


Infrastructure Planning and Management Political Risk Infrastructure Part 2

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Dabhol Power Project, Maharashtra, India

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Enron Corporation

- Provides services in the natural gas industry
- Enron Development Corporation (EDC) focused on satisfying infrastructure and energy needs in emerging economies by developing power plants and providing electricity.
- Central government's power secretary S. Rajgopal in May 1992 visited Washington D.C. to encourage foreign participation in the power sector.
- Enron proposed to build, own and operate a power station that would provide 2,015 MW (megawatts) of power in Dabhol, in Maharashtra state.
- Enron Development Corporation (EDC) , Risk Mitigation Strategies
 - All projects were project-financed and had long-term contracts, with pricing agreed upon in advance.
 - creditworthiness of the power purchaser was evaluated carefully
 - Revenues were tied to the U.S. dollar,
 - Political risk was mitigated
 - project financing was provided by multilateral lending institutions

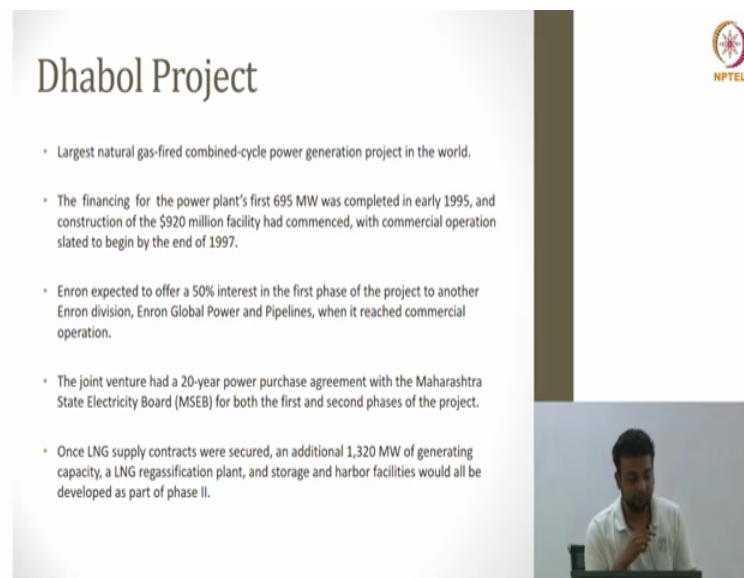


So good evening everyone I will be representing group 11 for the Dabhol power project, so this Dabhol power project was in Maharashtra, Dabhol is a place in Maharashtra and it required a power project so Enron Corporation provides services in natural gas industry, so Enron development cooperation is a part of Enron Corporation which takes projects in Asia for power sector focused on satisfying infrastructure and energy needs in emerging economics by developing power plants and providing electricity.

So central government power secretary S. Rajgopal in May 1992 visited Washington DC to encourage foreign participation where this Enron Corporation got an idea for building a power plant in India which was by our central government, channelized to a power plant in Maharashtra. So Enron proposed to build, own and operate power station that would provide 2015 megawatts of power in Dabhol, Maharashtra.

So how EDC previously does project was they actually all projects were project financed and had long-term contracts with pricing agreed upon in advance, the creditworthiness of the power purchaser was evaluated carefully, revenues were tied to US dollars so that the fluctuation in economy of the country in which they are working does not matter, political risks were mitigated and project financing was provided by multilateral lending institutions, so this is how the EDC actually used to do projects in many developing nations.

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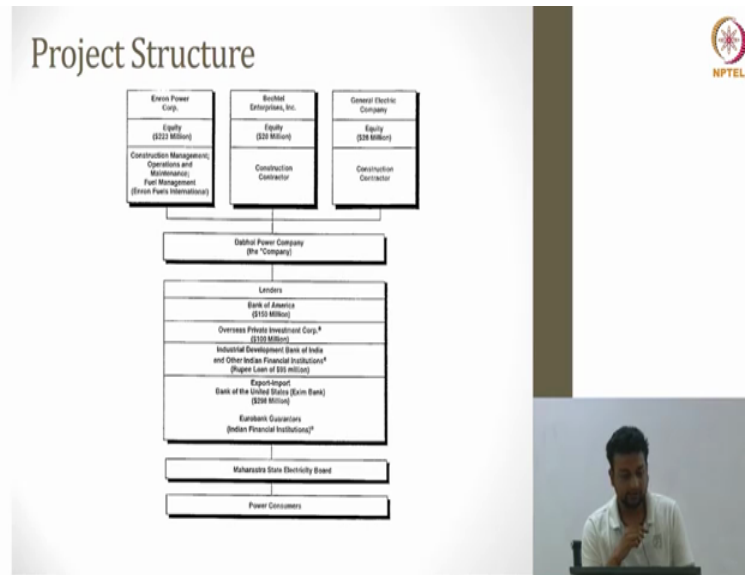
The slide is titled "Dhabol Project" and features the NPTEL logo in the top right corner. It contains five bullet points detailing the project's scale, financing, and operational details. In the bottom right corner, there is a small inset video frame showing a man in a white shirt speaking.

- Largest natural gas-fired combined-cycle power generation project in the world.
- The financing for the power plant's first 695 MW was completed in early 1995, and construction of the \$920 million facility had commenced, with commercial operation slated to begin by the end of 1997.
- Enron expected to offer a 50% interest in the first phase of the project to another Enron division, Enron Global Power and Pipelines, when it reached commercial operation.
- The joint venture had a 20-year power purchase agreement with the Maharashtra State Electricity Board (MSEB) for both the first and second phases of the project.
- Once LNG supply contracts were secured, an additional 1,320 MW of generating capacity, a LNG regassification plant, and storage and harbor facilities would all be developed as part of phase II.

So little about Dabhol project, it was a largest natural gas fired combined cycle power generation project in the world, the financing of the power plant first 695 megawatt was completed in year 1995 and construction of 920 million facility has commenced with commercial operation to begin by the 1997 this was mentioned in the case study, so Enron expected to offer 50 percent interest in first place of the project to another Enron division and on global power and pipelines when the project reached commercial operation.


There was a joint venture, had 20-year agreement for power purchase with the government of Maharashtra for both first and second phase of project and LNG actually, the Enron Corporation was not sure that India's coal and petroleum reserves will power this project where enough for powering the project so they have signed a contract with Qatari government for bringing this LNG supply.

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Now this is the project structure, Enron power corporation Bechtel and General electrical where the stakeholders in this like it was a joint venture in which Enron Power Corp has the major equity and the lenders were major Bank of America and other banks and the contract, the client was Maharashtra State Electricity Board and the power consumers were there.

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Problems by Central and SEBs

- Unable to meet the shortages in the power sector because of insolvency.
- Huge losses stemmed primarily from a pricing policy that granted subsidies to rural consumers.
- Agricultural sector
 - Uses 29% of total electricity
 - Contributed 4.7% of the total revenue
- Transmission and distribution losses averaging 22%
 - old equipment
 - few substations
 - poor-quality cables
 - widespread theft.




Now what were the problems with central and state electricity boards, they were unable to meet the shortages in power sector because of insolvency and huge losses stemmed primarily from a pricing policy that granted subsidies to rural consumers so for the data, for execution sector we have like twenty nine percent the agriculture sector used electricity and they contributed only 4.7 percent of the total revenue. The transmission and distribution losses were averaging around twenty two percent and the major reasons were old equipment, few substations, poor quality cables and widespread theft of power.

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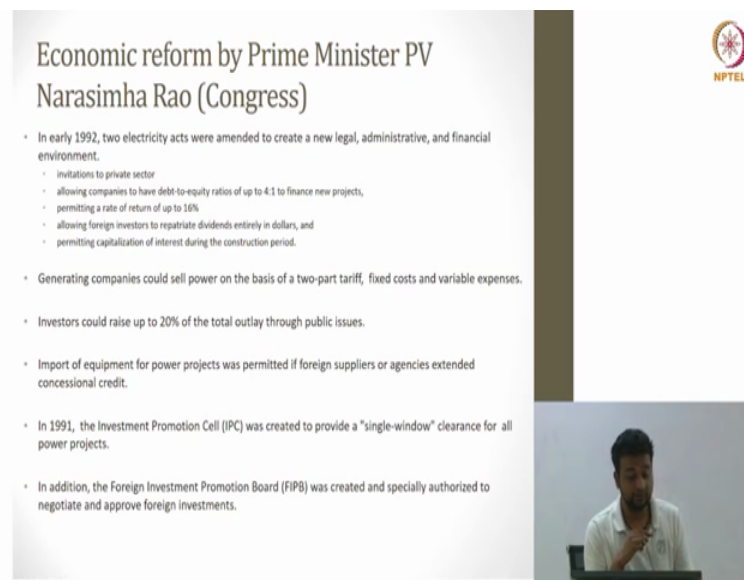
Need for Reforms

- Power generation and distribution were largely a state government responsibility.
- IMF had served notice that no more money would be forthcoming unless the Indian economy was thoroughly reformed.
- Narasimha Rao was elected as prime minister in 1991 from congress.
 - encourage private and foreign investment in all industrial sectors
 - Many requirements for industrial licenses were abolished



Now this all contributed to the need of reform, power generation and distribution were largely a state government responsibility and also IMF have served notice that no more money will be given for forthcoming projects until Indian economy was reformed thoroughly, so they have stopped all the funding, Narasimha Rao was elected as prime minister in 1991 from Congress and then he encouraged private and foreign investment in all industrial sectors and many requirements for industrial license were abolished.

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The slide is titled "Economic reform by Prime Minister PV Narasimha Rao (Congress)". It features the NPTEL logo in the top right corner. The main content is a bulleted list of reforms:

- In early 1992, two electricity acts were amended to create a new legal, administrative, and financial environment.
 - invitations to private sector
 - allowing companies to have debt-to-equity ratios of up to 4:1 to finance new projects,
 - permitting a rate of return of up to 16%
 - allowing foreign investors to repatriate dividends entirely in dollars, and
 - permitting capitalization of interest during the construction period.
- Generating companies could sell power on the basis of a two-part tariff, fixed costs and variable expenses.
- Investors could raise up to 20% of the total outlay through public issues.
- Import of equipment for power projects was permitted if foreign suppliers or agencies extended concessional credit.
- In 1991, the Investment Promotion Cell (IPC) was created to provide a "single-window" clearance for all power projects.
- In addition, the Foreign Investment Promotion Board (FIPB) was created and specially authorized to negotiate and approve foreign investments.

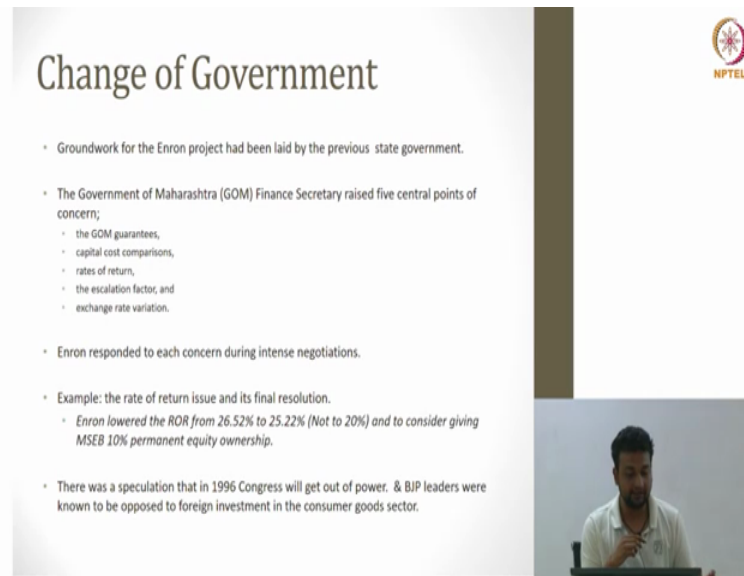
In the bottom right corner of the slide, there is a small video inset showing a man in a white shirt speaking at a podium.

So coming about what actually reforms here, economic reforms by Prime Minister Narasimha Rao who was like from Congress, in 1992 two electricity acts were amended to create a new legal administrative and financial environment, invitations to private sector were there allowing companies to have a depth equity ratios for of up to 4 is to 1 to finance new projects permitting a rate of return up to 16 percent that was quite high considering Indian infrastructure rate of return.

Allowing foreign investors to repatriate dividends entirely in dollars and permitting capitalization of interest during this construction period, so these reforms actually match with the risk mitigation strategies we have already seen by Enron, so they were interested in the project, generating companies could sell power on basis of two tariffs, one is the fixed cause and one is the variable expense, investor could raised raise up to 20 percent of total outlay through public issues, import of equipment for power projects were permitted if foreign suppliers or agencies extended concessional credit.

IPC cell was created to provide a single window for clearance of all the power projects and in addition the Foreign Investment Promotion Board was created and specialized, authorized to negotiate and approve foreign investment, so this reform actually brought a lot of private players interested in Indian projects.

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The slide is titled "Change of Government" and features the NPTEL logo in the top right corner. It contains the following text:

- Groundwork for the Enron project had been laid by the previous state government.
- The Government of Maharashtra (GOM) Finance Secretary raised five central points of concern;
 - the GOM guarantees,
 - capital cost comparisons,
 - rates of return,
 - the escalation factor, and
 - exchange rate variation.
- Enron responded to each concern during intense negotiations.
- Example: the rate of return issue and its final resolution.
 - *Enron lowered the ROR from 26.52% to 25.22% (Not to 20%) and to consider giving MSEB 10% permanent equity ownership.*
- There was a speculation that in 1996 Congress will get out of power. & BJP leaders were known to be opposed to foreign investment in the consumer goods sector.

An inset video in the bottom right corner shows a man in a white shirt speaking at a podium.

So now the change of government like groundwork of the Enron Project has already been done in the previous state government, the government of Maharashtra, Finance Security raised five points concerned about this project going on, the Government of Maharashtra guarantees capital cost comparisons, rate of returns the escalation factor and the exchange rate variation, so the Enron Corp responded to each concern during intense negotiation for example the rate of return issue was mentioned in the case study and its final resolution, when the government officials asked Enron Corp to reduce the rate of return to 20 percent, actually the rate of return was expected to 16 percent but they still gave 20 percent, Enron Corp was like no we will not do the project in such lower rate of return and it is not feasible for us and they were like okay to walk out.

But then with too much of negotiations Enron lowered the rate of return from 26.52 actually Enron Corp asked 26.52 to 25.22 and to consider giving MSEB 10 percent permanent equity ownership, so like this example all the other factors were like solved and the project was then commenced there was a speculation that in 1996 Congress will get out of power which

eventually happened and BJP leaders were known to oppose for foreign investment in consumer goods, thank you.

So thank you that was a good you know very detailed statement on the case right and how about we stopped the case at a very interesting point right where clearly and we know in hindsight that the next elections the BJP came to power and all of that now from Enron's perspective up until this point what were the risks that they identified and how well had they mitigated those risks?

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The slide is titled "Background of the Situation" and features the NPTEL logo in the top right corner. It contains a bulleted list of three points: "India is newly liberalizing", "Power has traditionally been state-owned", and "Performance of State and Central power authorities is very poor". A fourth point, "India seems all set for privatization in power", is circled in red. Handwritten red notes include "Demand → PPA", "Exchange rates → hoi", "Guarantees / Govt risk", "Pol risk", "Technical → Govt technical", "Power say backing", and "LNh". A small video inset in the bottom right shows a man in a blue shirt pointing at a screen.

What are the risks that Enron saw and how did they mitigate those risks the question is what were the risks that they saw and what do they do to mitigate it, so one of the risks clearly in this case is demand risk, what did Enron do to mitigate demand risk, so first of all they had a power purchase agreement right with the state of Maharashtra okay so that was one way in which they you know helped sort of somehow subvert the demand risk right because they said look there is a guaranteed off take, they had flexible fixed variable etcetera, what else they do, what do they do what exchange rate fluctuation.

So essentially who bore the exchange rate risks, the exchange rate risks were borne by India right essentially so exchange rate risks those were given to Government of India okay what else do they do in terms of looking at a risk and trying to do something about it okay so they had all of these guarantees okay what is the guarantee protect against, so if the MSEB could not pay,

Government of Maharashtra would step it okay so on the one hand it affects an economic risk okay, any other risks that the guarantee affects?

So who all are guaranteeing this project, Government of India right why Government of India, you already have government of Maharashtra who is going to guarantee in case MSEB defaults they are going to pay you why do you want Government of India in there, so because essentially there is a political risk as well right they might lose the election new party might come in and they might do what you call the you know exercise what we call the obsolescing bargain right which essentially says look in the beginning I have no money, I have no expertise, I call a private player in but once they actually build that facility, once they invest their money and build their facility they cannot take it away from them.

So if I kick them out citing some kind of sovereign responsibility then what is the records to the private player so that is called the obsolescing bargain, in the beginning it is a great bargain for me to have you come in right after a period of time it is no longer a great bargain I already have the asset with me I can kick you out right, so to protect against that there are guarantees at the central government level as well okay.

Technical risks, what have they done with technical risk so yeah so they have got so technical risks they have got GE and Bechtel, so they have got the who is who of construction so that you know construction risks are going to be minimized okay fantastic okay what else have they done okay so that's at the end of 20 years okay so there is a clause in the power purchase agreement on what happens at the end of 20 years but it is little bit more say throughout the duration of the project what else have they done?

All of these are good points okay so power secretary backing, okay all right what about environmental risk, what did they do about it, okay extensively lobby government, extensive lobby for environmental risks okay what else? Yeah let us go, let us first get not only importing fuel but the technological choice of LNG right was essentially because they had options it could have been coal, it could have been (())(11:57) it could have been LNG right Indian coal is not of high calorific value, there are issues with you know the other source with the sort of natural gas and so on and so they decided to sort of look at LNG and you have, this is on the western coast

and the Middle Eastern countries which are not too far away have wonderful reserves of LNG and therefore your supply risk, etc. are being managed okay.

So LNG great, any other risks that you saw that Enron has dealt with? So along those lines what was the total capacity of the plant 2000 megawatts right and that was sort of somewhat dictated by the fact that they were using LNG because they had these things called LNG trains or whatever so you had a certain amount that you had to buy plant sizes or so much, did they build one 2000 megawatt power plant right, so they built in two phases right, is there a risk mitigation strategy in that, right so clearly you know again the obsolescing bargain theory can be combated.

If I build all 2000 megawatts I can get kicked out quite easily, if I build I do not know what 695 or whatever it is and then have a second phase then clearly the government will continue to you know transact with me up until a later point in time right and therefore I prevent the government dredging on its deal very early right so again that phasing was another risk mitigation measure right, what about choosing Maharashtra, why was Maharashtra chosen, why not Tamil Nadu right, well not only was Maharashtra more economically stable, I mean many other states are but what was special about Maharashtra?

Well coastline but you know there are Gujarat why not, Gujarat got a pretty good, Bombay is the commercial capital but so what right, tower is power people will buy power anywhere, yeah let us let us sort of, let us have, so the key point is there were only a couple of states right that actually had state electricity boards that were not running at losses, I think Karnataka might have been the other one at the time right, so Karnataka and Maharashtra all the other state electricity boards and we have talked about this earlier in this class are running at a loss rate because you subsidize power to farmers and therefore you know you get very little income into your from your power consumers you do not have enough money to pay your own operations maintenance where are you going to get money to pay back right.

The only two electricity and of course there are a number of reforms in the power sector but at the time the two electricity boards that were actually financially solvent from Maharashtra and Karnataka, Maharashtra is also on the west coast, etc. Bombay because of that so one of the reasons of picking Maharashtra itself is a risk mitigation measure right you talked about how do I, I have got a power purchase agreement but how do I ensure yes I have got some guarantee by


government of Maharashtra but a better way of insuring is I have gone with somebody who is most likely to be able to pay me right so that again is another risk mitigation mechanism that they have looked at right.

And what of the what about what can you say about the rate of return that they are expecting 26 percent, 26.52 percent whatever right so because that is so high what does that mean right the risk is high but their buffering that by expecting such a high return on the project all right so that even if they get even if a few risks actually become enacted and their rate of the actual return falls it is still going to be at a level which is going to be pretty profitable to the companies or another way of actually hedging these risks is so is actually coming up with a rate of return that according to them combats the risk.

So they see all of these risks and therefore they also have a higher rate of return on their investment that they have put into their financial model right which they refuse to really back down from right, Varun as you were presenting okay, so the point is this is India is set for privatization of power we need power as was pointed out, we have changed the rules we have liberalized, we have allowed private power purchases to come in but it is still an untested market right so Enron comes in if they make seem to make a bunch of smart choices, they pick Maharashtra, okay that seems to be a smart choice right.


They sign take-or-pay agreement with Maharashtra that seems to be a smart choice okay, they seem to get these guarantees that seems to be a smart choice okay, they go in for LNG as a technical choice smart choice, right two-phase project right again a smart choice right all of this, so when I when I look at it in totality Enron seems to have made a bunch of smart choices and they seem to have signed a contract which has a lot of these ideas in it right.

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What is Enron's entry strategy?

- Enron picks a state with a fairly good power sector
 - State board is profitable
 - Already generates close to 10,000MW (12% of India's generation capacity)
 - Location is close to a port



So Enron picks a state with a fairly good power sector, the state board is profitable, there is demand, the location is close to a port, number of baskets are ticked right somebody says they entered through bureaucrats civil servants etcetera.

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Risk mitigation through the contract


- Economic Risk
 - A take or pay PPA with fixed and variable tariffs
 - PPA also takes care of rise in fuel costs as these are passed on to MSEB
- Exchange rate risk
 - Borne by the Indian government
- Political Risk
 - OPIC guarantee
 - International Arbitration Clause ✓
 - Sovereign guarantees from state and central government ✓
- Project Risk (construction)
 - Experienced Partners such as Bechtel, GE ✓



Risk mitigation through the contract, we have talked about all of this Power Purchase Agreement, exchange rate risk, political risk, they had this international arbitration cross, sovereign guarantees you talked about it, project risk right so it looks like they have really thought this project through all right so it is actually so even though we know that the

government might change and this and that they really thought the project through and in fact when this case is taught at the Stanford Law School in some cases it is taught as you know here is the perfect contract right they have really thought through everything and they have signed the perfect contract alright okay.



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Is Enron's Strategy Good?


Is Dabhol a good project for Enron?

For India? For Maharashtra?



The Saga unfolds


- BJP comes to power in 1995
- Lots of nationalistic noise
 - Advani says "we will not be dictated by foreign power giants"
- Committee prepares a report on DPC
- Project is cancelled in August 1995



So question is this Enron strategy good? I do not know, seems good, is Dabhol a good project of Enron possibly for India, for Maharashtra, possibly right but what happens right the BJP comes to power and first of all there is a lot of nationalistic noise I think sorry Varun had already said you know a Mr. LK Advani points on we will not be dictated by foreign power giants etcetera


Varun already pointed out that they were less likely to be supportive of private investment in consumer goods right and therefore a committee now prepares a report on the DPC and this echoes some of the comments that the Finance Minister had raised earlier right and as a result of what came out and I will show you what the committee just said right the project was cancelled in August 1995.

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Reasons for cancellation

- Lack of transparency and competition
- Some clearances were ignored based on 'fast-track' nature of the project
- Cost of the project was greater than comparable projects
 - Enron cost Rs 4.49 Cr per MW
 - Comparable projects cost Rs 3.6 Cr per MW
- Tariffs were too high
 - Will cost more than Rs 5/KwH
- Environmental concerns and WB report not addressed



Why was the reasons for cancellation? The committee said where was the bidding right you just had Enron come and build a power plant for you how do you know that this is the most optimal price at which you are getting the power plant, should not that have been competitive bidding where was the competitive bidding right, this project was fast-tracked, made a bunch of clearance whereas were ignored what was the reason right if this project can be fast-tracked every other infrastructure project should also be fast-tracked right, yes power is so vital but so is transport, so is water why give a damn for environmental clearances anyway there is a pun on the word dam if you did not catch that okay.


So yeah, so why sort of ignore that right and look at the cost of the project somebody does the report and say if you look at the total cost and the power generated it is costing four 4.49 crore per megawatt right everywhere else comparable projects seem to be costing 3.6 crores of megawatt right which means Enron is giving me power at I do not know 2.4 rupees the kilowatt

hour or whatever but that's because it is so expensive if it was built cheaper like everyone else is doing you might only need to charge me 1.7, 1.8 right so why was this not caught somewhere.

And this was not caught because there was no competition right had there been a competitive bid these guys would have been forced to put down their prices and therefore tariffs are too high, the actual tariffs will really be 5 rupees a kilowatt hour right it was what somebody said and all these environmental concerns yes there was lobbying, etc done but World Bank prepared a report none of those concerns were addressed right.


So essentially the incumbent government pointed out and if you recall the finance minister at the time also had some similar similar objections right so all of these objections were pointed out and they said look we are going to cancel the project right and indeed the project was cancelled, so one moment you go from perfect contract right to crash and birth right projects cancel okay so if you have got to think about why that is.

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The Response

- Enron goes to international arbitration
- PVN Rao says agreement is between Enron and Maharashtra govt and not with Center
- Govt files suit in Mumbai High Court challenging validity of Arbitration in England
- Negotiations re-opened in late 1995
- Panel of 6 experts reviews the project
- Revised proposal with major changes accepted in May 1996




So what would you do if you are Enron, if you are (())(19:27) what would you do, so you can bring in the international arbitration clause perfect, so Enron goes to international arbitration right what happens simultaneously so first of all Narasimha Rao says look the agreement is between Enron and Maharashtra government I sort of stepped in but you know I am not really enforcing my counter guarantee right simultaneously you know the government goes to the

Maharashtra, sorry the Mumbai High Court right and says what is the validity of international arbitration, this is a project that is being done on Indian soil right.

And in any case what we do it in international court is not valid here right is their argument right so then so what do you now do if you are Enron right your international arbitration they might award in your favor right but essentially Mumbai High Court says do not worry you do not have to implement think that they say okay so what do you do if you are Rebecca Mark, you take the next flight to Mumbai, take the next flight to Mumbai and you come in and say let us negotiate right, it is an either of our interests for this project you need power at the end of the day right.


We have already messed with the project, fine you have some concerns let us figure it out okay so panel of experts reviews the project and they have a revised proposal that they prepare which is accepted right.

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Revised Contract

	Old Contract	New Contract
Power Tariff	Rs 2.4/KwH	Rs 2.03/KwH in Ph 1 and Rs 1.84 in Ph 2
Capital Costs	Rs 90.6 Billion	Rs. 64.2 Billion
Ownership	Enron-80;GE-10, Bechtel-10	Enron-65;MSEB-10%, GE, Bechtel - 10
Fuel	LNG	LNG and locally available Naphtha
Environment		Enron agrees to manage this




So now they say in the old contract the power was 2.4 per kilo tower power, here now it is reduced to 2.03 and then successively to 1.84, capital costs are reduced, Maharashtra State Electricity Board now gets a stake in the project right, so lots of design optimization, you see you also use locally available Naphta right and you instead so it brings your cost total but you do not have to export everything from the Middle East, Enron agrees to manage these risks right and so essentially but of course the story is sort of continuous.

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Criticisms

- Take or Pay clause not changed
 - Would MSEB really need all the produced power? What if they did not?
- Government still bears currency risks
- Price is still a little too high
- LNG needs to be imported and there are price volatility risks here also




People still say look the take or pay clauses still not changed, currency risks are still being borne by the government, price is still high right comparatively yes it is lower but still high and LNG still needs to be imported, there are price volatility risks I mean you have done a few things but you have not done enough right I mean this should be a much better project for the Indian conditions right.

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The conclusion

- June 2001 Phase 2 is in Progress
- MSEB defaults on a payment
- Counter guarantees did not work
- Recourse to arbitration once again
- Enron wants to pull out of the project




NPTEL

Background of the Situation

- India is newly liberalizing
- Power has traditionally been state-owned
- Performance of State and Central power authorities is very poor
- India seems all set for privatization in power

Handwritten notes:
 - Top left: "Lobby for risks"
 - Right side: "Demand → PPA", "Exchange rates → hOI", "Guarantees / Govt risk", "Pol risk"
 - Bottom left: "LNh" (circled)
 - Bottom center: "Technical → Govt / Technical", "Power say backing"



So and then phase 2 is in progress MSEB defaulted on a payment, counter guarantees did not work, arbitration but we all know what happens to arbitration and Enron essentially ended up pulling out of the project at some point right that last part is not as important right the point was Enron seems to have thought through everything right, this whole thing was that slide where we had a bunch of stuff scribbled on the slide, so a bunch of stuff they have thought through where did they go wrong.

They seem to have thought through economic risk, they seemed to have thought through political risk, they seemed to have thought through you know all of these kinds of things, technological risk, what more could they have done or is it thus that we are such a you know difficult country to work in that projects are just duped yeah, Harsh, maybe dispute settlement okay yeah, Partik. So social risk not mitigated what could they have done, so one of the things was you know how transparent was Enron right so if you are an Indian citizen or if you are you know an elected representative of the BJP or whatever right, how much transparency do in this process right, who is and first there was no competitive bidding right these gates all hush-hush they go and meet some Rajagopal right and so and there is some agreement between the center and the state suddenly a project comes in there is a tariff, there is no justification for that tariff throughout this entire process you know nobody even knows who is the face of Enron right.

So what do you think sometimes you look at these arrangements it is not as if Enron is trying to be corrupt but you look at these engagements you say there is some underhand deal that is been

cut by these guys right so the moment you sort of have this kind of an aura around it you always suspect that something hanky-panky is going on this guy went to Delhi he must have done something there and that is why he got awarded this project which actually was probably the opposite of what really happened I think Enron did not want to go out and show itself shaking hands with people and all of that because they thought that might be perceived as corruption.

Right the moment I go shaking hands with various politicians people are probably going to think I am corrupt let me just work, I am going to make an offer the Indian government has accepted my offer we have a contract that sign so in some sense Enron probably thought that it was acting in a manner that would provide an image of fairness but actually when you look at it from the outside and you see a very opaque tendering process you know some secretary involved somewhere some agreement sign then you start thinking look was this a fair process after all right.

So it essentially underscores the value of being transparent and needing to consult the public maybe you have a reason for power being 2.4 rupees a kilowatt hour but and this is where you have to contrast it with what we learnt in (())(23:55) right where I actually open out the financials to you so that you know if you can reduce it reduce it if you can maybe there is a reason right for why we want power at 2.4 rupees a kilo maybe that is still economically beneficial right maybe the 3.6 crores per megawatt is because of other factors right that are not applicable in this project right so who knows you have to really be transparent in your data and I think a big issue this project is that Enron did a lot of things but the one thing they did not do was invest enough in transparency right.

And therefore when a new government came in they looked at it and said oh there is a completely opaque agreement that these guys signed with the previous government when I look at some of the metrics they seem to be extremely high this cannot run right let us throw these guys out and essentially what happened was while in some ways you are justified in throwing and drawn-out it also had all kinds of repercussions right so I met somebody in Washington DC who said was a manager of a large fund cutting was called the emerging markets partnership who essentially said I would not touch India with a 100 foot march pole right because how do I know that my investment will not meet the same fate that Enron does it is such an unpredictable country right.

And therefore we have also paid the penalty for a period of time because investor confidence dipped right and so in many ways it was a lose-lose kind of scenario all right.

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The slide features a title 'Protecting against political risk' and a list of strategies. A red circle highlights 'Transparency' and 'Strong Regulator', with a red arrow pointing to the handwritten text 'Stakeholders Consultative'. The NPTEL logo is in the top right corner. A video inset shows a man speaking.

- Choose projects with low socio-political risks
- Avoid capacity issues
- More debt, less equity
- Flexible and politically correct contracts
- Use local and foreign partners
- Insurance
- Government guarantees
- Transparency
- Strong Regulator
- Dispute resolution mechanisms – how effective are these?

So let me go back to my first slide right how do you protect yourself against so you have got two different examples of political risk right in the Enron case you have a government that could come in and throw out the project, in the Chad Cameroon case you have got a government that can misuse what is coming out of the project right and you have got to think about how do you deal with those risks right like I said in the first case maybe Exxon Mobil was not really concerned about the government misusing as long as they made their money but the World Bank was right, in this case Enron was concerned about what the government's response should be right.

So of course the simple answer is do not even go there right choose projects with low socio political risks right another strategy is you know do not put in too much of your own equity into these kinds of projects right because you are likely to lose a lot so take more debt right and therefore bring in more stakeholders for risk right you know can you have flexible politically correct kind of contracts, we would not get in that, can you use local and foreign partners right can you have local partners as well who can lobby for you right in these kinds of cases okay rather than just you as an international firm coming in what about a joint venture with say

Reliance for instance right maybe that might have helped so to overcome some of these risks right.

Or similarly there are probably some large private consortium in Chad or Cameroon anyway right so should they be part of the project of course you can take insurance, you can take government guarantees but transparency I think this is critical right political risk there needs to be transparency on all sides inside of the government or the side of the private party if not you are setting yourself up for being captured by a political risk (())(26:43) who could even be in to see political risk is see, okay both of our cases somewhat coincidentally involved foreign investment but political risks can happen otherwise as well even within the country you have had changes of government and you know concessions being cancelled and all of that so it does not have anything to do only with foreign investment right.

So it is something but I think transparency is very very important because at least then you might have a chance of having the people on your side right of people saying look this is the right project and therefore you cannot throw this project out right whereas here essentially people seem to be you know elected officials seem to be acting for the people saying look I am getting you out of a big hole that the previous government dug you into okay so transparency you need a strong regulator or a strong judicial system could help right but again those are factors outside your control right, it is easy to say I would like a strong and transparent judiciary it is not going to happen overnight right, true I think and then it comes down to what do you mean by transparency but essentially I think and we will come back to this again I think this is essentially what we are talking about is more transparency with respect to stakeholders right which could mean the general public as well right.

So if for example just like we saw an (())(27:50) if Enron also had been able to convince the people about the benefits of the project right perhaps the outcome might have been different, perhaps a newly elected government might have found it difficult to just cancel the project if there is a large sentiment that the project is beneficial right or having discussed a little bit more transparently up ahead maybe the project parameters could have been changed see a 26 percent return on investment, 25-26.5 percent does seem abnormally high right, particularly for a country like India where we are not like Chad or Cameroon right.

I do not think you can equate the kinds of risks in India to those kinds of risk, so 26 percent does seem to be extraordinarily high maybe that is because you know you fear what you do not know you've never come to India before and therefore you price all these risks it, may be by having more transparent discussions by understanding the supply chain the regulatory environment right by understanding the decisions that are made etcetera maybe you could have actually lowered that risk right or you could have lowered your perception of that risk or you could have done something to lower that risk.

As a result of which your tariffs could have come down right in order for me to make 26.5 percent I need a tariff of 2.4 right if my expectation was lower maybe my tariff would be lower as well right and therefore maybe by being more consultative right maybe the word is not so much transparent but consultative right and maybe by opening yourself up to a more transparent selection criteria you might have discovered ways of managing certain risks which you could have brought down your expectation of return, brought down your costs right and also therefore allowed you to convince people that this was actually a viable project.

Now whether it would still have been viable whether costs would have been brought down whether Enron would have been willing all of these are moot points right because we cannot go and recreate history right but clearly they did a lot of thinking from their perspective, they assumed that a watertight contract would hold right but essentially what happens is you have got to think beyond your perspective right the project has to be fair universally you cannot say I am bearing a risk I need 26.5 percent, I am happy with sticking you with 2.5 rupees a kilowatt right so that does not work.

Secondly you cannot just hide behind these contracts and say the law will protect me right because contracts are made by people they are enforced by governments, by courts, etc. and these can be interpreted in various ways and essentially the BJP's view here was yes it was a good contract but it is an unfair contract right and therefore why should I as an elected government continue to enforce an unfair contract right and therefore you cannot just hide behind the fact that somebody has signed and therefore nobody can go back on this that is just sort of impractical which means you have to really start talking to people understand risks managing them, mitigating them which these guys did not do effectively right.

So the moral of the story is political risks exist, political risks can destroy projects, it is very difficult to deal with political risks but there are certain steps that you can take right whether you are working in Chad or whether you are working in Mumbai or Chennai or wherever to mitigate these political risks it is important to think about that as you go through infrastructure projects not be naive and say I have got a contract I brought the World Bank on political risks have disappeared.