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Good morning

My presentation will relate India rising to energy dependency & what's the role of ONGC specifically meeting the challenge of energy dependency. My presentation will have these parts: Energy, I will try to give you a global view of energy scenario, come down to country specific. About My company and its subsidiary ONGC videsh limited, MRPL, what are the initiatives, that are taken by our company to ensure the energy dependency or to reduce energy dependency and what are the strategic pursuit my company taken in this regard.

I will first go to energy scenario.

Before proceeding let me quote of formal secretary general of United Nations Dr. Kofi Annan. He said

"Energy is essential for development yet 2 billion go without, condemning them to remain in the poverty trap. We need to make clear energy supplies accessible and affordable. We need to increase the use of renewable energy sources and improve energy sources and improve energy efficiency and we must flinch them addressing the issue of over consumption - the fact that people in the developed countries use far more energy per capita than those in the developing world"

The very small example of the last part of the statement is not judicious because, way back in 1997 when I was in united states, we ere a group of about forty fifty people attending one the programs there, on accountancy and management in one of the Universities, one day the coordinator wanted us to take around some of the places. He arranged for a bus, comprising of two couches to address to each other, driven by a lady driver and the bus came almost forty five minutes before the scheduled time. So we were strolling outside the hotel, the bus driver talk to some of the organisers and she was told that there was still 40 to 45 minutes time. He got down the bus by parked down the sides without shutting of the engine. That must have been at least 10 - 15 Hp engine, May even more than that. The engine continued running till everybody boarded the bus and till we started. We here in India, if we see red light in the signal we tend to stop our engine because burning the fuel for one minute, we consider waste of energy. but on the other side developed countries who really have enough of energy and who feel that they can use the energy as they like, without thinking of its optimal use, without thinking that others may need this energy, they continue to use this the way they want. That is a very brief example but that shows the kind of mind set people in the develop countries ho r using energy have. They are thinking that they are energy effluent and we are not that effluent.

Coming to the demand of energy, globally primary energy demand is 9Gtoe of oil and oil equivalent in the year 2000. It is likely to get doubled by 2030 and may triple in 2050. We can just imagine what is going to be the demand, if we really want to remain in the present state and also to meet some of the challenges. Now why this demand is growing because obviously increase in population all around. Where there are in some countries growth in population is negligible and somewhere it is negative, even in positive less than 1. But there are countries like china, India, developed and under developed countries; the growth in population is much more than that. Therefore in order to meet the demand of the population, we need more energy and in addition we also need for improved lifestyle. When we say improved lifestyle, we mean very good housing, transport, and infrastructure everywhere. Therefore that adds to the requirement of energy.

If you look at the geopolitical situation, age of the SAIL, ownership of the wind was not an issue. It was freely available, whosoever wants it can take wind, whatever the quantum of wind they want, they can take. The steam is too short did not last very long. The zone layers are beyond the border. There is no substitute for oil in transportation yet, as you saw. By times to come we can see some substitutes for transport sector. But the control of oil and gas is the fundamental. Who have the control on oil and gas? Everybody wants to have control over this type of energy that's why we have seen, few wars been fought among the countries.

In transportation as per UN agenda 21, it is the major driving force for the growing demand of energy; it's the larger end user of energy in developed countries. I gave the example of US, so as the case in developed countries of Europe, the fastest growing one developing countries, take the example of our own countries so as in any other country, the way we are heading the vehicles on the road, every manufacturer of vehicle, be it a two wheeler or three wheeler or a four wheeler, they want to grow their sales. Growth of sales of vehicles ultimately going to come on road. It will have the headed pressure on the road. It will need more fuel to burn for these vehicles. One example: we see so many aeroplanes flying now; there was a time, Indian airlines only there meeting the domestic needs of the air travel. Nowadays 15 - 20 companies are providing service in this particular sector. If so many air craft headed to this country, they will prolong on some energy, again it should be oil. Demand for oil growing in this particular sector alone. So where the substitutes for jet fuel, so far jet fuel are is run only on oil. At least I have not come across any substitute being thought of. The way aircraft industries in our country or anywhere else will increase the demand for oil further.

It costs more to produce more from the declining fields. Those who are from oil fields, oil is taken out from beneath the earth, since it is so, it may be alright till it may flows by itself but more deeper you go more costlier it will be. Even at the \$40 per barrel, even now its gone up till 95 – 97\$ per barrel there was a time where crude oil sold at a price of \$9 – 10 per barrel. In the year 1997-98 I distinctly remembered crude oil

price came down to \$9 – 10 per barrel but now it's almost travelled ten times up in the ladder. Two third of the world's oil and gas reserves are presently owned by countries without substitutable resources. That means they have to essentially depend either on gas or oil.

Just taking all of you back few thousand years back,

My father rode a camel,

I ride a car,

My son flies in a private jet,

His son will ride a camel.

That's not my father, just to show how the past, present and future will be. This shows that the era of olden age will come back.

In G8 summit held in the year 1998, Dr. Colin Campbell and Dr. Jean Laherrere say that the important issue is not when oil (& gas) runs out but when the 'peak' is reached, because the peak signals the beginning of the age beyond petroleum.

Peak means when the oil and gas production stops. Once it starts coming down, it will end up fast. And no other substitutes for petroleum will be there. So the petroleum will come to an end. G8 summit agrees with the statement. Everybody is started talking and thinking about saving oil. That's way we started to plan for oil conservation. We do celebrate oil conservation fortnight, oil conservation week and inculcate the habit of saving energy in any form whether it is oil energy, electrical energy or any other energy and we try to bring the oil conservation's importance in the mind of concerned people. We also give some incentives for who conserve energy and at the same time we try to invest in the alternatives.

Unless we not going to think of oil conservation today then we are going to have a terrible time ahead. The oil will be pumped at it maximum efficiency in the future then even minor disruptions in supply will give us a big shock. Recession and depression era will hang swords at that time. Therefore we need to have sustainable future of energy. How is that possible? Try to recover energy from solid waste and try to develop energy from renewable sources. Our country trying to find renewable sources like wind energy by setting up many wind energy plants and also trying through solar cell and also from tidal energy. So we have to travel far away in that direction to sustain in the future. Just to give you the energy scenario, energy from all fossil sources, includes coal, accounts for 88% of what makes our world go. That means most the energy sourced from the fossils and that not going to be very long. If you look at the world scenario and Indian scenario. Oil accounts for World is 3839.5 and in case of India it's 120.3. In Indian scenario still coal is the dominant energy

which accounts for more than 30%. In energy basket in future gas consumption will increase because gas is considered as the cleanest of all the energy.

The primary energy consumption is accounts for five countries and the top is USA and next I china that is obviously because of the population, third and fourth is Russia and Japan, then following them India with 4% of over all energy consumption. India accounts for 16% of the world population but we have only 0.5% gas and oil reserves. Whatever we may do either by the effort of ONGC or government, since we have very little reserves of energy, we need to find substitute for these energies. The per capita consumption in India only 0.33Toe against the global average of 1.67 Toe. This demand is to be going to rise further from 423 MToe (2006-07) to 1,633MToe by 2031-32(GDP rate: 8%). World wide oil consumption (2006) is 3,890 Million Tonnes. In which 49% is 6 countries. In that India is the largest consumer of oil: 3% of total. Oil consumption is increased at CAGR of 4.4% (1996 – 2006) against the world CAGR(compounded annual growth rate) of 1.7%. since we are a developed country we need lots and lots of energy unlike developed countries. Once we produced to meet our demand of energy and we achieved it. But now there is a long gap between the demand and supply. If this gap increased at this same rate, the time is not far away to depend most of our needs on import.

Coming to our company (ONGC) specifics:

Our Ex-president – **Dr.APJ Abdul kalam**, when he visited our head quarters in dehradun, gave us a vision and set us a mission.

"I would suggest ONGC to give world leadership in management of energy source, exploration of energy sources, diversification of energy sources, technology in underground coal gasification and above all findings new ways o tapping energy where ever it is, to meet the ever growing demand o the country.

.....My best wishes to the ONGC in their mission of making the nation energy independence before 2030."

ONGC is an integrated oil and GAS corporation with interests in E & P(Exploration and production), refining, LNG, Power, Petrochemicals and new sources of energy. We are emerging as reliable energy solution provider for the country.

Some of the recognition we achieved are: we are ranked 239th in forbes global 200 list of mar'2007; topper of India. We are listed 21st among top 50 publicly traded global oil and gas companies. In fortune global 500 we are ranked at 402nd. The financial times global 500 put us at 158th among the world's largest companies. There are 23 sedimentary basins in the country for hydro carbon, in that 7 of them were discovered. In that 6 of them were discovered by ONGC. Seventh one was discovered by assam railways and trading company way back in 1890's.

Interms of financial highlights, we are highest profit making company. In terms of profit last year we got Rs. 15,643 crore and a net worth of 61,410 crore. We

contributed to the Exchequer that is the central government and state government in various ways, Rs. 31,118 Crore. Our EPS: Rs. 101.20 up 11% and we pay a dividend of 465%(annualized to pre- bonus)to the share holder. We have 32 projects spread all over the world by 17 countries.

We have yet another subsidiary called MRPL. its acquired from birla's. that give us the MINI RATNA award: conferred to 15th june'07. We got many more awards like Jawaharlal centenary gold medal for energy management. OISD safety award and best exporter award. They have a capacity utilization of more than 132%.

Well friends these all are some of the efforts our company is making to meet or to certain extent to meet the growing demand of oil and energy for the country. With this I finish my presentation and I leave the floor to all of you. Thank you for all of you for giving a patience hearing. Thank you.....