





Educating & Informing Stakeholders on Energy, Environment & Thermal Power Plants

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Relevant Websites & Contacts

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IMPACT OF COAL MINING (PART 2) - COAL MINING BEST

In the previous issue, different types of mining technique used in coal mining, the impacts like acid mine drainage caused by coal mining to the environment were discussed. In this issue, occupational illness due to mining activities will be the focus.

Occupation illness is defined as the condition after exposure from a physical, chemical or biological agent in the workplace results in disruption of normal activities or may cause impairment to the normal functioning or in some cases leads to death. This is especially so in the case of mining sector. The sector has a poor track record in terms of occupational hazards on comparison with other sectors i.e. manufacturing, construction and rail. Mining activity causes surrounding to change more rapidly. E.g. open mining cracking of rocks with dynamite create noise and dust while releasing gases into the atmosphere which are otherwise held in pockets in between the rocks and minerals.

Silicosis and Coal Workers Pneumoconiosis (CWP)

CWP is most important occupational disease found among the mining workers. Silicosis is caused by inhalation of the silicon dust particles. This disease is widely found in developed countries where construction, mining, drilling, sand blasting and stone drilling are common. Though silicosis cannot be reversed it can be prevented from occurring. Respirable dust exposure has been the major cause for contracting the above mentioned diseases. Once a person had acquired the disease the condition cannot be reversed. This makes the disease to be fatal enough to cause death in most of the cases. National Institute for Occupational Health and Safety (NIOSH) has given guidelines to control dust generated in the coal mine site. Dust in coal mines can be controlled at different places. i) Controlling drill dust, ii) controlling haulage road dust iii) controlling dust at the primary hopper dump

Controlling drill dust

Drill dust is the dust emanating from cutting rocks when air is blown in the cut. This can be controlled either by dry or water based dry dust collection system.

- i. Dry dust collector system Dry dust collector system captures the dust flushed with compressed air from the hole during the drilling process. In order to assist the initial capture of the dust being flushed from the drill hole, the bottom of the drill deck is typically shrouded i.e., enclosed on all sides helping the collector inlet plenum located on the underside of the drill deck to contain the dust in it.
- ii. **Wet suppression** Add small amounts of water into the bailing air (air sent into drill bit) until the visible dust cloud has been significantly reduced. The water flows through the centre of the drill steel and exits through the end of the drill bit taking along the cuttings in the drill hole.

Controlling haulage road dust

Most of the dust at the mine site is contributed by off-road haul trucks. These dust generation can be averted by wetting the floor with water.

- i. Watering haul roads either by tankers or water sprinkler systems. Hygroscopic salts can be used to retain the water for a longer duration
- ii. Starch based absorbents, absorbs water 100—150 time its weight and stays immobilised for 3—6 months.

Controlling dust at the primary hopper dump

Usually the mine dust is loaded into the truck and taken to the crusher site. The load is either stored in a site or directly dumped into the hopper. Dust will emanate in both case if large volume of load is dumped in small time period.

- i. Enclose the primary hopper dump
- ii. Use water sprays to suppress the dust, chemical binder sprays to form resistance surface crust.
- iii. Prevent the dust from rolling back under the dump vehicle



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ECO NORMS TO RAISE YADADRI POWER PLANT COST BY RS 3,100 CR

With the Centre determined to implement the revised environment norms, the proposed 4000 MW Yadadri thermal power project will cost Telangana an additional Rs 3100 crore. The new environment norms mandate setting up of flue-gas desulfurization (FGD) devices at the thermal plant. The FGD is a set of technologies used to remove sulphur dioxide from exhaust flue gases of fossil-fuel power plants, and from the emissions of other sulphur oxide emitting processes. This will impose an extra burden on the state.

Similarly, the new environment guidelines also mandate setting up of Electro Static Precipitators (ESP) at the main project site and ash pond. This will help in reducing the pollution not only in the plant but also that which is being let out into the environment.

"The new environment standards are for less emissions and

reducing pollution. But as the earlier agreement with the engineering and construction company had not included these provisions, we have started negotiations with the BHEL, which is executing the prestigious project," Devulapalli Prabhakar Rao, chairman, Telangana Transco and Genco told TOI.

The Yadadri thermal power station with a capacity of 4,000 MW would be set up at Damaracherla of the newly formed Suryapet district. The project recently received environment clearance from the Centre. The environmental clearance, a key permission for construction of projects, has come with several new conditions which will increase the cost of the project.

The plant is estimated to come up at a cost of Rs 25,099.42 crore at the revised rates as it will have to pay more for additional environment safeguards.

"The FGD and ESP provisions are likely to cost Rs 0.79 crore per

mega watt," said sources in the Genco. Which means the project cost will increase by Rs 3100 crore in addition to the Rs 25,099 crore which was approved by the Centre.

It was proposed that the project would be constructed in an area of 2,800 acres. Out of the required land, 2,095 acres is forest land and the rest belongs to private individuals, government and others. The project is being constructed with super critical technology which uses pulverized coal as fuel from Singareni Collieries Company Limited.

The prestigious thermal project has already received financial closure with Rural Electrification Corporation Ltd and (REC) and Power Finance Corporation Ltd(PFC) having come forward to finance the project. Now, the additional burden due to the revised environment parameters will be negotiated with BHEL.

<u>Times of India</u> September 2, 2017

FISHERS WANT ENNORE ESTUARY DREDGED

Fishermen living in hamlets along the Ennore creek in north Chennai want the estuary that has silted up to be dredged.

Residents said that due to the silt piling up, they were unable to enter the sea. With the monsoon around the corner, they said that unless the estuary is dredged, water from the Kosasthalaiyar and Buckingham Canal that empty into the creek will break the banks and enter habitations.

"The direction of the waves has changed since the continuous dredging by one of the thermal power stations was stopped a couple of months ago. The waves are now hitting the opposite shore leading to heavy siltation. During low tide, we are able to walk across the creek and our boats get stuck in the sand causing much trouble," said D. Joseph, a resident.

Kalaivannan, a fisherman, said the dredging needs to be done and sand needs to accumulate south of the old pier.

"We have submitted petitions to the Fisheries Minister, district administration and various other agencies. The work needs to be taken up on a war footing," he said.

Also, the low-level causeway formed to carry coal to the Ennore Thermal Power Station (ETPS) beneath the new bridge needs to be removed so as to allow the free flow of water.

The work has been stopped following the orders of the National Green Tribunal, he added.

The Water Resources Department has not dredged the Ennore estuary for several years now. Since seawater is used by ETPS for

various process, the authorities there used to dredge the estuary periodically.

However, after ETPS stopped dredging work nearly three months ago, the estuary has silted up.

The estuary must be dredged to a width of 100 metres to help tidal wave action.

Though the estuary falls under the control of the WRD, it was not engaged in the work like in other estuaries as ETPS was hitherto removed sand blocks from the estuary.

Officials of the WRD said that measures would be taken to dredge the Ennore estuary as part of monsoon preparedness work if ETPS does not resume dredging. The Hindu September 3, 2017

The world's largest solar power plant is located in <u>Kamuthi, Tamil Nadu</u> has the capacity of 648MW. It is owned by Adani power Ltd. Volume 4, Issue 9 Page 3

WILL RENEWABLES HELP SECURE AUSTRALIA'S ELECTRICITY SUPPLY?!

Australia's energy market operator opens up that the increased renewable energy is helping to secure the electricity grid but also deficient supply ends up in blackouts, new approaches has to be adopted to take care of it.

The above report was released after the Prime Minister, Malcolm Turnbull confirmed the need for extension of the Australia's oldest coal power plant. Liddell and talks with owners AGL. But, however the tweet by chief executive of AGL to the former PM Tony Abbott regarding the closure of the plant by 2022 brings an end to the extension news. Subsequently, the report finds highest risk for an undersupply of electricity in the coming summer (2017-2018) in South Australia and Victoria regions. The convincing news here is that, there are more other renewable projects coming up reducing the risk. Where as in places like Queensland or Tasmania, there will be no risk of electricity shortage for the next 10 years.

After the closure of the Liddell power plant in 2022, there seems to be a power undersupply in NSW, also the report guotes the Australian Energy Market Operator's (AEMO) analysis on the renewable to compensate the coal plant closure.

AEMO also states that the penetration of the renewable to be effectively taken care, because if this leads to retirement of existing thermal facilities, then undersupply of electricity may increase without any firming capability. Chief executive officer, Audrey Ziibelman said that 'the power system does not have the reserves it once had. and therefore to balance peak summer demand in real time, targeted actions providing additional firming capability are necessary to reduce heightened risks to supply.

In between all this, there held a

another AEMO meeting in which the Minister for Environment and Energy, Josh Frydenberg put forth his opinion to opt for Australia's energy needs before deciding whether to implement the Clean Energy Target (CET). Commenting on his opinion, Turnbull spoke about his discussion with AGL in relation to keep Liddell running for another five years from 2022.

Mark Butler, member of Australian Labor party criticized the delay in the response for CGT and also stated that the investment strike on new electricity production will continue until PM takes a well planned CGT. Also blamed the PM for the pollution suit up and price hike. The above reports modeled for two scenarios for going green, which are nationally coordinated and expansion by states.

The Guardian September 5, 2017

Since 1970 about 7,68,935 sq.km of forest cover had been lost in Amazon. In the year 2016 the estimated total forest cover is around 33,22,700 sq.km.

SOLAR POWER DEAL WILL LOWER UK Consumer energy bills

Solar panels are to be installed vet another vote of confidence in in 800,000 low-income homes across England and Wales over the next five years, as part of a new government scheme. The Dutch firm, Maas Capital, is investing £160m in the project. The panels, which will be free to tenants, are expected to cut hundreds of pounds from energy bills, according to the UK firm Solarplicity. The first people to benefit from the scheme include residents of a sheltered retirement home in Ealing, west London.

Speaking at the site, International Trade minister Greg Hands said this initial £160m capital expenditure programme will deliver massive benefits to some of the UK's poorest households. As well as creating 1,000 jobs and delivering cheaper energy bills the UK as a place to invest and do business.

The firm providing the panels, Solarplicity, will work with more than 40 social landlords, including local authorities across England and Wales, also will target military veterans. The feed-in tariff scheme offers guaranteed cash payments to households that produce their own electricity using renewable technologies. It changed in February, adopting different rules and lower tariff

Julian Bell, leader of Ealing Council, welcomed the scheme, but said its own programme of installing solar panels had been curtailed after the government reduced the feed-in tariffs that offered a return on electricity generated from small-scale

energy schemes.

The business case didn't quite add-up when the government made changes to subsidies and feed-in tariffs for sustainable energy.

We're grateful that private investors are coming here and investing in Ealing and benefitting our residents but the government still needs to do more to move people to sustainable energy and solar power particularly.

The chief executive of Solarplicity, said the price of solar panels had fallen enough so that government subsidies were no longer essential.

Most of all, any kind of investment in the transition to low carbon energy supply can be a positive thing.

BBC News September 2, 2017

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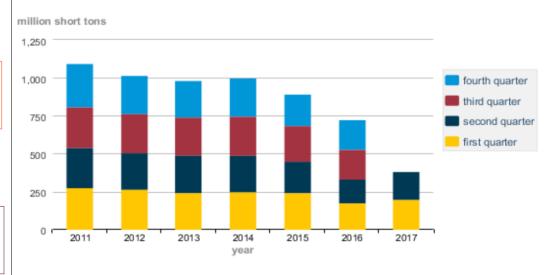
http://thermalwatch.org.in/



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.

COAL PRODUCTION IN EACH QUARTER FROM 2011 - U.S E.I.A

U.S. coal production by quarter



eia Includes refuse recovery, Source; U.S. Energy Information Administration; "Quarterly Coal Report."

REGULATIONS AND CASES

- V Ramasubbu Advocate Sri Sakthi Nagar Krishnapuram Tirunelveli VS Union of India Ors,, "Invoking polluter pays principle to compensate the damages done in Upparu stream", 8th Septermber 2017, Click here
- Sou Pushpa Shivaji Powar Vs The Commissioner Kolhapur Municipal Corporation "Seeking ban on illegal mining in Kolhapur", 6th Septermber 2017, Click here

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- Ministry of Environment forest and climate change, (2017), "Wetlands (Conservation and Management) Rules, 2017 " [Online], New Delhi, [Accessed on 24 October 2017] Click here
- IRENA (2017), "Geothermal Power: Technology Brief" [Online], Abu dhabi, [Accessed on 24 October 2017] Click here

MISCELLANEOUS

- Public hearing for proposed coal mine 5 MTPA and Pit head coal washery of % MTPA by Rajasthan Rajya Vidyut Utpadan Nigam Limited (RVUNL) on 29-10-2017 in Surguja and 12-11-2017 in Surajpur, Click here
- 6th International Conference on Environment, Chemistry and Biology (ICECB 2017) will be held during November 20-22, 2017, Queensland, Australia Click here