The Solar Scam



01 February, 2012

Centre for Science and Environment, New Delhi

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Jawaharlal Nehru National Solar Mission (JNNSM)

- Launched in 2008 with a goal of 22,000 MW of Solar Power in India by 2022.
- 20,000 MW grid-connected and 2,000 MW off-grid
- Grid-connected split into 3 phases:
 - 1000 MW by 2013
 - 10000 MW by 2017
 - 20000 MW by 2022
- Reduce cost of solar energy to achieve gridparity and promote manufacturing of solar technology in India



1st phase JNNSM

- First phase (1000 MW) has been split up into two batches.
 - 1st Batch 150 MW of Solar PV (divided into 5 MW each) and 470 MW of Solar Thermal (max 100 MW) – Auctioned in November 2010

 2nd Batch – 350 MW of Solar PV (project max 20 MW; 1 company 50 MW) – Auctioned in December, 2011



Process of awarding projects

- Reverse bidding process. Companies were asked to give discount over the tariff fixed by CERC. Companies who offered the highest discount in a closed bid got the project.
- CERC benchmark tariff was Rs 17.81/ kWh for solar PV for first batch. The average tariff quoted by winning companies was Rs 12/kWh.
- For solar thermal CERC fixed Rs. 15.31/ kWh as tariff, the average bid was Rs. 11.48/kWh
- The winning bidders will receive this tariff for all electricity they produce for the next 25 years.



Process of awarding projects

- NTPC Vidyut Vyapar Nigam Ltd (NVVN), 100% owned subsidiary of NTPC was made responsible for the contracting, buying and selling of solar power
- Solar power was subsidized by bundling 1 unit solar power with 4 unit of unallocated coal power.
 These power are then bought by discoms at Rs.
 5.50/kWh. 1000 MW unallocated coal power was made available to subsidize solar power.
- Discoms bought this expensive power because they have solar RPOs (0.25%).



3 key guidelines

1. Each company only allowed to apply for one 5 MW PV plant and 100 MW of solar thermal – to increase competition and to allow more companies to participate.

2.4 Number of Applications by a Company

In order to have wider participation from Solar Power Developers, only one application per Company including its Parent, Affiliate or Ultimate Parent-or any Group Company shall be permitted for development of one project of 5 MW \pm 5% size using a Solar PV Project.

3.4 Number of Applications by a Company

The total capacity of Solar Thermal Projects to be allocated to a Company including its Parent, Affiliate or Ultimate Parent-or any Group Company shall be limited to 100 MW. The Company, including its Parent, Affiliate or Ultimate Parent-or any Group Company may submit application for multiple projects at different locations subject to total maximum of 100 MW. The Company shall submit one single application in the prescribed format detailing all projects at multiple locations for which the developer is submitting the application.



3 key guidelines

2. No changes in the shareholding pattern was allowed between Request for Selection (24th September 2010) and signing of PPA (10th January 2011). No change in controlling shareholding for one year after completion of the project. **This was to deter companies from bidding and then selling project at premium - '2G effect' – to allow only serious players**

2.11 Minimum Equity to be held by the Promoter

The Company developing the project shall provide the information about the Promoters and their shareholding in the company to NVVN indicating the controlling shareholding before signing of the PPA with NVVN.

No change in the shareholding in the Company developing the Project shall be permitted from the date of submitting an RfS till the execution of the PPA. However, this condition will not be applicable if a listed company is developing the Project.

After execution of PPA, the controlling shareholding (controlling shareholding shall mean at least 26% of the voting rights) in the Company developing the project shall be maintained for a period of (1) one year after commencement of supply of power. Thereafter, any change can be undertaken under intimation to NVVN.



Elaborations on shareholding

What are the provisions with respect to the Changes in the Shareholding pattern of a Bidding Company / Bidding Consortium from the stage of submission of RfS till the execution of PPA and thereafter up to one year of COD? Please elaborate.

Company developing the project shall provide the information about the promoters and their shareholding in the company to NVVN indicating the controlling shareholding at the stage of submission of RfS to NVVN.

Further in the case of Bidding Company the Shareholding Pattern as given at the time of RfS shall not change till the signing of PPA and the *Controlling Shareholding* shall not change from the stage of RfS and up to one year after the COD of the Project.

Further, in the case of a Bidding Consortium, the Project Company incorporated shall have the same Shareholding Pattern as given at the time of RfS. This shall not change till the signing of PPA and the *Controlling Shareholding* (which is held by the Lead Member of the Consortium) shall not change from the stage of RfS and up to one year after the COD of the Project.

However, in case of any change in the shareholding of the other shareholders (other than the Controlling Shareholder including Lead Member) after signing of PPA, the arrangement should not change the status of the *Controlling Shareholder and the lead member in the Project Company at least up to one year after the COD* of the Project. Further, such change in shareholding would be subject to continued fulfilment of the financial and technical criteria, by the project company.



3 key guidelines

3. **Net worth:** For each PV project of 5 MW a net-worth of 15 crore had to be shown 7 days before applying for Request for Selection. For a Solar Thermal project of 100 MW the networth needed to be 220 crore. **This to deter bidders without financial strength**

Net Worth

The "Net Worth" of the company should be equal to or greater than the value calculated at the rate of Rs 3 Crore or equivalent US\$ per MW of the project capacity. The computation of Net Worth shall be based on unconsolidated audited annual accounts of the company. For the purpose of the computation of net worth, the best year in the last four years shall be considered. The Company, would thus be required, to submit annual audited accounts for the financial years 2006-7, 2007-08, 2008-09 and 2009-10 (if available), while indicating the year, which should be considered for evaluation, along with a certificate from the Chartered Accountant to demonstrate the fulfilment of the criteria.

For companies which are newly incorporated, the Net Worth criteria should be met seven days prior to the date of submission of RfS by the Project Developer. To demonstrate fulfilment of the criteria, the Project Developer shall submit a certificate from a Chartered Accountant certifying the Net Worth on the date seven days prior to submission of RfS. Further, the Project Developer shall submit the un-audited financial statements of the company for the date on which the Certificate of Chartered Accountant has been obtained.



Winning bidder in First batch

NTPC VIDYUT VYAPAR NIGAM LIMITED

List of Selected Projects

Appl. No.	Bidder Name	Bidder's City	Solar Project Type	Proj Cap (MW)	Location	State
0428	Camelot Enterprises Private Limited (Project Company: FireStone Trading Private Limited)	Mumbai	PV	5	Kalhe	MAHARASHTRA
0198	Khaya Solar Projects Private Limited	Gurgaon	PV	5	Dist:Naguar, Tehsil:Naguar, Vill:Mundwa	RAJASTHAN
0368	DDE Renewable Energy Limited	Faridabad	PV	5	Dist:Nagaur, Tehsil:Khinvsar, Vill:Bhojas	RAJASTHAN
0380	Electromech Maritech Pvt Ltd	Pune	PV	5	Dist:Nagaur, Tehsil:Khinvsar, Vill:Bhojas	RAJASTHAN
0359	Finehope Allied Energy Private Limited	New Delhi	PV	5	Dist:Nagaur, Tehsil:Khinvsar, Vill:Bhojas	RAJASTHAN
0302	Vasavi Solar Power Pvt Ltd	Hyderabad	PV	5	Nagaur, Khinvsar, Bhojas	RAJASTHAN
0020	Karnataka Power Corporation limited	Bangalore	PV	5	Mandya, Malavalli, Belakavadi	KARNATAKA
0081	Newton Solar Private Limited	Ahmedabad	PV	5	Dist:Nagaur, Tehsil:Khinvsar, Vill:Bhojas	RAJASTHAN
0399	Greentech Power Private Limited	New Delhi	PV	5	Jodhpur, Phalodi, BAP	RAJASTHAN
0429	Saidham Overseas Private Limited	Gurgaon	PV	5	Nagaur, Khinvsar, Bhojas	RAJASTHAN
0245	Mahindra Solar One Private Limited	Mumbai	PV	5	District: Jodhpur , Tehsil: Phalodi, Village: Amla	RAJASTHAN
0072	Azure Power (Rajasthan) Pvt Ltd	New Delhi	PV	5	Nagaur, Jayal, Kathali	RAJASTHAN
0114	Rithwik Projects Private Limited	Hyderabad	PV	5	Anantapur, Kadiri, Kutagulla	ANDHRA PRADESH
0074	SAISUDHIR Energy Limited	Hyderabad	PV	5	T.Veerapuram, Rayadurg Taluk, Anantapur Dist., AP.	ANDHRA PRADESH
0188	Maharashtra Seamless Limited	Gurgaon	PV	5	Jaiselmer, Pokaran, Pokaran	Rajasthan
0412	Viraj Renewables Energy Private Limited	Mumbai	PV	5	Jodhpur District, Phalodi tehsil, Rawre village	RAJASTHAN
0144	Northwest Energy Private Limited	Mumbai	PV	5	Village-Kantia, District- Nagaur	RAJASTHAN

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Winning bidder in First batch

0115	SunEdison Energy India Private Limited	Chennai	PV	5	Bikaner, Kolayat, Deh	RAJASTHAN
0119	Electrical Manufacturing Co. Ltd.	Kolkata	PV	5	Allahabad, Naini	UTTAR PRADESH
0355	Alex Spectrum Radiation Private Limited	Kolkata	PV	5	Gajner, Kolkayat, Bikaner	RAJASTHAN
0054	Indian Oil Corporation Limited	New Delhi	PV	5	Barmer, village Marudi	RAJASTHAN
0314	Coastal Projects Limited	Hyderabad	PV	5	Chitradurga, Molakalmur, Murudi	KARNATAKA
0411	Welspun Solar AP Private limited	New Delhi	PV	5	ANANTAPUR DISTRICT, AMADGUR MANDAL, THUMMALA VILLAGE	ANDHRA PRADESH
0263	CCCL Infrastructure Limited	Chennai	PV	5	Tuticorin District, Kombukaranatham Village	TAMIL NADU
0357	Alex Solar Private Limited	Kolkata	PV	5	Khurda, Khurda	ORISSA
0389	PUNJ LLOYD INFRASTRUCTURE LTD	Gurgaon	PV	5	Jodhpur, Bap, Phalodi	RAJASTHAN
0419	AMRIT ANIMATION PVT LTD. (Project Company: Amrit Energy Pvt. Ltd.)	KOLKATA	PV	5	jaisalmer, Pokran, lanwa	RAJASTHAN
0019	OSWAL WOOLLEN MILLS LIMITED	LUDHIANA	PV	5	JODHPUR, PHALODI, NATISARA	RAJASTHAN
0097	PRECISION TECHNIK PRIVATE LIMITED	KOLKATA	PV	5	Jaisalmer, Pokhran, Nokh	RAJASTHAN
0278	Lanco Infratech Limited (Project Company: Diwakar Solar Projects Private Limited)	Hyderabad	Thermal	100	Jaisalmer, Nachna, Chinnu	RAJASTHAN
0392	KVK Energy Ventures Private Limited	Hyderabad	Thermal	100	Jaisalmer, Nachana-1, Chinnu	RAJASTHAN
0307	MEGHA ENGINEERING AND INFRASTRUCTURES LTD (Project Company: MEIL Green Power Ltd.)	Hyderabad	Thermal	50	Anantapur, Pamidi, Virannapalle	ANDHRA PRADESH
0122	Rajasthan Sun Technique Energy Private Limited	Navi Mumbai	Thermal	100	Bikaner, Kolayat, Ladkan	RAJASTHAN
0425	Aurum Renewable Energy Private Limited	Mumbai	Thermal	20	Jamnagar, Dwarka, Mojap	GUJRAT
0029	Godawari Power and Ispat Limited (Project Company: Godavari Green Energy Limited)	Raipur	Thermal	50	Jaisalmer, Jaisalmer, Parewar	RAJASTHAN
0322	Corporate Ispat Alloys Limited	Mumbai	Thermal	50	Jaisalmer, Pokhran, Nokh	RAJASTHAN



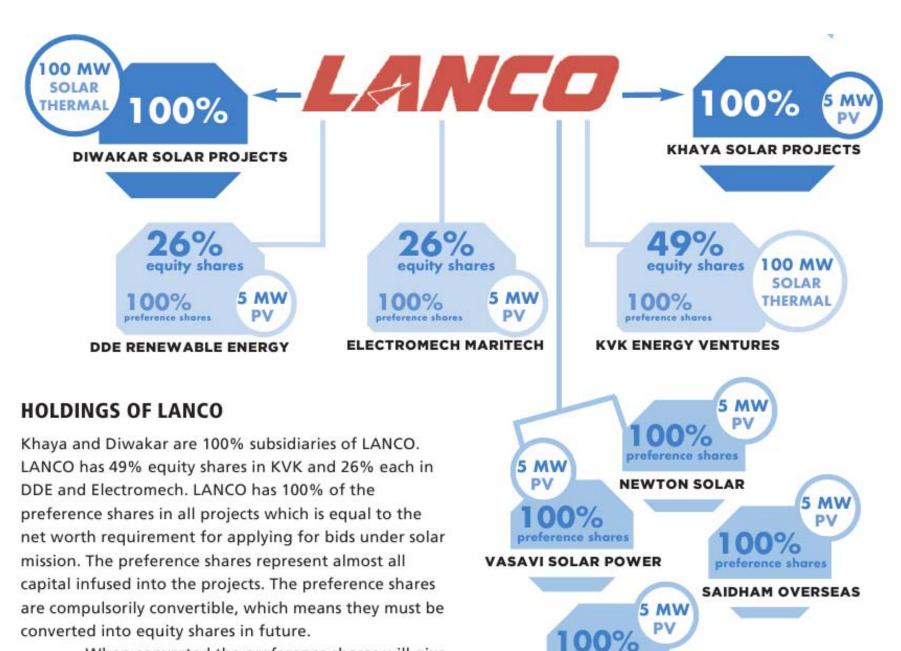
Non-Transparency

- MNRE and NVVN provided only name of project company (not the backer) and no contact details.
 Only the tentative location of the plant was given – many plants have moved location.
- No information provided even through RTI.
- NVVM reply on RTI "information sought for relates to Commercial Confidence of the third party and the disclosure of which may affect the competitive position of the third party and has no public interest...."



The result

 Lanco Infratech, a major private sector power company, used front companies to circumvent the rules of the solar mission and got about 40 per cent of the first batch of the first phase of JNNSM



preference shares

FINEHOPE ALLIED ENERGY

When converted the preference shares will give LANCO a 99% ownership in each project. Each share gives a 0.001% dividend, so except for future ownership these shares give almost no benefit to LANCO



The tell-tale signs

- Six of the solar PV projects indicated same village as the proposed location during RfS (Vill. Bhojas, Tehsil Khinvsar, Dist. Nagaur)
- Both 100 MW solar thermal projects indicated same site during RfS (Vill. Chinnu, Tehsil. Nachna, Dist. Jaisalmer)
- During signing of PPA all 9 project shifted location to Askandra village in Jaisalmer – Questions asked?
- Each PV project bid with 5 paise difference between each other.
- Coincidence?



The tell-tale signs

- Detailed project reports are practically identical.
- In two reports we find the same hand-writing doing correction.



Diwakar

iv. Summary Highlights of the Project

Capacity of farm	100 MW
Location	Village Askandra, Tehsil Nachana 2, District Jaisalmer.
Proposed structures	Parabolic Trough collector with 1-axis tracking
Type of Collector	Parabolic Trough collector
Total Land Requirements	500 perps at 5 acres/MW 2770 Harter
Energy production (per MW)	2 million units (MU) p.a. /MW
Total estimated AC yield (p.a)	200 MU per annum
O& Mexpenses in Rs./kWh	0.25
Insurance expenses	0.30%
Life of sofar to wer project	25 Years on Shared to the same of the same

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iv. Summary Highlights of the Project

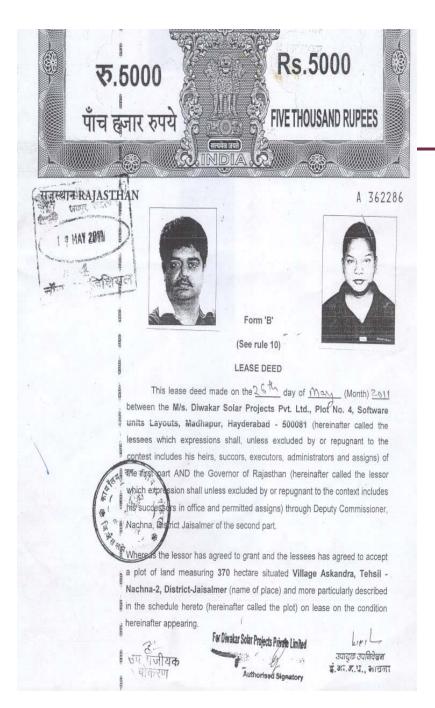
Capacity of farm	100 MW As Kanere
Location	Village CHINNU, Tehsil NACHANA, district JAISALMER
Proposed structures	Parabolic Trough collector with 1-axis tracking
Type of Collector	Parabolic Trough collector
Total Land Requirements	760
Energy production (per MW)	2 million units (MU) p.a. /MW
Total estimated AC yield (p.a)	200 MU per annum
O& M expenses in Rs./kWh	0.25
Insurance expenses	0.30%
Life of solar power project	25 Years
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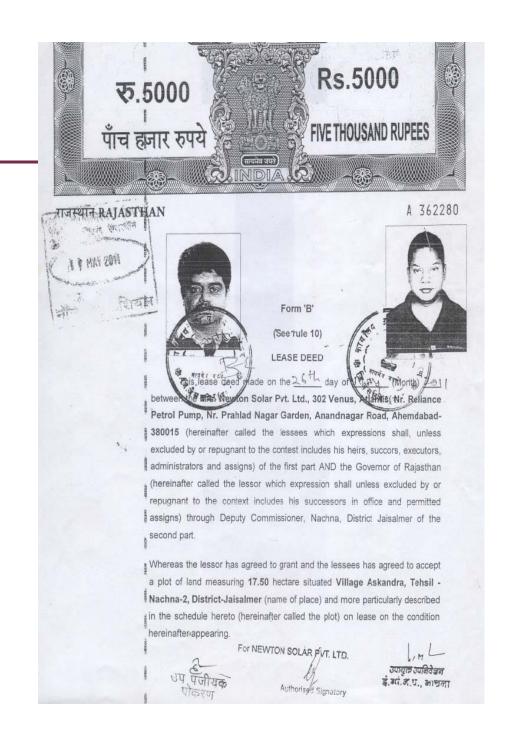


The tell-tale signs

- Lanco is EPC contractor to all projects.
 Coincidence?
- Land documents and project reports seem to show they are more than that – Land lease documents are all signed by the same Lanco employee.



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Further investigation -- Visiting the offices

- The offices addresses given by Rajasthan Renewable Energy Corporation were visited:
- Phone numbers didn't work
- Saidham Overseas (one of the projects taken by Lanco)
 office was a construction site in Gurgaon (near the Lanco
 main headquarters), no one on site knew of Saidham
 Overseas at the site.
- Finehope allied and Vasavi stated "given the project to Lanco". No clarification on what 'giving' means.
- Most other sites yielded companies with strong ties to Lanco.
- Incidentally, all projects are funded by Axis Bank. This Bank is also the main banker of LANCO.



The upfront financial linkages – preference shareholding



Schedules to the Accounts

(₹ in Lakhs)

	As at March 31, 2011	As at March 31, 2010
Schedule 9 INVESTMENTS - Continued		
DDE Renewable Energy Private Limited [15,200,000 (Previous year - Nil) - 0.001% Non-Cumulative Compulsorily Convertible Preference Shares of ₹ 10 each fully paid up]	1,527.60	-
Electromech Maritech Private Limited [15,200,000 (Previous year - Nil) - 0.001% Non-Cumulative Compulsorily Convertible Preference Shares of ₹ 10 each fully paid up]	1,533.68	-
Finehope Allied Engineering Private Limited [15,200,000 (Previous year - Nil) 0.001% Non-Cumulative Compulsorily Convertible Preference Shares of ₹ 10 each fully paid up]	1,539.76	
KVK Energy Ventures Private Limited [221,700,000 (Previous year - Nil) 0.001% Non-Cumulative Compulsorily Convertible Preference Shares of ₹ 10 each fully paid up]	22,724.25	-
Newton Solar Private Limited [15,250,000 (Previous year - Nil) 0.001% Non-Cumulative Compulsorily Convertible Preference Shares of ₹10 each fully paid up]	1,538.73	-
Saidham Overseas Private Limited [15,200,000 (Previous year - Nil) 0.001% Non-Cumulative Compulsorily Convertible Preference Shares of ₹10 each fully paid up]	1,553.44	
Vasavi Solar Power Private Limited [15,200,000 (Previous year - Nil) - 0.001% Non-Cumulative Compulsorily Convertible Preference Shares of ₹10 each fully paid up]	1,547.36	-



The upfront financial linkages – preference shareholding

- Lanco holds shares worth Rs. 15.2 crore in each PV project and Rs. 221.7 crore in the solar thermal project.
- This matches almost exactly the net-worth needed for the projects
- It is almost the only capital injected into the projects except for the 1 lakh needed to register a private limited company in India
- Preference shares are not counted towards voting rights and therefore circumvents the guideline rules. However:



The upfront financial linkages – preference shareholding

- These shares are 'compulsorily convertible'
 which means they must at a set time be
 changed into equity shares which would give
 Lanco a 99% ownership of the companies
- In the case of <u>Electromech Maritech</u> we know this will happen between 2 and 3 years from now.



The backhand financial linkages – control through employees

- The case of DDE Renewable Energy and Electromech Maritech.
- Upfront Lanco has 26% equity and 100% preference share in both companies.
- Our investigation shows that the remaining 74% equity is held by companies whose directors are Lanco employees or their family members.
- The original promoter of these two projects now own nothing.



- 17 November 2009 DDE Renewable Energy was incorporated by K L Bansal and 3 family members as directors and owners. It had Rs. 1 lakh in equity and authorised/ paid-up capital of Rs. 1 lakh.
- 24 August 2010 Request for selection and the method of bidding was announced
- 10 September 2010 Nice Infracon is incorporated as Rs. 1 lakh equity with Tonu Kumar and Krishna K Sharma has directors and owners with 50% equity each. On the same day <u>Premchand and Sahithi</u> <u>Kurumoju joins as directors.</u> They are both children of long time Lanco employee Subhramanyam Kurumoju



- 11 September 2010 Tonu Kumar and Krishna K Sharma resigns from Nice Infracon
- 17 September 2010 was the original last date for Request for Selection. 7 days before this net worth of Rs. 15/220 crore needed to be shown.
- 24 September 2010 Request for selection is extended to this date.
- 8 October 2010 DDE Renewable Energy files its annual returns and balance sheets for FY 2009-10 to Ministry of Corporate Affairs showing no changes in shareholding since incorporation.



- 10 November 2010 Short listing of projects that fulfill the criteria
- 16 November 2010 Bids are opened with DDE Renewable Energy winning 5 MW of capacity.
- 13 December 2010 Letters of Intent are issued by NVVN to winning bidders.
- 17 December 2010 DDE Renewable Energy raises its authorised share capital to 25 crore, of which 24.99 crore in preference shares.



- 31 December 2010 DDE Renewable Energy issues 15.2 crore in preference shares to DEE Development Engineers K L Bansal's company.
- 10 January 2010 DDE Renewable Energy signs Power Purchase Agreement (contract) with NVVN
- 8 February 2011- DDE Renewable Energy retroactively revises its annual returns document for FY 2009-10 showing a different shareholding – now K.L. Bansal owns 23% of the 1 lakh equity shares and the rest 77% is owned by an unnamed corporate entity.



- On the same day Premchand and Sahithi Kurumoju become directors in DDE Renewable Energy.
- 30 March 2011 All of the Bansal family except K L Bansal resigns as directors in DDE Renewable Energy.
- 31 March 2011 In the annual returns document ending on this day the company is shown to now be owned to 100% by two companies. The majority is owned by **Nice Infracon**.
- Almost all the funds <u>15 crore</u> is shown to be in 'Loans and Advances' in DDE Renewable Energy's



- The Lanco annual report on the same day shows that Lanco has 26% of the 1 lakh equity shares in DDE which means Nice Infracon must have 74% of the equity shares. Lanco also now owns the 15.2 crore in preference share earlier issued to DEE Development Engineers.
- 14 November to 16 December 2011 Premchand and Sahithi Kurumoju resign and Ravinder Singh and two others become directors in DDE Renewable Energy and Nice Infracon. Ravinder Singh becomes Managing Director of DDE.
- Ravinder Singh is an employee of Lanco Solar.



The end result: Lanco controls 26% of equity directly and 74% of it through Nice Infracon. It also has almost all the capital of the company through the 15.2 crore worth of preference shares. DDE Renewable Energy is now 100% in control of Lanco.



Modus operandi

- All seven companies formed as Rs 1-10 lakh capital.
 No assests, no reserves from past
- Looks as if most were created just for bidding (Newton incorporated just 4 days before the original bidding date. Won't have qualified if date was not extended by a week)
- All increase their authorised capital after getting letter of intent. Most issued as preference share on the same day Dec. 31, 2010; not directly to LANCO but through an intermediary.
- LANCO holds 99% shares in all companies.



Why is it bad?

- Blatantly illegal
- Smothered competitors
- Hampered the growth of a new market
- Public funds cornered by one company (Rs. 13,000 crore)



What should be done?

- Investigate and punish
- Improve process and procedures.
- Allow more public scrutiny.
- More transparency in JNNSM.