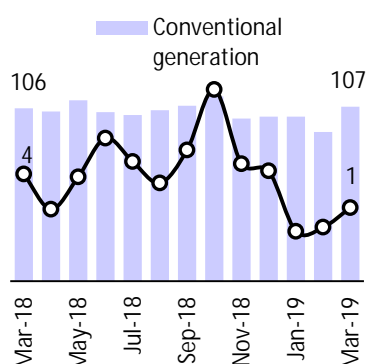
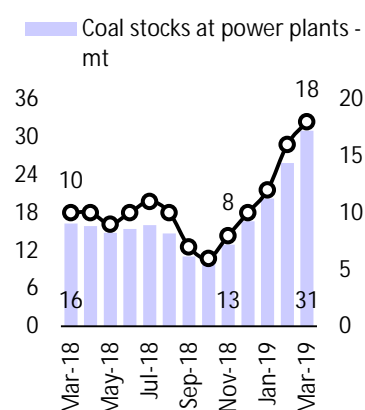


## All-India conventional electricity generation (b kWh)



## Coal stocks at power plants



## Power demand muted, NTPC's PAF improving though

### Coal stocks at power plants increase to 18 days

### Conventional generation up 1% YoY in Mar'19

Conventional electricity generation increased by just 1% YoY in Mar'19 (YTD +3.6%). Coal generation was weak (down ~1% YoY), while hydro generation was healthy (+26% YoY).

### Total generation up 1.1% YoY in Feb'19

Including renewable energy (RE), generation grew 1.1% YoY in Feb'19 (+4.5% YoY for 11MFY19). RE represented 8.5% of India's generation in 11MFY19 – accounting for ~22% share of incremental generation.

### Coal stocks improving

Coal stocks at power plants improved to 18 days in Mar'19 v/s 16 days in Feb'19 and just 6 days in Oct'18.

Overall, dispatches from Coal India (COAL) were up 8% YoY (YTD: +4.8%) to 59.7mt in Mar'19. COAL's coal production rose 9.6% YoY (YTD: +7%) to 79.2mt.

### IEX volumes lower

Volumes on the IEX stood at 3.4b kWh (-15% YoY). On a trailing 12-month (TTM) basis though, volumes were up 12%. Average prices stood at INR3.12/kWh (v/s INR3.08 in Feb'19).

### Plant availability improving at NTPC

Availability at some NTPC plants improved — Unchahar-IV TPS (Mar'19: 71% v/s Mar'18: 0%) and Mauda-II (Mar'19: 104% v/s Feb'18: 60%). This would help reduce fixed-charge under-recoveries.

## Exhibit 1: Power & Coal – Key snapshot

	FY17	FY18	YTD FY19	Mar-19
<b>Total generation growth (%)</b>	5.8	5.4	4.5*	NA
Conv. Generation growth (%)	4.7	4.0	3.6	1.0
RE generation growth (%)	25.1	23.9	12.9*	NA
<b>All India Peak Demand (GW)</b>	158	161	176	169
<b>Capacity addition (GW)</b>	23.4	18.5	6.3**	NA
Net Coal	5.5	6.5	0.3*	0.6
Solar	5.5	9.4	4.4**	NA
Wind	5.4	1.8	1.2**	NA
IEX traded volumes growth (%)	16.9	12.6	11.7	-15.1
IEX avg. prices (INR/kWh)	2.4	3.3	4.0	3.1
Coal receipts by Power Plants, growth (%)	-0.1%	6.1%	8.1%*	NA
Coal cons. by Power Plants, growth (%)	5.4%	5.8%	3.8%*	NA
Coal stocks at Power plants (days)	19	10	18	18
Coal India Dispatches, growth (%)	2.0%	6.9%	4.8%	8.2%
Coal India Production, growth (%)	3.2%	2.4%	7.0%	9.6%

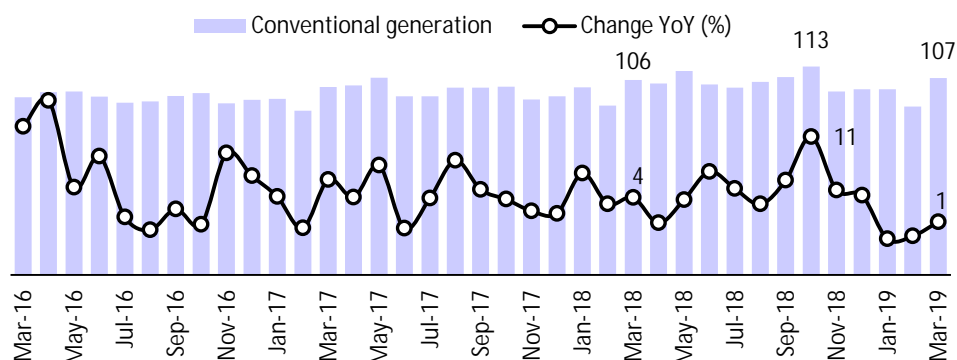
Note: Data for 12mFY19; \* indicates data for 11mFY19; \*\* indicates data for 10mFY19

Conventional electricity generation increased 1% YoY in Mar'19.

## Generation

Conventional generation increases 1% on muted thermal offtake

Exhibit 2: All-India conventional electricity generation (b kWh)



Source: MOFSL, CEA

Exhibit 3: Conventional electricity generation (m kWh) and PLF (%) by fuel source

	Monthly		Year to date	
	Mar-19	YoY %	Mar-19	YTD YoY %
<b>Thermal</b>				
Generation	94,828	-0.9	1,071,699	3.3
PLF	57	-65bps	55	165bps
<b>Coal</b>				
Generation	87,875	-0.5	987,225	3.7
PLF	62	-61bps	59	187bps
<b>Lignite</b>				
Generation	3,153	-3.0	34,503	-1.0
PLF	68	-99bps	63	39bps
<b>Gas</b>				
Generation	3,785	-6.7	49,846	-0.7
PLF	20	-145bps	23	-15bps
<b>Others</b>				
Generation	14	-43.1	126	-51.8
<b>Hydro</b>				
Generation	8,834	26.2	135,039	7.1
PLF	26	538bps	34	217bps
<b>Nuclear</b>				
Generation	3,249	2.7	37,612	-2.0
PLF	64	169bps	63	-129bps
<b>All India (conventional)</b>				
Generation	106,911	1.0	1,244,350	3.6
PLF	52	40bps	52	166bps

Source: CEA

Coal-based generation decreased 0.5% YoY in Mar'19, while hydro generation was up ~26% YoY.

All-India PLF was ~40bp higher YoY at 52% in Mar'19.

## Exhibit 4: Conventional electricity generation by ownership – m kWh

Generation declined for plants owned by states, while generation for central and privately owned plants was higher YoY.

NTPC's S/A coal-based generation decreased ~2% YoY in Mar'19.

	Monthly		Year to date	
	Mar-19	YoY %	Mar-19	YTD YoY %
<b>Central</b>	<b>40,153</b>	<b>4.0</b>	<b>460,928</b>	<b>2.5</b>
Thermal	33,457	1.4	368,079	3.4
Coal	29,944	1.8	328,296	4.1
Gas	1,644	-2.8	19,579	-3.7
Other	1,868	0.4	20,204	-1.7
Hydro	3,447	40.6	55,142	0.2
Nuclear	3,249	2.7	37,706	-1.7
<b>State</b>	<b>33,953</b>	<b>-7.6</b>	<b>401,111</b>	<b>6.2</b>
Thermal	29,197	-10.5	334,921	4.4
Coal	27,847	-10.4	315,726	4.9
Gas	1,012	-18.0	15,953	-2.7
Other	339	7.7	3,242	-4.5
Hydro	4,756	15.6	66,190	16.1
<b>Private</b>	<b>32,804</b>	<b>7.5</b>	<b>382,720</b>	<b>2.4</b>
Thermal	32,174	7.0	369,012	2.5
Coal	30,084	8.1	335,022	-0.1
Gas	1,129	0.0	13,618	1.0
Other	961	-12.7	20,372	82.7
Hydro	631	45.7	13,708	-2.8
<b>Total</b>	<b>106,911</b>	<b>1.0</b>	<b>1,244,758</b>	<b>3.6</b>
NTPC coal (s/a)	20,201	-2.3	238,252	3.8
Private share %	30.7	187bps	30.7	-38bps

Source: CEA

## Exhibit 5: All-India generation (Conventional + RE) – m kWh

All-India generation (incl. RE) grew 1.1% YoY in Feb'19 and 4.5% YoY in 11MFY19.

RE's share increased 158bp YoY to 9.2% in Feb'19.

	Monthly		Year to date	
	Feb-19	YoY %	Feb-19	YTD YoY %
<b>All-India Generation</b>	<b>100,620</b>	<b>1.1</b>	<b>1,242,671</b>	<b>4.5</b>
RE	9,219	22.2	105,232	12.9
Conventional	91,401	-0.6	1,137,439	3.8
Coal-based	75,479	-1.3	899,349	4.2
RE share %	9.2	158bps	8.5	63bps
RE incr. share %			22.3	

Source: MOFSL, CEA

## Capacity additions

### Renewable capacity addition outpacing thermal

#### Conventional capacity addition: 2.3GW in 11MFY19

Exhibit 6: Capacity addition as monitored by CEA

Month	Promoter	Plant	Unit	Type	Capacity MW	Location (State)
Dec-18	Telangana	Kothagudem	U-12	Thermal	800	Telangana
Nov-18	Madhya Pradesh	Shree Singaji	U-3	Thermal	660	Madhya Pradesh
Oct-18	Essar	Mahan	U-2	Thermal	600	Madhya Pradesh
Sep-18	Telangana	Pulichintala	U4	Hydro	30	Telangana
May-18	NEEPCO	Pare	U-1 to 7	Hydro	110	Arunachal Pradesh
Apr-18	Assam	Lakwa	U-1 to 7	Thermal	70	Assam

Source: MOFSL, CEA

#### Conventional capacity retirement: 1.9GW in 11MFY19

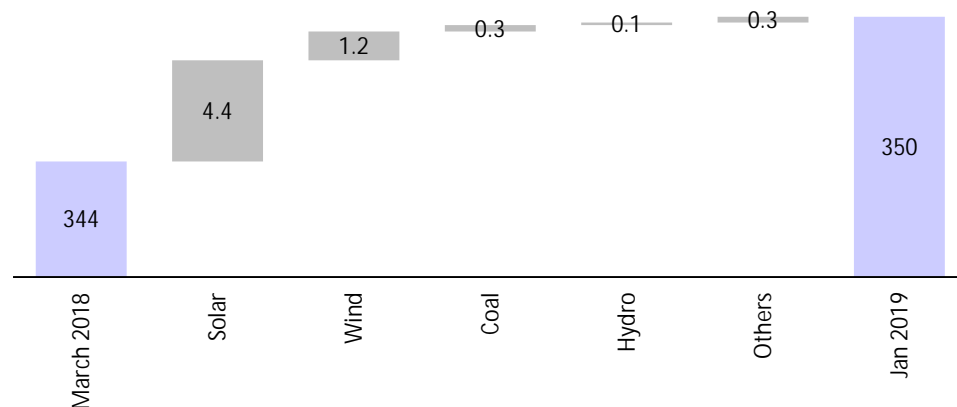
Exhibit 7: Capacity retirement/conversions as monitored by CEA

Month	Promoter	Plant	Unit	Type	Capacity MW	Location (State)
Feb-19	Neyveli	NNTPP	U-7	Thermal	100	Tamil Nadu
Dec-18	GMR	Basin Bridge	U-1 to 4	Thermal	200	Tamil Nadu
Oct-18	NTPC	Badarpur	U-1 to 5	Thermal	705	Delhi
Aug-18	Punjab	GND Bhatinda	U-1 to 4	Thermal	440	Punjab
Aug-18	Punjab	Ropar	U-1&2	Thermal	420	Punjab
Jul-18	Assam	Lakwa	U-2&3	Thermal	30	Assam

Source: MOFSL, CEA

Exhibit 8: Net capacity addition during 10MFY19 - GW

Net capacity addition during 10MFY19 was ~6.3GW, led by solar and wind-based capacities



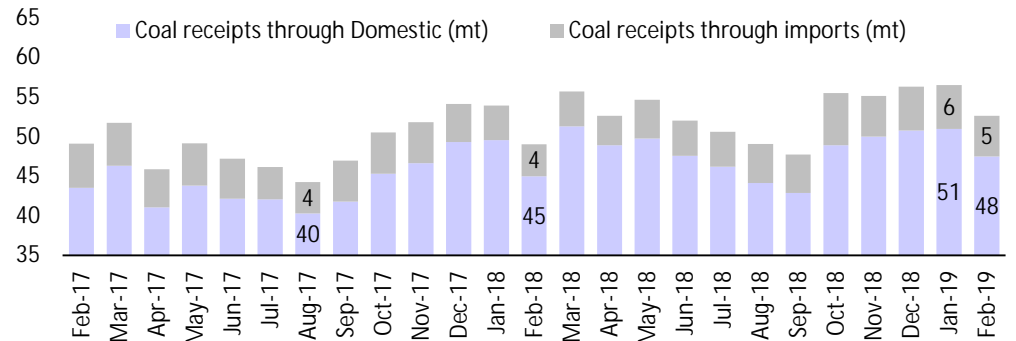
Source: MOFSL, CEA

## Coal stocks

Coal stocks increased on higher receipts and lower demand

Coal receipts for the power sector were up 7.3% YoY (+8.1% YTD) to 52.7mt (583 mt YTD) in Feb'19

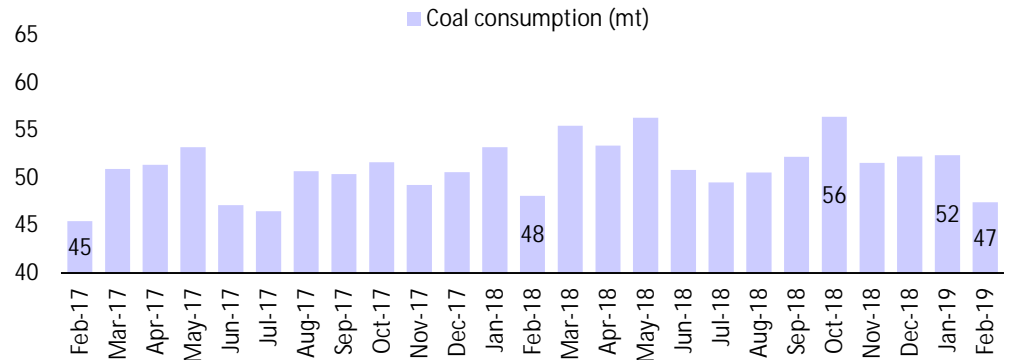
Exhibit 9: Coal receipts for Power sector



Source: MOFSL, CEA

Coal consumption by the power sector was down 1.4% YoY (+3.8% YTD) to 47.5mt (573mt YTD) in Feb'19.

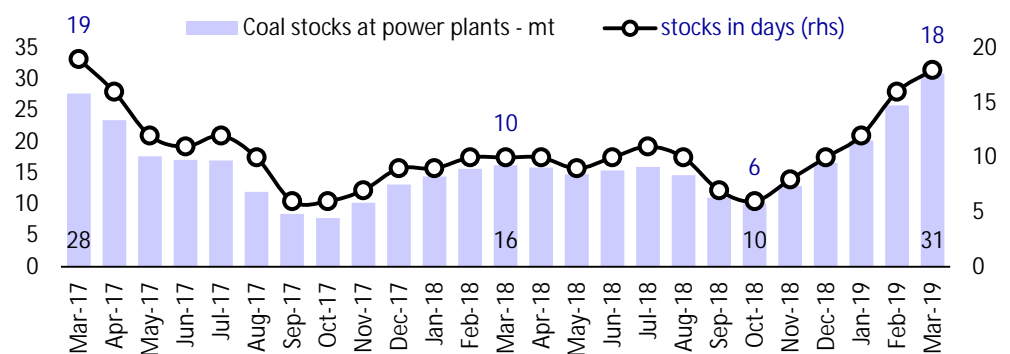
Exhibit 10: Coal consumption by Power sector



Source: MOFSL, CEA

Coal stocks at power plants increased to 18 days in Mar'19 from just six days (Oct'18) of consumption.

Exhibit 11: Coal stocks at power plants



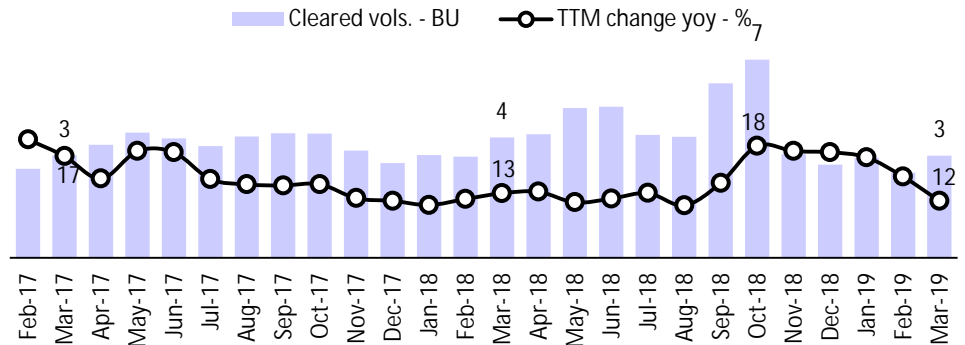
Source: MOFSL, CEA

## Short-term market

### Volumes and price lower on muted demand

IEX volumes were down ~15% YoY in Mar'19. On a TTM basis, volumes are ~12% higher.

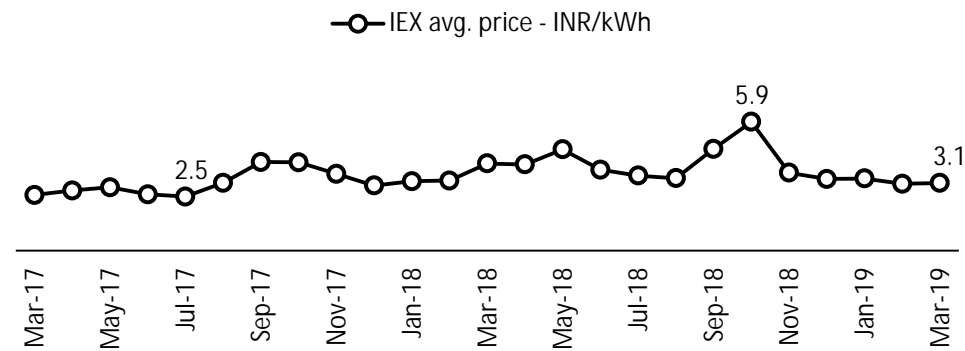
Exhibit 12: IEX cleared volumes (b kWh) and growth YoY



Source: MOFSL, IEX

IEX prices were 1% MoM higher at INR3.12/kWh.

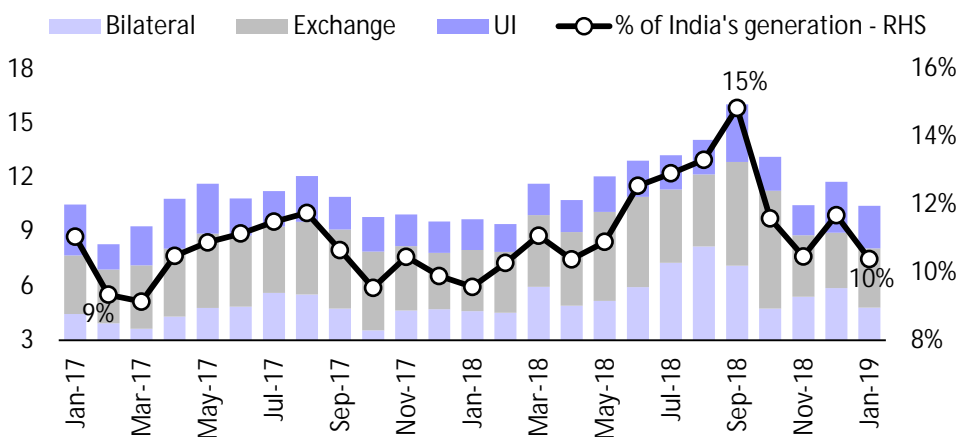
Exhibit 13: IEX prices



Source: MOFSL, IEX

Short term transactions (ex-UI) rose 1% YoY in Jan'19. Bilateral transactions increased 4% YoY, while exchange volumes were down 3% YoY in Jan'19.

Exhibit 14: Short-term transactions (b kWh)



Source: MOFSL, CERC

## Demand by states

Exhibit 15: Electricity demand by states

	Growth (%)					FY19	
	FY16	FY17	FY18	FY19	Mar-19	mkWh	% share
Chandigarh	-0.6	2.4	-2.7	-2.5	0.0	1,561	0.1
Delhi	1.8	4.1	3.3	1.5	-6.0	32,289	2.5
Haryana	2.2	3.1	3.8	5.7	-8.3	53,663	4.2
Himachal Pradesh	0.3	0.3	6.3	3.0	8.1	9,618	0.8
J&K	7.0	1.1	6.0	5.4	5.4	15,869	1.3
Punjab	3.5	6.7	3.4	1.1	-4.5	55,397	4.4
Rajasthan	2.9	0.3	4.7	12.8	14.1	79,661	6.3
Uttar Pradesh	6.8	13.5	12.1	-1.7	-4.8	116,265	9.2
Uttarakhand	5.0	2.5	3.4	2.4	-0.8	13,753	1.1
<b>Northern Region</b>	<b>4.0</b>	<b>6.0</b>	<b>6.5</b>	<b>3.4</b>	<b>-0.3</b>	<b>378,080</b>	<b>29.8</b>
Chhattisgarh	20.9	-8.0	10.7	3.6	6.0	26,720	2.1
Gujarat	7.6	0.2	6.0	6.1	-0.1	116,638	9.2
Madhya Pradesh	15.7	6.7	7.6	6.0	8.7	75,194	5.9
Maharashtra	6.0	-1.4	7.3	5.8	-1.5	158,167	12.5
Daman and Diu	14.2	2.1	6.2	1.1	-0.5	2,561	0.2
Dadra and Nagar	11.0	1.8	3.0	-0.5	3.6	6,176	0.5
Goa	31.4	-13.3	-7.3	4.0	-3.7	4,276	0.3
<b>Western Region</b>	<b>9.6</b>	<b>-0.1</b>	<b>6.9</b>	<b>5.6</b>	<b>1.3</b>	<b>389,726</b>	<b>30.7</b>
Andhra Pradesh	-10.5	7.8	7.3	9.5	8.8	63,802	5.0
Telangana	23.3	6.4	13.5	10.4	4.4	66,601	5.2
Karnataka	1.7	9.7	1.6	6.3	8.8	72,227	5.7
Kerala	5.1	4.1	2.9	0.3	5.8	24,911	2.0
Tamil nadu	4.2	7.8	1.4	3.4	5.2	109,149	8.6
Puducherry	2.6	4.0	5.0	3.6	5.9	2,748	0.2
<b>Southern Region</b>	<b>3.5</b>	<b>7.6</b>	<b>4.7</b>	<b>6.2</b>	<b>6.5</b>	<b>339,429</b>	<b>26.8</b>
Bihar	28.0	6.2	5.7	15.8	0.9	30,775	2.4
DVC	3.4	2.6	14.2	2.5	-2.2	21,894	1.7
Jharkhand	3.0	4.5	-2.9	10.1	1.9	8,442	0.7
Odisha	3.8	0.3	7.7	9.5	3.0	31,444	2.5
West Bengal	2.8	1.8	4.8	4.6	-0.5	52,655	4.2
Andaman	0.0	0.0	67.2	7.6	0.0	324	0.0
<b>Eastern region</b>	<b>7.3</b>	<b>2.7</b>	<b>6.3</b>	<b>7.1</b>	<b>0.4</b>	<b>144,712</b>	<b>11.4</b>
Arunachal Pradesh	-3.1	19.8	10.5	7.0	-3.2	837	0.1
Assam	4.4	5.7	0.6	5.6	18.4	9,289	0.7
Manipur	19.5	-9.1	12.1	9.3	1.5	902	0.1
Meghalaya	5.6	2.7	-9.8	22.8	69.6	1,963	0.2
Mizoram	7.1	9.7	-1.2	38.5	25.6	683	0.1
Nagaland	11.8	-1.2	5.8	3.2	0.0	797	0.1
Tripura	9.4	30.1	70.8	-29.4	47.1	1,799	0.1
<b>North Eastern Region</b>	<b>5.8</b>	<b>6.8</b>	<b>7.8</b>	<b>2.9</b>	<b>23.6</b>	<b>16,272</b>	<b>1.3</b>
<b>All India</b>	<b>6.0</b>	<b>4.1</b>	<b>6.2</b>	<b>5.3</b>	<b>2.5</b>	<b>1,268,770</b>	<b>100.0</b>

Source: MOFSL, CEA

Exhibit 16: Peak demand

	YoY growth (%)				in MW
	FY16	FY17	FY18	FY19	FY19
Chandigarh	-6.8	4.1	2.0	1.7	369
Delhi	-1.3	7.1	4.2	7.5	7,016
Haryana	-0.4	1.6	3.0	7.7	10,270
Himachal Pradesh	4.6	0.7	6.3	6.6	1,700
J&K	5.6	-0.8	8.4	41.3	3,277
Punjab	8.3	3.2	4.5	7.3	12,556
Rajasthan	3.0	-5.6	11.8	14.8	13,276
Uttar Pradesh	11.5	6.9	16.5	11.1	20,062
Uttarakhand	5.4	0.1	5.5	3.1	2,216
<b>Northern Region</b>	<b>6.3</b>	<b>12.9</b>	<b>2.3</b>	<b>3.9</b>	<b>60,715</b>
Chhattisgarh	3.3	2.5	0.9	9.9	4,270
Gujarat	7.0	1.8	12.8	2.2	16,963
Madhya Pradesh	12.2	5.5	7.0	12.3	13,815
Maharashtra	4.0	7.8	1.3	3.4	23,254
Daman and Diu	2.0	8.8	8.4	-1.7	356
Dadra and Nagar	3.6	5.9	0.8	3.2	815
Goa	12.9	-3.8	5.1	6.8	596
<b>Western Region</b>	<b>11.7</b>	<b>7.7</b>	<b>-3.5</b>	<b>11.5</b>	<b>55,821</b>
Andhra Pradesh	-40.7	7.9	12.8	5.2	9,453
Telangana	1.4	33.4	12.5	5.2	10,815
Karnataka	-0.4	7.7	5.5	18.9	12,841
Kerala	7.3	3.6	-3.2	9.3	4,228
Tamil Nadu	5.1	4.5	1.0	4.9	15,712
Puducherry	0.6	5.4	4.9	6.5	412
Lakshadweep	0.0	0.0	12.5	-11.1	8
<b>Southern Region</b>	<b>7.6</b>	<b>13.9</b>	<b>4.0</b>	<b>4.8</b>	<b>49,464</b>
Bihar	21.2	6.9	21.2	12.6	5,084
DVC	7.9	-3.9	7.8	8.0	3,127
Jharkhand	8.7	4.1	5.5	2.3	1,289
Odisha	15.3	-6.3	8.2	21.7	5,357
West Bengal	4.8	0.0	2.9	9.7	8,899
Sikkim	31.3	2.8	-14.3	10.4	106
Andaman	0.0	0.0	68.8	0.0	54
<b>Eastern region</b>	<b>8.2</b>	<b>8.3</b>	<b>5.2</b>	<b>11.0</b>	<b>22,733</b>
Arunachal Pradesh	7.1	3.7	3.6	-4.8	138
Assam	9.6	18.5	6.9	3.7	1,809
Manipur	14.4	-2.4	19.6	10.8	216
Meghalaya	2.7	-12.2	11.2	1.1	372
Mizoram	14.8	-3.0	-2.0	24.0	119
Nagaland	7.8	6.5	-0.7	-5.5	138
Tripura	1.1	5.6	20.4	2.0	349
<b>North Eastern Region</b>	<b>7.5</b>	<b>13.9</b>	<b>-6.5</b>	<b>13.1</b>	<b>2,850</b>
<b>All India</b>	<b>5.2</b>	<b>6.5</b>	<b>1.7</b>	<b>9.2</b>	<b>175,528</b>

Source: MOFSL, CEA



## Plant availability factor (PAF)

PAF for NTPC's Mauda, Kudgi and Unchahar-IV is improving

Exhibit 17: PAFs (%) for NTPC's power plants

Plant Name	Jan-18	Feb-18	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19
ANTA GPP	102.8	99.3	99.3	98.7	56.2	88.5	96.6	98.2	98.3	93.4	97.2	100.7	102.4	101.1	99.9
AURAIYA GPP	99.9	101.3	74.4	99.6	60.8	90.8	95.3	97.8	98.2	95.6	94.6	96.7	100.0	99.7	100.2
DADRI GPP	103.4	102.8	99.9	90.1	37.6	75.7	96.7	97.6	96.8	95.1	98.6	101.6	99.7	100.4	95.3
DADRI TPS	97.3	99.8	100.0	77.5	95.1	99.9	92.2	100.8	98.5	75.0	80.2	94.4	74.7	100.1	95.7
DADRI-II TPS	99.7	52.5	56.3	97.3	87.9	94.0	91.6	101.9	104.2	99.4	90.8	100.0	97.6	81.5	49.7
RIHAND STPS	92.8	92.5	69.9	54.9	88.7	93.0	99.4	97.9	86.0	87.0	87.7	64.9	101.0	98.0	101.7
RIHAND-II STPS	100.0	100.0	96.6	99.5	64.5	57.8	98.2	101.0	101.0	101.0	95.7	98.9	87.8	100.9	91.0
RIHAND-III STPS	100.0	100.0	100.0	95.3	99.7	91.0	100.5	101.0	87.6	50.3	91.4	92.8	101.3	101.5	101.2
UNCHAHAR-I TPS	92.5	97.4	100.0	96.4	98.3	97.7	102.5	77.1	74.0	99.6	101.7	101.3	104.7	104.5	104.7
UNCHAHAR-II TPS	99.7	100.1	100.0	99.2	100.0	99.7	54.7	85.2	104.7	92.6	104.5	103.8	102.5	104.4	102.2
UNCHAHAR-III TPS	100.5	98.2	100.0	53.4	54.6	99.6	101.4	89.5	103.6	104.7	104.7	104.7	104.6	104.7	90.6
UNCHAHAR-IV TPS	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.6	79.9	84.2	71.3
Farakka-I	91.8	93.6	68.3	51.0	74.8	93.9	86.9	81.0	95.4	82.4	97.4	96.1	95.6	97.8	100.4
Farakka-II	68.9	82.8	89.1	93.9	95.4	77.8	89.1	93.1	93.8	93.1	71.4	92.6	95.5	90.4	95.5
Kahalgaoon	89.4	85.5	73.2	94.1	95.9	92.1	74.8	91.0	96.0	90.5	87.7	94.8	96.5	97.7	85.2
Kahalgaoon U-2	90.1	99.6	98.2	96.9	74.6	75.3	82.1	99.1	74.9	82.5	92.2	97.6	99.0	97.5	96.1
Talcher Stage 1	85.5	98.2	98.7	91.4	94.4	87.5	81.0	79.8	81.1	80.3	79.1	38.3	54.2	83.9	95.5
BARH STPS STAGE-II	99.7	96.6	99.8	92.8	83.7	95.2	100.0	90.0	78.0	93.1	91.0	95.5	97.0	77.9	86.2
Ramagundem Stg I&II	73.8	95.3	97.7	101.2	89.5	90.7	73.5	97.0	94.4	74.1	95.5	94.8	94.3	95.0	81.0
Ramagundem Stg III	93.1	101.9	102.1	92.7	92.5	99.4	100.1	99.9	95.3	99.1	45.1	18.6	99.8	91.9	101.2
Talcher Stage 2,	98.3	95.7	100.8	94.8	94.2	86.0	58.9	64.6	66.5	67.9	86.6	96.6	92.9	94.7	101.4
Simhadri STPS Stage 2	100.6	99.0	91.0	103.4	58.4	51.7	98.5	49.2	66.6	90.8	98.4	103.1	103.4	102.9	94.1
Simhadri STPS STAGE 1	68.6	100.1	101.6	103.1	98.4	101.7	95.6	99.9	69.9	50.5	58.8	100.3	91.8	101.6	93.0
NTPC Kudgi STPS	73.2	89.4	99.3	99.5	97.9	115.6	96.6	99.9	75.3	34.7	44.0	66.8	81.0	94.9	101.8
Korba-Stg I (KSTPS)	85.4	95.6	98.3	96.9	89.2	89.3	80.9	79.8	73.6	87.5	92.0	81.3	84.6	96.5	87.6
Vindhyanchal-I	98.7	82.0	83.6	82.9	83.0	93.3	93.0	88.1	75.5	93.3	92.8	98.2	100.8	97.8	89.7
Vindhyanchal-II	98.5	99.2	95.7	97.5	99.6	72.5	57.7	89.5	92.2	84.5	100.0	99.9	99.3	99.9	99.2
Vindhyanchal-III	99.4	99.4	100.0	95.0	97.1	95.6	99.5	100.8	100.8	100.4	81.6	66.8	94.5	100.6	100.8
Kawas GPS	99.6	99.6	99.2	98.9	86.4	97.8	100.0	100.2	100.8	96.0	98.1	100.1	98.3	92.7	80.6
Gandhar GPS	72.4	100.2	98.5	91.1	79.6	88.8	99.5	79.7	62.3	67.4	67.6	96.4	102.3	103.4	90.2
SINGRAULI STPS (SSTPS-II)	87.6	89.2	91.0	96.4	82.3	76.9	100.0	90.5	99.0	97.3	91.2	90.1	50.0	86.3	98.9
Korba-Stg II	98.6	99.1	93.5		91.6	90.0		97.6	73.3	86.7	99.7	89.6	89.9	100.0	99.8
Sipat-I	97.6	92.7	93.9	97.4	91.6	82.8	66.6	91.5	94.3	99.6	95.3	99.9	97.7	95.4	98.9
Vindhyanchal-IV	95.4	100.0	100.0	98.9	100.0	100.0	99.0	58.7	99.3	96.7	99.3	99.9	99.9	100.0	99.8
MAUDA-I	73.3	79.2	83.3	84.8	53.4	52.7	84.7	50.7	86.3	95.5	104.0	102.0	103.2	102.6	100.4
Vindhyanchal-V	100.0	99.7	100.0	96.2	98.8	95.9	96.7	101.8	100.8	94.5	101.6	101.8	72.1	44.1	101.9
MAUDA- II	31.2	34.7	59.6	71.5	59.3	73.0	79.6	86.0	69.2	41.8	61.6	97.9	96.7	99.4	103.8
Solapur	47.3	52.0	83.4	87.0	86.7	72.7	87.4	50.4	54.0	95.6	101.3	100.0	100.0	100.0	100.0

Yellow represents a PAF b/w 50% & 85%;

Pink represents a PAF of <50%

Source: RPC

## Plant load factor (PLF)

Seven plants of NTPC clocked PLF of >85% in Mar'19

Exhibit 18: PLFs (%) for NTPC standalone plants

	MW	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19
Badarpur	0	0	18	41	48	47	46	48	0	0	0	0	0	0
Barh I	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Barh II	1,320	96	87	80	88	90	85	75	89	88	93	94	72	79
Bongaigaon	500	80	70	69	73	69	66	54	47	66	56	64	69	70
Dadri	1,820	60	70	78	77	70	69	66	74	62	64	64	57	43
Darpalli	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Farakka	2,100	72	58	75	82	81	78	88	81	87	89	88	80	80
Gadarwara	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kahalgaoon	2,340	83	86	76	72	71	84	75	83	85	88	86	78	82
Korba	2,600	98	97	90	90	83	83	75	87	94	82	84	95	98
Kudgi	2,400	0	39	58	27	13	0	46	50	30	41	53	53	71
Lara	800	0	0	0	0	0	0	0	0	0	0	0	0	0
Mauda	2,320	63	69	54	53	62	51	67	59	60	38	65	47	76
Ramagundem	2,600	92	94	84	80	69	80	90	77	81	74	84	84	81
Rihand	3,000	89	81	83	76	93	95	87	78	90	84	89	89	92
Simhadri	2,000	81	85	67	59	72	54	63	66	65	82	78	83	81
Singrauli	2,000	72	63	83	76	63	79	89	94	101	98	87	88	94
Sipat	2,980	83	97	94	88	77	91	96	99	94	96	79	90	97
Solapur	660	63	67	72	53	50	0	19	77	30	0	0	0	0
Talcher	460	102	99	100	90	85	87	72	75	90	98	85	101	92
Talcher	3,000	100	93	94	84	67	70	73	72	84	76	78	86	96
Tanda	440	85	68	63	73	58	65	63	79	80	72	78	37	1
Unchahar	1,550	82	72	82	79	61	59	69	82	76	76	74	65	64
Vindhyachal	4,760	95	93	94	88	86	84	91	94	93	88	89	87	93
<b>TOTAL COAL NTPC</b>	<b>39,650</b>	<b>83</b>	<b>80</b>	<b>80</b>	<b>76</b>	<b>72</b>	<b>72</b>	<b>72</b>	<b>80</b>	<b>81</b>	<b>78</b>	<b>79</b>	<b>77</b>	<b>82</b>
Anta	419	7	0	3	7	1	0	21	54	38	1	36	7	0
Auraiya	663	0	0	8	3	4	17	15	47	16	1	1	4	0
Dadri	830	14	19	26	22	17	4	33	45	18	27	8	27	30
Faridabad	432	46	48	25	25	8	0	0	3	1	16	39	26	23
Gandhar	657	50	46	43	44	50	41	11	22	9	21	20	7	16
Kawas	656	41	48	53	47	18	28	59	69	48	39	38	38	46
R. Gandhi	360	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>TOTAL GAS NTPC</b>	<b>4,017</b>	<b>24</b>	<b>24</b>	<b>26</b>	<b>31</b>	<b>28</b>	<b>15</b>	<b>28</b>	<b>38</b>	<b>20</b>	<b>17</b>	<b>19</b>	<b>16</b>	<b>19</b>

Yellow represents a PLF b/w 50% & 85%;

Pink represents a PLF of <50%

Source: CEA

## PLF for JSWE's Ratnagiri improved while that for Vijaynagar decreased on a YoY basis

Exhibit 19: PLFs (%) for private power plants with exposure to merchant market

	MW	Mar-18	Apr-18	May-18	Jun-18	Jul-18	Aug-18	Sep-18	Oct-18	Nov-18	Dec-18	Jan-19	Feb-19	Mar-19
<b>Adani Power</b>	<b>11,040</b>													
Avantha	600	0	0	0	0	0	0	0	0	0	0	0	0	0
Mundra	4,620	7	4	8	40	61	81	71	67	51	76	82	84	84
Tirora	3,300	54	57	61	54	74	71	70	86	86	86	84	81	90
<b>CESC</b>	<b>2,485</b>													
Dhariwal	600	52	79	82	47	50	45	51	94	73	69	43	36	50
<b>JSW Energy</b>	<b>4,440</b>													
Karcham	1,000	15	20	36	92	107	94	76	33	22	17	0	0	0
Ratnagiri	1,200	64	80	96	77	60	55	78	95	82	65	76	73	77
Vijaynagar	860	55	65	63	35	42	45	69	93	43	35	79	34	39
<b>Jindal Power</b>	<b>3,400</b>													
Tamnar 1	1,000	24	23	46	45	43	38	40	51	43	22	33	28	35
Tamnar 2	2,400	31	48	52	29	28	29	29	38	43	32	50	47	38
<b>JP Power</b>	<b>4,200</b>													
Bina	500	67	65	54	65	45	50	45	65	67	52	63	62	54
Nigri	1,320	41	78	87	71	35	60	77	90	61	33	50	55	65
<b>KSK</b>	<b>2,940</b>													
Akaltara	2,400	28	52	61	26	40	42	35	45	45	36	38	39	52
Wardha	540	31	39	34	27	28	30	33	38	31	7	0	0	0
<b>Torrent Power</b>	<b>3,252</b>													
Sugen	1,148	67	74	0	72	66	62	68	68	38	56	49	49	65
Unosugen	383	0	0	0	0	0	0	0	0	0	0	0	0	0
DGEN	1,200	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Essar</b>	<b>1,200</b>													
Mahan	600	51	60	68	53	52	55	80	93	67	55	57	23	24
Salaya	600	0	0	0	0	0	0	0	0	0	0	0	0	0
<b>Rattan India</b>	<b>1,350</b>													
Amravati	1,350	53	75	51	49	14	63	70	20	25	27	5	0	14
<b>Vedanta</b>	<b>3,180</b>													
Sterlite	600	14	15	2	9	17	0	0	0	19	3	8	38	11
Balco	600	19	60	62	49	48	47	40	46	43	62	74	57	44
<b>South plants</b>	<b>4,460</b>													
Powertech	1,320	95	95	73	84	76	87	95	60	49	46	44	40	0
Meenakshi	300	0	13	4	0	0	0	0	0	0	0	0	0	88
Simhapuri	600	0	0	22	0	0	0	0	0	0	0	0	0	0
Sembcorp	1,200	97	97	96	79	94	74	91	96	71	80	73	80	97
Hinduja	1,040	0	0	0	0	0	0	0	0	0	10	8	0	28

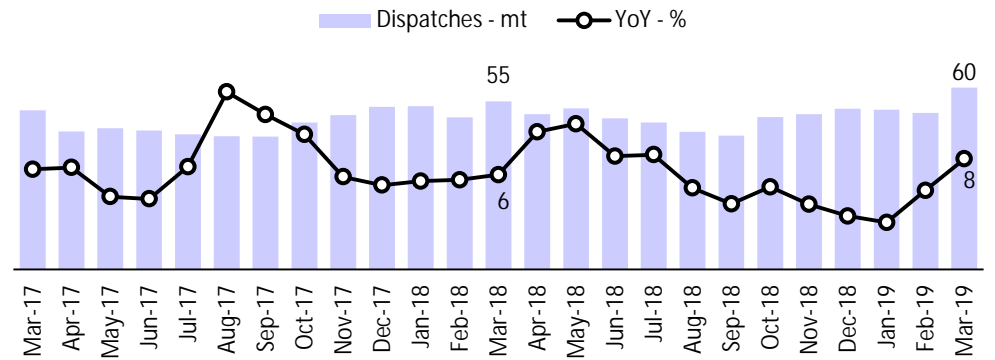
Yellow represents a PLF b/w 25% &amp; 50%;

Pink represents a PLF of &lt;25%

Source: CEA

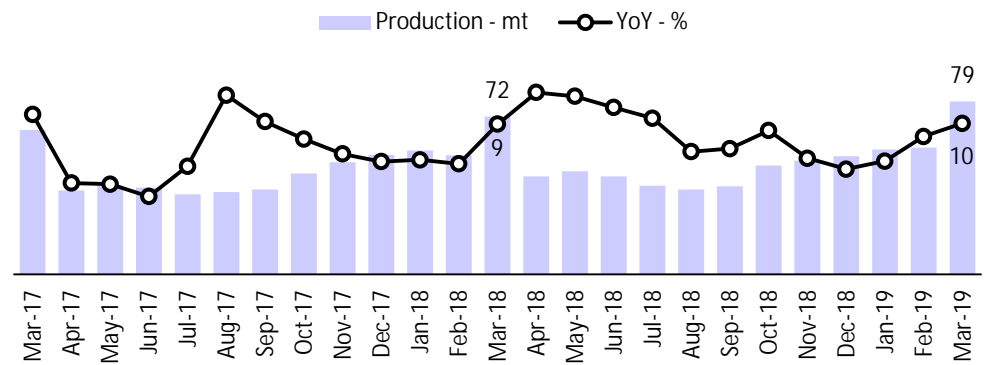
## Coal India's volume monitor – Mar'19

Exhibit 20: Dispatches increased 8.2% YoY in Mar'19 (YTD: +4.8%)



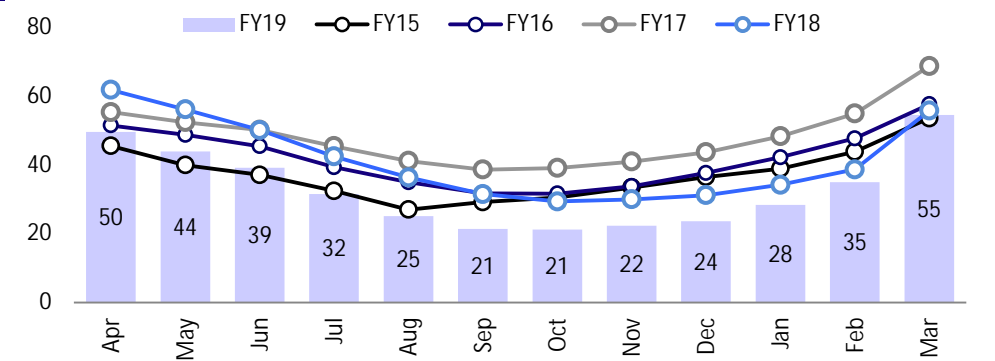
Source: MOFSL, Company

Exhibit 21: Production increased 9.6% YoY in Mar'19 (YTD: +7%)



Source: MOFSL, Company

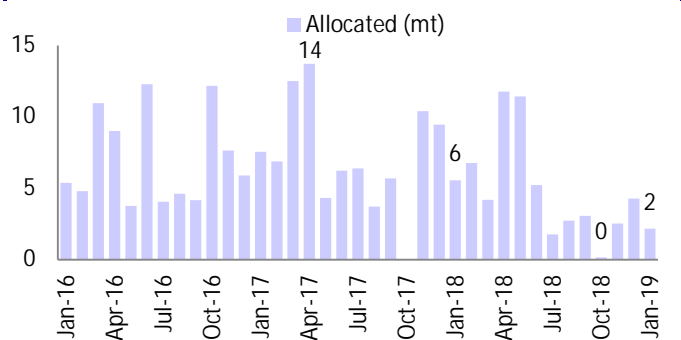
Exhibit 22: Inventory at mines increased MoM in Mar'19



Source: MOFSL, Company

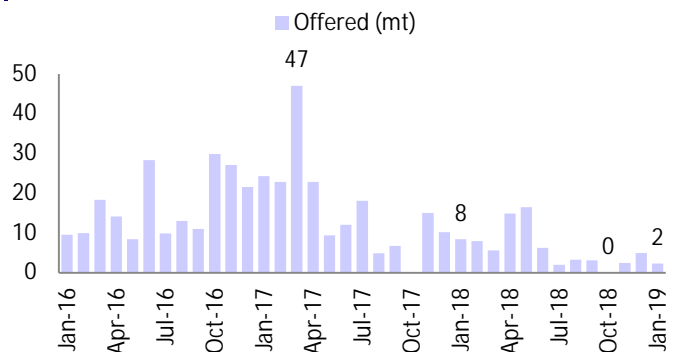
## E-auction monthly monitor

**Exhibit 23: Monthly E-auction allocated quantity**



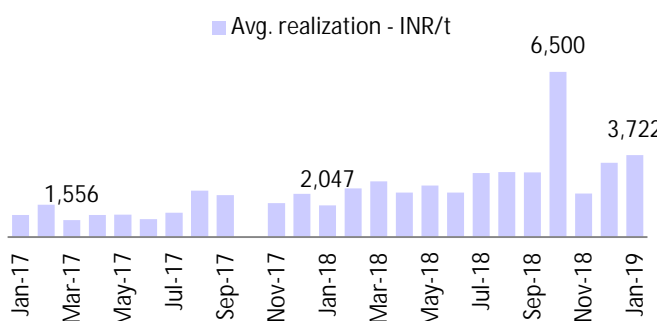
Source: Industry

**Exhibit 24: Monthly E-auction offered quantity**



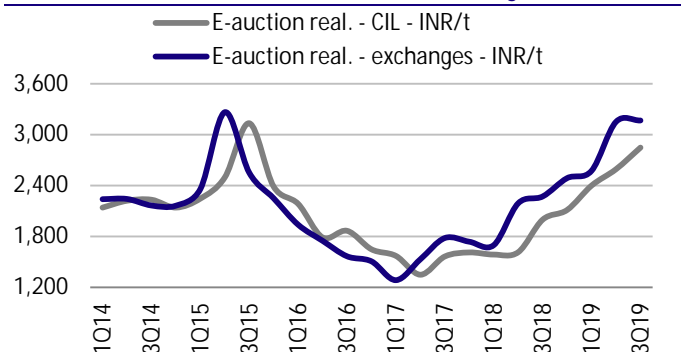
Source: Industry

**Exhibit 25: Average E-auction realization – INR/t**



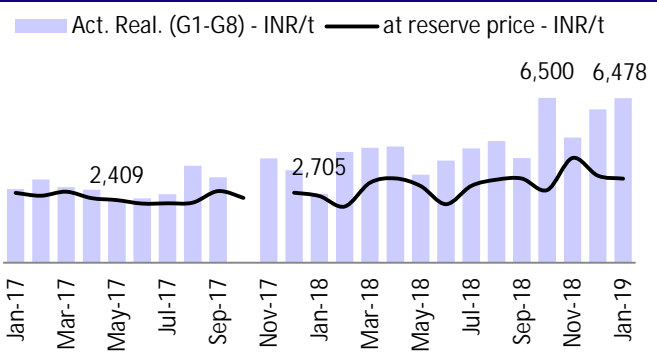
Source: Industry

**Exhibit 26: Realization trend – CIL v/s exchanges**



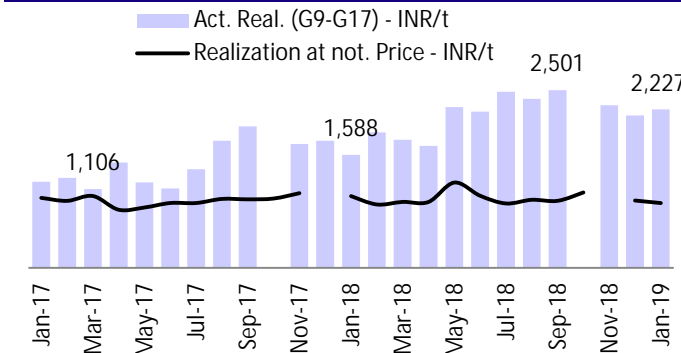
Source: Industry

**Exhibit 27: Average realization (higher grade)**



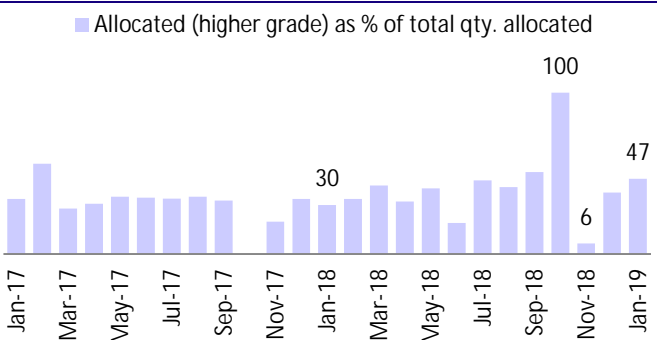
Source: Industry

**Exhibit 28: Average realization (G9-G17 grade)**



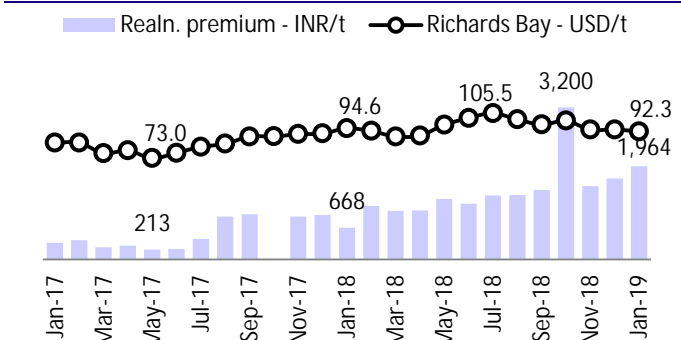
Source: Industry

**Exhibit 29: Share (%) of high grade in allotted mix**



Source: Industry

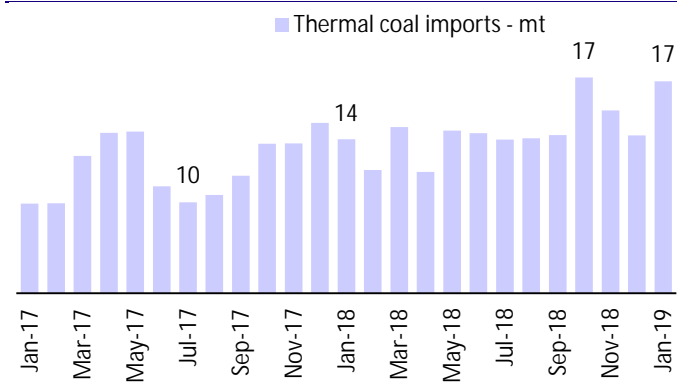
**Exhibit 30: Premium over notified price and RB Index**



Source: Industry

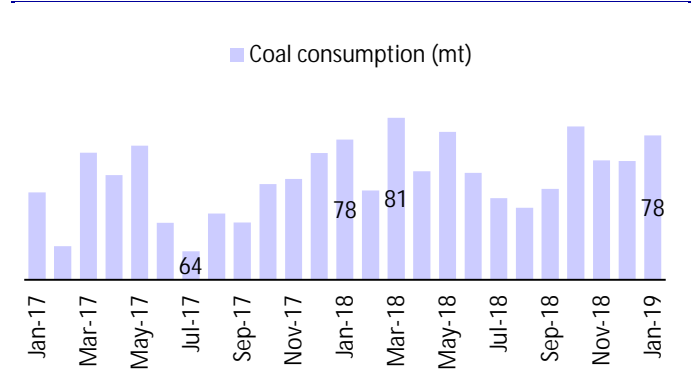
## India coal demand and its drivers' monitor

Exhibit 31: Monthly thermal coal imports – mt



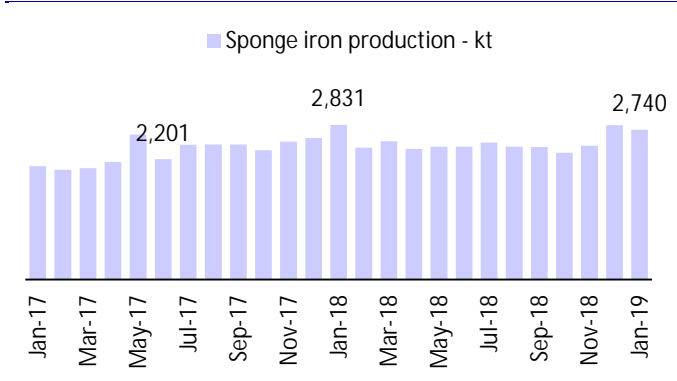
Source: CEA, Industry

Exhibit 32: Monthly coal consumption – mt



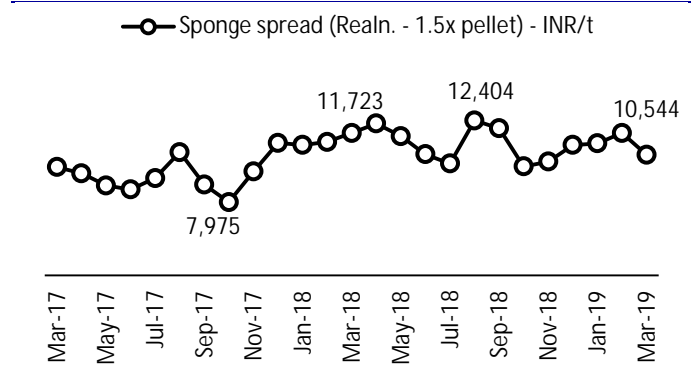
Source: CEA

Exhibit 33: Sponge iron production down 3% YoY in Jan'19



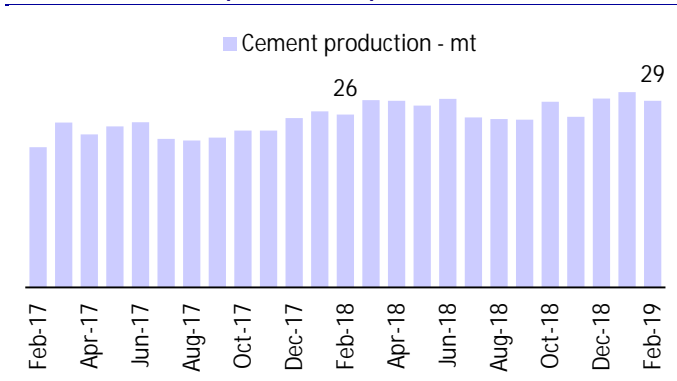
Source: JPC

Exhibit 34: Sponge iron spreads – INR/t



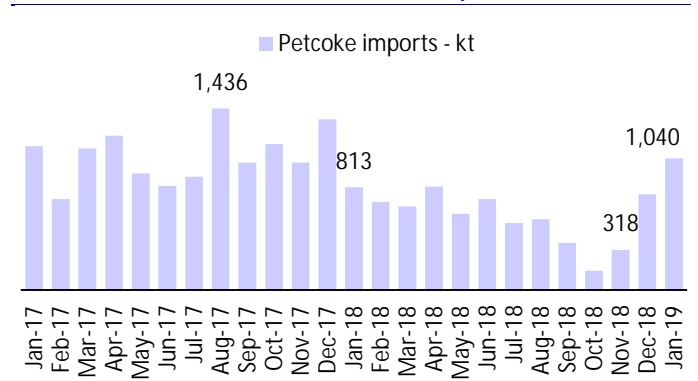
Source: SteelMint

Exhibit 35: Cement production up 8% YoY in Feb'19



Source: Industry

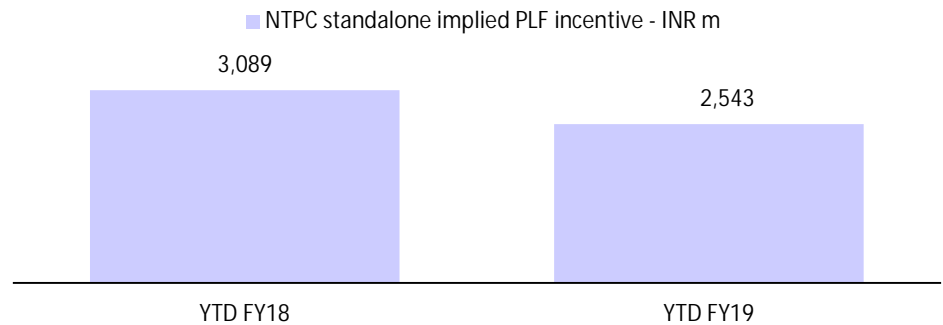
Exhibit 36: Coal substitute – Pet coke imports



Source: Industry

**Exhibit 37: NTPC's standalone implied PLF incentives for FY19 (INR m)**

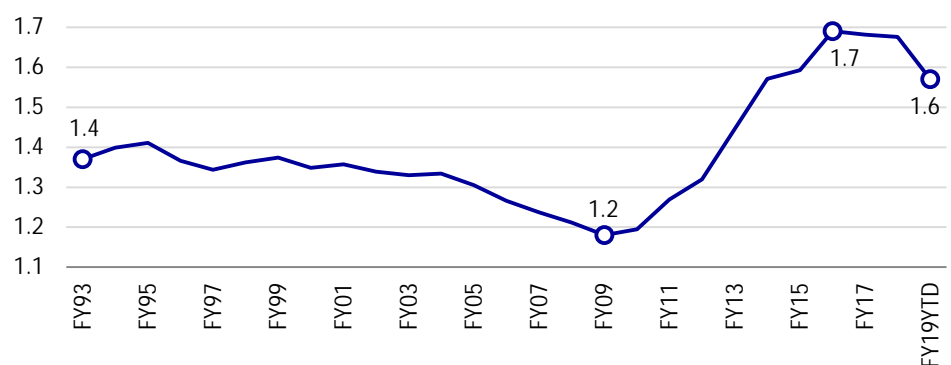
Implied PLF incentives for NTPC's standalone plants are lower by ~INR550m YTD



Source: MOFSL, CEA

The conventional capacity to peak load ratio has started to decline from its peak of ~1.7x

**Exhibit 38: Conventional Cap./peak load (x)**



Source: MOFSL, CEA

**Exhibit 39: Utilities' sector valuation**

	Rating	CMP (INR)	MCAP (USD M)	EPS			P/E (x)		P/B(x)		RoE (%)	
				FY19E	FY20E	FY21E	FY19E	FY20E	FY19E	FY20E	FY19E	FY20E
Powergrid	Buy	196	14,634	18.3	20.8	22.6	10.7	9.4	1.7	1.5	16.7	17.1
NTPC	Buy	136	19,170	10.9	13.1	15.0	12.4	10.4	1.2	1.1	10.1	11.4
JSW Energy	Neutral	72	1,691	4.3	4.7	5.7	16.7	15.3	1.0	1.0	6.3	6.7
CESC	Under Review	715	1,361	75.4	80.0	90.6	9.5	8.9	1.0	1.0	11.4	11.2
Tata Power	Neutral	72	2,799	2.1	6.6	6.7	33.7	10.9	1.2	1.1	3.6	10.2
NHPC	Buy	24	3,795	2.3	2.4	2.4	10.6	9.9	0.8	0.8	7.6	8.0
Torrent P	Buy	254	1,712	22.0	23.1	27.6	11.5	11.0	1.4	1.3	13.0	12.5
Coal India	Buy	240	21,692	27.4	29.0	29.9	8.8	8.3	7.2	6.7	84.1	83.7

Source: MOFSL, Bloomberg

**Exhibit 40: Utilities' stock performance on absolute and relative basis (%)**

	Absolute Perf (%)				Relative Perf to Sensex (%)			
	1month	3 months	6 months	12 months	1month	3 months	6 months	12 months
Power Grid	-0.2	0.1	4.7	-0.2	-3.2	-6.9	-6.5	-13.6
NTPC	7.9	10.2	-0.7	-3.7	5.0	3.2	-11.8	-17.0
NHPC	-4.0	-6.3	1.1	-13.5	-7.0	-13.3	-10.1	-26.9
JSW Energy	3.7	3.6	18.2	-8.7	0.8	-3.5	7.0	-22.0
Tata Power	-1.5	-3.5	11.2	-17.8	-4.5	-10.6	0.0	-31.1
CESC	-1.7	8.9	4.4	-8.9	-4.7	1.9	-6.8	-22.3
Torrent	-1.3	-2.7	8.3	2.7	-4.2	-9.7	-2.8	-10.6
PTC	-9.6	-20.9	1.5	-22.9	-12.5	-27.9	-9.7	-36.2
Adani Power	-3.1	0.4	69.0	97.3	-6.0	-6.6	57.8	84.0
Adani Trans	2.1	1.7	43.9	24.0	-0.8	-5.3	32.7	10.7
Reliance Power	-20.6	-68.2	-64.2	-76.4	-23.5	-75.2	-75.4	-89.7
IEX	-3.7	-3.1	-4.9	-3.0	-6.7	-10.1	-16.1	-16.3
RattanIndia	-11.3	-23.6	-15.4	-49.1	-14.2	-30.6	-26.6	-62.4
<b>Sensex</b>	<b>3.0</b>	<b>7.0</b>	<b>11.2</b>	<b>13.3</b>				

Source: MOFSL, Bloomberg

## NOTES



Explanation of Investment Rating	
Investment Rating	Expected return (over 12-month)
BUY	>=15%
SELL	< - 10%
NEUTRAL	< - 10 % to 15%
UNDER REVIEW	Rating may undergo a change
NOT RATED	We have forward looking estimates for the stock but we refrain from assigning recommendation

\*In case the recommendation given by the Research Analyst is inconsistent with the investment rating legend for a continuous period of 30 days, the Research Analyst shall within following 30 days take appropriate measures to make the recommendation consistent with the investment rating legend.

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