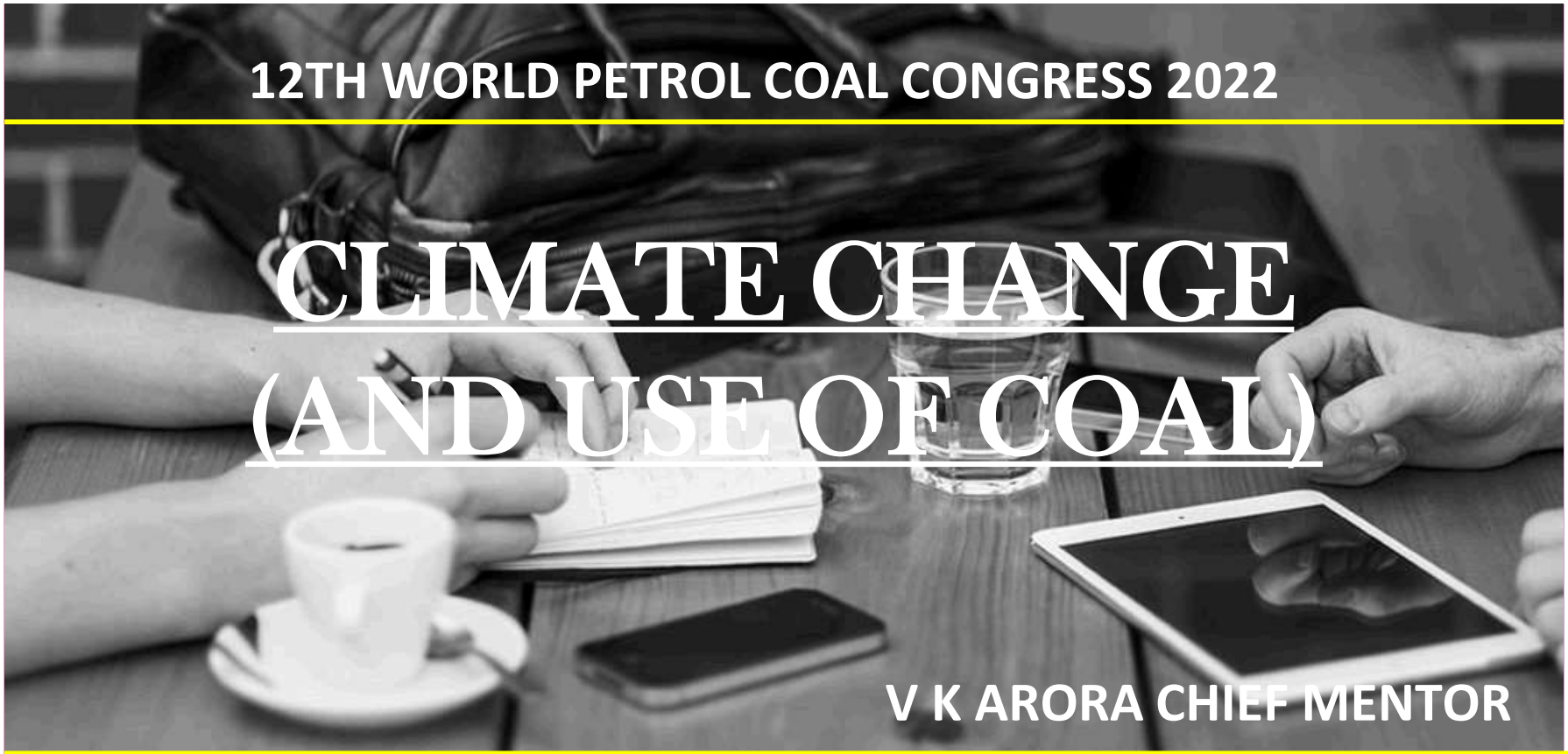
12TH WORLD PETROL COAL CONGRESS 2022

CLIMATE CHANGE (AND USE OF COAL)



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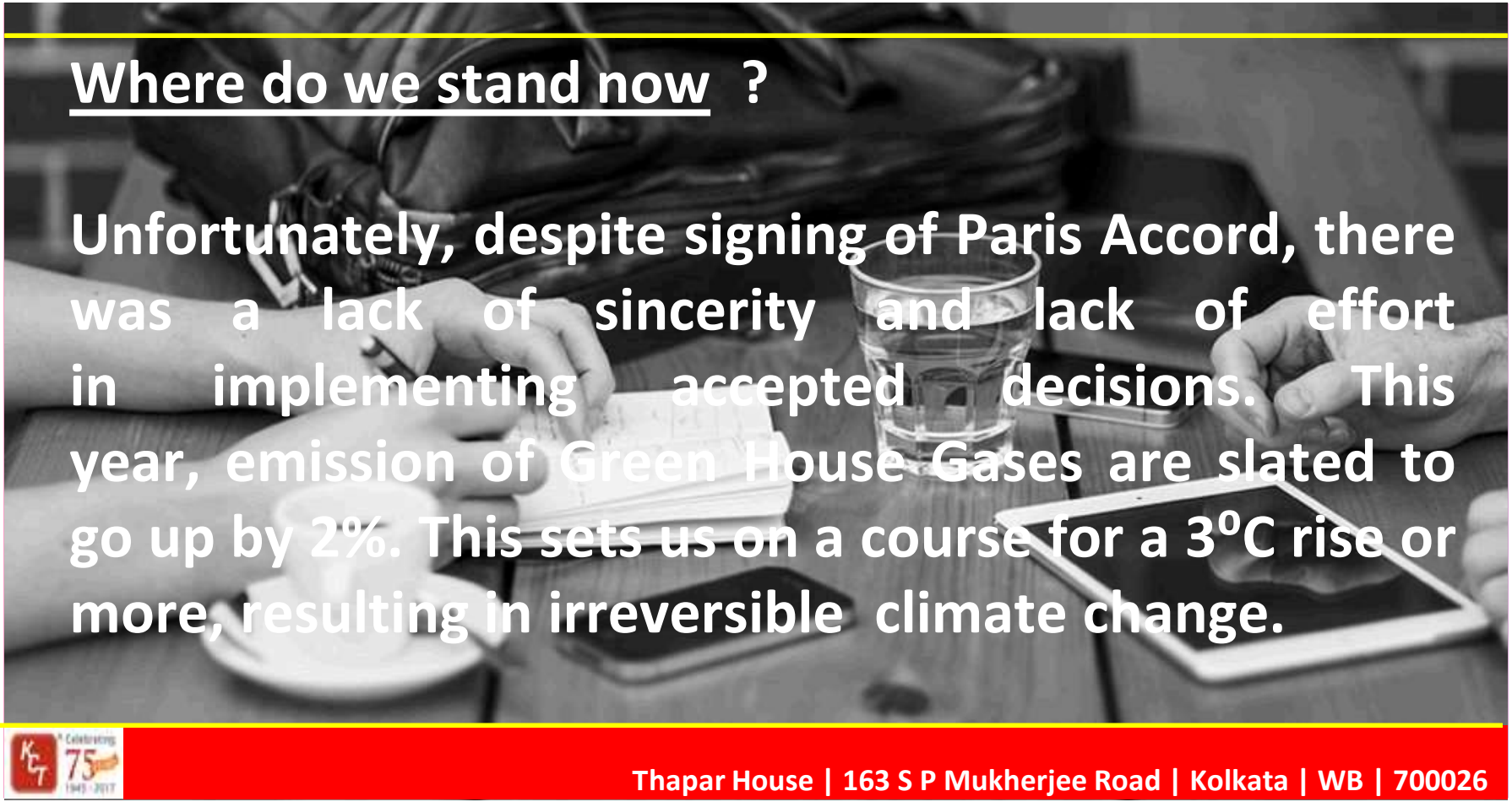
Every year, escalating records are being set as being the worst year on the climate calendar.

As per World Meteorological Report, 2022 is on course to be the warmest year on record. Past four years have been the hottest and the last twenty years have been the warmest. Hurricanes and cyclones have been stronger than before. Droughts are breaking all records. Recently, there were forest fires in Sweden which is within Arctic Circle. Fires in Australian forests have continued for months- Australia happens to be biggest exporter of coal.

We had a chance to contain this. Paris Climate Agreement of 2015 was signed by 195 countries and based on 6000 separate scientific studies by different governments which examined possibilities of limiting global warming to 1.5^{o}C over pre-industrial levels by 2100. This agreement tried to make the best of a bad deal.

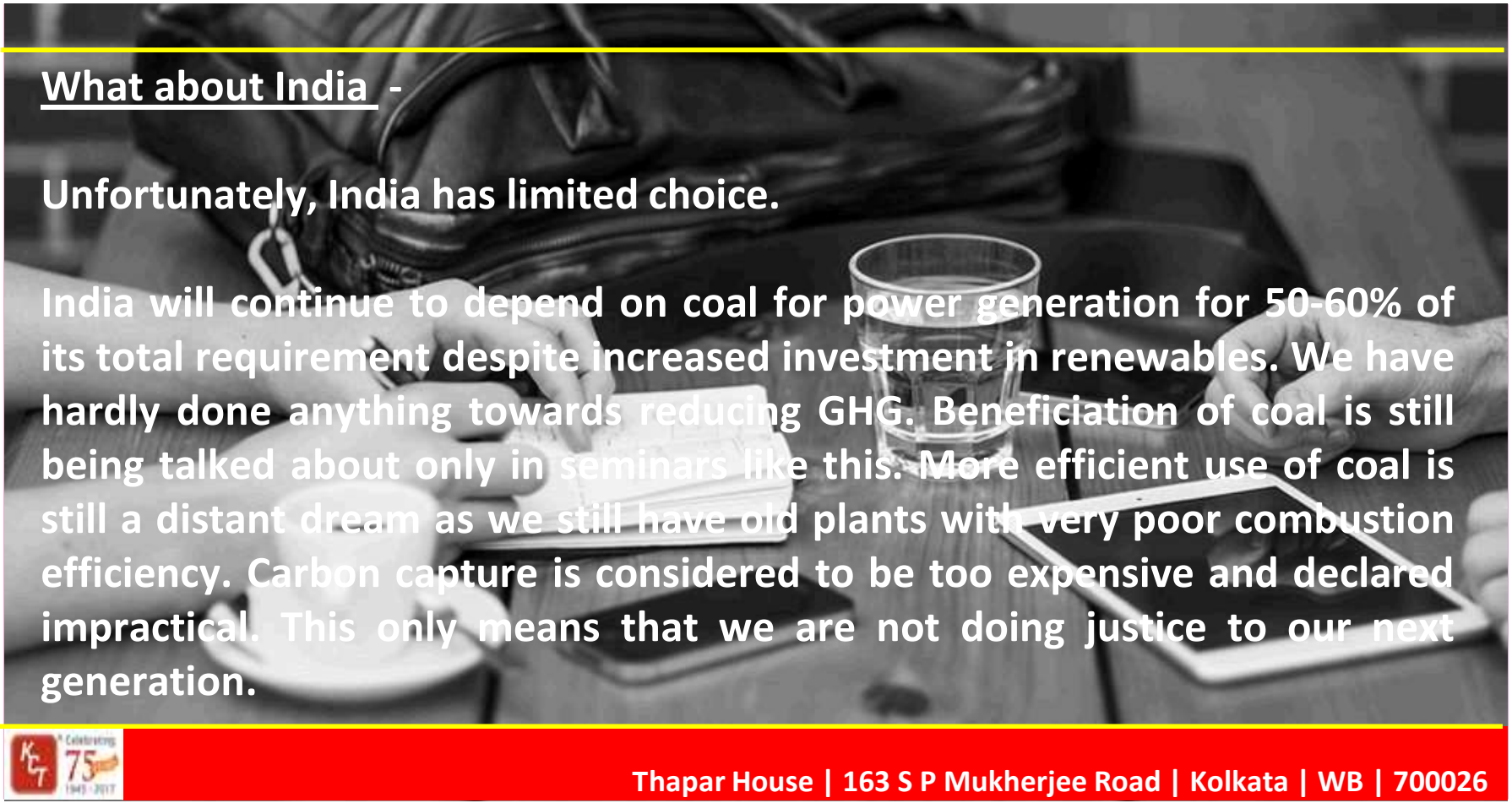


Where do we stand now ?

Unfortunately, despite signing of Paris Accord, there was a lack of sincerity and lack of effort in implementing accepted decisions. This year, emission of Green House Gases are slated to go up by 2%. This sets us on a course for a $3^{o}C$ rise or more, resulting in irreversible climate change.

Measures to be adopted –

Measures are very clear. Reforestation is essential as is shift to electric transport systems and greater adoption of carbon capture technologies. For meeting 1.5^{o}C goal, carbon pollution needs to be cut by 45% of present levels by 2030 and leading up to 0 emissions by 2050. This would mean that carbon pricing needs to be 3-4 times higher than what it currently is.



What about India -

Unfortunately, India has limited choice.

India will continue to depend on coal for power generation for 50-60% of its total requirement despite increased investment in renewables. We have hardly done anything towards reducing GHG. Beneficiation of coal is still being talked about only in seminars like this. More efficient use of coal is still a distant dream as we still have old plants with very poor combustion efficiency. Carbon capture is considered to be too expensive and declared impractical. This only means that we are not doing justice to our next generation.

Another conference- COP 26 held at Glasgow desired different countries to declare their resolve for Net Zero timetable.

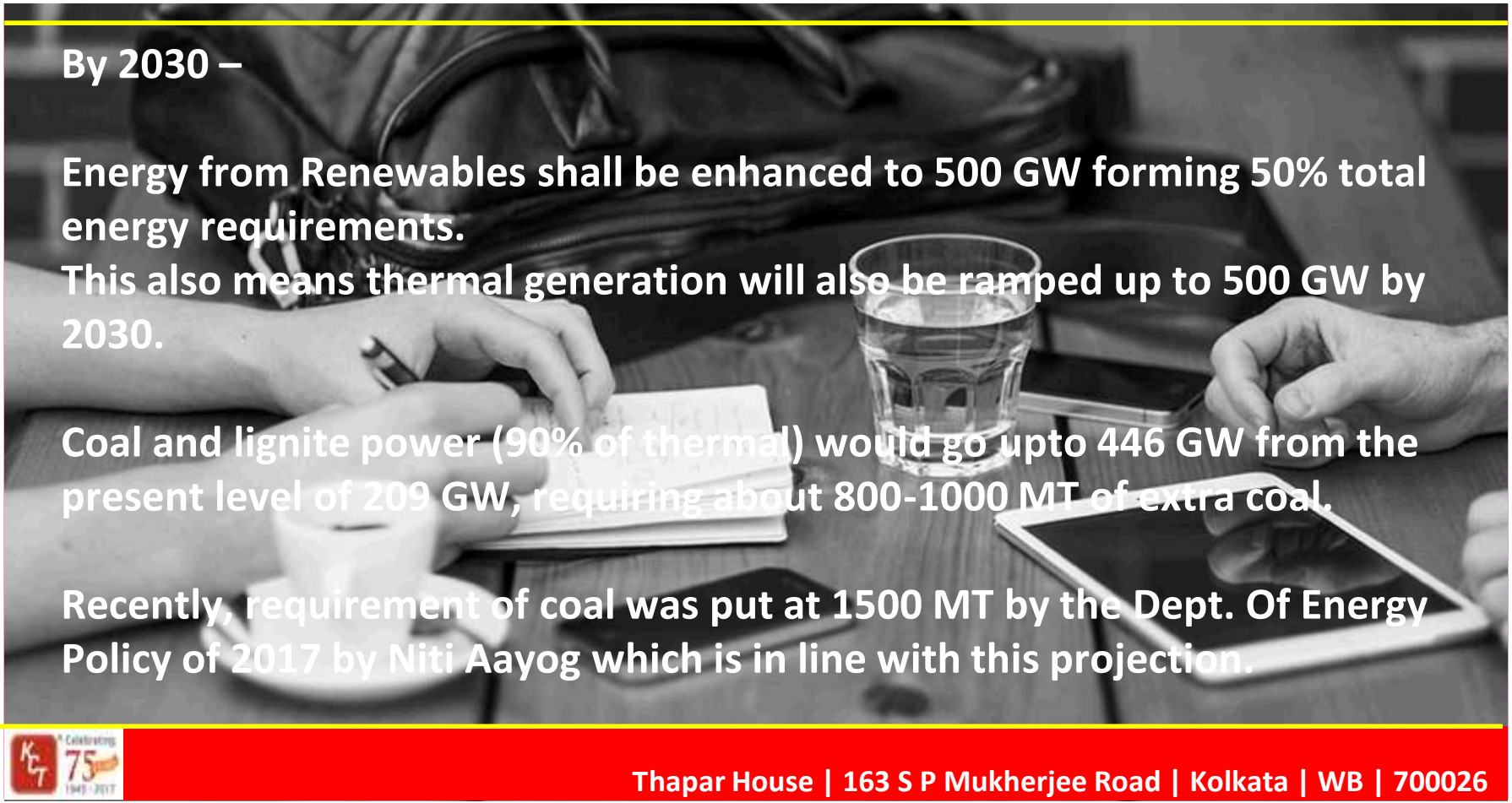
USA fixed 2050 for meeting this requirement, China promised by 2060 and India declared it by 2070.

For the first time, there was an explicit Plan to reduce coal use-responsible for 40% of annual CO_2 emissions. However, countries agreed on a weaker commitment to 'Phase Down' instead of 'Phase out'.

India's commitment at COP 26

Indian Prime Minister made the following pledge in COP 26.

1. Increase non fossil energy capacity to 500 GW by 2030. This means we need to install 62.5 GW of non fossil energy/year.
2. Meet 50% of energy requirements by Renewable Energy (RE) by 2030.
3. Reduce total carbon emissions by 1 Billion Tonnes by 2030.
4. Reduce carbon intensity of economy by less than 45%.
5. Achieve net zero carbon by 2070.

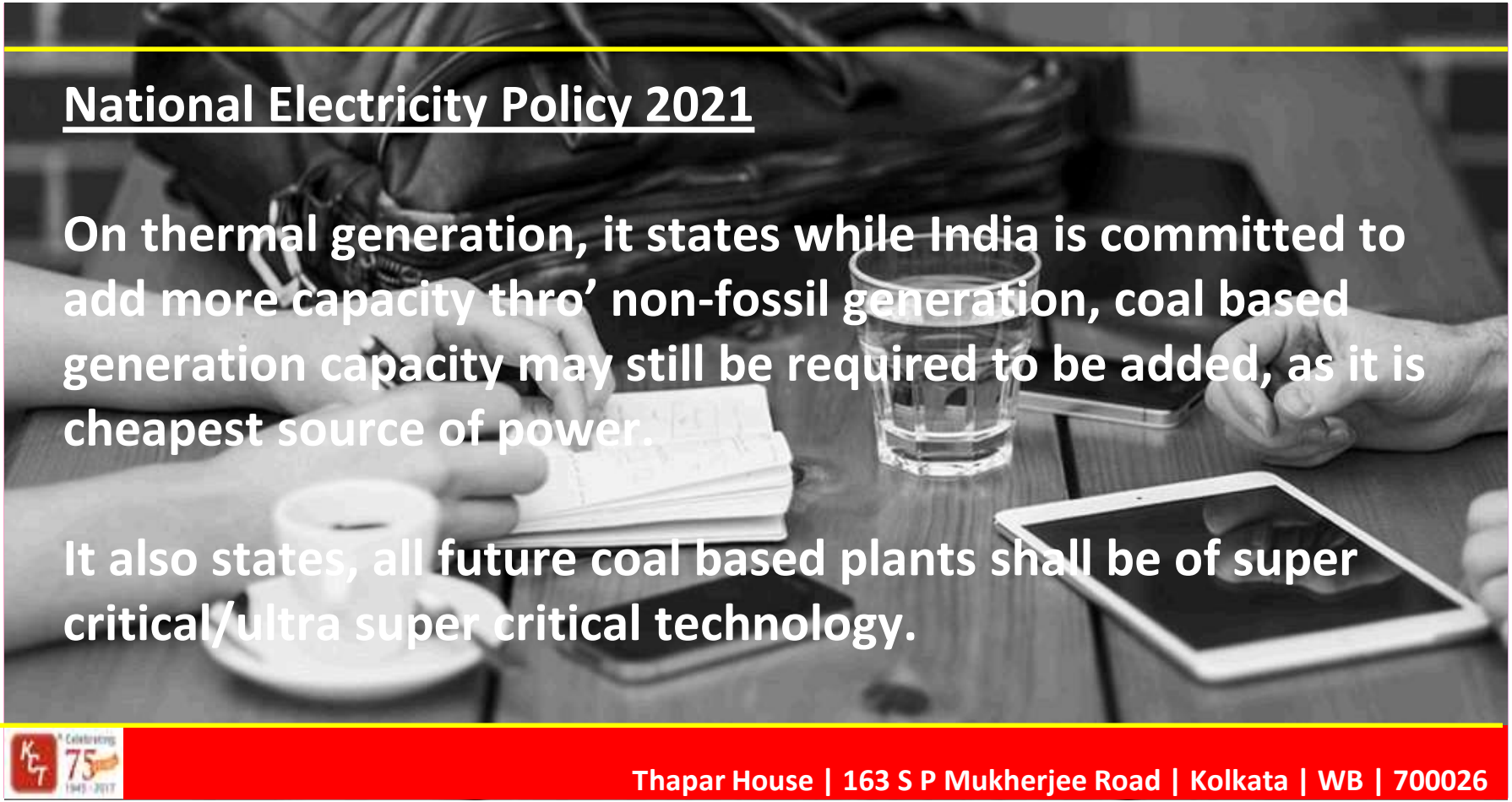


By 2030 –

Energy from Renewables shall be enhanced to 500 GW forming 50% total energy requirements.
This also means thermal generation will also be ramped up to 500 GW by 2030.

Coal and lignite power (90% of thermal) would go upto 446 GW from the present level of 209 GW, requiring about 800-1000 MT of extra coal.

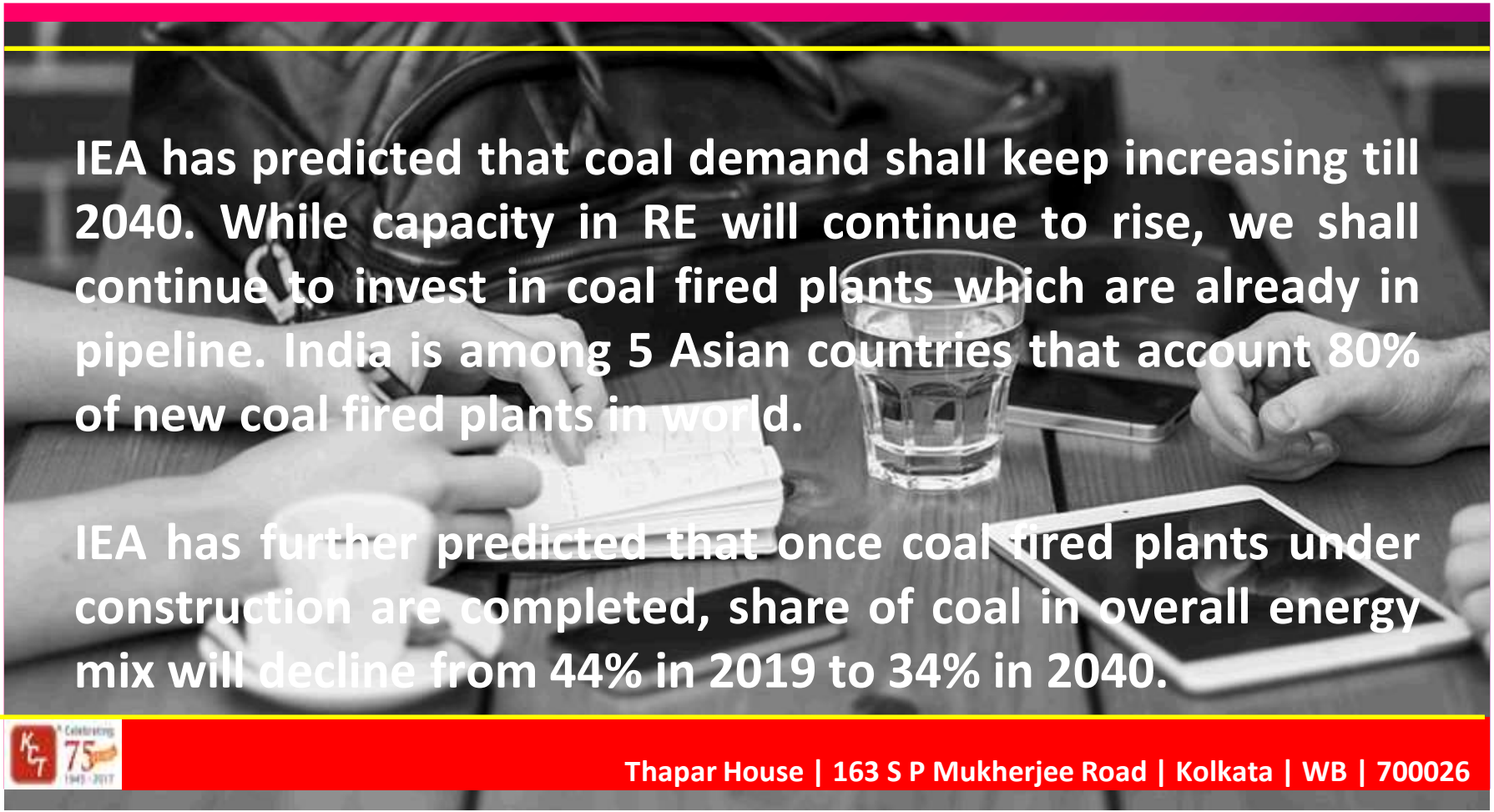
Recently, requirement of coal was put at 1500 MT by the Dept. Of Energy Policy of 2017 by Niti Aayog which is in line with this projection.



National Electricity Policy 2021

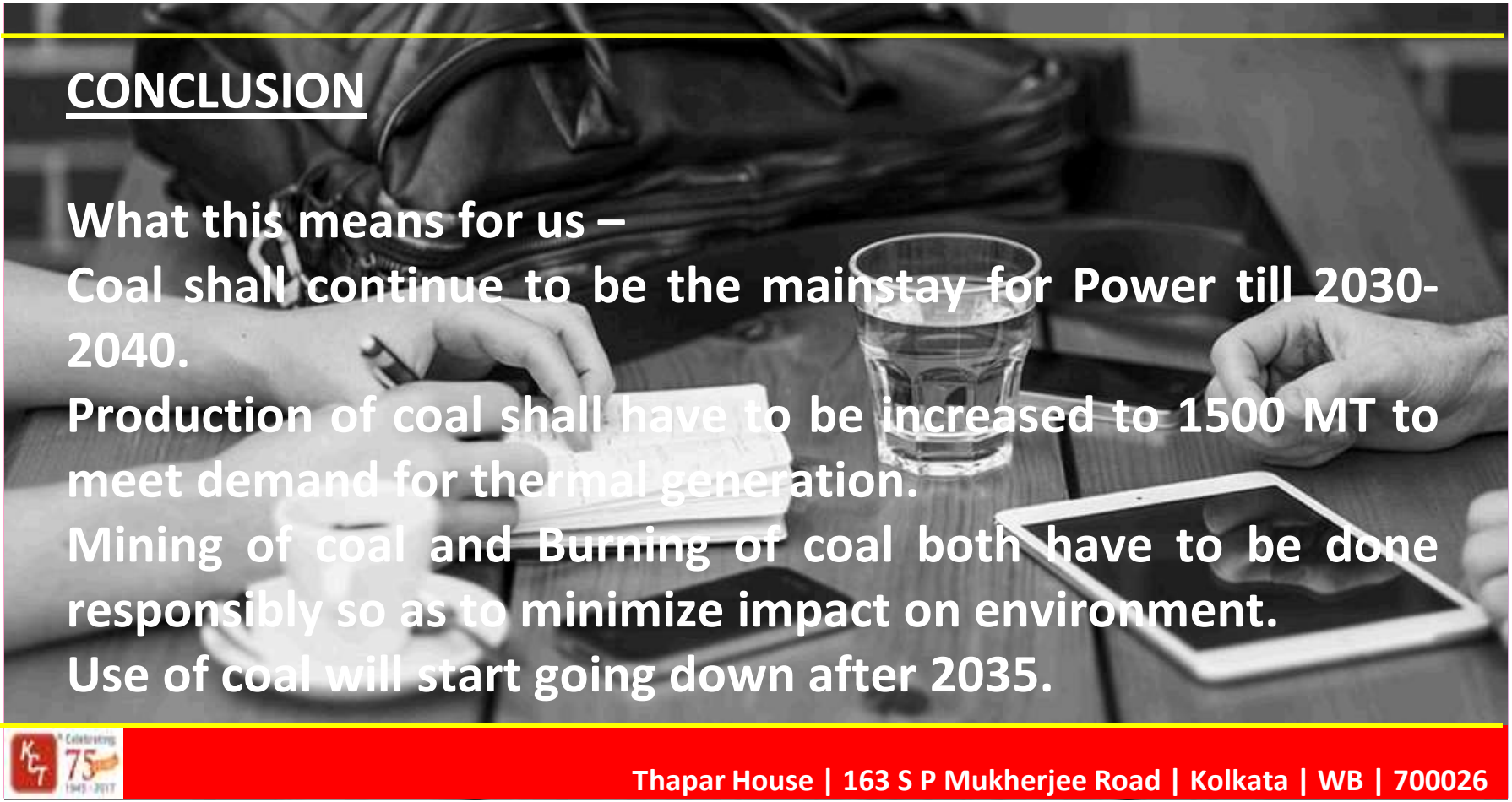
On thermal generation, it states while India is committed to add more capacity thro' non-fossil generation, coal based generation capacity may still be required to be added, as it is cheapest source of power.

It also states, all future coal based plants shall be of super critical/ultra super critical technology.



IEA has predicted that coal demand shall keep increasing till 2040. While capacity in RE will continue to rise, we shall continue to invest in coal fired plants which are already in pipeline. India is among 5 Asian countries that account 80% of new coal fired plants in world.

IEA has further predicted that once coal fired plants under construction are completed, share of coal in overall energy mix will decline from 44% in 2019 to 34% in 2040.



CONCLUSION

What this means for us –

Coal shall continue to be the mainstay for Power till 2030-2040.

Production of coal shall have to be increased to 1500 MT to meet demand for thermal generation.

Mining of coal and Burning of coal both have to be done responsibly so as to minimize impact on environment.

Use of coal will start going down after 2035.


THANK YOU