# Indian Mining Exchange

**News Bulletin, 24th October 2011**

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(Sourced from ET)

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http://www.diamonds.net/news/NewsItem.aspx?ArticleID=37487&ArticleTitle=Emeralds+for+Elephants+Auction+Raises+%24750K

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http://www.reuters.com/article/2011/10/17/idUS270304600220111017

## Coking Coal, Thermal Coal and Lignite

**CIL workers call off proposed strike after higher bonus**

- 18 Oct 2011 Steel Trade Today

ET reported that employees unions of Coal India Ltd today withdrew their proposed three day strike after the management agreed to give higher bonus, along with INR 1,000 as Diwali gift.

CIL has reached an agreement with workers Unions to pay INR 20,000 bonus to each worker instead of earlier announced INR 17,000, besides INR 1,000 as Diwali gift.

The unions were demanding for a minimum bonus of INR 23,500 per employee.

The unions have decided not to proceed on 72 hour strike as announced earlier. The five workers' unions INTUC, the Centre of Indian Trade Unions (CITU), the All India Trade Union Congress (AITUC), the Hind Mazdoor Sabha (HMS) and the Bhartiya Mazdoor Sangh (BMS) had threatened to proceed on strike if their demands of bonus and pay revision are not met.

(Sourced from ET)

**WCL wants coal belt around Nagpur**

Ashish Roy, TNN Oct 20, 2011, 03.21 AM IST

NAGPUR: The district's natural wealth is gradually proving a bane for the city and its nearby areas. A large number of thermal power plants are coming up around the city because as per the government this area is close to mines and has lot of water. If this was not enough, Western Coalfields Limited (WCL) wants to dig up the areas around the city, some of which will soon become suburbs of Nagpur.

WCL has written to Nagpur Improvement Trust (NIT), which is the planning authority for the Nagpur metro region, to reserve 60,000 hectare for the company as this land is likely to have coal reserves. 129 villages and localities are coming under this area.

Some of these villages - Godhni, Hingna, Wanadongri - have become heavily urbanized while rapid urbanization is taking place in many areas like Gondkhairi, Dahegaon, Jamtha, etc. WCL's coal belt starts from Godhni, which is on the fringes of the city, and passes through Gorewada reserved forest, Gondkhairi, Hingna MIDC, Hingna town, Wanadongri, south-western boundary of Mihan, Jamtha upto Nagpur-Umred narrow gauge railway line.

NIT chairman Pravin Darade told the media on Wednesday said that he would take up the issue at the highest level including ministry of coal. "We cannot allow WCL to mine this area.

Development of the metro region will become impossible. Moreover, the city's future will be quite bleak," he pointed out.

MK Singh, general manager (PR) of WCL, defended his company's demand. "We have only asked NIT to take no objection certificate (NOC) from us before starting development of any region. If you develop any area which has coal, then it will create major issues 10 to 15 years down the line."

Singh said that WCL did not have much choice as government did not permit coal mining under forests. Replying to a query he said that as per law, ministry of coal could compulsorily acquire an area having coal reserves.

The coal company has already asked NIT to help it in acquiring 535 hectares in Kamptee, Saoner and Umred areas. It has stated in a letter that it needed to acquire these areas urgently as the coal was to be supplied to the power sector, which was in dire need of coal.

http://articles.timesofindia.indiatimes.com/2011-10-20/nagpur/30302359_1_wcl-coal-reserves-metro-region

## Iron Ore, Iron and Steel

**SAIL finds solution for its mill troubles at Sindri**

Kunal Bose / October 18, 2011, 0:01 IST

Now finds enough space for an integrated steel mill, a power complex and a fertiliser unit in what was once the Sindri fertiliser complex.

Steel Authority of India Ltd (SAIL) could not have asked for more than finding access to the huge tracts of land at Sindri in Jharkhand where till 2002 plant nutrients were made by the country's first public sector fertiliser unit. In one stroke without going through the increasingly complex and expensive process of buying land, SAIL now finds enough space to pack an integrated steel mill, a power complex and also a fertiliser unit in what was once the Sindri fertiliser complex. Promoters of big projects are finding their cost of acquiring land could scare them out of their wits.

SAIL Chairman Chandra Sekhar Verma has had occasions to speak about the compulsions of building compact steel plants, raising the land use efficiency bar by many notches in view of shrinking land availability. So, when he goes to build a 5.6-million-tonne (mt) mill at Sindri, the industry will be watching the technology he inducts to produce steel cost effectively and occupy minimum space. The new reality in the steel industry is that bigger the mill size, greater should be the efficiency in land use. To give an example, when a Chinese mill installed a huge 5,500-cubic-metre blast furnace or JSW here commissioned a 4,019 cubic metre one, the objective was to do with one unit instead of with a couple. The twin benefits in the exercise are cost saving in making hot metal and economy in land use. The Sindri

complex is spread over 6,652 acres of which the usable area is, however, 5,482 acres. All three proposed SAIL projects will have to be highly compact in order to be accommodated in the complex.

In case a greenfield mill is to use Posco's Finex technology, then the land requirement will be about 40 per cent less than needed for making steel through BF route. As Finex process allows making of hot metal directly from non-coking coal using a coal briquetter and fine ore run through fluidised bed reactors, it dispenses with coke ovens and sinter plants. So a lot of space is saved. Moreover, this new technology is well suited to use ore with high levels of alumina. Verma, who these days is sounding more and more like a technology aficionado, also has other options like Rio Tinto's Hismelt technology allowing high intensity smelting of ore fines using non-coking coal and Corex smelting reduction process, which Siemens Vai claims could lead up to 20 per cent cost saving in hot metal making.

Since he became SAIL head honcho in June 2010, Verma started looking for opportunities through joint ventures and technology transfer to get into making cold rolled grain oriented steel and auto grade and electrical steels. In fact, these are the steels for which the country is import dependent. Verma also wants SAIL's rolling mill capacity quickly to be strengthened so that every tonne of saleable steel it makes is sold as finished products. Now, however, semis have a share of 20 per cent of SAIL saleable steel. Unlike at its existing mills where along with capacity expansion transition is made to new technologies, the building of a new mill at Sindri, in the words of Verma, will allow SAIL to induct "state-of-the-art technology." Verma must be aware that for the proposed mill to be in tune with frontiers of technology, he needs a JV partner. What should work to the advantage of SAIL is that foreign steel majors have discovered that to get a toehold in steelmaking in India, the best route is to have partnerships with established local groups. ArcelorMittal has done this, so also Nippon Steel.

By 2012-13, SAIL will be completing an investment of Rs 70,000 crore to expand its hot metal capacity to 23.46 million tonnes from 13.8 million tonnes, in phases. However, for Verma, who is now to decide the capacity target for 2020 – "this could be anything between 45 and 60 million tonnes to maintain our market share" – a breakthrough at Sindri will be a welcome development. Whatever iron making natural resources may now be at SAIL's command, Verma will be seeking independent new accesses to iron ore and coal deposits from the Jharkhand government before he sets out to build the mill at Sindri. Incidentally, SAIL has lease rights to around 4 billion tonnes of iron ore. Like many steelmakers across the world, including the largest of them all ArcelorMittal, SAIL is readying itself to increase the size of its raw materials bank.

"It's not only more of iron ore and coal that we want in SAIL kitty, but we also need to look for reserves of dolomite, limestone and manganese ore," says Verma. While seeking to enlarge the raw materials bank, SAIL at least once had to use all the tricks in its armoury to fend off some steelmakers from trying to wrest control of slices of 2 billion tonnes of high

quality Chiria iron ore deposit. As it seeks to open a 15 million tonnes iron ore mine at Rowghat with deposits of 500 million tonnes, SAIL will have a task in hand to deal with extremist threats and win over the local people on its side.

http://www.business-standard.com/india/news/sail-finds-solution-for-its-mill-troubles-at-sindri/452883/

## Renewable Energy

**Landfill Goes From Wasteland to Solar Plant**

by Lauren Craig, October 19th, 2011

According to the U.S. Environmental Protection Agency (EPA), there are about 100,000 closed landfills in the United States. These sites represent hundreds of thousands of acres of property that could be used for renewable energy development. In addition, many of these landfills are near urban areas and have infrastructure in place to deliver solar and other forms of alternative energy economically.

Fortunately, landfill owners and operators are beginning to catch on to this opportunity to turn wastelands into a source of renewable energy. Republic Services has announced the completion of a solar photovoltaic (PV) landfill cover on top of its closed Hickory Ridge landfill near Atlanta. The installation is the world's largest landfill solar energy cap; and only the third application of this technology in the U.S. The 1-megawatt (MW) solar array covers approximately 10 acres along the south slope of the 45-acre site, and is configured to allow access to landfill gas collection wells for a future landfill gas-to-energy project at the site. The cover will generate more than 1 million kilowatt-hours (kWh) of renewable electricity annually – enough to power 224 homes in Georgia.

The Spectro PowerCap, made by Carlisle Energy Services (CES), integrates thin-film photovoltaic panels into a three-ply membrane. The system meets regulatory requirements as a means of permanent landfill closure, and also generates electricity. A similar closure system was also installed earlier this year atop a municipal landfill in Madison, N.Y.

The roughly $5 million investment by Republic was offset by a $2 million grant from the Georgia Environmental Finance Authority. Georgia received $82.5 million in funding for state energy-efficiency and renewable energy programs through the American Recovery and Reinvestment Act.

http://www.earthtechling.com/2011/10/landfill-goes-from-wasteland-to-solar-plant/

## Macro Speak

**Reverse mood of negativism: PM**

TNN | Oct 23, 2011, 12.45AM IST

*Prime Minister Manmohan Singh on Saturday suggested India's business and economic environment is much better than the gloomy sentiment generated by a slew of corruption scandals ranging from the 2G telecom scam to the Commonwealth Games fiddle.*

NEW DELHI: Warning against a mood of "negatism" gripping the country, Prime Minister Manmohan Singh on Saturday suggested India's business and economic environment is much better than the gloomy sentiment generated by a slew of corruption scandals ranging from the 2G telecom scam to the Commonwealth Games fiddle.

Singh said India could be in danger of scoring a self-goal and buoyant domestic conditions cannot be taken for granted. "It is our collective responsibility to reverse the mood of negativism today...Nothing is ordained or pre-determined. India can rise, but India can also falter."

The PM urged the Opposition to agree on shared objectives apart from political differences and said, "We can either become victims of negativism, criticising ourselves all the way, or work together to put ourselves firmly in the group of rising economies. Both optimism and pessimism have an infectious quality."

"We must guard against the mood of negativism that seems to have gripped the country. Recently a distinguished business leader said that in India `the business is better than the mood'. Investment is, after all, a reflection of the 'animal spirits' of enterprise," the PM told a meeting of the National Development Council.

The PM said that the current slowing of the economy is temporary and the 12th Plan which NDC discussed aimed at a robust 9% growth. Singh said India's long-term prospects were not in doubt but stressed that not catching the tide at full could well becalm the Indian economy.

Calling for sustained higher investment in infrastructure, Singh sought to shake off a doomsday scenario about UPA-2, Singh said, "As we in government seek to create the foundations for higher investment, higher employment and growth, we must be particularly mindful of the impact of our policies and politics on public and private investor sentiment."

Pointing to India's advantages at a time when a slowdown threatens both the US and European economies, the PM said the world is witnessing a major realignment of economic

power and said, "Industrialised countries are slowing down, emerging market economies are gaining weight and regionally, Asia is gaining weight."

India, he said, could be poised to reap a double gain from the developed world's woes and Asia's rising domestic demand. Singh argued, "As an emerging market economy in Asia, we stand to gain on both counts. Our policies in the 12th five-year Plan must therefore be shaped to take full advantage of these emerging possibilities."

The NDC meeting sought views of assembled chief ministers on a blueprint to power Indian infrastructure which Singh has repeatedly asserted can absorb $300 billion of investment over the next decade.

"Much of the growth process is now driven by actors outside the direct control of government...This, however, does not mean government has no role to play in the development process. It has a very large role and I would distinguish four areas in this context," the PM said, pointing to the policy environment and areas like rural and urban infrastructure.

"The world is watching India with great interest. I also believe it is watching us with great goodwill. The world has a stake in India's success because a peaceful prosperous democratic India is a stabilising force in the world," the PM said calling for Centre-state cooperation to build on policies that he pointed out were pursued by almost all parties.

"Let us therefore embark on the 12th five-year Plan journey with ambition tempered with humility and confidence, combined with determination. Let us show the world that democratic India is capable of building a prosperous, inclusive, secular and plural nation on the path of sustainable growth. The world has a great stake in the success of this Indian model of development," the PM said.

http://timesofindia.indiatimes.com/india/Reverse-mood-of-negativism-PM/articleshow/10457648.cms

## MIxed Bag

**Emeralds for Elephants Auction Raises $750K**

**World Land Trust and Wildlife Trust of India receive $150K from the emerald auction.**

Oct 18, 2011 2:32 PM By Jeff Miller

RAPAPORT... Gemfields' ''Emeralds for Elephants'' collection raised $750,000 at auction with $150,000 of the proceeds going to the World Land Trust and Wildlife Trust of India's conservation projects in India. World Land Trust and Wildlife Trust of India work

together to create a network of wildlife corridors so elephants can follow their migratory routes while minimizing human-elephant conflict. Gemfields, which produces ethically mined emeralds in Zambia, appointed Bollywood actress Madhuri Dixit, pictured, as its ambassador for the Emeralds for Elephants project.

Dixit appealed to guests at the auction, saying, ''This collaboration demonstrates that everyone has something to give, and I believe that we all need to give something back to the natural world we share with these animals.''

Ian Harebottle, the chief executive of Gemfields, said, ''We are thrilled with the results of the auction, especially as this is the first time that auction of this kind has been held in India. We are honored to have worked with so many great partners on this project, from Indian's top jewelers and retailers, Arzan Khambatta, our ambassador Madhuri Dixit to Jaguar Land Rover, Gemological Institute of America (India), Taj Mahal Palace Hotels and Resorts and Sotheby's who provided the auctioneer. We are proud to play a small part in being able to raise critical funds for the World Land Trust's Indian Elephant Corridor Project and look forward to continuing our work together to ensure the survival of natural habitats.'

For more information on World Land Trust please visit www.worldlandtrust.org

http://www.diamonds.net/news/NewsItem.aspx?ArticleID=37487&ArticleTitle=Emeralds+for+Elephants+Auction+Raises+%24750K

**Coal Plant + New Fuel Cell System = 90 Percent Reduction in $CO_2$ Emissions?**

By Cleantechnica at Cleantechnica

Mon Oct 17, 2011 1:51am EDT

by Andrew Burger

Back on Oct. 3, I wrote a post about the Dept. of Energy awarding $3 million for Connecticut's FuelCell Energy to carry out a three-year project that entails evaluating the use of the company's Direct Fuel Cells (DFC) to efficiently and cost-effectively separate carbon dioxide (CO2) from coal-fired power plant emissions and use it to produce clean electricity. Readers' comments prompted me to dig deeper into the project's aims, how the system is designed to work, and the implications of its potential success or failure.

In doing so, Schwartz MSL's Rob Skinner arranged, and sat in on, a four-way conference call during which I spoke to Tony Leo, FuelCell Energy vice president of applications engineering and new technology and Kurt Goddard, who is in charge of investor relations for the Hartford, Ct.-based designer and manufacturer of fuel cell systems and technology.

Before moving on into the nitty-gritty and meat of the technology - which I'll do in a separate post to come shortly - I'll cut straight to the chase, at least as far as I see and understand it.

If successful, FuelCell Energy's system will separate and capture 90 percent or more of the $CO_2$ emitted from a coal-fired power plant's flue stream. The $CO_2$, along with hydrogen 'reformed' from natural gas, will be used to drive a fuel cell that produces clean electricity that will add to the plant's energy output. Nitrogen oxides (NOX), another potent greenhouse gas, will also be captured, but destroyed in the process. Emissions from the fuel cell system: water.

Now if FuelCell Energy's system does indeed work, it will eliminate virtually all the coal-fired power plant's $CO_2$ emissions, as well as its $NO_X$ emissions. Plus it will add to the plant's now virtually $CO_2$-free electricity output. That's a pretty potent "double-whammy. In fact, I'd have to agree with FuelCell Energy's Tony Leo when he said that the system, if proven on a commercial scale, "would be a game-changer."

**Weighing the Costs and Benefits**

Now, there are a lot of other issues to do with using coal to generate electricity, primarily related to the mining of it, that cause many, including me, to not only come out against increasing coal-fired power generation, but to support using cleaner, more socially and environmentally sustainable means of producing electricity as quickly as possible.

On the other hand, I believe projects such as this merit government funding and public support. Take into account that this is no 'pie in the sky,' 'shoot for the moon' system design or technology. FuelCell Energy has proven that it works, just not at commercial scale. That's where, and why, the DOE stepped in.

The outlay, at $3 million, is practically miniscule when viewed within the context of the overall scale and scope of current government clean energy support and incentives, much less to say when compared to the amount and scope of fossil fuel energy industry subsidies.

Then there's the potential 'pay-off': projects such as this offer potentially tremendous benefits, both in terms of economics and environmental health and safety. That's particularly true, and over the near-term, when it comes to assuring our energy security, significantly reducing our greenhouse gas emissions and mitigating our out-sized contribution to climate change and global warming.

Coal-fired electricity generation accounted for 43.3 percent of US electricity production through July, 2011, according to the US Energy Information Administration's October report, yet accounted for 81 percent of total US CO2 emissions from electricity generation in 2010, according to the US Environmental Integrity Project's annual 2010 CO2 report.

If FuelCell Energy's system proved successful, and if such systems were installed at all the coal-fired power plants in the US, we would produce that 40-odd percent of nationwide electricity and cut the resulting CO2 emissions by a whopping 90 percent, which, roughly

speaking, translates into a 70 percent or more reduction in total CO2 emissions from electricity generation. And this might be done within a relatively short time frame.

That's assuming we could muster up sufficient quantities of the materials and energy inputs required to manufacture, install and run a sufficient quantity of such fuel cell systems. To my mind, that's a goal, and a clean energy technology, that at this stage is well worth pursuing and funding.

Blazing a Trail Out of the 'Hydrocarbon Man Era'

Again, don't get me wrong, I report and write for Clean Technica. I'm all for developing a clean, more distributed, renewable energy infrastructure that's more sustainable and much less socially and environmentally damaging as fast as we possibly can.

Yet as fast as wind, solar, geothermal, ocean energy and biofuels are growing, or could grow, it's going to require decades before they account for a majority of the energy the US consumes. Whether or not that's even achievable given our current energy consumption and rate of growth remains an open question. The flip side of the coin, reining in our demand for energy, is a 'different dog with a whole 'nother set of fleas.'

Some commentators have likened the effort it will take for us to wean ourselves off fossil fuels and blaze a trail out of 'the era of hydrocarbon man' before nature's constraints force us to do so to the nation-wide mustering of resources and effort Pres. Kennedy launched in the 1960s. That resulted in putting a man on the moon. One said it would be more like 'establishing a human colony on Pluto.'

That's the scope and scale of the change, and challenge, we're facing when it comes to energy. Unfortunately, we're decades late in fully recognizing and accepting this as a reality and getting serious about taking the steps necessary to make such a transition. It's going to require decades more to do so.

Given the current political climate in the US, it's by no means clear that 'we' collectively, as a nation, have even accepted the problem and challenge for what it is, much less committed ourselves to enacting the policies, restructuring our markets and industries, or making the lifestyle changes that will greatly improve our chances of successfully doing so.

**Coal or No Coal?**

Coming back around to the DOE's funding of FuelCell Energy's pilot coal-fired power plant $CO_2$ capture and clean energy production system: if it works, I believe that it would indeed be a 'game-changer.'

Would it solve all the problems associated with using coal to produce electricity? By no means. But it would get us halfway there, so to speak, in that it would eliminate 90 percent or more of a coal-fired power plant's $CO_2$ emissions, as well as $NO_X$ emissions.

A lot would be learned by testing FuelCell Energy's system. The concept and system design also suggests other avenues of R&D to pursue in our search for cleaner, more sustainable energy sources that we can implement widely in the near term as we continue to move towards ever cleaner, more sustainable renewable energy resources, both now and over the longer term.

For example, could this, or a similar, fuel cell system design be used in tandem with coal-bed methane production to produce clean electricity? This approach might address some of the key environmental issues associated with the mining end of using coal to produce electricity.

After all, though they produce much, much less in the way of $CO_2$ and greenhouse gas emissions, we can't manufacture solar cells and modules or wind turbines without mining either. These activities come with their own environmental health and safety, greenhouse gas emissions and energy security issues, though, again, to a much smaller degree.

It also suggests the possibility of making greater use of biogas from waste streams as a source of $CO_2$ for such fuel cell systems. Such systems are already up and running, as at an Orange County, California wastewater treatment facility.

Taking this another step, renewable power systems, such as wind farms, can be used to electrolyze water to produce hydrogen, which can be stored and later used by fuel cells to produce clean electricity on demand, thereby addressing one of the biggest problems associated with making greater use of intermittent renewable energy sources, smoothing out and matching supply and demand.

This is also happening today. Canada's Hydrogenics last week won a contract from the German city of Herten, a hydrogen and renewable energy hub, to install a fuel cell system that will do just that.

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http://www.reuters.com/article/2011/10/17/idUS270304600220111017