

BARA THERMAL POWER PLANT

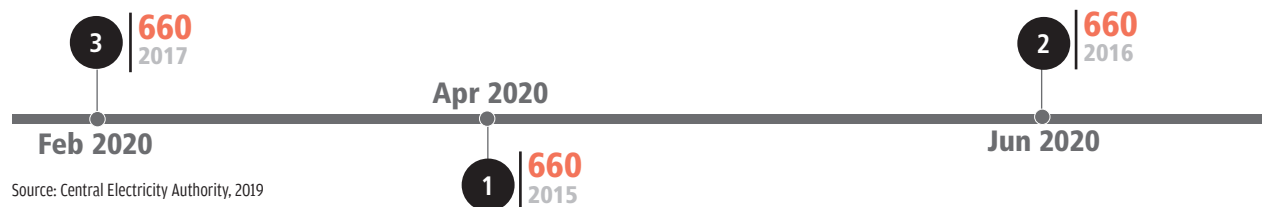
Bara thermal power station has a capacity of 1,980 MW with three units of 660 MW each (see Table 1: Compliance deadlines for units in Bara

thermal power station). It is operated by Prayagraj Power a subsidiary under Jaypee group, and is located in Allahabad district.

Table 1: Compliance deadlines for units in Bara thermal power station

Urgent measures are needed to comply

● Unit No. ■ Capacity in MW ■ Commissioning Year ■ Compliance deadline



EMISSIONS AND SUGGESTED TECHNOLOGY:

● **Particulate matter:** The CEMS data/any emission data from the station is unavailable in public domain (see Table 2: Particulate Matter emissions in Bara thermal power station).

Table 2: Particulate Matter emissions in Bara thermal power station

Current emissions data is unavailable in public domain

■ Unit No. ■ CEMS ■ Lab ■ Norm

1	NA	NA	50	2	NA	NA	50	3	NA	NA	50
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Source: Centre for Science and Environment, 2019

● **Sulphur dioxide:** The CEMS data/any emission data from the station is unavailable in public domain (see Table 3: Sulphur dioxide emissions in Bara thermal power station). CSE based on coal quality stoichiometrically estimates over 1000 mg/N.cu.m sulphur dioxide emissions.

Table 3: Sulphur Dioxide emissions in Bara thermal power station

Current emission level data is unavailable in public domain

■ Unit No. ■ CEMS ■ Lab ■ CSE's estimate ■ Norm

1	NA	NA	over 1000	200	3	NA	NA	over 1000	200
2	NA	NA	over 1000	200					

Source: Centre for Science and Environment, 2019

● **Oxides of nitrogen:** The CEMS data/any emission data from the station is unavailable in public domain station (see Table 4: Oxides of nitrogen emissions in Bara thermal power station).

The plant was commissioned recently and is of large size 660 MW. According to experts, these must be equipped with low-NO_x burners and over-fire air system. Therefore, it will require primary control measures such as combustion optimisation to meet the new norms.

Table 4: Oxides of nitrogen emissions in Bara thermal power station

Current emission level data is unavailable in public domain

■ Unit No. ■ CEMS ■ Lab ■ Norm

1	NA	NA	300	2	NA	NA	300	3	NA	NA	300
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Source: Centre for Science and Environment, 2019

CURRENT STATUS:

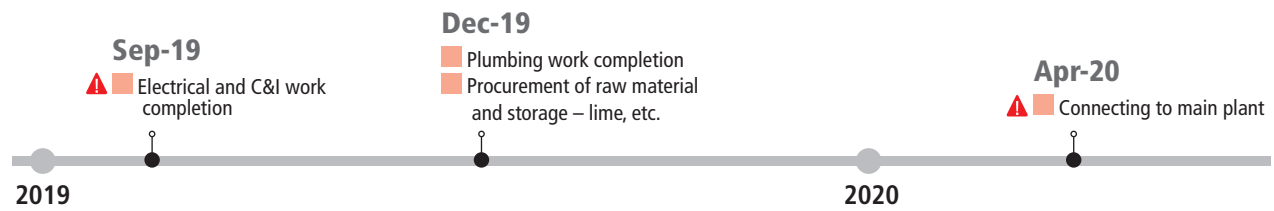
● Feasibility study is under process. The plant has requested the govt. for FGD implementation date to be postponed by 5-6 years.

ACTION PLAN

- CSE has prepared unit-wise action plan for all three pollutants. The action plan is based on deadlines given under Section 5 notices sent by the Central Pollution Control Board in December, 2017, which were also submitted to the Supreme Court. In turn, the deadlines were based on the Phase-in Plan prepared by the CEA and the Regional Power Committees.
- The Action plan has been based on discussions with industry experts and manufacturers on time taken for various stages. We have converted the major project processes/stages into key milestones that can be used by PCB officials to track progress.
- A fair share of activities has been presumed to have already been undertaken. Below stage of work completion is required to meet the norms.

Unit 1 (660 MW): April 2020

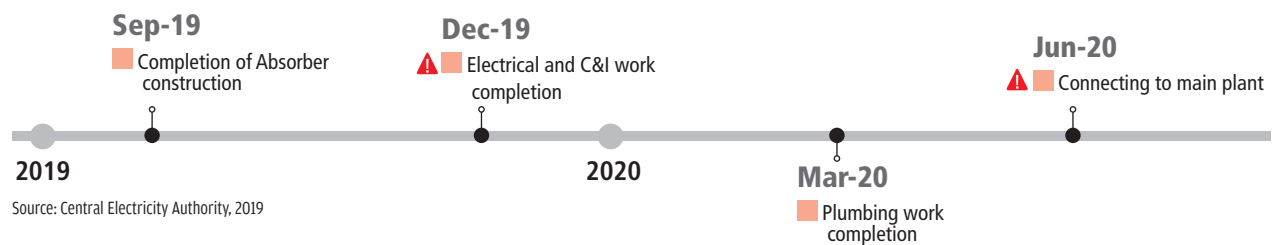
■ Sulphur dioxide control ▲ Critical



Source: Central Electricity Authority, 2019

Unit 2 (660 MW): June 2020

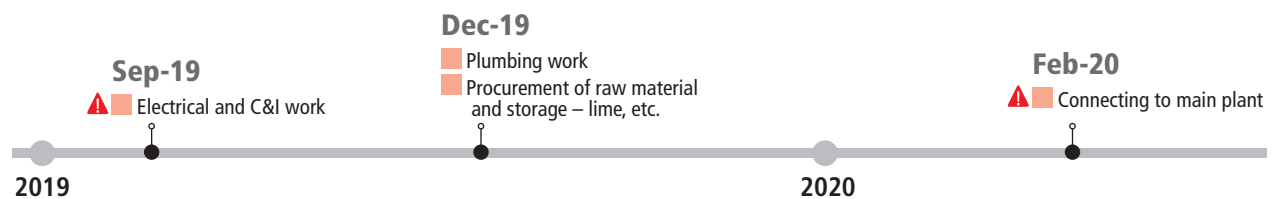
■ Sulphur dioxide control ▲ Critical



Source: Central Electricity Authority, 2019

Unit 3 (660 MW): Feb 2020

■ Sulphur dioxide control ▲ Critical



Source: Central Electricity Authority, 2019

Disclaimer – The analysis/timelines mentioned in this document for preparing action plan has been made based on the inputs provided by various technology suppliers.

