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From the editorial desk...

Clean energy investments

Clean energy benefits the environment, fuel supply, and the economy. These benefits are found at both global and local levels. Clean energy technologies rely on alternative and renewable fuel sources, like the sun, wind, biofuel, hydrogen, and so on. Using these sources in place of fossil fuels helps in reducing both toxic and non-toxic wastes. More importantly, it acts as an alternative to the depleting natural resources.

Market indicators demonstrate that many clean-energy technologies are on the rise. According to the *New Energy Finance*, investment in clean energy worldwide rose by one-third last year to $117 billion, boosted by widespread concerns over global warming. Government measures to combat climate change and support clean energy sources such as wind, biofuels, and solar have drawn funding for investment into the sector, helping it weather a wider credit crunch which has strained markets and threatened lending elsewhere. Venture capital and private equity investments in clean energy companies have seen an upward trend. Large corporations like General Electric Co., BP Solar, and so on, are investing in clean energy technologies. Google has recently launched RE<C, a strategic initiative whose mission is to develop electricity from renewable sources cheaper than the electricity produced from coal. Initially, this project, to create renewable energy cheaper than coal, will focus on advanced solar thermal power, wind power technologies, enhanced geothermal systems, and other potential breakthrough technologies.

In India, venture capitalists invested over $777 million in about 57 deals for entrepreneurial companies during the first three quarters of 2007, according to the *Quarterly India Venture Capital* Report. In 2007, an EvalueServe report on venture capital investment in India estimated at about $4.4 billion to flow into India via venture capital funds over a year.

Sources
Web site: *www.reuters.com*, *www.google.com*, *www.ciol.com*

News

Economy

India, UK pledge to cooperate in SMEs

Business Standard, 23 January 2008

India and the United Kingdom have decided to increase cooperation between SMEs, entrepreneurs and venture capitalists. In a joint declaration signed at the end of the summit meeting between British Prime Minister Mr Gordon Brown and his Indian counterpart Dr Manmohan Singh, the two countries agreed to encourage business partnerships to tap the opportunities offered by India's rapid infrastructure growth. He said the trade between two countries was already growing. It had doubled in the last five years and recorded 20% annual growth during the last few years, he added.

Semiconductor policy logs Rs 400-billion commitment

The Hindu Business Line, 24 January 2008

The government has now received cumulative investment commitment worth almost Rs 400 billion under the scheme to promote semiconductor fabs and other micro and nano technology units. While three companies had applied earlier, two more firms – Signet Solar and KSK Surya Photovoltaic Venture Pvt Ltd – have submitted applications to avail the incentives under the policy. The investment proposals of the two new applicants add up to nearly Rs 190 billion. While Signet Solar's proposal entails an investment blueprint of Rs 90 billion to manufacture solar photovoltaic modules, KSK has outlined an investment plan of about Rs 100 billion. Earlier, Moser Baer, Videocon and Titan Energy had submitted formal applications to the government, with combined investment value touching Rs 200 billion. Moser Baer plans to manufacture solar photovoltaic cells/modules, while Titan Energy Systems would start with solar cells and modules project and get into wafer and poly-silicon, at a later stage. The proposal by Videocon pertains to an LCD unit.

Rs 5000-billion fund for core development of smaller ports

The Financial Express, 24 January 2008

In a bid to boost trade, the government is planning to set up a Rs 5000-billion fund to improve road and rail connectivity with non-major ports across the country. The department of shipping has already sent a proposal in this regard to the finance ministry. There have been discussions over the issue between the Ministry of shipping and the finance ministry for this to be considered in the upcoming budget. The country requires around Rs 1000-billion worth investment by 2011/12 to increase port capacity and infrastructure. The government wants most of this investment to come from private companies. The country has attracted Rs 15 FDI/-billion in port development.

Commodities watchdog to get sharper teeth

The Financial Express, 25 January 2008

The government gave the commodities market a much-needed shot in the arm by making its regulator, the FMC, an autonomous body. The Cabinet has decided to issue an ordinance that will lend greater powers to the commission to supervise India's commodity trading market, expected to touch $1 trillion by 2008/09. The ordinance will amend the Forward Contracts (Regulation) Act 1952 to give the FMC power to decide on the listing and de-listing of commodity bourses, as well as give approval to exchanges to start options trading. The FMC's new powers will include the right to undertake search and seizure operations and initiate steps to stop illegal futures trading.

Right turn: FDI norms in key sectors eased

The Financial Express, 31 January 2008

In a major step to draw large-scale investment into critical sectors, the government revised the cap on FDI in critical sectors like aviation, petroleum and natural gas refining, commodity exchanges, and a part of the financial sector. It also eased the norms for investment in industrial parks and mining of certain metals. The last significant movement forward on FDI by the current administration was for the telecom sector in 2005, when the cap was raised to 74%. Relaxation of FDI caps by the UPA government has been delayed by strong opposition from some allies, most notably, the left parties. In the aviation sector, the omnibus air transport services category has been split to allow more play for FDI. The domestic scheduled passenger airline sector will remain capped at 49%, but for nonscheduled airlines, the FDI limit goes up to 74%, along with that for chartered airlines and cargo airlines. Foreign airlines will still not be allowed to come in through this route.

Energy | Coal

Coal mining may strike infrastructure's tax benefits

The Economic Times, 21 January 2008

Coal mining, a sector expected to attract large investments with mega power companies taking up coal mining, may soon get to enjoy some large tax sops. Budget 2008 may include coal mining in the list of infrastructure sectors that enjoy fiscal packages like tax holidays on income tax for 10 years and concessional duties on import of capital equipment. The finance ministry is understood to be examining a proposal on these lines. The biggest beneficiaries of such a move will be power companies like Reliance Power, NTPC, Jindals, GMR, LNG Bhilwara, and Torrent Power, to name a few. These companies, which are setting up generation capacities, have been allocated mines and will be taking up coal mining to get fuel for their power projects. The Energy Coordination Committee, headed by the prime minister, is also in favour of the proposal. Constraints in supplies of required fuel, whether coal or gas, has been one of the major hurdles in capacity creation. The tax sops for coal mining will be aimed at promoting investments in this sector. The target is to increase coal production under the captive route to over 200 MT over the next two Plan periods from just over 30 MT now. However, some restrictions may be placed while giving the tax sops to ensure benefits accrue to only the power sector and results in lower tariff for consumers. Infrastructure status will allow coal mining to qualify for benefits currently restricted to production of power. It will also enable coal mining activities to boost production required for meeting 78 577 MW of generation capacity largely based on coal during the Eleventh Plan (2007–2012).

NTPC may invest Rs 17 billion in Jharkhand coal mine

The Financial Express, 23 January 2008

NTPC, whose plan to commission its Pakri Barwadih coal mining project by March 2008 has gone haywire due to delays in the completion of necessary formalities by the Jharkhand government, plans to invest Rs 17 290 million for development of the mine. NTPC is weighing two options for development of the project. Whereas the first option involves no outsourcing of infrastructural work and productivity norms based on Indian standards, the second option involves outsourcing of equipment via a mine development operator and productivity based on international norms. The Pakri Barwadih site has geological reserves of 707 MT, of which 594 MT are proven reserves. The Rs 17 290-million project would be financed through a debt equity ratio of 70:30 wherein the company plans to meet the debt requirement through domestic commercial borrowings and bonds and the equity would be funded via internal sources.

Anil firm seeks coal blocks for gasification

The Financial Express, 25 January 2008

R-ADAG President, Mr J P Chalasani, in a recent letter to the coal secretary, Mr H C Gupta, sought allocation of 'captive coal blocks for the purpose of converting coal to gas.' Mr Chalasani made no mention of coal requirement for his company's coal-gasification project but said R-ADAG was setting up 28 200-MW electricity generation capacity projects. They include seven coal-fired projects (14 620 MW), two gas fired projects (Shahapur 2800 MW and Dadri 7480 MW) and four hydroelectric projects (3300 MW).

Mr Chalasani said RNRL was keen on participating in competitive bidding process, being contemplated by the coal ministry for allocation of captive coal blocks, for its projects for converting coal into gas.

JSW in parleys for coal mine stakes abroad

DNA, 29 January 2008

JSW Steel Ltd, an integrated steel manufacturer with a capacity of 4 MTPA, is in talks with Australian and Canadian firms for strategic stakes in coking coal mines there. JSW Steel is looking for three mines in Australia and one mine in Canada. The Canadian mine is completely operational and JSW Steel is looking at picking up minority stake in it. The company currently owns stakes in some coking coal (a major raw material for manufacturing steel) and thermal coal mines in Mozambique too and will start importing coal from there by the end of the calendar year 2008.

Star Emmsons acquires coal mines in Indonesia; looking to buy more

Mint, 30 January 2008

Star Emmsons Resource has acquired Indonesia's Bara Energy Makmur, a company with two coal blocks, in an attempt to line up supplies for a plant its parent is setting up in Tamil Nadu and to trade in coal, demand for which is on the increase. ETA Star is setting up a 1200-MW coal-based power project in Tamil Nadu at a cost of Rs 60 billion. Indian power companies needing coal to run their plants are increasingly looking to Indonesia. Last year, Tata Power Co. Ltd acquired a 30% stake in two coal mining units and a trading company from Indonesia's PT Bumi Resources for $1.1 billion. Other Indian companies such as NTPC Ltd, Coal India Ltd, Reliance Power Ltd, Lanco Infratech Ltd, Madhucon Projects Ltd, and GVK Power and Infrastructure Ltd are also looking for coal assets in the same region. Star Emmsons' newly acquired mines in Indonesia will have a production of 12 MT a year. Half of this will go into feeding the Tamil Nadu power project and the rest will be traded.

Forward coal e-bids on cards

The Economic Times, 31 January 2008

Power, cement, and steel companies may soon get assured long-term supply of coal under the electronic auctioning (e-auction) route. The country's largest coal producer, CIL, is planning to introduce forward e-auctioning of coal that would meet coal requirements of up to one year of consuming industries. The present system of e-auction provides a small quantity of coal for spot bidding without any provision for long-term supplies. 'We plan to introduce forward e-auction of coal from next fiscal (2008/09). The new auctioning platform would benefit companies that require coal over a longer period for meeting the production schedule,' Coal India Chairman Mr Partha S Bhattacharyya said. The company is likely to set aside about 25% of coal on offer under the e-auction route for bidding under the new dispensation. The quantity may be increased later as CIL grows its e-auction platform. CIL proposes to offer about 40 MT of coal (roughly 10% of 2008/09 coal production by CIL) under e-auction route next fiscal. This would mean that about 8–10 MT of coal would be available for auctioning under the forward e-auction route.

Energy | Oil and gas

Combative crude set to bloat trade deficit by $10 billion

The Economic Times, 18 January 2008

The spurt in global crude oil prices is beginning to have its impact on the Indian economy. Oil import bill is projected to close at almost $73 billion—almost 6% of GDP, clocking a 45% increase in the second half of the current fiscal. The whopping rise in oil imports is likely to increase the country's trade deficit to $94.4 billion, 67% higher than last year. Global crude oil prices, which crossed the $100 mark late last year, has posed huge challenges for oil-guzzling economies like India and China. The value of oil imports rose by 10% to $43.3 billion in the first eight months of 2007/08 on account of 11% increase in international crude prices. If global oil prices continue to remain at current levels, the average price of imported crude is likely to increase by 50% in the remaining months, a review of the economy by the Prime Minister's Economic Advisory Council has pointed out. The only upside of this huge surge in the oil import bills would be the increase in customs collections on this front. The share of petroleum imports is more than 30% in the country's total import basket, which is expected to grow by 29% to $240 billion. Country's trade deficit would be $10 billion more than what the council itself had forecast at $94.4 billion, which is 7.9% of the GDP, mainly on account of costlier oil imports.

Healthy margins raise RIL net 26%

Business Standard, 18 January 2008

Healthy refining margins saw India's largest private sector company RIL, posting a 26% increase in its net profit for the quarter ended December 2007 over the corresponding previous quarter. The company earned $15.4 a barrel from processing oil during the quarter compared with $11.7 in the corresponding previous quarter. However, net profit grew 162% to Rs 80 790 million over the corresponding previous quarter on the back of a one-time gain of Rs 47 330 million from the sale of a stake in its subsidiary RPL. The company gets the bulk of its revenue from crude oil refining and petrochemicals, but also has a presence in retail and textiles. The company also announced that RPL's upcoming refinery at Jamnagar is expected to be completed ahead of its initial schedule of December 2008. Reliance Petroleum's refinery, coming up next to RIL's 660 000-barrels-per-day refinery, will have a capacity to process 580 000 barrels per day.

Mangalore Refinery faces 37% cost overrun for expansion

Business Standard, 18 January 2008

MRPL , a subsidiary of ONGC, is likely to witness an over 37% cost escalation for expansion of its refinery capacity at Mangalore, Chairman Mr R S Sharma said. The capacity is being increased to 15 MT per year from the current 9.69 MT. 'Investment in the project is likely to be over Rs 110 billion as against Rs 80 billion approved by the board,' Mr Sharma said. He said the cost overrun was due to a 'significant rise' in input cost since the investment was approved in January 2006. MRPL Managing Director Dr R Rajamani said the expansion was likely to be completed by the end of 2010. Licensors for four major units for the refinery upgrade and expansion project have already been selected, and design work has started. Dr Rajmani said investment in the project would be through a debt–equity ratio of 2:1.

New fields may offset drop in oil output

Mint, 18 January 2008

Output from the world's existing oilfields is declining at a rate of about 4.5% annually, a new study concludes, depriving the world of the same amount of oil that No. 4 producer Iran supplies in a year. Yet, the study's authors, Boston-based CERA , argue that their assessment supports a generally rosy view of the industry's future, given that new projects in the works will make up for the decline. The study, based on data from 811 fields around the world, takes aim at a growing school of thought that the world's oil production may soon hit its peak just as demand is surging in Asia and West Asia. 'This study supports a view that there is no impending short-term peak in global oil production,' the paper concludes. CERA, led by oil historian Mr Daniel Yergin, is a prominent adviser to oil companies. Oil-field depletion rates are a key barometer of the health of the world's oil market, and thus are hotly debated among factions feuding over the relative stability of future supply. That debate is made all the more intense because analysts have limited access to reliable data on field-by-field production rates from key suppliers such as Saudi Arabia, Iran, Venezuela, and Russia. [By Neil King Jr]

GAIL eyes operating stake in small onshore blocks

The Hindu Business Line, 19 January 2008

GAIL (India) Ltd may bid for operating stake in small onshore and shallow water blocks in NELP-VII. For the rest of the blocks on offer, especially those in deepwater, GAIL will bid for participatory stake in the consortium. GAIL has stakes in 29 oil and gas blocks in the country, out of which 'six has proven reserves'. On the company's petrochemical facility at Pata in Uttar Pradesh, Mr U D Choubey, CMD of GAIL said that the company had recently completed capacity expansion of the facility from 310 000 TPA to 440 000 TPA through de-bottlenecking. 'We are now planning further expansion of the capacity to 500 000 TPA through some modifications at an estimated investment of Rs 1000 million,' Mr Choubey said. Pata petrochemicals currently processes 12–13 MSCMD of gas. Following the forthcoming capacity augmentation, the plant will consume approximately 15 MSCMD.

RIL to invest $1.14 billion in Orissa gas finds

The Times of India, 19 January 2008

Reliance Industries will invest $1.139 billion in putting to production the gas fields it has discovered off the east coast, a DGH official said. Reliance has submitted an initial development plan for six gas discoveries in the NEC-25 block in Orissa, envisaging a production rate of 35–40 MSCMD. The investments projected in IDP would be for drilling 12 developments wells along with production facilities and the onshore receipt terminal, he said. Gas from NEC-25 will flow after Reliance puts its coveted KG-D6 fields off the Andhra coast on production. Reliance is investing $5.2 billion in developing Dhirubhai-1 and 3, the first two of the 16 gas discoveries in the 7645 km^2 KG-D6 block. Initial output is likely to be 40 MSCMD, which will be raised to 60 MSCMD in 2009/10. Gas production from the block will peak to 80 MSCMD in 2011/12 and remain at that level till 2016/17, after which it will fall to 60 MSCMD in 2017/18 and to 40 MSCMD in 2018/19.

Reliance sees hydrocarbon prospects in KG basin block

The Hindu Business Line, 21 January 2008

Sensing hydrocarbon prospects in a fresh deepwater block in the KG basin, off the east coast, RIL plans to start testing for possible oil and gas presence there. Industry sources said that as the block KG-DWN-2003/1 (KG-V D3) was nearly adjacent to RIL's prolific D6 block, the company may see good hydrocarbon prospects in it. The company plans to start testing for hydrocarbon prospects very soon. If the company finds hydrocarbons, then this would be its third deepwater block in KG Basin, where it has struck success. Hardy Exploration & Production (India) holds a 10% participating interest, while RIL is the operator, with 90% interest in the block. RIL, along with Hardy, won the block in the fifth round of the NELP. The block is in exploration phase one, which provides for the drilling of six exploration wells.

MRPL, Shell form JV for aviation fuel
Business Standard, 22 January 2008
MRPL, a unit of state-run ONGC, has entered into an agreement with Shell Aviation to supply ATF at Bangalore and Hyderabad airports. The MRPL–Shell JV will later market and supply ATF at other Indian airports, MRPL said. 'The companies will provide complimentary services and strengths to the JV; MRPL will bring its expertise and supply of high-quality products, and Shell Aviation will bring its global brand, network and customer base in addition to stringent quality control procedures,' it said. Together, the companies will offer a compelling co-branded global refueling offer to both Indian and international airlines. The agreement will become effect early in 2008.

ONGC profits decline 6.4% on strong rupee, growing subsidies
Mint, 22 January 2008
Third quarter net profits at India's largest exploration and production firm, ONGC, fell 6.4% to Rs 43 670 million from a year ago. The company's performance suffered primarily due to the growing subsidy burden – Rs 60 800 million for the quarter, 176% higher than in the same period last year – it had to absorb with domestic fuel prices being kept pegged down, even as global crude prices spiked. In addition, the appreciating rupee meant that the company earned less for its oil sales, which are priced in dollars.

GAIL, EIL keen to set up gas processing plant in Oman
The Financial Express, 23 January 2008
GAIL and EIL have jointly made an expression of interest to the Oman Gas Company for setting up a processing plant in Oman for the extraction of LPG. Both the companies are also reportedly looking at opportunities to participate in pipeline transportation, marketing of LPG and other liquid hydrocarbons in Oman, and other countries, including India. However, even after having given the EoI in September 2007, the companies have not yet received any response from the Oman Gas Company. GAIL is also interested in gas-based petrochemical projects in Oman depending on the availability of feedstock. At present, in India, GAIL has a tie-up with Petrogas of Oman. In NELP-VI round, GAIL and Petrogas, along with other partners, were awarded three blocks for exploration and production.

India, Turkmenistan discuss gas pipeline project
The Tribune, 23 January 2008
As the Iran–Pakistan–India gas pipeline project remains in a state of logjam, India is pursuing other options, particularly the TAP pipeline. The proposed TAP pipeline will move natural gas from Turkmenistan's Dauletabad fields through Afghanistan to Pakistan's Multan. The partly ADB-funded pipeline can move up to 30-billion cubic metre of gas a year from Turkmenistan to the client states. Dauletabad, in south-east Turkmenistan, is the world's fourth largest gas field. If approved, TAP will pass through Herat/Kandahar in Afghanistan to Quetta–Multan in Pakistan covering 1650 km. It will also be extended to Arabian Sea ports in Pakistan for shipment of gas to other Asian markets. The IOC and GAIL (India) have submitted bids for construction of the $2.5 billion pipeline.

Kakinada: rice bowl set to be gas hub
Business Standard, 23 January 2008
Kakinada is filling up with engineers and contractors, all working to bring to production the huge volumes of RIL's gas from an area 30 nautical miles off the town's coast. 'The population of this town will soon touch a million from the current 500 000–600 000. The slow pace of life is quickly changing and we will not be able to recognize this town a couple of years later,' said Mr Surya Prakash Gutta, chief operating officer of Kakinada Seaports Ltd, the company which runs the Kakinada Port. Most of the engineers pouring into Kakinada are working on the gas-receiving and processing terminal that Reliance is constructing at Gadimoga, around 30 km from Kakinada. Reliance is spending close to Rs 100 billion to build the terminal, over an area of 214 acres. The 214-acre gas terminal area houses water tanks and desalination plants that will supply clean water to four villages in the terminal's proximity.

Petrochem sector set for funding

The Financial Express, 23 January 2008

The Indian petrochemical industry is expecting a whopping upstream investment of Rs 800–1000 billion in the next three to four years, while the downstream segment would get another Rs 500 billion, said a senior official of the Union ministry of chemicals and petrochemicals. With the recent introduction of the petrochemical policy, the country is also expecting an investment from global players like Exxon Mobil, SABIC and ELF, among others. The country's petrochemical industry is poised for a growth of over 10% over the next five years from 2006. According to industry sources, at current prices, downstream petrochemical production is expected to increase from current levels of $15–18 billion to $30–35 billion over the next five years. Petroleum ministry estimates peg India's refining capacity to increase from 135 MTPA in 2006 to 210–225 MTPA by 2011. This would create an export surplus of refined products of 80–90 MTPA by 2011.

Chennai Petro net zooms on better refining margins

The Hindu Business Line, 24 January 2008

CPCL has announced a net profit of Rs 2256.2 million for the quarter ending December, which is close to ten times the achievement in the same quarter last year, of Rs 243.5 million. This was essentially because the company was able to get better prices for its products from its parent company, IOC, which is the sole buyer of its products. Gross refining margin rose to $8.75 per barrel compared with $2.65 in the corresponding period last year. Under the refinery transfer pricing mechanism, the standalone refineries such as CPCL get a price based on international product prices. That is why CPCL was able to turn in a 10-fold increase in profit, despite the crude throughput falling to 2.27 MT in the quarter from 2.58 MT in the same quarter last year. Turnover (net of excise) increased to Rs 70 600 million from Rs 58 980 million previously, reflecting better selling prices.

Oil imports will cost 6% of GDP

The Financial Express, 24 January 2008

India is expected to pay $17 billion more this fiscal towards its oil import bill compared with 2006/07. The sum is about the same as the government's plan expenditure for the entire transport sector. The estimated oil import bill for 2007/08 would be around $73.83 billion (Rs 2984.32 billion), against an actual import bill of $57.28 billion (Rs 2594.18 billion) in 2006/07. The annual oil import bill at $74 billion is over 6% of the country's GDP. The oil economy is therefore a critical component of the annual Budget, which the finance ministry takes into account when deciding receipts and expenditure for the year. India meets 79% of its crude requirement by way of imports. With international crude prices crossing the $100-a-barrel mark in December 2007, the Indian basket of crude averaged close to $88 a barrel in the same month, and even touched $94.62 a barrel on 3 January, against $65 at the start of the fiscal last April.

Barauni may be made petrochemical hub

The Hindu Business Line, 25 January 2008

The Ministry of Chemicals and Fertilizers, while seeking more gas for making Barauni, Bihar, into a petrochemical hub, has also asked for expansion of GAIL (India) Ltd's pipeline network in the region. The possibility of setting up a petrochemical hub at Barauni has been discussed with various stakeholders, including the IOC, GAIL, and EIL. Based on the current availability of naphtha from the Barauni Refinery, it may not support a petrochemical complex in the region. But with further expansion, there is a possibility of fuel oils being available. The other alternative is availability of gas through pipelines for which GAIL has plans which could result in increased availability of natural gas in Bihar by 2010. This would facilitate the petrochemical hub.

Australia offers long-term gas pacts

The Economic Times, 29 January 2008

India's global hunt for energy could take a new turn with Australia offering to supply gas on a sustained basis through long-term contracts. Australia has the reserves to meet India's growing energy needs, but the new Australian government wants to tap them only on the basis of assured supply avenues. Investments can be pumped into tap gas reserves if off-take is assured, said Australian trade minister Simon Crean, who visited India recently. He said India could get gas at cheaper price by getting into long-term contracts. Delay in finalizing such contracts could lead to higher prices, he emphasized. The talk about long-term tie-up for gas comes at a time when Australia has urged India to commit to non-proliferation before seeking uranium supplies. While the broad consensus is that Australia's natural resources provide synergy to India's growing energy needs, ways have to be worked out for committed supplies over a long term.

Centre may partner states in ATF relief

The Economic Times, 29 January 2008

The centre is working out a compensation package for states to reduce sales tax on ATF to 10% or 15%, which will help domestic carriers like Air India and Jet Airways bring down their operating cost. The finance ministry is considering compensating states for their revenue loss until jet fuel comes under the VAT regime. As of now, many states levy VAT of more than 20% on jet fuel. The move may not result in lower fares for passengers as airlines are keen to improve their bottom line. Jet fuel accounts for about 40% of the operating costs of airlines. According to an estimate, a reduction in tax to 10% or 15% will lead to states losing nearly 35% to 50% of their sales tax revenue on jet fuel, which constitutes about 2% of their total sales tax revenue. The civil aviation ministry feels a sales tax cut will not have a major effect on states as the consumption rate of jet fuel has multiplied over the last few years. The move will also benefit the states as more airlines will prefer fuelling their aircraft in the state offering lower sales tax. This will lead to a quantitative increase in jet fuel sales and eventually, more revenue for the states.
[By Nirbhay Kumar]

ONGC, Shell to jointly bid for projects under NELP-VI round

The Financial Express, 29 January 2008

With the intent of jointly participating in projects under the NELP-VII, ONGC and Shell have recently revised their MoU. The original MoU was aimed at cooperation in the area of enhanced recovery through field optimization using Shell's proprietary technology, and other mutually identified areas of cooperation like LNG import, development of coal bed methane, underground coal gasification and surface coal gasification projects, refinery upgrade, trading and development of supply chains. The exploration and production giants plan to jointly explore opportunities for technology induction in field optimization and integrated brownfield development in mutually agreed assets. Under the arrangement, Shell will provide its technical know-how, including operational experience.

Government set to raise AMP gas prices by 16%

The Indian Express, 30 January 2008

The government is likely to raise the price of natural gas produced by the ONGC and Oil India Ltd by 16% and index it to inflation rate, a move that would result in higher revenues for the two firms. The petroleum ministry has proposed to the Cabinet raising prices of natural gas produced by the ONGC from fields given to it on nomination basis, to Rs 3.71 per cubic meter from current Rs 3.2 per cubic meter. For OIL, the gas price has been proposed at Rs 4.15 per cubic meter. The price would change by Rs 55 per thousand cubic meter for every 10 points change in the WPI. Price of gas produced by the ONGC and OIL from fields given to them on nomination basis, called the administered or APM rate, was last revised in June 2005. All natural gas produced from nominated gas fields (excluding new fields) will be treated as APM gas, while the fuel produced from new fields would be allowed to be sold at market price.

CPCL mulls Rs 50 billion unit revamp

The Financial Express, 30 January 2008

The CPCL plans to take up revamping of its refinery at Chennai at a cost of Rs 50 billion to increase its capacity from 10.5 MT to 11.5 MTPA, a company official said recently. The revamping would be completed by 2009 and the CPCL would bear the entire cost of the project, which would also result in manufacturing quality petroleum products, its general manager, maintenance, Mr D Selvaraj said. Besides, there was a plan to supply Euro4 quality petrol in another one or two years. This would result in minimum emission from automobiles, he said. There were also plans of setting up a 15 MT/year capacity refinery at Ennore, for which the state government had been approached for 3000 acres of land.

APM gas price set to go up, may hit power, fertilizer sectors

The Financial Express, 30 January 2008

The petroleum ministry has moved a Cabinet note to increase the price of APM gas – the natural gas produced by ONGC and OIL from the fields awarded to them on nomination basis by the government. The price of APM gas was last revised in June 2005. The producer price for ONGC's gas would be increased to Rs 3710 per MSCM and that of OIL's gas to Rs 4 150 per MSCM from the existing Rs 3200 per MSCM. While the move will have a direct impact on the cost of power generation and fertilizer production, however, on the other hand the impact of this price hike will result in additional revenue generation for both the Central and state governments on account of increase in royalty of gas production, corporate tax, sales tax and dividend. However, the revised APM gas prices are still far below the weighted average price of non-APM gas at Rs 6852 per MSCM or 185% above the proposed producer price.

BIS panel for 10% ethanol blending

The Financial Express, 31 January 2008

A panel appointed by the BIS has favoured the Centre's move to increase ethanol blending of petrol to 10% from the present level of 5% from October. The panel has suggested that branded fuel be exempted from blending in view of the practical difficulties in managing several grades and has recommended suitable incorporation of 10% ethanol blending in gasoline in the specification of Motor Gasoline IS 2796. The report by the BIS panel, chaired by IOC Executive Director (R&D) RK Malhotra, is crucial as IOC, BPCL, and HPCL have already contracted a total quantity of 1 404 152 kl of ethanol from various suppliers for blending with petrol over the next three years. This is against the total requirement of 1 800 459 kl of ethanol in many states.

DGH nod to ONGC, RIL demand for drilling holiday

The Financial Express, 31 January 2008

There is good news for exploration and production majors ONGC and Reliance Industries Ltd. The DGH has conceded their demand for a drilling holiday on account of a global rig shortage. The DGH, in its recent report, has recommended a moratorium of three years starting December 2007 in 35 deepwater blocks. The moratorium may be given in respective phases of deepwater blocks to fulfil the balance of exploratory drilling commitments. According to the DGH report, a firm commitment or contract for tying up rigs may be insisted upon within one year, or such period as may be agreed upon by the petroleum ministry, up to a maximum of two years. The DGH would monitor the availability of rigs in close coordination with contractors.

Energy | Power

$400-million World Bank loan for Rampur hydel project

The Tribune, 16 January 2008

The World Bank has granted a loan of $400 million to the Sutlej Jal Vidyut Nigam for the execution of the 412-MW Rampur hydel project. The loan agreement was signed by the CMD of Sutlej Jal Vidyut Nigam, Mr H K Sharma; World Bank Country Director Dr Isabella Guerrio; Joint Secretary (Economic Affairs), Ministry of Finance; and Dr Rashima Gupta, resident commissioner, Himachal, at New Delhi. The project, to be completed at a cost of about Rs 22 billion, will be commissioned by January 2012. Located downstream, the 1500-MW Nathpa–Jhakri project on the Sutlej it will be virtually the country's largest hydroelectric venture. The cost of generation will be Rs 2.39 per unit and in all it will generate 1770 million units of power annually. It is the most economical project, as power will be generated by utilizing the desilted tailrace water of the Nathpa–Jhakri project. No big diversion dam or desilting chambers will be required to be constructed.

New technology for power discom

The Hindu, 17 January 2008

Residents of some parts of Delhi may soon boast of a new BPL technology that will allow them access to a host of services through existing power distribution lines. Power distribution company NDPL has tied up with Delhi College of Engineering to study the viability and application issues of BPL technology. The BPL technology allows use of existing electricity distribution lines as a transmission medium for information. A workshop to discuss the technology was organized, with a live demonstration of the technology. The commercial aspect of the implementation will be taken up once the technical study is successfully completed.

NTPC forays into power tools mart

Business Standard, 17 January 2008

NTPC, the country's biggest power producer, will branch out into equipment manufacturing, with

the board giving the go ahead for a JV with Bharat Forge, India's largest forging company. NTPC is positioning itself in such a way that it becomes a source of raw materials used for making the equipment and for supplying the main equipment. The JV may churn out everything from castings and forgings to large turbines and generators. Talks between the state-owned firm and Bharat Forge to float a JV to produce components for power plants is progressing. NTPC, which has an installed capacity of 27 904 MW and produces one-third of the country's electricity, plans to raise its capacity to over 50 000 MW in the next five years.
[By Sapna Dogra Singh]

REL records 50% profit growth
Business Standard, 18 January 2008
REL, the power company that is part of the Anil Dhirubhai Ambani Group, has announced that its quarterly profit rose by half, helped by higher returns from its core energy distribution business. The company registered a net profit of Rs 3010 million in the third quarter of 2007/08 against Rs 2010 million in the previous corresponding period. Net sales increased marginally (1.81%) to Rs 18 530 million in the period, while net revenues from electrical energy (mainly distribution) were 34.35% higher at Rs 12 294.1 million in the quarter, as compared with the previous corresponding period.
Other income in the period was up 18.84% to Rs 3479.2 million, against Rs 2927.4 million last year. The company, which supplies electricity to parts of Mumbai and New Delhi, has diversified into engineering and construction such as building roads and airports and analysts say the new operations would be a key driver of growth in coming quarters.

Government to spend Rs 2000 billion for power system augmentation
The Financial Express, 22 January 2008
The government has estimated a massive investment of Rs 2000 billion for systems augmentation, Rs 900 billion for the RGGVY and Rs 400 billion for the revised APDRP during the Eleventh Plan period. The Centre has made it clear that this would be in addition to Rs 3000 billion that is to add over 80 000 MW during the Plan period, REC CMD Mr Anil Kumar Lakhina said. Mr Lakhina asked investors to tap a large number of opportunities in systems augmentation, power distribution, rural electrification and metering. 'During the Eleventh Plan, the Centre has planned 700 000 km of conductors, 700 000 transformers, 15 million poles and a record 30 million meters. The Centre is quite clear in its implementation strategy, which will do away with the business-as-usual attitude but take things head on to catch the culprits,'
Mr Lakhina added.

Mahagenco plant on full steam by March
DNA, 23 January 2008
Mahagenco, Maharashtra's state power generator and the country's second largest generation company after NTPC, is confident of raising the capacity of its gas-based Uran plant to 750 MW by the end of March 2008. Mr Ajoy Mehta, MD, Mahagenco, said, 'It actually depends on the pipeline that is being constructed by GAIL, which will connect the Uran plant to the West Coast of the country. Now the pipeline is nearing completion and we are sure it will be operational from March this year.' Once the pipeline is complete, Mahagenco wants the supply of gas immediately so that the infrastructure can be used right away, he said. Mahagenco is currently negotiating with several companies to source imported gas based on spot prices from March. The pipeline is being constructed from Dahej to Panvel connecting Hazira and Uran.

NTPC, GAIL to invest more in Dabhol
The Financial Express, 23 January 2008
NTPC Ltd and GAIL (India) Ltd may have to pump in more money into the Dabhol power plant after an official panel monitoring the progress of the beleaguered project decided to limit lenders' commitment to Rs 4550 million. A Committee of Secretaries had decided that the lenders will bear a total of Rs 9210 million of the Rs 14 940 million escalation in completion cost of the project and the adjacent LNG facility. The committee did not entertain the demand of Ratnagiri Gas and Power Pvt Ltd, the JV of NTPC and GAIL that owns the 2150 MW power plant, to ask lenders to bear Rs 5730 million as additional costs on account of items such as service tax, insurance, and fuel expenses. The original estimate for completing the project was Rs 8700 million, when RGPPL took over the Dabhol plant in 2005.

UMPPs set to get extra ECB power
The Economic Times, 23 January 2008
UMPPs may be in for a one-time relaxation in ECB norms. The government is likely to relax

some of the restrictions and allow UMPP developers to raise money abroad. Currently, ECB norms restrict companies from using the proceeds to a maximum of $20 million for meeting rupee expenditure with prior approval of the Reserve Bank. 'An ECB relaxation will mean a company will not only raise cheaper funds from abroad but also use the sum for procuring cost-effective domestically produced equipment,' an expert said. While reviewing the progress in the power sector, Prime Minister Dr Manmohan Singh had asked Finance Minister Mr P Chidambaram to look into financing issues of the power sector, which requires investments of over Rs 10 000 billion in the Eleventh Plan. The power ministry is persuading winners of UMPPs to advance deadlines. While asking Reliance Power to 'positively' achieve financial closure for the 4000-MW Sasan UMPP by the second quarter of 2008, the power ministry said it would request the finance ministry to consider providing a one-time relaxation in ECB guidelines for UMPP developers. Official sources said the issue was also raised during a stock-taking meeting by the prime minister.

BSES plan for students

The Tribune, 24 January 2008

To further broadbase its message on energy conservation, BSES has formulated a unique programme of enlisting school students for propagating its message. The initiative, launched in late 2007, has already seen two interactive sessions being conducted at Amity International School, Saket, and New Delhi Public School, Vikaspuri. The third session was conducted for students of Upras Vidyalya, Vasant Vihar. The programme being conducted in BRPL and BYPL areas plans to cover over 50 schools till 31 December 2008, a spokesman said. The two-hour interactive session, conducted by experts from BSES, aims to sensitize the students (classes 9 to 12) on the immediate need of energy conservation and its methods, international concerns like global warming, and CO_2 emissions and generation of electricity through renewable resources. In the session, the students and their teachers are also taken through the entire process of electricity generation, transmission, and distribution.

Centre working on inter-state power ventures

The Indian Express, 25 January 2008

With its UMPPs attracting huge investments, the power ministry is now working on a scheme to encourage state governments to get together and set up projects using fuel linkages that are already available with them. Though the proposal is yet to be finalized, power ministry officials said the aim of the project is to provide a framework that will enable states to best utilize the fuel linkages that have been provided to companies, including the state government-owned public sector entities. Take the case of Kerala, for instance. The state wants to source coal-based power and, along with other states, is working on a proposal to set up such a project in Orissa and thereafter, transmit a portion of that power back to the state. Kerala's initiative for a coal-based power project stems from the extremely low tariff that some of the UMPPs have been able to attract. In fact, the Kerala government has asked for NTPC's advice on how to put together such a project for the state. [By Kandula Subramaniam]

Nod to allotment of hydel projects

The Tribune, 24 January 2008

The Himachal government gave the go-head for the allotment of two major hydroelectric projects that were offered to the private sector through the competitive bidding route. The state Cabinet approved the allotment of the 180-MW Bajoli–Holi project to GMR Energy Limited and the 108-MW Chhatru project to DCM Shriram Infrastructure Limited. The two companies had deposited 50% of the upfront premium of Rs 820 million for the Bajoli–Holi project and Rs 218.7 million for the Chhatru project. It decided to requisition a status report in respect of the 200-MW Bara Bhangal and 140-MW Chango–Yangthang hydroelectric projects bagged by Malan Power Company with reference to the environment damage caused in the execution of the Allain Duhangan project at Manali along with the status of the litigation pending in the high court.

Punjab mulls 50% power subsidy for farm sector

The Financial Express, 28 January 2008

Contrary to speculation that Punjab might do away with free power to the farm sector in view of its poor fiscal state, the government is considering giving about 50% subsidy to the sector. Himachal Pradesh gives a subsidy of 78 paisa a unit on power tariff, while Gujarat and Andhra give about 29 paisa subsidy on tariff and Haryana about 35 paisa. The Punjab State Electricity Regulatory Commission has asked for a Rs 2.40 paisa a unit tariff for the farm sector. The overwhelming view in the government is that it could subside tariff by 60 paisa a unit, after which the government's liability will come down to about Rs 5000 million. [By Charanjit Ahuja]

CEA told to draft new contract guidelines for hydel projects

Mint, 29 January 2008

The government has asked the apex power sector planning body in the country, the CEA, to draw up a model contract that state-owned firms can use when they contract out the setting up of hydroelectric projects in an effort to address delays in many of these—usually a result of a contract dispute—between the companies and contractors. Once ready, the model contract will be used by PSUs such as the National Hydroelectric Power Corporation Ltd, North Eastern Electric Power Corporation Ltd, Satluj Jal Vidyut Nigam Ltd, Tehri Hydro Development Corporation Ltd and NTPC Ltd, which are setting up hydro projects in the country.

Gujarat power bodies to hike tariff

The Economic Times, 29 January 2008

Gujarat's power utilities are busy setting the stage for a tariff hike for over 8.5 million customers. It has been over seven years since the then Gujarat Electricity Board (now GUVNL) proposed any major tariff hike. The private power generator and distributor Torrent Power would also propose the tariff hike for Ahmedabad and Surat cities. The state consumes about 8000–9000 MW of power and faces deficit of about 2500 MW. The new tariff structure would come into effect from 1 April, after inviting views from stakeholders. 'A tariff hike is inevitable,' said a top GUVNL official, who is busy number crunching to submit the petition to the GERC before the deadline of 31 January. GUVNL and its six subsidiaries, four distribution, one generation, and one transmission entities, are likely to present a strong case for steep tariff hike.

Power ministry looks beyond BHEL for high-end equipment

Business Standard, 29 January 2008

To meet the target of 78 000-MW power generation during the Eleventh Plan (2007–12), the power ministry plans to float a tender inviting firms to manufacture equipment based on super-critical technology. BHEL is the only company in the country that manufactures such equipment. Power Secretary Mr Anil Razdan said the equipment supplied by BHEL was not enough to meet the country's needs as the demand was very high. '... Give global industries a chance to take part (in manufacturing super-critical equipment) in the country,' he added.

Tata Power, IOC to form JV

Mint, 29 January 2008

In what might be the first such partnership in the country, India's largest oil refiner, the state-owned IOC, and Tata Power Co. Ltd will soon form a JV to set up a 1000-MW power project at Mirthapur in Orissa. While Tata Power will have a majority stake of 74%, the balance will be held by us. The project will have an initial capacity of 500 MW, which will be later ramped up to 1000 MW. Tata Power will also do the operation and maintenance work for the project. The JV will guarantee power supply to IOC's Paradip refinery and sell the surplus power to the grid at a profit. The JV is also significant in view of the IOC's attempt to reduce risks both in terms of investment and commissioning a project.

Power exchange to pave the way for rationalization of prices

Mint, 29 January 2008

The online platform for electricity will enable excess power to be openly traded at reasonable prices. Financial Technologies, which floated the MCX of India Ltd, India's largest commodity exchange by volumes controlling around 75% of the commodity trade, holds 46% stake in the power exchange, and the state-owned power trading firm PTC India Ltd, holds a 26% stake in the exchange. Other stakeholders in the exchange include Tata Power Co. Ltd, Reliance Energy Ltd, Infrastructure Development Finance Co. Ltd, Lanco Infratech Ltd, the state-run Rural Electrification Corp. Ltd, and Adani Enterprises Ltd. India's other commodity exchange, the National Commodity and Derivatives Exchange Ltd, is also planning to set up a power bourse. IEX already has registered more than 50 members with 50 others currently undergoing the vetting process. [Ramanathan, Gayatri]

Krishnapatnam UMPP handed over to RPL

The Hindu, 30 January 2008

The PFC, the nodal agency for implementing UMPPs, handed over the SPV – Coastal Andhra Power Ltd – set to execute the much delayed 4000-MW Krishnapatnam UMPP in Andhra

Pradesh to Anil Ambani-owned RPL. RPL's bid was much lower than the other two bids received from Larsen & Toubro (Rs 2.68 per unit) and Sterlite (Rs 4.18 per unit). This is the second UMPP for RPL after the award of the 4000-MW Sasan UMPP in Madhya Pradesh. While Krishnapatnam will be run on imported coal, Sasan is a pithead coal project. RPL is hopeful of completing the project in 39 months.

Tata Power Q3 profit dips 2.5%

Business Standard, 30 January 2008

Despite record power generation by its thermal plants, Tata Power Company posted a 2.48% dip in net profit at Rs 1972 million for the third quarter ended 31 December 2007, as compared with the corresponding quarter in the last financial year (Q3FY07). The company, the country's largest private power utility, said net profit for the quarter was not comparable year-on-year as Q3FY07 included higher reversal of tax provisions at Rs 1300 million from favourable assessments and orders for the Mumbai Licence Area operations. Revenues rose 18.3% to Rs 14194 million, as compared with Rs 11 997.2 million in Q3FY07. According to the consolidated figures, profit before tax grew 48.2% to Rs 1959.7 million, as against Rs 1322.3 million in the corresponding quarter last year.

Bhel plans to invest Rs 7360 million for Trichy plant

The Financial Express, 30 January 2008

Power equipment manufacturer BHEL said it would invest Rs 7360 million to increase the capacity of its manufacturing plant at Trichy in Tamil Nadu, by 2009. BHEL would upgrade the production capacity of boilers by over four times in the unit. It has already invested Rs 1900 million in the boiler shop in Tamil Nadu. 'The company is augmenting its manufacturing capacity to 15 000 mw per annum, by 2009. As part of this, BHEL is upgrading its boiler manufacturing facility at its Trichy plant,' the company said in a statement. With the completion of this capacity augmentation programme, BHEL's production capacity for manufacturing thermal and nuclear boilers would go up to 481 000 MT, from a capacity of 108 000 MT, prior to commencement of the expansion programme, it added. The scheme envisages installation of manufacturing facilities for supercritical boilers, material handling, storage and shipping facilities.

NTPC begins location hunting to set up power plants in Nigeria

The Financial Express, 31 January 2008

NTPC Ltd has appealed to the Federal Government of Nigeria to provide prospective locations for setting up a 500 MW coal-based power plant and a 700 MW gas-based power plant in the country. The power company had in May 2007 signed an MoU with the the Nigerian government to set up and operate a coal-based power plant and a gas-based plant, subject to techno-economic feasibility. According to the agreement, Nigeria will provide 3 MTPA of LNG for a period of 25 years from its existing and future LNG terminals to NTPC for use in the company's plants in India at a reasonable price. Currently, NTPC's gas-based projects – Kawas, Gandhar, and Kayamkulam – has either been operating on naphtha or gas procured at a higher price. On some occasions, NTPC has been forced to operate these plants below their generation capacities for want of LNG.

Overseas hydel firms look to tap potential in India

Mint, 31 January 2008

Companies from Russia, Scandinavia, and France are looking to form JVs with Indian firms to set up hydroelectric power projects in India, a business in which the country is just beginning to tap some of its considerable potential. The government plans to set up 16 553 MW of hydropower capacity in the five years to 2012, and another 30 000 MW in the five years to 2017. The government is hoping the involvement of foreign firms will boost growth in the sector. These firms have the technical and construction expertise for setting up projects which are more complex to build, and need specialized technology and design inputs. Several hydro projects in the country have been delayed and India has met a little less than half the target of 14 393 MW set for hydropower generation in the five years to 2007. In April, a study by the parliamentary standing committee on energy showed the increase in project costs due to delays varied from 400% to 2500%.

NTPC Q3 net slips 15% to Rs 17 800 million

The Economic Times, 31 January 2008

The country's top power generating firm, NTPC, reported a 15.37% decline in net profit at Rs 17 799 million for the third quarter ended

31 December 2007, as against Rs 21 033 million in the year-ago period. The total income increased 8.4% to Rs 100 932 million during the quarter under review from Rs 93 110 million for the three-month period ended 31 December 2006, the company informed the BSE in a statement. Shares of the company closed at Rs 201.70 each, down 4.70% on BSE.

Fund on cards for power distribution
Mint, 31 January 2008
In an attempt to help state electricity boards improve the state of their finances and, through this, reduce distribution losses, the government plans to set up a national electricity fund, which will raise money that can be loaned to these boards at low rates of interest. The creation of the fund is likely to be announced in the 2007/08 Union Budget. 'The success of the fund will depend upon whether it will be linked to target and performance and there will be effective monitoring,' said Mr K Ramanathan, TERI. His reference is to linking the performance of SEBs to loans, one way of ensuring that these electricity boards do actually work towards improving their distribution networks.

Energy | Renewable energy

MCD to generate power from garbage
The Indian Express, 16 January 2008
The MCD has chalked out a Rs 1700-million plan to utilize the latest solid waste management technologies, including generating power from garbage, as followed in Bangalore. The Delhi government has already invited tenders to convert solid waste into RDF in order to generate electricity in Bawana. The Delhi Pollution Control Committee has authorized three plants in Okhla, Timarpur, and Ghazipur to convert solid waste into RDF. The MCD also plans to conduct awareness campaigns on segregation and composting.

NTPC to begin renewable energy generation in Tamil Nadu
The Financial Express, 20 January 2008
Power generation major NTPC is planning to generate around 600 MW of electricity using renewable energy resources in Tamil Nadu. The PSU is aiming at generating 1000-MW power under renewable energy mode and a major portion of it will be in Tamil Nadu. A blueprint would be made ready shortly for a JV with TNEB. The projects would include windmills and biomass units, he added. NTPC already has entered into a JV with TNEB for setting up a Rs 75-billion thermal power plant at Ennore, with a projected capacity of 1500 mw.

Thirty companies vie to turn Delhi's waste into power
Business Standard, 23 January 2008
About 30 companies are in the fray for this first-of-its-kind project in Delhi aimed at generating about 16 MW of power from waste. Instead of burning coal or gas to run the power plant, the plan is to use waste as fuel. The waste will be delivered 'free' by the MCD and the New Delhi Municipal Council to the company that bags the project. The waste would include all kinds of refuse—bio-degradable, non-degradable, recyclable, non-recyclable and even broken glass. This mixed waste will undergo a host of mechanical and thermal processes to flush out the combustible elements. This refuse-derived fuel – or RDF – will be burnt in a boiler to generate power. A lot of waste is generated by the 14 million or so residents of the city— the volume being anywhere between 6000 and 8000 tonnes per day. The situation is so severe that even the landfills are running out of capacity. The power plant will use about a third of the daily waste of the city. However, at a project cost of about Rs 1750 million, the capital investment per MW of power is almost Rs 110 million. In contrast, a typical coal-powered plant can be set up at about Rs 40 million per MW. While the capex for a waste-based power plant is high, the fuel cost is almost zero, and this would make the power generated from the plant not too expensive. The transmission cost is also expected to be low, since the project will be located within the city—across 18 acres of land in Okhla and Timarpur. And then there is the upside from carbon credits, which this project is eligible for.

Thar Tech to set up bio-diesel plant in Rajasthan
The Economic Times, 31 January 2008
The US-based technology company, Thar Technologies, is planning to set up a bio-diesel plant in Rajasthan. The company is looking for a 20-acre plot in Jaipur and surroundings for the proposed project. 'Main sources of bio-diesel – jatropa and karanj – are extensively available in

Rajasthan. We want to draw benefits from the recent bio-diesel policy of the Rajasthan government that entails allotment of 30% cultivable wasteland to the private sector for jatropa and karanj cultivation. Apart from growing these plants, we would source them from other private growers for processing. The scale of investment would depend on the response from the state government,' he said. The company has recently received a $1.9-million US Federal Advanced Technology Programme grant for the development of a bio-diesel production facility in south-western Pennsylvania. The new process will use 25% less energy to produce the same amount of fuel, and will be 14% less expensive — a combination of higher efficiency and lower cost.

Environment

Now green certificates for lead battery makers

The Hindu, 17 January 2008

Occupational Knowledge International, or OK International, a non-governmental organization that works for improving public health through innovative strategies to reduce exposure to industrial pollutants, launched the BEST certification for lead battery manufacturers. Under the BEST programme, lead battery manufacturing facilities that implement a collection programme and meet minimum emission standards for used batteries will be eligible to place the eco-label on their products. This is an international effort which has been launched for the first time in this country. It is a voluntary certification effort developed by a consensus of industry and environmental organisations for manufacturing an industrial product while protecting public health and the environment. The BEST certification standard was developed through a two-year multi-stakeholder process organized by OK International of San Francisco, Development Alternatives of Delhi, and the National Referral Centre for Lead Poisoning of Bangalore.

Nod for Parks society to improve green cover for Delhi

The Hindu, 22 January 2008

The Delhi Cabinet has approved the formation of a Delhi Parks and Gardens Society, which seeks to create 'green sinks' in the nearly 15 000 parks and gardens across the Capital. Announcing the decision, Chief Minister Ms Sheila Dikshit said the move had been initiated to expand the green cover of Delhi from around 18% at present to 33% and also to provide proper places for playing, recreation and walking to people across the city. Ms Dikshit said under the scheme the society would undertake tree plantation and work with residents' welfare associations, non-government organizations and local agencies to fill up vacant spaces in the gardens and parks and maintain them professionally.

ICAR for agri intelligence system

The Asian Age, 22 January 2008

Every one degree rise in global temperature will cause fall of wheat production by four to 5 MT in India. This in turn, will mean a loss of Rs 50 billion, a study on 'Quantification of climate change impact on Indian agriculture sector,' carried out by the ICAR has said. The study recommended an agriculture intelligence system for real-time study of climate change impact and to give inputs to the government on production of important commodities at national and international levels. According to global reports, agricultural production will fall by anything between 10% to 40% by 2100. The fall in production can be reduced to 1–2 MT, only if farmers change to timely planting of crops, the study has advised. Fall in production of apples in Himachal Pradesh, a general decrease in quality of basmati rice were mentioned by the study. An important tropical fish of the country, the oil sardines, have moved along both the West and East coasts from their original habitat. Global temperature rise will lead to increased use of fertilizer, which in turn will cause more GHG emissions. The study says that of the three GHGs, agriculture will cause emissions of methane and nitrous oxide and negligible amounts of carbon dioxide. [By C Anand Reddy]

CSE report on mining calls for tougher regulations

The Asian Age, 29 January 2008

Putting the spotlight on India's mining sector, the *Sixth State of India's Environment* report of the CSE has called for tougher regulations, a new social contract to let people decide and a system that puts back money into devastated areas. Listing the industry's many lapses, the report takes a sector and state-wise look at the industry. In 2005/6, mineral exploration created 1.6 billion tonnes of waste and overburden, which has not been disposed of, it says. A total of 510 mines are listed as simply abandoned without closure. An estimated 0.16 million hectares of forest land has been diverted for mining. A new social and environment contract has become imperative, the report suggests in conclusion. Mineral extraction has to be better regulated and better managed. The report points out that there is need to recognize that mining degrades people, livelihood and environments, so it has to give back to the land.

Big dilemma over nanotechnology
Mint 30 January 2008
The science of nanotechnology – dealing with particles a thousand times thinner than a strand of human hair – may itself be new, but with scientists coming up with applications for nanoparticles in the electronics, chemical, and pharmaceutical industries, the government wants to understand the polluting and toxic effects of these particles. A growing body of research also suggests that nanoparticles could easily lodge themselves within the body and cause respiratory problems. Though India is yet to see substantial investments in its nanotechnology sector, venture capitalist firms such as Draper Fisher Jurvetson, which helped Hotmail and Skype start off, are now betting big on nanotechnology. TERI has initiated a study that would include the toxicological fallouts of nanoparticles.

Environment | Biodiversity

Biodiversity information system to be created soon
The Hindu, 18 January 2008
The National Biodiversity Authority will soon create an Indian Biodiversity Information System, Chairman Mr S Kannaiyan said. The Authority would bring together the existing databases to form a 'meta-database.' The Indian Biodiversity Information System would have all the information about India's biodiversity and bio-resources and their traditional knowledge, including the people's biodiversity register. A village-level biodiversity management committee, to be formed all over the country, would prepare the people's biodiversity register, in consultation with the locals. The register would contain comprehensive information on the availability and knowledge of local biological resources, their medicinal or any other use and traditional knowledge associated with them, he said. The concerned authorities and the state biodiversity boards would provide guidance and technical support to the committee for preparing the register. It sought an allocation of Rs 500 million in the Eleventh Plan for creating the Indian Biodiversity Information System and the people's biodiversity register.

Indian begins documenting fish species
The Financial Express, 28 January 2008
The Lucknow-based NBFGR has begun the process of Indian fish germplasm accessions with a view to developing a repository for future use and as well as for protecting the Indian species from biopiracy. The ICAR has constituted a six-member committee headed by its deputy director-general for fisheries for protection of fish germplasm through registration and documentation. NBFGR as a nodal agency has issued the necessary guidelines for implementation. India has rich aquatic biodiversity spread across different ecosystems. Out of the 27 800 fish species found across the world, about 11% are found in Indian waters. Apart from finfish resources, nearly 2934 species of crustaceans, 5000 species of molluscs and 765 species of echinoderms also contribute to India's rich aquatic germplasm resources. Natural aquatic germplasm resources are important as majority of the genetic resources for food still come from the wild due to low documentation level in the fishery sector. In other words, capture fishery is equally important as breeding for nutritional security across the globe.

Rs 6000 million for Project Tiger
The Asian Age, 31 January 2008
The Centre approved an estimated Rs 6000 million for Project Tiger for the current Eleventh Plan, the nodal agency protecting endangered population of big cats in the country. The fund will be used in not only protecting the big cats but also for issues like corridor conservation, rehabilitating villages from within the core area of forests, and implementing safeguard in wildlife conservation. The money would be used to rehabilitate people living in core area or critical tiger habitat and implement safeguard and retrofitting measures in the interest of wildlife conservation. The scheme would also rehabilitate and resettle denotified tribes involved in traditional hunting, and mainstreaming livelihood and wildlife concerns in forests outside

tiger reserves. The government will also foster corridor conservation through restorative strategy to arrest fragmentation of habitats. Recent studies have revealed that tiger habitats, especially the core areas, have reduced drastically in some of the forests, which is critical for the population of tigers and other big cats.

Environment | Climate change

New study on melting glaciers
The Hindustan Times, 21 January 2008
Gearing up to meet the challenges posed by global warming, particularly in the context of the Himalayas, the National Institute of Hydrology has embarked on a study of glacier melting in Gangotri (Uttarkhand) and Zanskar (Ladakh) regions. Scientists at the institute are already in the middle of uncovering the first phase of results. The outcome of the studies will help in reaching a conclusion on whether global warming has adversely affected the glaciers in this area or not. Under the Himalayan glacial studies, scientists have embarked on a multi-pronged mission to study the glaciers vis-à-vis the dangers of global warming, changing climate patterns with their overall impact in the sub-continent. The study is also vital in view of reduction in the availability of per capita water and fast dipping groundwater levels. 'There are numerous reports of the possible effect of climate change on water resources, particularly in the context of glacial melting. [By Anil Anand]

MCX launches carbon credit trading
Business Standard, 22 January 2008
The MCX, the country's largest commodity bourse, had launched futures trading in carbon credits, one of the fastest emerging intangible commodities in developing countries, including India. MCX will offer five contracts running up to 2012. It will trade carbon credits of 200 tonnes unit each that will expire on 15 December every year, the bourse said in a statement. As on 21 January, the total volume of trade for the December 2008 contract was 9600 tonnes while open interest stood at 8000 tonnes. The tick size has been fixed at Rs 0.50 a ton, while the exchange has decided to facilitate delivery on the expiry of the respective contracts. The initiative makes MCX Asia's first commodity exchange to launch carbon credit trading. This is the second intangible commodity launched for trade on MCX after natural gas. Carbon credits are generated by enterprises in the developing world by using cleaner technologies, thereby saving on energy consumption. This consequently reduces their greenhouse gas emissions.

Railway hunts for carbon credits in the light of CFLs
The Indian Express, 23 January 2008
Hoping to earn carbon credits under the CDM of the UNFCCC, the Indian Railways plans to replace 2.6 million incandescent lamps with energy-efficient CFLs in 650 000 railway households free of cost. The idea is to rope in private players willing to replace four incandescent bulbs (up to 100 watts) with 15-watt CFLs for all railway employees 'at their cost'. The selected player supplying the CFLs would have to get the project registered with the CDM and maintain the CFLs for the project tenure of seven years, including replacement and disposal at the end of a bulb's life. Bids have already been called for the project. [By Raghavendra Rao]

Ispat, JSW line up plans for carbon business
The Times of India, 24 January 2008
Steelmakers like Ispat Industries and JSW Steel are planning to cash in on carbon credit incentives, by recycling waste gases into energy fuels. Ispat Energy, the wholly owned subsidiary of Ispat Industries, is targeting a generation of 600 000–800 000 carbon credits from its 110-MW captive power plant at Dolvi, which will be fired by waste gases from its blast furnace. JSW, on the other hand, will derive 7.6 million carbon credits over the next 10 years. Both the companies have major plans which include setting up more power plants running on such fuels. Ispat's Dolvi power project is expected to be operational by the end of this calendar year. The company is hopeful that this project will be registered with the UNFCCC as a CDM project, and thus generate carbon credits.

Climate change may cost 5% global GDP by 2030: Pachauri
New Indian Express, 25 January 2008
Dr R K Pachauri has warned the international business and political leaders that climate change could cost up to 5% of the global GDP by 2030 if effective steps were not taken in time. 'The business and political leaders should realize that measures to bring down emission levels would not cost more than 0.2% of the global GDP, but it could cost up

to 3% of world GDP by 2020, and 5% by 2030, if the temperature goes up by 2–4 °C ,' the head of the UN's Nobel Prize-winning scientific panel on climate change said. Addressing the annual meeting of the World Economic Forum, Dr Pachauri said that the threat of climate change had become a threat to world peace. Though there was unprecedented awareness about the issue, the response of the corporate sector and governments was still weak. The agriculture production could come down by as much as 50% by 2020, due to climate change and by 75–200 MT in Africa alone, he said.

MCX eyes India Inc. with Asia's first carbon credit plan

The Financial Express, 28 January 2008

MCX, Asia's first commodity exchange to launch carbon credit futures contracts, is looking to tap Indian companies seeking to gain from adoption of clean technology and saving on energy usage. MCX, the country's leading comex, has launched the futures trading in carbon credit contracts. The launch would benefit Indian companies considerably, as the country is likely to generate 140 million carbon credits. Launching of carbon credit futures on the Indian trading platform is expected to provide transparency to markets and help producers earn remunerative returns out of environmentally clean projects.

Morbi ceramic players join carbon credit race

The Economic Times, 29 January 2008

Ceramic players from Morbi have joined the race to capitalize on reduction in emission of carbon from their respective industries and earning carbon credits. Carbon credits are certificates issued to countries that reduce their emission of GHG, which lead to global warming. It is estimated that 60% to 70% of the GHG emission is through fuel combustion in industries like cement, steel, textiles, and fertilizers. Some GHG gases like hydro fluorocarbons, methane, and nitrous oxide are released as by-products of certain industrial processes that affect the ozone layer, leading to global warming. A few companies from the ceramic region, including Decolight Ceramics (Rs 1000 million turnover), Face Ceramics (Rs 200 million), Favourite Ceramics (Rs 150 million), and Soriso Ceramics (Rs 200 million) are altogether investing around Rs 350 million in projects like converting fossil fuel into biomass.

Environment | CSR

Investing in innovation

The Financial Express, 28 January 2008

Indian chemical producer Jubilant Organosys has been able to attract investors with its high environmental, health and safety record, as well as efficient sustainability reporting, according to a new report. The report, *Market Movers: Lessons from a Frontier of Innovation*, has been brought out by the International Finance Corporation, a World Bank group member, and SustainAbility, a consultant. The Indian chemical producer has been featured along with a Sri Lankan apparel manufacturer, an egg producer in China, and a plastic pipe manufacturer in Brazil. These companies gained a competitive advantage by developing business strategies to become environmentally and socially responsible, says the report.

Environment | Natural resources

TERI report says Coke should shut Rajasthan plant

The Indian Express, 17 January 2008

Coca-Cola has been asked to consider shutting down a bottling plant in the drought-stricken state of Rajasthan, saying the plant was depleting scarce water supplies. The recommendation came in a report released by TERI. The report was commissioned by Coca-Cola in 2006 in response to reports that pesticide residues had been found in its products. The study found no pesticides in the water used at the six bottling plants it sampled, and said that water quality 'generally meets the government regulatory standards'. But the report expressed concern about the company's use of scarce water supplies–an issue that has been raised repeatedly by villagers who live near several of the company's bottling sites.

Centre to launch mega scheme on rivers

The Asian Age, 19 January 2008

The union water resources ministry will soon announce a mega scheme that envisages funding of conservation and development works of different rivers taken up by the respective state governments. A group of ministers will look into the scheme when it is placed before it in its next meeting. According to sources in the ministry, about 12 big rivers across the country will be declared as national rivers and they will get funds for constructing new multipurpose projects for irrigation and power generation. These projects will be taken up by the respective basin states of the river concerned and the Centre will fund them. The scheme is likely to get the final Cabinet nod within a month. The criteria for shortlisting the rivers and other modalities are presently under the study of a group of ministers. The GoM has approved three selection criteria for these national projects. One, international projects where usage of water in India is required by a treaty or where planning and early completion of the project is necessary in the interest of the country. Two, inter-state projects which are dragging on due to non-resolution of inter-state issues relating to sharing of costs, rehabilitation, aspects of power production, among others. Three, intra-state projects with additional potential of more than one lakh hectares and with no dispute regarding sharing of water. [By Anand Reddy]

Centre to adopt some rivers as 'national assets'
The Hindu, 31 January 2008
In an effort to increase irrigation potential and harness the hydropower possibilities, the Central government plans to adopt some rivers as 'national assets.' The Centre will provide 90% funding for projects on such rivers for their conservation and utilization. At the same time, a proposal to impose a cess on (ground) water use by industry is also under consideration. Announcing this at the Social Editor's Conference, Union Water Resources Minister Mr Saifuddin Soz said river projects that had been unduly delayed or those that had an 'international dimension' would be funded and developed by the Centre. He clarified that the Centre had no plans to nationalize rivers. 'The waters will belong to the state. The Centre will only help conserve and develop projects on them. A proposal to this effect will be brought to the Union Cabinet.' He said a scientific and technical criterion had been applied to select the projects.

Environment | Pollution

Delhi to get three new air-monitoring stations
The Hindu, 21 January 2008
Listed among the greenest capitals of the world, Delhi will also soon become the most monitored city, with the CPCB now in the final leg of its preparations to give it three more continuous air-monitoring stations. To be set up at the cost of Rs 8 million each, this latest endeavour will enable the CPCB to generate a more comprehensive all-Delhi continuous air-quality data that will be updated on the official website every 15 minutes, allowing the public a non-stop update on air quality throughout the city and assess fluctuations. Three new stations will be enlisted taking into account expansion of Delhi over the years and growing human and vehicular population. The CPCB has already drawn up a list of 'proposed sites', of which three will be selected and put to use.

International

Google warms to solar thermal energy
Financial Times, 18 January 2008
Google has thrown its weight behind a solar energy technology that is fast becoming one of the hottest renewable plays for investors, as part of its push into green technologies. The company gave details of $25 million (£12.7 million) of investment in renewables and philanthropic projects under its *Google.org* arm, the unit that manages the company's commitment to devote 1% of equity and 1% of profits to philanthropy. Solar thermal energy has begun to attract the interest of investors because it offers a cheap way of harnessing the sun's power to generate electricity. Unlike photovoltaics, also known as solar panels, which use silicon to turn the sun's rays directly into electric current, solar thermal technology uses infrastructure similar to traditional power plants. The technology in its basic form consists of mirrors that focus the sun's rays to heat water which drives steam turbines. Because no silicon is involved, this technology is relatively cheap and can be deployed on a large scale.

http://www.ft.com

Global carbon trade rises 80% in 2007
Business Standard, 20 January 2008
Trade in the world greenhouse gas credits market rose 80% last year as emissions rules became a concern for more companies, a carbon analysis group said. Global carbon credit trade rose to $60 billion in 2007, from $33 billion the previous year, according Point Carbon, an Oslo-based group of greenhouse gas analysts and consultants. Total traded volume in the global market reached 2.7 billion tonnes of greenhouse emissions

reductions in 2007, a 64% jump in the same period. The UN's climate panel last year squarely blamed human actions for global warming. Carbon trade allows companies that have cut emissions under a set limit to sell credits representing the reductions to slower-moving players. It is seen as a major way to spur clean technologies that are hoped to slow and then decrease global emissions.

Greenhouse gases at new peak in sign of Asia growth

ENN, 20 January 2008

Atmospheric levels of the main GHGs have set another new peak in a sign of the industrial rise of Asian economies led by China. 'The levels already in January are higher than last year,' said Dr Kim Holmen, research director of the Norwegian Polar Institute. Dr Holmen said measurements at a Norwegian station high in the Arctic showed levels of carbon dioxide, the main GHG, were around 394 PPM, up about 1.5 PPM from the previous records early in 2008. The levels have risen by about a third since the start of the Industrial Revolution in the 18th century, in tandem with more use of fossil fuels in power plants and factories, and defying recent international efforts to cut back. The carbon levels usually peak just before the arrival of spring in the northern hemisphere, where most of the world's industries, landmasses, and plants are found. Levels then dip because plants soak up carbon dioxide as they grow.

http://www.enn.com

Corporations team up to cut supply chain emissions

Planet Ark, 21 January 2008

Eleven of the world's largest companies are teaming up to see how they can work with thousands of their suppliers to curb GHG emissions. Cadbury Schweppes, Dell, Nestle, PepsiCo, Proctor & Gamble, and Tesco are amongst the companies in the scheme, called the Supply Chain Leadership Collaboration. The venture is being coordinated by the Carbon Disclosure Project, a UK-based non-profit organization that helps companies and investors to cooperate on fighting climate change. The Carbon Disclosure Project will publish a report after the first phase, recommending a standardized approach to emissions cuts and highlighting areas to be targeted. The project will expand the scheme in its second phase, starting in May 2008, to include up to 2000 suppliers from each participating organization. More major companies will be invited to join in the second phase.

http://www.planetark.com

Abu Dhabi to build world's first zero-carbon city

Physorg.com, 21 January 2008

Construction work on the world's first zero-carbon city housing 50 000 people in a car-free environment will begin in the oil-rich Gulf emirate of Abu Dhabi. In Masdar City, which will be run entirely on renewable energy, including solar power to exploit the desert emirate's near constant supply of sunshine, people will be able to move around in automated pods. 'This is a place that has no carbon footprint and will not hurt the planet in any way,' Mr Khaled Awad, director of the Masdar project's property development unit of the Abu Dhabi Future Energy Company said. Once completed in 2013, residents will be able to move around the six-square-kilometre (2.4-square-mile) city using a light railway line and a series of automated transport pods. The city will be sited to take advantage of sea breezes, and a perimeter wall will protect it from the hot desert air and noise from the nearby Abu Dhabi airport.

http://www.physorg.com

Israel plans electric car network

Financial Times, 21 January 2008

Israel will set out plans to cut drastically its dependence on oil imports, with a private-sector initiative for a nationwide electric car network. The privately funded plan to build 500 000 recharging points and battery-swap stations for electric cars in the next 18 months has the backing of the government and President Shimon Peres. Renault and Nissan will develop an electric car with a range of more than 100 miles to be mass-produced from 2011. The plan would cut Israel's oil imports by half within a few years, and Israel could cut the remainder by building solar energy generating plants. The infrastructure will be built by Project Better Place, a US start-up, which has raised $200 million (€137 million) for the purpose, enough to cover the initial stages. Further roll-out of the infrastructure and vehicles is expected to add about $800 million to the cost. Electric cars have failed to find mass-market acceptance due to their limited driving ranges, high costs relating to their batteries and small production runs. Project Better Place, founded by Shai Agassi, an Israeli–American, champions a business model that would see the costs of batteries borne by infrastructure companies. Israel's government this month approved tax incentives for electric vehicles.

http://www.ft.com

EU unveils blueprint for climate fight

The Financial Express, 24 January 2008

The European Union's executive met to adopt landmark proposals that will make the 27-nation bloc a leader in the fight against climate change, but tradeoffs will include higher energy bills. The European Commission will detail proposals to cut planet-warming greenhouse gas emissions by one-fifth and split among EU states a target to produce one-fifth of all power from renewable sources like the wind and sun by 2020. The Commission wants to spur talks among industrialized countries for a global climate deal by 2009 to help arrest global warming which risks raising sea levels and causing more floods and droughts. Brussels has had to fine-tune its plans to placate anxious industry leaders, who fear higher energy costs will tilt competitiveness further in favour of China and India, which have no emissions limits, at a time of record oil prices. Stiff resistance is expected over targets for each country to cut greenhouse gases and install renewable energy. Business, meanwhile, has sought to soften a planned overhaul of the EU's Emissions Trading Scheme.

US DOE signs MoU with USDA and China, awards biofuels grants

Biobased News, 25 January 2008

The US DOE, the USDA, and China's National Development and Reform Commission recently signed an MOU that will strengthen and expand cooperation on biofuels production and use. More specifically, the MOU encourages cooperation in biomass and feedstock production and sustainability, conversion technology and engineering, bio-based product development and utilization standards, and rural and agricultural development strategies. 'This biofuels agreement with China builds on our work with Brazil, the International Biofuels Forum, and the G8 Global Biofuels Energy Partnership to accelerate and intensify our global cooperation around the development and deployment of biofuels,' said Mr Reuben Jeffrey, US Department of State Undersecretary for Economic, Energy and Agricultural Affairs.

http://biobased.org/

Intel to buy green energy certificates

Planet Ark, 29 January 2008

Intel Corp, the world's largest chipmaker, has said that it would buy more than 1.3 billion kWh a year of renewable energy certificates, making it the largest corporate purchaser of alternative energy in the United States. The certificates will subsidize the development of wind, solar, biomass, and small-scale hydroelectric sources of energy, Intel said in a statement. The US Environmental Protection Agency estimated that Intel's purchase has the equivalent impact of taking more than 185 000 passenger cars off the road each year, the company said.

http://www.planetark.com

Technology

New nanocomposite material could increase solar cell efficiency

Renewable Energy Access, 17 January 2008

In the race to make solar cells cheaper and more efficient, many researchers and start-up companies are betting on new designs that exploit nanostructures–materials engineered on the scale of a billionth of a meter. Using nanotechnology, researchers can experiment with and control how a material generates, captures, transports, and stores free electrons—properties that are important for the conversion of sunlight into electricity. Two nanotech methods for engineering solar cell materials have shown particular promise. One uses thin films of metal oxide nanoparticles, such as titanium dioxide, doped with other elements, such as nitrogen. Another strategy employs quantum dots –nanosize crystals – that strongly absorb visible light. These tiny semiconductors inject electrons into a metal oxide film, or 'sensitize' it, to increase solar energy conversion. Both doping and quantum dot sensitization extend the visible light absorption of the metal oxide materials. Combining these two approaches appears to yield better solar cell materials than either one alone does, according to Prof. Jin Zhang at the University of California, Santa Cruz.

http://www.renewableenergyaccess.com

Indian scientists to use ocean as carbon sink

Deccan Herald, 27 January 2008

Scientists aim to capture the carbon dioxide gas and store it in the ocean for hundreds of years so that at least some of the perilous consequences of global warming can be overcome. A group of Indian scientists will spend three months on board an isolated ship releasing tonnes of iron in the southern-most part of the Indian Ocean, close to the Antarctic waters. They aim to capture the carbon dioxide gas and store it in the ocean for hundreds of years so that at least some of the perilous consequences of global warming can be overcome. 'This is the first Indian experiment, which can provide a clue or two to the world whether the oceans can be used as a carbon sink,' Dr S W A Naqvi, the project leader from the Goa-based National Institute of Oceanography told Deccan Herald. Bangalore-based CSIR institute's Centre for Mathematical Modelling and Computer Simulations, along with two other CSIR institutions and the Alfred Wegner Institute for Polar and Marine Research, Germany, will be a part of this initiative. The scientists will release 20 tonnes of ferrous sulphate solution mixed with sea water on an area spanning a few hundred square kilometres to trigger the growth of plankton – a combination of many marine organisms and algae – which is also an important food source. [By Kalyan Ray]

Hydroponics — a promising agricultural technology

Dawn, 28 January 2008

The hydroponics is a method of growing plants using mineral nutrients solution instead of soil. In other words, it is a soil-less culture. Plant physiologists in the 19th century discovered that plants absorb mineral nutrients as inorganic ions in water. In a natural condition, soil acts as a mineral nutrient reservoir, but it itself is not essential for plant growth. When mineral nutrients in the soil dissolve in water, plant roots are able to absorb them. When the required mineral nutrients are artificially dissolved in water, soil is no more required for the plant to thrive. Almost any terrestrial plant will grow with hydroponics, but some will do better than others. Popularized in 1930s by various books and writings on the subject, the hydroponics became widely and frequently used technique for growing plants and vegetables in various countries. The most significant research being done on hydroponics was being carried out at the Environmental Research Laboratory, Tuscan, Arizona, in the United States, and the Glasshouse Crops Research Institute, Little Hampton, England.

http://www.dawn.coM

Japan plans to support replacing petrol with wood

Planet Ark, 29 January 2008

Japan is set to embark on a five-year plan this year to harness a new form of energy using unused wood biomass to produce auto fuels and other industrial products currently made from imported petrol. Japan, where two-thirds of the country is covered by forests, can supply a part of alternative fuels made from wood-origin ethanol as well as raw materials for plastic and carbon fibres. The Ministry of Agriculture said that it was to set aside a total of 1.2 billion yen ($11.2 million) in the next fiscal year's budget to support a few private projects to develop an alternative processing system to that of the petrochemical industry, pending parliament approval. Satoshi Ishihara, director of the Technology Development Office at the ministry's Forest Agency, said up to 10 billion yen of the total subsidy would be used for a project or projects using the wood for cellulosic ethanol technology.

http://www.planetark.com

Forthcoming events

Mumbai, **India**
4–6 March 2008

2008 SPE Indian Oil & Gas Technical Conference and Exhibition
Mr Abhimanyu Singh, Project Manager, Reed Exhibitions India, U&I Corporate Centre, Suite No. 25, Plot No. 47, Sector 32, Gurgaon – 122 001, Haryana, India

Tel. +91-0124-4371016 • *E-mail* abhimanyu.singh@reedexpo.co.uk
Fax +91-0124-4109055 • *Website* www.indianoilgas.org

Washington DC, **USA**
4–6 March 2008

WIREC (Washington International Renewable Energy Conference) 2008
American Council on Renewable Energy, 1629 K Street NW, Suite 210, Washington, DC 20006, USA

Website http://www.wirec2008.org/

Karnataka, **India**
14–15 March 2008

National symposium on Plant resources of India: Linking conservation, livelihood and culture
Prof H C Veerappa Gowda, Princial/Secretary, Sri CBM College, Sringeri – 577 139, Chickamagalore Dist., Karnataka

Tel. 09448344630 • *Fax* 08265 251502/251503/250138

New Delhi, **India**
3–5 April 2008

POWER-GEN India & Central Asia 2008
Inter Ads Ltd, 859, Phase - V, Udyog Vihar, Gurgaon - 122 016, India

Tel. +91-124-4381160/4381163 • *E-mail* power@interadsindia.com
Fax +91-124-4381164 • *Website* www.indiacore.com

Alexandria, **Egypt**
10–13 May 2008

International GEF Workshop On Evaluating Climate Change And Development: Results, Methods And Capacities
Secretariat of the International Workshop Evaluation Office of the Global Environment Facility - GEF EO, 1818 H Street. NW 20433 Washington, DC, USA

Tel. 1+ (202) 458 8537 • *E-mail* IntWorkshop@TheGEF.org
Fax 1+ (202) 522 1691 • *Website* http://www.esdevaluation.org/

Cadiz, **Spain**
28–30 May 2008

Second International Conference on Environmental Economics an Investment Assessment
Jenna Solanki, Conference Secretariat, Environmental Economics 2008, Wessex Institute of Technology, Ashurst Lodge, Ashurst Southampton, SO40 7AA

Tel. 44 (0) 238 029 3223 • *Fax* 44 (0) 238 029 2853

Queensland, **Australia**
15–19 June 2008

17th World Hydrogen Energy Conference
Susan Harris, ICMS Pty Ltd, 88 Merivale Street, South Bank, Queensland 4101, Australia

Tel. +61 7 3307 4000
Fax +61 7 3844 0909 • *Website* www.whec2008.com

The New Forest, **UK**
16–18 June 2008

Geo-Environment and Landscape Evolution 2008
Rachel Swinburn, Conference Manager, Geo-Environment & Landscape Evolution 2008, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO40 7AA, UK

Tel. +44 (0) 238 029 3223 • *E-mail* rswinburn@wessex.ac.uk
Fax +44 (0) 238 029 2853 • *Website*: www.wessex.ac.uk

Ontario, **Canada**
24–26 June 2008

Seventh World Wind Energy Conference And Exhibition
World Wind Energy Association, Charles-de-Gaulle-Street. 5 53113 Bonn, Germany

E-mail info@wwec2008.com • *Website* http://wwec2008.com/default.htm

Lucerne, **Switzerland**
30 June – 4 July 2008

International Fuel Cell Conference with Exhibition : 8th EUROPEAN SOFC FORUM
European Fuel Cell Forum, P.O. Box 99, orgenacherstrasse 2F, CH-5452 Oberrohrdorf / Switzerland.

Tel. +41 - 56 - 496-7292 • *E-mail* forum@efcf.com
Fax +41 - 56 - 496-4412 • *Website* www.efcf.com

Southampton, **UK**
3 – 5 September 2008

Third International Conference on Sustainable Tourism
Rachel Creasey, Conference Secretariat, Sustainable Tourism 2008, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO40 7AA, UK

Tel. +44(0) 238 029 3223/+44(0) 238 029 2853
Fax +44(0) 238 029 2853 • *E-mail* rcreasey@wessex.ac.uk

Skiathos, **Greece**
22 – 24 September 2008

Sixteenth International Conference on Modelling, Monitoring and Management of Air Pollution
Rachel Swinburn, Conference Manager, Air Pollution 2008, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO40 7AA, UK

Tel. +44(0) 238 029 3223 • *E-mail* rswinburn@wessex.ac.uk
Fax +44(0) 238 029 2853 • *Website* www.wessex.ac.uk

Skiathos, **Greece**
24–26 September 2008

Fifth International Conference on Urban Regeneration and Sustainability
Rachel Swinburn, Conference Manager, The Sustainable City 2008, Wessex Institute of Technology, Ashurst Lodge, Ashurst, Southampton SO40 7AA, UK

Tel. +44(0) 238 029 3223 • *E-mail* rswinburn@wessex.ac.uk
Fax +44(0) 238 029 2853 • *Web site* www.wessex.ac.uk

Greece
1–3 October 2008

1st International Conference on Hazardous Waste Management
Maria Aivalioti, University Campus – 73100 Chania (Greece)

Tel. +30 28210 37790 • *E-mail* hwm1.conference@enveng.tuc.gr
Fax +30 28210 37850

Abbreviations

ADAG	Anil Dhirubhai Ambani Group
ADB	Asian Development Bank
APDRP	Accelerated Power Development and Reforms Programme
APM	Administered price mechanism
ATF	Aviation turbine fuel
BHEL	Bharat Heavy Electricals Ltd
BPCL	Bharat Petroleum Corporation Ltd
BPL	Broadband over power lines
BRPL	Bongaigaon Refinery and Petrochemicals Ltd
BSE	Bombay Stock Exchange
BSES	Brihanmumbai Suburban Electric Supply
BYPL	BSES Yamuna Power Ltd
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CERA	Cambridge Energy Research Associates
CFL	Compact fluorescent lamp
CIL	Coal India Ltd
CMD	Chairman and managing director
CPCB	Central Pollution Control Board
CPCL	Chennai Petroleum Corporation Ltd
CSE	Centre for Science and Environment
CSIR	Council of Scientific and Industrial Research
DGH	Directorate General of Hydrocarbons
DOE	Department of Electricity
ECB	External commercial borrowing
EIL	Engineers India Ltd
EoI	Expression of interest
FDI	Foreign direct investment
FMC	Forward Markets Commission
GAIL	Gas Authority of India Ltd
GDP	Gross domestic product
GERC	Gujarat Electricity Regulatory Commission
GHG	Greenhouse gas
GoM	Group of ministers
GUVNL	Gujarat Urja Vikas Nigam Ltd
HPCL	Hindustan Petroleum Corporation Ltd
ICAR	Indian Council of Agricultural Research
IDP	Initial development plan
IEX	Indian Energy Exchange
IOC	Indian Oil Corporation
ISRO	Indian Space Research Organization
JV	Joint venture
KG	Krishna–Godavari
kl	kilolitre
kWh	kilowatt-hour
LCD	Liquid crystal display
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
Mahagenco	Maharashtra State Power Generation Company Ltd
MCD	Municipal Corporation of Delhi
MCX	Multi Commodity Exchange
MD	Managing director
MoU	Memorandum of understanding
MRPL	Mangalore Refinery and Petrochemicals Ltd
MSCM	Million standard cubic metres
MSCMD	Million standard cubic metres per day
MT	Million tonnes
MTPA	Million tones per annum
MW	Megawatt
NBFGR	National Bureau of Fish Genetic Resources
NDPL	North Delhi Power Ltd
NELP	New Exploration Licensing Policy
NTPC	National Thermal Power Corporation
ONGC	Oil and Natural Gas Corporation
PFC	Power Finance Corporation
PPM	Parts per million
R-ADAG	Reliance-Anil Dhirubhai Ambani Group
RDF	Refuse derived fuel
REC	Rural Electrification Corporation
REL	Reliance Energy Ltd
RGGVY	Rajiv Gandhi Grameen Viyutikaran Yojana
RIL	Reliance Industries Ltd
RNRL	Reliance Natural Resources Ltd
RPL	Reliance Petroleum Ltd
RPL	Reliance Power Ltd
SME	Small and medium enterprise
SPV	Special purpose vehicle
TAP	Turkmenistan–Afghanistan–Pakistan
TNEB	Tamil Nadu Electricity Board
TPA	Tonnes per annum
UMPP	Ultra mega power project
UNFCCC	UN Framework Convention on Climate Change
USDA	United States Department of Agriculture
VAT	Value added tax
WPI	Wholesale price index