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INDO CANADIAN BUSINESS

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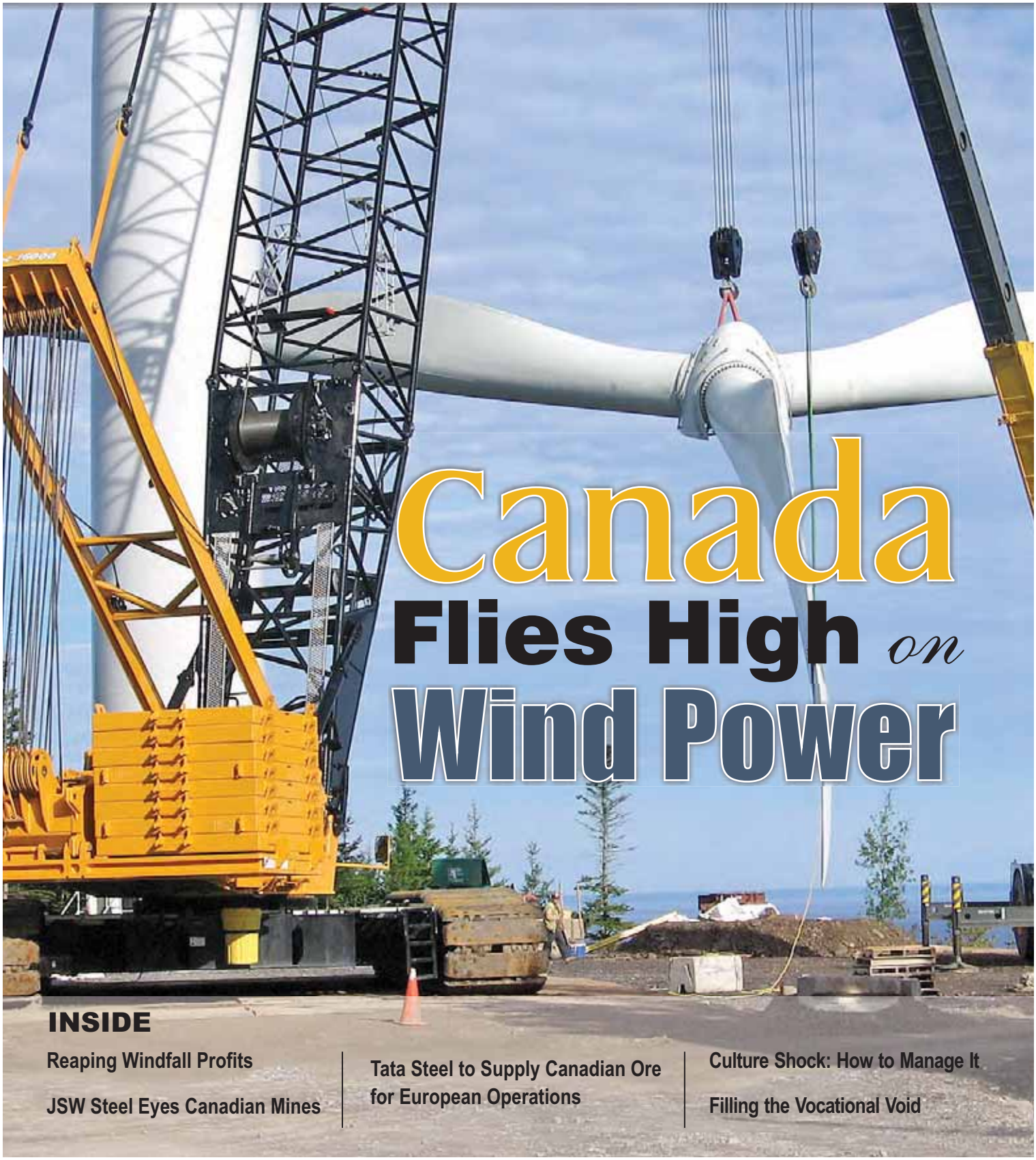
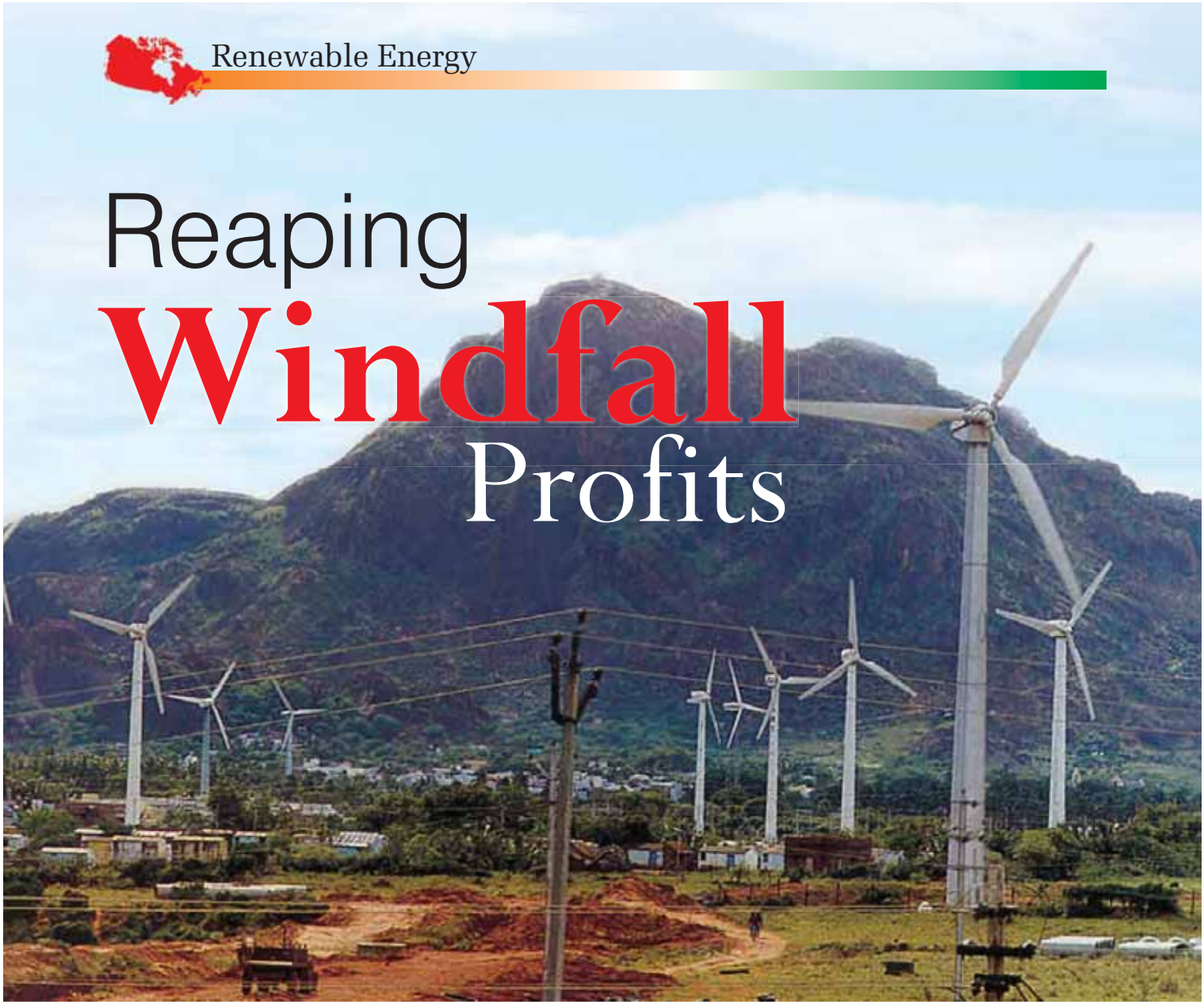


Canada Flies High on Wind Power

INSIDE

Reaping Windfall Profits



India has witnessed an exponential growth in renewable energy sector achieving a total installed capacity of 28068.45 MW (excluding large hydro) as on 31.04.2013. Wind Energy is the fastest growing amongst the renewable energy sources with an installed capacity of 19,051MW, holding the fifth position globally and third highest in annual capacity addition in 2011-12. In terms of wind energy mix in electricity generation, India is ahead with 4% to 5% penetration while USA and China are having ~3% and ~2% respectively. India has played an important role in the world wind energy market and has developed into the world's top five largest markets. Owing to the sustained government policies India has a strong domestic manufacturing base with high potential for wind energy harnessing. Today most of the installed capacity of wind energy projects WTG (Wind Turbine Generators) has come up owing to accelerated depreciation benefit of 80% in the very first year of commissioning, a capital subsidy of significant scale to get power from private in the national utility grid. Centre for Wind Energy Technology (C-WET) as an Autonomous R & D Institution under the Ministry of New and Renewable Energy (MNRE) has been since its inception (in 1998) an enabling body for orderly development of wind energy projects in India.

However, the present installed capacity of about 19GW spread over 8 states essentially in India is only about 40% of the predicted potential of 49GW at a level of 50m above ground level (AGL). Indian Wind Atlas released by C-WET also indicates a potential of 103GW at 80m level, which means there is still a lot more scope for penetration of this form of green energy. Owing to withdrawal of accelerated depreciation for Wind Power and due to allocation of higher budget provisions towards bringing a fast track development of solar

potential in India during the financial year (FY) 2012-2013 having a 40% lower annual capacity than the previous year. But the Independent Power Producers (IPP) in India are optimistic if government policies are sustained since they can offer power less than the power produced by solar as well as gas based generations in India, without affecting the original land use pattern.

With the Ministry's new initiatives like GBI (Generation Based Incentive), Renewable Purchase Obligation (RPO), Renewable Energy Certificates (REC) etc and 12th plan targets of reaching about 17000MW of wind power installed capacity addition by 2017, the wind power development in India is likely to get a significant boost in the years to come. The Government of India is to protect high risk taking investors have removed the cap of 200Watts/sq.m, Wind Power Density (WPD) requirement at any site starting 2011. The revised policy will allow wind farms in the areas which are much less in WPD of 200 watts/sqm and mandates states to allot land on foot-print basis (actual area occupied by tower and right of way to access) hence permitting wind farms to come up on active farm lands as well if wind potential exists. A policy framework for repowering, intercropping and offshore wind power would certainly speed up wind power deployment in India. It is more than evident that the wind power is environmentally benign. In the north eastern states some wind potential is indicated in snow covered mountain regions and dense forest regions having complex terrains. However, the main challenges would be the requirements of the development of roads and logistic needs, interstate evacuation grid network and transmission grid capacity enhancements and declaration of forest areas for wind power development apart from the need for indigenous technology through innovation and R&D for cost reduction. (Please visit: cwet.res.in) Being infirm power dictated by nature accurate forecasting and scheduling of wind power is very much needed and is ready to be implemented through National load dispatch centre in India through a renewable regulatory fund. Offshore wind needs reliable measured data even to develop projects in shallow water depths near Kanyakumari and Dhanuskoti in the south-eastern Coast of Tamil Nadu. MNRE is finalizing the draft policy for offshore wind power.

With close to 35% to 40% of India's huge population still deprived of grid connected power, small wind energy systems or solar/wind-solar hybrids implemented as offgrid/microgrid/battery supported mode holds a big promise and market in India. Policies to bring in proven small wind systems or wind-solar hybrid systems with O&M support would open the market to the systems which has started happening rather slowly at the moment with some states declaring net-metering on roof top generations. C-WET, an autonomous R&D institution under the MNRE offers comprehensive international quality services and facilitates orderly development of both wind and solar power deployment in India. (Please visit: www.mnre.gov.in).

The North East Challenge

In India, the north eastern (NE) states pose the highest challenge for wind resource assessment, owing to the mountains and complex terrain. Before 2003 only about 5 wind monitoring stations had been established and the measured wind power densities are considerably low in most of the regions. One station in Arunachal Pradesh had 168 watts per square meter (WPD=wind power density) at 50m level, i.e Sela. In view of this observation, Government of India through MNRE has several

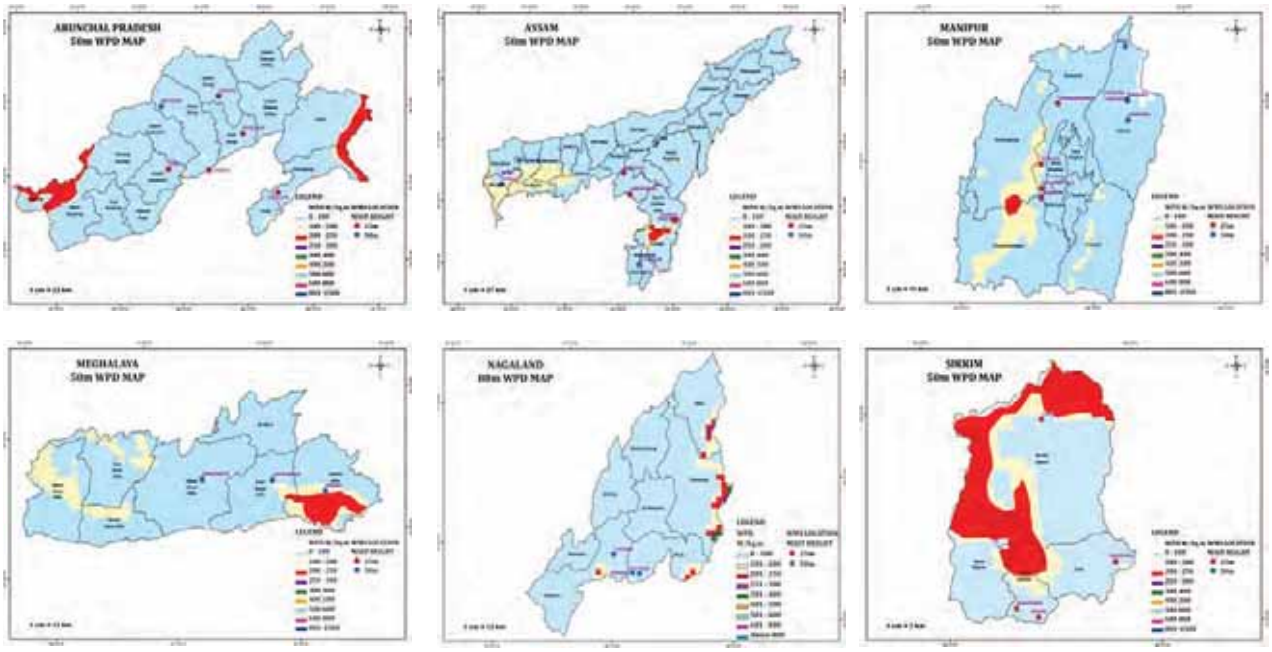


Figure 1: Distribution of indicative Wind Resource Potential in the North Eastern States (Wind Atlas 2010)

proactive measures to promote renewable energy deployment through offgrid / stand alone applications of solar, wind and small hydro programmes. To promote roof top small wind aero generators, over 55 micro-survey studies have been taken up by MNRE engaging a consultant and complete detailed project reports (DPRs) have been prepared and shared with the state nodal agencies, inviting proposals from the NE states. In addition, the officials of the state nodal agencies have been trained in wind resource assessment and analysis through a focused course with involvement of industry experts at C-WET, Chennai.

Of the eight states Tripura and Mizorum do not seem to have even indicative potential based on the meso scale model study using the Indian Wind Atlas developed in April 2010. Nagaland does not indicate wind resource potential at 50m level but at 80m level it has some 16MW as seen in Fig.1 and in the Table. Arunachal Pradesh and Sikkim had the wind potential of about 200MW based on meso scale based (Indian Wind Atlas April, 2010) estimation. However the areas identified are mostly snow covered or protected forest areas with very little access throughout the year. There were over 64 locations planned for mast based measurements and MNRE, GOI commissioned as many as 54 wind monitoring stations and measurements for 1-2 years which were completed on 44 stations by the end of 2011. Over 10 stations in the North Eastern states had shown wind power densities over 150 watts/sq.m but less than 180 watts/sq.m.

On an overall scale, even though indicative potential of 400 to 600 MW seem to exist in NE region, the error levels of these (above table) meso scale computations are quite high owing to (i) the complex hilly terrain and (ii) the non-availability of adequate mast based measured wind data at closely spaced grid points in a complex terrain for validation of meso scale wind resource model estimates. The logistical access roads to locations to carry heavy large sized Wind Turbine Generator (WTG) has been another bottle neck apart from electricity grid capacities for evacuating the variable infirm power such as wind and solar for attracting the interest of investors as well as wind/solar farm developers in the NE region.

However, MNRE as well as Government of India through multiple schemes allocates sufficient subsidies specially for NE region for offgrid deployment of renewable energy capacities using roof top standalone small hydro/wind/solar energy systems coordinating through the respective state nodal agencies, with rural electrification, power for all and green home concepts. ■

By S.Gomathinayagam,
Executive Director
Centre for Wind Energy Technology

Flying High *on* Wind Power

In 2012, wind energy grew by nearly 20 per cent in Canada, driving over $2 billion in investments and creating 10,500 person-years of employment. The industry in Canada installed 936 MW in 2012, bringing the total installed capacity to 6,200 MW by end of the year.

Wind energy projects were built and commissioned in British Columbia, Alberta, Ontario, Manitoba, Northwest Territories, Quebec and Nova Scotia. Ontario is the provincial leader with over 2,000 MW of installed wind energy capacity, while Quebec wind farms made up about 46 per cent of total installations in Canada in 2012.

There were many firsts for wind energy in Canada in 2012. The 9.2 MW Diavik Wind Farm has not only put the Northwest Territories on Canada's wind map, it has also opened the door to a potential new market in a growing mining sector looking to tap into the economic and environmental advantages wind energy brings. The 4 MW M'Chigeeng Mother Earth Renewable Energy Project in Ontario is the first wind farm 100 per cent owned by a First Nations community in Canada. These milestones highlight the diversity of the wind energy industry in Canada and its ability to deliver real economic and environmental benefits at a local level.

The progress Canada's wind energy sector made in 2012 provides a strong foundation on which to build. As the provinces begin to lay out plans for what their future electricity supply mix will look like, they will want low-cost generation with strong economic development potential and minimal environmental impacts. There is no doubt that, in this context, wind energy is a strong competitor.

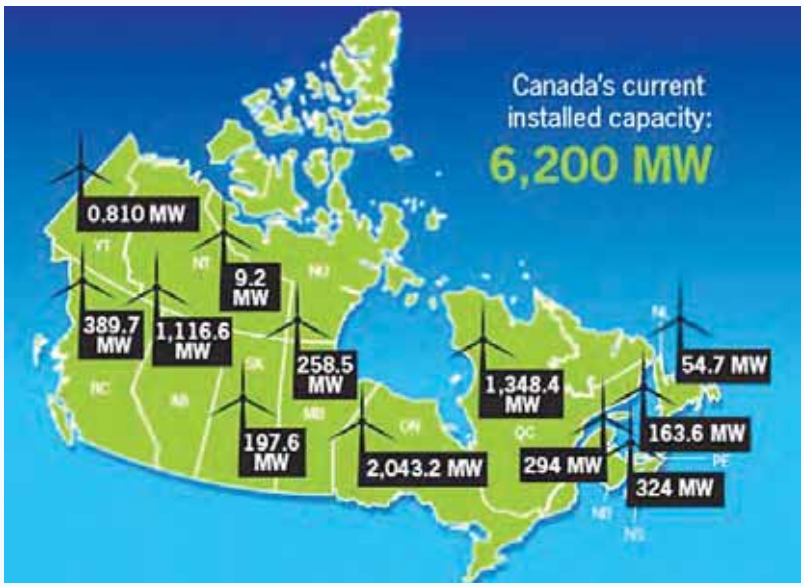
Emerging Trends

The Ontario Government's Long Term Energy Plan (LTEP) envisions that by 2018 there will be over 7,000 MW of wind energy in the province. In 2012, the government made a commitment to procure all the energy required to meet that aggressive target by 2015 and to examine in 2013 the potential for additional renewable energy procurements. A new price of 11.5 cents per kWh for wind energy was also established as part of Ontario's Feed-in Tariff program.

The Quebec government announced a fourth call for tenders for the commissioning of a new 700 MW wind energy block. In issuing this new call for tenders, the province reaffirmed its commitment to wind energy by seeking to attain its 4,000 MW objective set in its 2006-2015 energy strategy. However, it is still unclear if the call for tenders will go ahead and when, Quebec's recently elected Parti Québécois government is expected to begin consultations on a new post-2015 energy strategy this spring.

Nova Scotia has moved to enshrine its goal of 40 per cent renewable energy by 2020 in regulation and awarded 100 MW of wind energy contracts to help meet its interim target of 25 per cent by 2015. The province has also implemented feed-in tariffs for small and community wind projects.

In British Columbia, wind energy can help power a burgeoning liquefied natural gas (LNG) sector without the price and environmental risks that come with an increased reliance on fossil fuels. There are at least five LNG ports proposed that will require enormous amounts of electricity to compress and cool the gas for shipment. The province is wrestling with the question of where that electricity will come from. The answer to this will have a big impact on the market for wind energy in the province. BC Hydro is expected to



deliver its 20-year integrated resource plan in August 2013.

CanWEA is also in the process of developing a strategic WindVision for Alberta to take advantage of a "once-in-a-decade opportunity" to lay a long-term foundation for wind energy development in the province. The Alberta Electric System Operator's (AESO) latest long-term forecast predicts electricity demand will increase an average of 3.2 per cent a year for the next 20 years and wind energy can play an important role in filling that gap. The provincial government is planning to launch consultations in 2013 on an alternative and renewable energy policy framework, and the Alberta WindVision will form the industry's input into the process.

Outlook for 2013 and Beyond

In a world where there is tremendous competition for wind energy investment, clear long-term policy objectives and stable policy frameworks are critical to making Canada a competitive destination for such investment. The national WindVision 2025, along with the regional WindVision targets proposed for Quebec, British Columbia and soon Alberta, are part of the industry's attempt to kick start a discussion on what Canada's long-term wind energy future could look like.

2013 will be another record year for new wind energy development in Canada with the largest portion of new development taking place in Quebec and Ontario. New contracts were also awarded in 2012 for projects in Saskatchewan, Nova Scotia and Prince Edward Island. With various projects now contracted to be built across Canada, the country will see on average 1,500 MW of new wind energy installations commissioned annually for the next few years.

Canada is expected to reach 12,000 MW of total installed capacity by 2016 and remains on track to meet CanWEA's WindVision target of supplying 20 per cent of Canada's electricity from wind energy by 2025.

Policy Reforms

One area where policy clarity is still required is in Canada's approach to climate change. Securing a national carbon pricing framework in Canada that recognizes wind energy's environmental attributes in market prices is critical to future wind energy development – particularly at a time when low-priced natural gas is factoring heavily into discussions about future electricity supply. It will be up to the industry to make the case that wind is an economically efficient and sensible investment from an electricity pricing perspective, both today and in the long term.

Further, as noted above, many jurisdictions will be taking decisions on the future shape of the electricity mix in Canada over the next 18-24 months. What is uncertain at this time, however, is what role wind energy will ultimately play in these new long-term plans for electricity development that will soon be discussed and debated across Canada. The coming months will be crucial to assuring the sustainable growth of the country's wind energy industry beyond 2015.

Ontario has seen wind energy linked to issues around electricity pricing and local decision-making and this became a significant political issue in 2012. The "politicization" of wind energy is creating some uncertainty for investors and threatens the significant progress that has been made in making Ontario a North American leader in the development of renewable energy. The industry is working with stakeholders to promote responsible, stable and sustainable wind energy development in the province.

Continued political support and policy stability is crucial to ensure wind energy continues to deliver clean, safe and affordable power in all provinces.

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Courtesy: Canadian Wind Energy Association (CanWEA)

JSW Steel Eyes Canadian Mines

The company is looking at acquiring iron ore and coal mines in both India and abroad as it looks to increase self-sufficiency in feeding its steel plants

JWS Steel Ltd is looking at acquiring coal mines in Africa, US and Canada, according to company sources. The company is scouting for acquisition of coking coal in all of the countries mentioned above according to Seshagiri Rao, Managing Director

The company is looking at acquiring iron ore and coal mines in both India and abroad as it looks to increase self-sufficiency in feeding its steel plants.

As expansion takes place aggressively, there is the need to own mines to bring down costs, according to Rao.

He also said that the idea behind acquiring mines overseas was that there lay huge opportunities as the commodity cycle was on the reverse curve, according to the Chairman & Managing Director Sajjan Jindal.

During FY13, the company operation in Chile iron ore mine continued to be profitable, while the production in coal mines in the US remained subdued due to delay in obtaining permits.

In the domestic market, the company plans to bid for iron ore mines in Karnataka after Supreme Court lifted the ban. Having its own raw material and owning its captive mines. JSW is aggressively bidding for 18 mines in the C category in Karnataka, according to Jindal. Out of 6 MT captive mines auctioned, the company is aiming at a lion's share, he said. ■

Tata Steel to Supply Canadian Ore for European Operations

Tata Steel is expected to begin production from one of its iron ore projects in Canada by the third quarter of this year, which will help boost raw material supplies to its European operations.

The production from Direct Shipping Ore (DSO) Project, in which Tata Steel holds 80% stake, is to commence during the October-December quarter. A target of 1 million tonnes (MT) of iron ore has been kept for the current fiscal.

The production is to increase to over 3 MT in 2014-15, according Tata Steel officials.

Trial production that was carried in 2012 proved successful with the initial mining and dry processing of 63% iron grade ore. Plans for the scale up from 1 MT of iron ore in FY'14, to over 3 MT in FY15, would be carried out as the company had obtained various permits, approvals and environmental clearances.

The DSO Project having an investment of about 300 million is run by Tata Steel Minerals Canada Ltd and contains 64.1 MT of proven and probable reserves having an average grade of 58.8% iron. It also has about 60 MT indicated, inferred and historical resources of various grades of iron.

New Millennium Iron Corporation which has a 20% partnership in DSO Project, having a processing complex and ancillary facilities which are expected to be completed during the October-December quarter of 2013 after which the first production would take place.

Iron ore from the project will be shipped to Tata Steel's European operations as pellets and sinter fines. Tata Steel had already made a commitment to take 100% of the DSO project's iron ore products for the life of the mining operations.

Besides the DSO project, Tata Steel also has 26.3% stake in Canadian firm New Millennium Iron Corporation and 51% stake in Howse iron ore deposit of Labrador Iron Mines. ■

Niko Resources Partners in Major Find

Canada's Niko Resources Ltd. along with Reliance and BP Plc have discovered gas and related liquids in a deposit that lies under the biggest producing areas in the KG-D6 block in the Bay of Bengal, east coast of India.

Niko and its partners plan to spend more than US$5-billion in the next three to five years to develop gas discoveries in the block. Gas production from KG-D6 declined 39 percent to 336 billion cubic feet in the 12 months ended March 31 from a year earlier. The drop was spurred by reservoir complexity and a natural decline in output.

BP, Europe's second-biggest oil company, bought stakes in KG-D6 and 20 other blocks for US$7.2-billion in August 2010 as

Ambani sought the London-based company's technology to drill and produce gas from deepwater areas. Niko owns a 10% stake in the KG-D6 block. ■

Oilfield Contracts to be Extended

The Indian government is in the process of placing a comprehensive system to extend oilfield contracts with private and public companies in order to help field operators like Cairn India know in advance if lease for the oilfield they operate will be extended for another term or not.

Currently, oilfields are leased to companies for 15-25 years, but before the lease expires the company needs to know if it will retain the field so that it can decide whether or not it should invest thousands of crores of rupees to produce oil and gas.

To facilitate this, the government has constituted an inter-departmental committee to extend petroleum leases in producing blocks such as BG-operated Panna-Mukta and Tapti oilfields, JTI's Dholka oilfield and Cairn India's Rajasthan block. The committee is chaired by oil ministry's additional secretary & financial adviser (AS&FA) SC Khuntia. Members of the committee include officials from ministries of oil, finance and law and the Planning Commission. The committee will also decide terms and conditions for such extensions, according to official sources..

The scope of this committee can be extended to include several other exploration-related issues that may include recent proposal of Directorate General of Hydrocarbons (DGH) disallowing eight discoveries in the D6 block because of some timeline issues, according to official sources.

It may be recalled that last year, the government granted 20.5 sq km additional area in the prolific KG basin to Gujarat State Petroleum Corp, as the company's fields extend beyond its block located near gas discoveries of Reliance Industries and ONGC. ■

H-Energy to build LNG terminal

H-Energy an Indian based company has signed an option agreement with Nova Scotia, a Canadian province to construct a natural gas liquefaction facility and export terminal in the province. The company's Director Darshan Hiranandani said that the option on the Strait of Canso would give the privately-owned company exclusive rights to buy the site if feasibility studies prove satisfactory.

Hiranandani said it would take two or three years to get to the point of starting construction on the site.

He was speaking at a forum organized by the Canada-India Business Council in Calgary, aimed at encouraging Indian investment in Canada's oil and gas industry.

Canada is the world's third largest gas producer and sixth largest oil producer.

Energy demand is on the rise in India's nearly $2 trillion economy, with stagnant domestic output encouraging companies to ramp up efforts to import oil and gas.

H-Energy, which is part of the Hiranandani Group, one of India's largest privately-held property developers, is also building an LNG import facility on the west coast of India. ■

India to lift 20 million tonnes LNG

India has emerged fifth largest importer of LNG accounting for 5.5 per cent of the total trade said India's Oil Minister M Veerappa Moily. It requires as much as 20 million tonnes a year but at a price of over $10 which is a challenge.

With LNG demand expected to grow at 5-6 per cent per year till 2020 and 2-3 per cent thereafter, India along with other Asian counterparts is driving this growth, he said. Although there are capacities created within the country and huge number of supply deals made, LNG re-gasification capacity is expected to be more than 50 million tonnes per annum by 2016-17 with a supply of 198 million standard cubic meters per day, according to the Minister.

The nation currently has three operational LNG import facilities - 10 million tonne terminal at Dahej and 3.6 million tonne plant at Hazira in Gujarat and 5 million tonne terminal at Dabhol in Maharashtra. A 5 million tonne capacity terminal is to be commissioned in Kochi in Kerala this year. LNG terminals are being planned on the east coast as well.

Having secured supply deal of around 14 million tonnes per annum (of LNG) and around 20 million tonnes deals are in the pipeline, however the major challenge for India is the landed cost which remains high in the lower range of $ 10-12 per million British thermal unit. Making this LNG a cheaper comparable fuel option is a great task, said the Minister.

Moily said pricing of LNG (natural gas super-cooled to turn it into liquid for ease of transportation in ships) is fast turning an issue. Importers now desire to move away from oil-linked gas prices to henry hub gas pricing on account of high price band in which oil is hovering around, he said.

Stating that the country depends on imports to meet 73 per cent of

its oil needs, the Minister said he wants to reduce imports by 50 per cent by 2020, 75 per cent by 2025 and eventually achieve self-sufficiency and energy independence by 2030.

Part of this could be achieved by sourcing newer sites for oil and gas. Despite very low per capita consumption of energy, which is about one-third of global average, India is the fourth-largest consumer of energy in the world and expected to become third largest consumer of energy by 2030.

India's energy consumption will grow at around 7.2 per cent during 2007-2030 in comparison to world average of 1.5 per cent, he said.

As per IEA projections, India will be needing additional 271 million tonnes of oil and 97 million tonnes of oil equivalent gas per annum by 2030. ■

Indo-Canadian Trade to touch $15 bn

Considering the current bilateral trade of US$ 5.8 billion India has with Canada, Canadian Consul General Richard Bale is optimistic that the trade could grow to USD 15 billion by 2015. This is possible considering the 700 Canadian companies that are prevalent in India. He said this at a conference on Renewable Energy

With the successful conclusion of the eighth round of negotiations of the Canada-India Trade Agreement which would boost Indian and Canadian economics resulting in a significant increase in bilateral trade.

A combination of Canadian technology and Indian talent expertise, would result Canadian and Indian manufacturers developing and delivering advanced and competitive products and services for India, Canada and third country markets, according to Bale.

Canada has committed USD 13.8 million over five years to establish Canada-India Research Centre of Excellence. The government is expected to fund greater collaboration between Indian and Canadian researchers which is to become operational by the year-end, he added.

Canadian investments in science and technology currently amount to USD 12 billion per year and have created one of the strongest science and technology bases in the world, he said.

Ashvini Kumar, Director Solar Energy Cooperation of India, in his key note address said that renewable energy is an evolving sector and has grown from 2 percent in 2003 to 12 percent in 2013 in total power generation.

With policy framework in place, this sector is set for a significant boost with a target of 20 percent for renewable energy in the total electricity mix by 2020.

The renewable energy industry is having a turnover of Rs 40,000 crore as in 2012 with an average growth rate of 12 percent, Kumar said.

Indra Mohan, president India Tech Foundation, said that the Indian government has drawn up an ambitious capacity addition plan of adding 88,000 MW of power at a massive investment of Rs 13,72,580 crore during the 12th plan.

However, in the view of the threat of high levels of CO2 in the air, 30,000 MW capacity addition is expected to come from renewable energy sector, which is quite an ambitious target. ■

Filling the Vocational Void

With a population of more than 1.2 younger than 25 years of age, India faces a major challenge of placing them in the mainstream of a productive work force. The Indian government has projected that 500 million young people have to be trained by 2022 or else this population would be the unemployed of the future. Taking cognizance of this fact the government has made skills training a major policy issue.

Several small institution have sprung up imparting knowledge on various fields, one such is Gras Academy, headquartered in Uttar Pradesh is a private institution with 58 skills training centers across India, offering 25 courses. It is one amongst several academies providing hands-on job training in India, bridging the gap between government vocational centers and degree course at a university. Such schools offer short, practical, non-degree programs which have been springing up since the early 2000s. Gras Academy has developed its own textbooks, manuals, training system and on-campus job placement services.

Since 2006, Gras has trained about 28,000 students in 10 Indian states. More than 60 percent take technical courses on computer networking, accounting, and computer and cell phone repair. Service industry training is popular for those who want work in shops, restaurants and hotels, as are courses for future plumbers, electricians and beauticians. The trend that has emerged at Gras and another similar school named Gram Tarang that runs training centers is that more than half of its students are middle school dropouts. Courses that are being offered at such schools are basic life skills, such as importance of punctuality, speaking professionally with supervisors and keeping things clean and neat.

Government vocational institutes have been in existence since the late 1960s and continue to exist even today. The quality is skill set being imparted is not considered to be up to the mark and the curriculums and training are outdated. The World Bank estimates that India's training institutes serve only about 7 percent of students who need vocational skills.

There are several cases where first year students in a government college paying a measly amount of 5000 rupees or even less towards tution fees, are willing to pay a whooping 22,000 rupees for a six-month course at Gras. They do this because they know that they about 75% of the times with Gras's graduate courses the can find jobs immediately. These students want practical knowledge from school and they find it easier to comprehend than theory. Whatever being taught is practical and linked to industry. Teachers undergo 40 hours of training and must pass a test. There is also an incentive program: They get financial rewards if 70 percent of their students land jobs, plus extra recognition if 85 percent do.

Gram Tarang based in Orissa, whose main industries are in mining, power and steel.This school caters to training programs for fitters, machinists, mechanics, electricians and is a placement for graduates within Orissa and in the southern cities of Chennai and Bangalore. Since 2006, it has

trained 28,000 rural young people. According to its Managing Director Abhinav Madan, the vocational training helped many against unemployment and from becoming target recruits for Maoist rebels.

Gram Tarang is supported by the National Skills Development Corporation (N.S.D.C.), which the Indian government started in 2009 to fund training centers and to act as a go-between with industry. It has a target of training 150 million people by 2022.

Gram Tarang has a placement team that scouts for manufacturing jobs in Pune, Chennai, Bangalore and near Delhi. It also works with companies like Tata, Honda and Renault Nissan.

There is a high demand from industry for semiskilled and skilled workers said Madan.

Enrollment is growing at Gras, where 15,000 students completed courses last year, compared with 1,200 its first year. It receives some funding from the N.S.D.C. and investors, but makes most of its income from student fees.

Debasish Mitter, Education Portfolio Director of the Michael & Susan Dell Foundation that invests in Gras said that programs helped unemployed and under skilled to enter into trades and vocations that kept them away from poverty.

Also, Zahid, Founder of Gras said that as the youth strive to get bigger and higher, the government needs to meet their aspiration or else it would cause a mismatch resulting in a huge problem.

The N.S.D.C. works with 71 skills institutes across India. At the end of January, its partners had trained 363,789 people in 27 states and territories. More than 70 percent of graduates found jobs.

IL&FS Skills Development Corp., another N.S.D.C. partner, works in rural areas in states like Orissa and Tamil Nadu. It has trained more than 225,000 people since 2007 and has ambitious plans to train four million youths over the next decade.

Chief Executive Dilip Chenoy of N.S.D.C., mentions that in an organization's initial stages, many centers offering free training as part of government programs were impatient in trying to fill classrooms, as there was a lot of attrition.

According to Paul Comyn, a Delhi-based skills training specialist with the International Labor Organization also based in Delhi sums it up by saying that there has to be a system determining quality standards in place that supports institutions to meet their needs.

There are also nonprofit skills programs with a philanthropic approach, like those run by Dr. Reddy's Foundation, which has trained 263,000 people since 1999.

From the recruitment at companies, there is a dearth of employable workers at Indian companies. These companies complain of lack of skills required by employers leading ot trouble in hiring staff for their companies. Industries in the telecommunication and retail are unable to get to the next level of boom as they are unable source the skilled workers for their next level of rapid expansion. Larger companies have their own in-house training centers and are able to meet their requirement.

Comparing with China, India has only 11,000 vocational training schools, while China has 500,000.

For decades, oversight of the importance of vocational centers has been devalued as it was handled by various ministries and state governments. ■

India's $1 trillion Infrastructure Pie!

According to recent comments by the planning commission the $1 trillion 12th Plan infrastructure investment target is still feasible, inspite economic uncertainties. The Prime Minister's Office has been considering various proposals to spur up private sector participation to meet this target. Notable progress has been made in each of these sub sectors:

Ports: By the end of March quarter, the ports sector had fared well. It has been awarded 32 projects in 2012-13 as against a target of 42. Prior to this, the ports sector was able to acquire only three projects.

Power: Power sector capacity creation has been impressive. Although the target set was 17,000 megawatt (MW), the sector has been able to achieve more than 20,000 MW, of which 10,000 MW was in the last quarter itself. There was tremendous progress seen in setting up transmission lines.

However there were major hiccups due to non-availability of fuel. Last year, capacity utilization was 69% against a usual 78% because a large number of power plants did not have coal. At a given point of time around 7,000 MW of capacity was lying idle.

Airports: On airports, the government has been able to keep to plan. It is expected that the new terminal at the Mumbai airport would be operational by the end of December 2013 and Pakyong in Sikkim is likely to be completed next year.

The primary problem faced was a decline in the passenger growth, as a result of the overall economic slowdown.

Railways: Although the sector crossed a billion tonnes in freight, growth was not much due to constrained capacity. Iron ore movement was less because of problems at iron ore mines (bans on account of environmental concerns). Coal, food grains and other freight movement was also less. However, the passenger segment showed an upward trend in the railways.

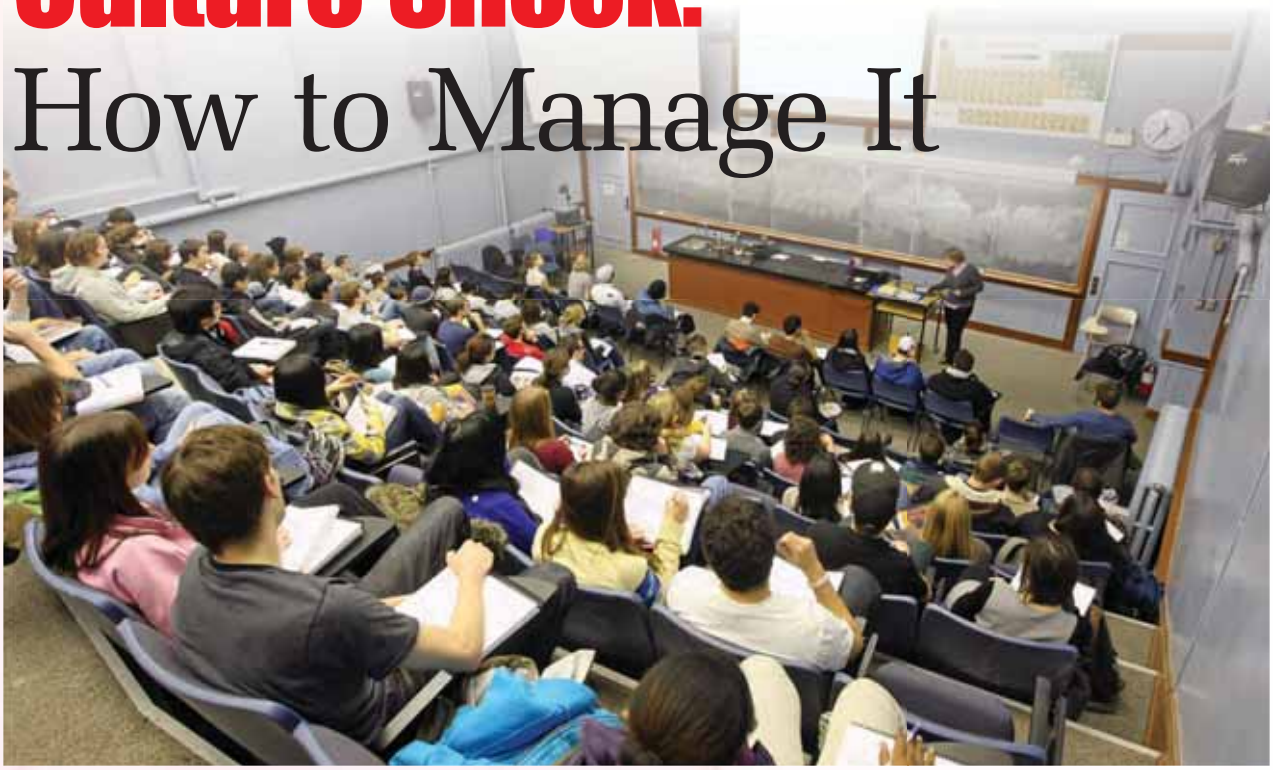
The (Dedicated) Freight Corridor is moving as per the required stream and it is expected to increase around 2016-17 on target.

Roads: Construction was considered good with approximately 3,000 km of roads constructed in 2012-13. Earlier, the highest used to be 2,300 km. As more roads have been constructed toll realization was picking up.

The following are some of the recommendations by the Planning Commission for the 12th plan:

- Shifting from PPP contracting mode to EPC, and restructuring premium payments for developers.
- An independent road regulator to monitor project and service quality.
- Drafting a dispute resolution Bill for public contracts, a task assigned by the PMO. While in the process several rounds of consultations with lawyers, secretaries, ICADR (International Centre for Alternative Dispute Resolution), and others have been undertaken.
- A railway tariff regulatory authority is in the works. ■

Culture Shock: How to Manage It



Are you about to start your education in Canada?

Is your Son or Daughter set to put that first step towards becoming a global citizen?

Are you concerned about the new world that they are about to enter?

Studying abroad is an effective way to absorb a new culture, gather knowledge & develop personally. The experience of moving out of your social context and integrating in another society brings with it rich rewards but also requires preparation. In the scientific world this is called shifting levels of the W-Curve, as per the Gullahorn and Gullahorn Hypothesis.

However the term that we are more familiar with and which is used in many contexts in "Culture Shock". Culture shock can be described as the feelings one experiences after leaving their familiar, home culture to live in another cultural or social environment. The departing students and parents alike, have several anxieties; about the life, climate, people, adaptability, food, town and more.

Culture shock has three to five phases, depending on which source you read. It is also dependent on other factors such as - how big the cultural difference is between your home and your new location, and how long one is away from home, have you been away from home before etc.

Phase 1 – Is the exciting phase. Where everything is fun, in the beginning you are enthusiastic about all the changes. You embrace the differences that you notice and enjoy the whole experience.

Phase 2 – Is the time of disorientation, of homesickness. During this phase you will begin to notice the differences and some of these differences will not seem good to you. The fact that your holidays are not celebrated, you have had enough of the food and just want some of mom's food so badly, you're missing your gang from school/college, it's too cold.

Phase 3 – Is the time to settle. This is the most important phase as this is the time that you decide whether you will succumb to homesickness or you will make the most of your time in Canada. You may not have the same level of euphoria and enthusiasm as Phase 1 but you feel confident that you can navigate the new

society and education system successfully.

The three phases can take weeks, months or years depending on many factors. And most Canadian Universities will have separate services for their international students including special orientations. There are many things you can do to ensure that your phase of homesickness is the shortest and here are a few things to keep in mind:

- Do your research. Learn as much as you can about your new home. The World Wide Web is a wonderful resource full of material that students who have gone in past years have posted. Go through their experiences to help you be prepared.
- Be open-minded and willing to ask for help. The beauty of Canadian culture is that people are very friendly and warm. If you ask they will always respond to your question.

- Be prepared for differences in accent and language. Even though most Indians are familiar with English but there are many words which are used in different context in India. Grammar and usage varies from country to country and be prepared for the differences in your English from others.
- There are many activities and clubs on campus. Join in and get involved with activities which are of your interest. This will keep you busy and you will get to meet people who are interested in the same things that you are.
- Dress for the weather. Winter in Canada is cold, but if you dress for the cold weather you will be fine. Enjoy all the games and activities that are planned around snow – learn to make your first snowman, make a snow angel, and take part in a snowball fight.
- Carry a few touches of home with you. With Skype and other internet based services it is easy to be in touch with family, but carry a few photographs, posters, knick knacks which will help you settle into your room in the hostel.
- Keep your sense of humour and make it a point to smile. Use this opportunity to meet and make friends with Canadians and all the other international students from different countries. ■

By Maria Mathai, Director, M.M Advisory Services