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## Relevant Websites & Contacts

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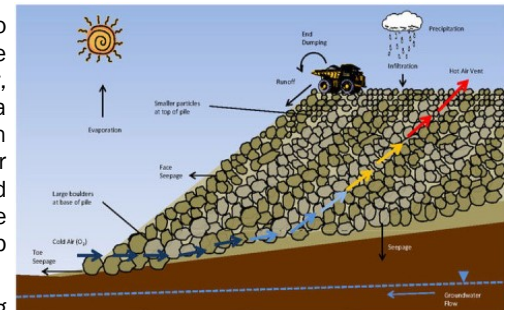
Website: <http://www.greentribunal.gov.in/>

## IMPACT OF COAL MINING - 4 ACID LEACHATE MITIGATION

The main problem affecting the mining industry is the safe disposal of waste rock dump (WRD). The infiltrated water interacts with the waste dump which has sulphur and metals within them, making it acidic and metal rich. This drain is referred to as an acid mine drainage, naturally occurs at operating and decommissioned mines. Acid mine drainage generated from coal mining operations is difficult to handle.

Reduction in the rate of generation of such acids requires elimination or reduction of one or more components or control of environment at the waste source in the form of isolation of sulphide, reduced supply of oxygen, temperature control, pH control and control of bacterial action. However, the method that is chosen for the process will depend on the characteristics of the waste material, amount of waste present, location, condition of the environment, economic feasibility, implementation, monitoring and maintenance.

The method of controlling and preventing aims to eliminate oxidation of sulphide present in waste which in turn reduces acid drain formation. Further, controlling the source to prevent acid formation is a preferable option for control the acid drainage in new operating mines. Source control methods refer to control of a) water migration, b) separation and blending wastes with alkaline materials and c) the use of dry and water covers. (Picture: waste dump hydrology)



**Control of water migration** is a method of restricting the amount of water moving through potentially acid generating waste. Clean water flows including surface water and groundwater should be interrupted from flowing through the waste pile. This is possible by way of construction of ditches, restricting the movement of clean water.

**Separation and blending** involves storing of wastes containing high percentage of sulphur separately or otherwise it should be encapsulated in acid neutralising substance such as limestone which is an alkaline material. This process neutralises the acid generated. Further, storing the waste with coarse materials mixing with tailing will reduce the size of the pores, reducing the oxidation of the sulphur contained.



**Soil compaction**—Compaction occurs when soil particles are pressed together, reducing pore space between them. In this context, compaction of mining waste decreases their permeability or restricting space for water to trickle through. Compaction helps in restricting percolation of water hindering oxidation of materials decreasing the rate of acid production.

**Dry covers (left picture)** can be used to separate waste with sulphate, which will limit the access to water and oxygen. Cutting oxygen supply is very effective means of preventing sulphide oxidation.

Mines are the only way to extract natural resources to utilise it for the common good. But this process ultimately disturbs the fragile ecosystem resulting in environmental degradation. Though it is inevitable in some cases, the pollution from mining can be controlled using a combination of the above methods. However, the appropriate technique should be adopted after analysing the nature, source and economic viability.

## BLAST AT UNCHAHAR THERMAL POWER PLANT IN UTTAR PRADESH

The accident took place in unit six of the plant. According to initial reports, the accident happened after the steam pipe of the boiler plant burst open.

Ash-pipe exploded due to pressure at NTPC plant in Rae Bareli, at least 100 injured," said DM Rae Bareli.

At least 32 persons died and more than 97 were injured, many sustaining serious burns, after a boiler tube exploded at the National Thermal Power Corporation (NTPC) unit in Unchahar in Rae Bareli district of Uttar Pradesh on Wednesday.

Workers and engineering staff were active at the 550 MW unit at the time of the accident, which left thick smoke billowing out of the plant. Rescue work is still on and district officials, police personnel and CISF jawans are trying to recover the bodies.

The office of the Director-General of Police confirmed 20 deaths so far and the death toll, it is

feared, could go up.

According to U.P. ADGP Anand Kumar, around 22 victims with severe burn injuries have been referred to Lucknow, said he said adding, another 15 victims are in Rae Bareli hospital. Some victims were also sent to Allahabad.

The identity of the victims is still not known. Most of them are believed to be workers. The NTPC management, which ordered a probe, said an abnormal sound was recorded at 3.30 p.m. in unit 6 of the plant.

There was a sudden abnormal sound at 20 mt. elevation and there was opening in corner no.2 from which hot flue gases and steam escaped affecting the people working around the area," the NTPC said in a statement.

Mr. Kumar said 'prima facie' the cause of the explosion appeared to be the pressure built up in the boiler due to gathering of ash.

UP Chief Minister Yogi Adityanath, who was in Mauritius, directed

Principal Secretary of the Home Department to oversee the rescue operations.

Terming the accident as "extremely sad", Mr. Adityanath announced an ex gratia compensation of 2 lakh each to the family of the dead, 50,000 to those grievously injured and 25,000 for other injured.

Expressing her condolences to the victims of the NTPC boiler accident, Sonia Gandhi, in a statement said, "In your hour of crisis, I stand by you and pray for the speedy recovery of the injured. I wanted come personally and share your grief but unable to do so as I am not well. She represents Rae Bareli in Lok Sabha.

All possible measures are being taken to provide immediate relief to the families of affected people in close coordination with the district administration, the firm said through a media statement.

[The Hindu](#) November 3, 2017.

*With the total capacity of 47,057 MW, India is the seventh largest producer of Hydroelectric energy in the world*

## TNPCB TWEAKS ONLINE CONSENT PROCESS FOR INDUSTRIES

The Tamil Nadu Pollution Control Board on Monday made prompt resubmission of consent and renewal of applications from industries mandatory to avoid cancellation of its consent for functioning.

In a statement, the Tamil Nadu Pollution Control Board said several industries, during the process of obtaining consent/renewal of consent orders, were not prompt in resubmitting applications that were picked out for errors. "... (such) applications are shown pending for a long time with the board," the statement said.

To avoid this situation, the board has proposed the processing and issuing of consent orders

within a specific time limit.

Effective November 10, the TNPCB will send out SMS and email alerts to industries whose applications have been pending for more than 15 days. In the case of small and medium industries, the board will issue four alerts over a period of two months, each spanning a gap of 15 days. For large industries, six alerts over a period of three months will be sent out.

If there is no response to these alerts, on the 61st day (for small and medium scale industries) and on the 91st day (for large scale industries), the board will delete the pending consent application forms from its Online Consent Management and Monitoring

System (OCMMS).

The consent fee paid for that application will be forfeited and necessary action will be initiated against such industries for operating without consent/renewal," the statement added.

The industries will then need to reinstate the process by filing a fresh application through the OCMMS along with the necessary fee, the board said.

The TNPCB has been issuing online consent/renewal through the Online Consent Management and Monitoring System since January 19, 2015.

[Times of India](#) November 6, 2017.

# COAL PRICE RISE A HARSH BLOW TO ASIAN BUDGETS

The dramatic rise in the international spot price of thermal coal over the past 12 months may have put a smile on the faces of a handful of chief executives of Australian and Indonesian coal exporters, but for importing nations including Vietnam, Thailand, South Korea, Japan and the Philippines, it risks putting a multibillion-dollar dent in current accounts.

Since the beginning of 2016, the price of internationally traded thermal coal, based on the Newcastle benchmark, has doubled from around US\$50 a ton to just under \$100 a ton now.

## Vietnam faces huge additional bill

To take the case of Vietnam, as it stood in 2016, the country imported a net 12 million metric tons of coal, up 131% from just 5.2 million tons in 2015.

But if the International Energy Agency (IEA) Mid-Term Outlook 2017 is to be believed, this will increase to 35 million tons per annum (Mtpa) of imports by 2021.

As such, at current market prices, Vietnam faces a \$3.5 billion bill every year by 2021, up from \$800 million in 2016.

Compared with projections based on 2016 numbers, Vietnam will in fact end up spending an extra \$1.27 billion every year on importing foreign coal by 2021.

With 35 million metric tons of imports also forecast per year for the Philippines, it too faces a current-account deficit increased by a similar amount.

While even a generous analyst would describe the IEA's traditionally overinflated forward coal growth projections as bullish, it does go to highlight the fiscal risk inherent in expanding domestic coal power plants fleets reliant on imports.

What's more, the inflationary nature of imported coal is dangerous for rapidly growing economies such as Vietnam.

## Record low solar price in India

India has already recognized this fact, with Coal Minister Piyush Goyal repeatedly pledging to end coal imports.

Instead, India has moved to ramp up dramatically the development of domestic renewable energy. The result has been a swath of record-breaking deals for solar, which remarkably is now cheaper than even the abundant domestic coal.

On the back of a doubling of renewable-energy installation activity in 2016-17, India's solar and wind tariffs have both fallen by nearly 50% since the start of 2016 to set record-low wholesale electricity tariffs of as little as \$38 per megawatt-hour. With price reductions consistently hitting 10% per year over the last five to 10 years, renewable energy is, in stark contrast to coal, deflationary.

South Korea is also wising up. As the world's fourth-largest importer of coal, it is particularly sensitive to both coal-power pollution and price fluctuations. With the IEA forecasting 102Mtpa of imports by 2021, a doubling of the coal price would result in an additional \$5 billion of expenditure per year.

This has sharpened minds in Seoul, and the recently elected government has taken steps this year to cancel proposed new power stations fueled by imported coal and to close highly polluting, end-of-life coal plants. Instead, it has embarked on an ambitious renewable-energy expansion with the target for a tenfold increase to 40-60 gigawatts of wind and solar infrastructure investments by 2030. This is smart policy.

## Coal fire-sale

Ironically, even as South Korea and its large neighbor China move to phase down reliance on coal, their domestic coal-plant manufacturers remain hungry for external markets as

their own decline.

This is in effect a fire-sale, with China, Japan and South Korea seizing a final opportunity to offload old technology produced by domestic manufacturers before it becomes completely obsolete and politically unacceptable.

But lured by cheap finance subsidized by the export credit agencies of China, Japan and South Korea, some Southeast Asian countries are coming to the table.

Only last week, the government of Vietnam penned a \$2.5 billion deal for the Nghi Son II coal power plant, largely funded and constructed by Japan and South Korea. What's more, significant coal pipelines remain in other nations including the Philippines, Indonesia, Bangladesh, Pakistan and to a lesser extent Thailand.

These countries clearly need new power-generation capacity, but locking themselves into 40-year-life power plants fueled by imported coal is a path to inflation, current-account pressures, pollution and expensive, inflexible electricity supplies.

For countries experiencing significant sustained economic growth, diversifying the electricity-sector generation base to incorporate more alternative sources of domestic supply, namely renewable energy infrastructure, is imperative.

Meanwhile, as evidenced by the burgeoning global green bond market, international capital is increasingly available for countries willing to set a clear policy direction to transition to clean energy.

Embracing this is the shrewd way to lock in deflationary energy-sector support for more sustainable economic growth.

[Asia times](#) November 15,2017

*A supercritical steam generator is a type of boiler that operates at supercritical pressure, repeatedly used in the production of electric power. Water passes below the critical point as it does work in a high pressure turbine and enters the generator's condenser, resulting in slightly less fuel use and therefore less greenhouse gas production*

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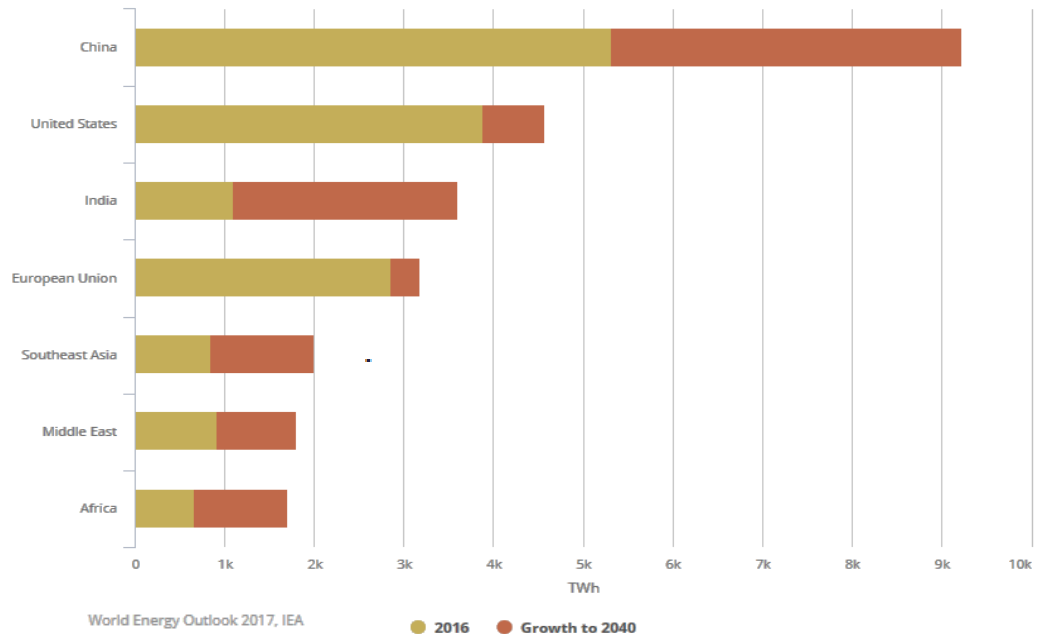
[www.cag.org.in](http://www.cag.org.in)

<http://thermalwatch.org.in/>



*Citizen consumer and civic Action Group (CAG) is a non-profit, non-political and professional organization that works towards protecting citizens' rights in consumer and environmental issues and promoting good governance processes including transparency, accountability and participatory decision making.*

## ELECTRICITY DEMAND BY SELECTED REGION – I.E.A



## REGULATIONS AND CASES

- Pankaj Kumar Mishra Vs Union of India & Others “Severe environmental pollution and health hazards because of Singrauli Industrial Area”, 24th November 2017, [Click here](#)
- Shailendra Singh Bisen & Others Vs State of Madhya Pradesh “Pollution in the river Narmada”, 6th November 2017, [Click here](#)

## PUBLICATIONS

- Jaron J. Peck, Amanda D. Smith, (2017), “Quantification and regional comparison of water use for power generation: A California ISO case study”, Energy Reports, [Accessed on 22-18th November 2017] [Click here](#)
- Nilolay Vasev, (2017), “Governing Energy while neglecting health— The case of Poland”, [Accessed on 11th November 2017] [Click here](#)

## MISCELLANEOUS

- The ASAR - International Conference on Renewable Energy, Green technology & Environmental Science (ICREGTES) will be held on December 31, 2017 at Chandigarh. [Click here](#)
- 8th International Conference on Environment, Agriculture and Biology and Natural Sciences (EABNS2017) will be held on December 25 & 26, 2017 at Bangkok, Thailand. [Click here](#)