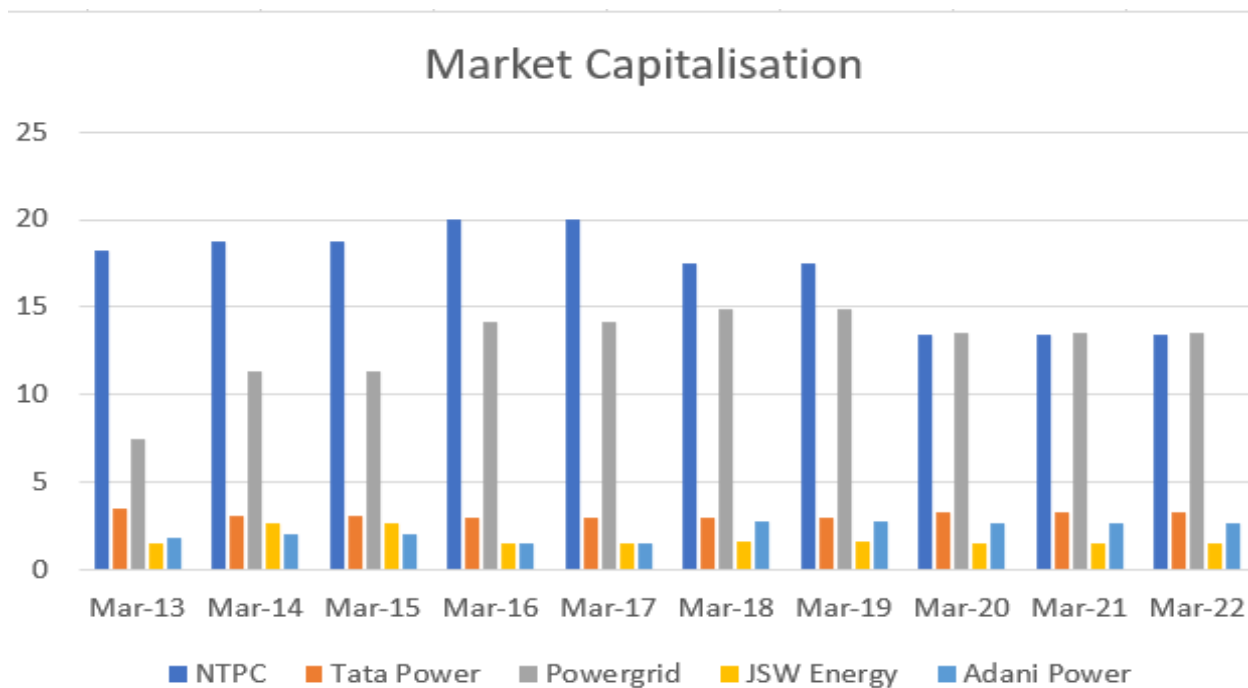
8) Net Profit



- **NTPC:** The net profit hike of NTPC is not that great as compared to its other competitors but it shows a positive trend over the years.
- **Tata Power:** The net profit hike of tata power is greatest when compared to its competitors but it is like it is rising every year investors generally invest in these types of companies It started from the year 2013 and now stands at 2156 in the year 2022. It is a 1652.846 % increase.
- **PowerGrid:** The net profit of the company is improving year over year.
- **JSW Energy:** The Net Profit in the year 2013 was 901 and now it is 1743, percentage hike is 93.45%.
- **ADANI POWER:** The company's revenue position was very volatile since 2013 to 2020. In between, 2016 was the only year where the made profit.

9) Market Capitalization

Company	Mar-13	Mar-14	Mar-15	Mar-16	Mar-17	Mar-18	Mar-19	Mar-20	Mar-21	Mar-22
NTPC	18.25	18.74	18.74	19.99	19.99	17.52	17.52	13.43	13.43	13.43
Tata Power	3.5	3.07	3.07	3.01	3.01	2.96	2.96	3.3	3.3	3.3
Powergrid	7.46	11.39	11.39	14.12	14.12	14.88	14.88	13.57	13.57	13.57
JSW Energy	1.49	2.65	2.65	1.46	1.46	1.61	1.61	1.52	1.52	1.52
Adani Power	1.81	2	2	1.47	1.47	2.8	2.8	2.62	2.62	2.62



- NTPC is large cap firm with a market capitalisation of 1.59 trillion. Its market cap in 2022 is 13.43 billion, whereas in ten years back in 2013 it was valued at 18.25 billion Which means there is a difference of 4.82 billion. Market cap of NTPC in last ten years has reduced by around 26%.
- Its market cap in 2013 was 7.46. Company has shown a significant growth within past ten years.
- The remaining three companies that is Tata Power, JSW Energy and ADANI Power are the very stable through out the tenure of ten years.

Future prospects

- In the current decade (2020-2029), the Indian electricity sector is likely to witness a major transformation with respect to demand growth, energy mix and market operations.
- The Government of India is preparing a 'rent a roof' policy for supporting its target of generating 40 gigawatts (GW) of power through solar rooftop projects by 2022. It also plans to set up 21 new nuclear power reactors with a total installed capacity of 15,700 MW by 2031.
- The Central Electricity Authority (CEA) estimates India's power requirement to grow to reach 817 GW by 2030. The government plans to establish renewable energy capacity of 500 GW by 2030.