

A Comprehensive Webinar Report of the
Energy Finance Workshop 2021: The Status of Coal Financing in India

22 & 23 February, 2021

Organised by



By

Aakanksha Tiwari (Researcher, Environment & Climate Action, CAG)

Mala Balaji (Researcher, Environment & Climate Action, CAG)

Acknowledgements:

The authors acknowledge S. Saroja and Vamsi Sankar Kapilavai for their critical review of the report and Benedicta Issac for editing the report.

Energy Finance Workshop 2021: The Status of Coal Financing in India

S. No.	Topics	Speakers
Day 1		
1.	Clubbing public financing of coal and climate change	Mr. Niraj Bhatt, Researcher- Environment and Climate Action, Citizen consumer and civic Action Group (CAG)
2.	Energy finance and coal in India: banks and international finance	Mr. Rajesh Kumar, Senior Programme Associate, Centre for Financial Accountability (CFA)
3.	Can the banking sector redeem itself while catalysing “just transition” of the Indian energy sector?	Mr. Thomas Franco, A veteran officer of State Bank of India (SBI)
Day 2		
1.	TANGEDCO’s recipe for recovery: Retiring old coal, stopping new build & boosting renewables	Mr. Ashish Fernandez, CEO and Lead Analyst, Climate Risk Horizons (CRH)
2.	Decarbonising energy sector in Tamil Nadu: Incentives and Instruments	Mr. Soumya Dutta, Co-convenor of South Asian, People's Action on Climate Crisis (SAPACC) and member of advisory board of the UN Climate Technology Centre and Network

Day 1

In India, coal consumption and production has doubled in the last 15 years. The federal government sees coal as a key driver of economic growth in the coming decades as well. Traditionally, coal mining and coal based power generation have been funded by the public enterprise and operated by the State. The speakers on day one spoke about various topics involving coal financing and they shared their answers to the following questions:

- How does public financing of coal take place in India and how is it linked to climate change?
- What role does international financing institutions play in funding coal in India?
- How can the banking sector redeem itself in bringing about “just transition” in the Indian energy sector?

Topic 1: Clubbing public financing of coal and climate change

Mr. Niraj Bhatt kicked off his presentation by enlightening the attendees as to what happens to the depositor's money in banks. He explained how the money deposited (in term deposits) is in turn used by banks to invest and lend to various sectors. He added that these sectors are based on profitability and run on government signals. He said coal is one such sector which is very lucrative where banks invest and lend money. He pointed out that public sector banks are funded by the government which in turn is funded by the taxes citizens pay and hence public money is at stake. He then went on to talk about the difference between a depositor and shareholder. He insisted that everyone should have this basic right irrespective of whether he/she is an investor or a depositor. He said that between 2016 to 2019, following the Paris agreement, 35 private sector banks have together channelled USD 27 trillion into the fossil fuel industry. Of these 30 top mining coal projects have received USD 54.462 billion while 30 top coal based power plants have received USD 138.524 billion. He went on to mention that such financing of the fossil fuel industry not only weakens the global effort towards climate action to stay within 1.5° C but also has the potential to ramp up the global temperature by 4° C. He urged for more awareness and scrutiny among the public as to where their money is channelled through these banking institutions. He then went on to illustrate the ill effects of coal. He said that mining and burning coal releases smoke and leaves behind fly-ash, which is harmful both to the environment and human health. He stated that phasing out old coal power plants alone has an annual greenhouse gases (GHG) reduction potential of 4 giga tons (GT) of CO₂ by 2050 and explained how this would be about 10 percent of 2010 total emissions level. He added that an increase of 1 gigawatt (GW) of coal fired power generation capacity in India increased infant mortality rate by 15 percent in districts near the plants as compared to those that are away. He then elaborated about the status of coal in India. He said that India is the second biggest individual driver of primary energy consumption growth, which rose by 2.3 percent last year. India's energy related CO₂ emissions continued to rise and they are at 2,480 million tons (MT) of CO₂ in 2019 and coal represents 73 percent of total electricity generation in India. He added that 63 percent of the 200 GW of installed capacity of coal fired power plants is owned and operated by the state and is traditionally financed by the public finances.

He then presented a bar graph which depicted how India's biggest bank, State Bank of India (SBI), coincidentally happens to be the biggest investor in coal as well. He specified that the data presented have been acquired as of 31st March, 2021 and are solely on the basis of filing RTI responses to public sector banks, insurance companies and respective ministries. He pointed out that apart from banks even a few insurance companies like The New India Assurance Company, United India Insurance etc., have hugely invested in coal. He then went on to present the investment in renewable energy by public sector banks and how it compares to that of their investment in coal, stressing that their investments in coal far out-stripped their investment in renewable energy. This is despite the false hype by the media that solar energy is giving tough competition to the coal sector. He later analysed the outstanding loans to the coal sector by different banks and insurers. He said that the new name that crops up in the list of public sector banks having credit exposure to coal is Rural Electrification Corp. He also listed out the public sector banks having non-performing assets (NPA's) in coal with the Bank of Maharashtra topping the list followed by Rural Electrification Corp and SBI. He then summarised the reasons why he thinks that the marriage between public sector banks and coal is in the doldrums. The main reason that he pointed out was non-availability of coal linkages before the start of a new power plant and the problem of disputed coal block allocations. He stated that no proper power purchase agreements are in place and also that the cost overruns because of coal price movements. He talked about a few other causes like litigation over environmental and social concerns and fierce competition from renewable energy. He finally concluded his presentation by stating that delayed payments by banks to distribution companies is also one of the contributing factors.

Topic 2: Energy Finance & Coal in India: Banks and International Finance.

Mr. Rajesh Kumar commenced his presentation by talking about how coal is the largest emitter of greenhouse gases in the energy sector. He added that India is aggressively pushing investments in coal and coal power plants, thereby doing the opposite to global efforts.

He apprised the audience regarding the recent position of India with regards to coal mining. He listed down the various facts right from how in 2019, India opened the coal mining sector to 100 percent foreign direct investment (FDI). He added that in 2020, the government announced auctioning of 41 coal blocks out of which 19 coal mines have been auctioned and taken by major Indian private companies. In January 2021, single window clearance for coal mining was extended and announced that India will invest USD 4 trillion in the coal sector within the next decade. Coal India Limited (CIL) increased its current budget by an additional INR 3000 crores and production target of 660 megatonnes. He stated that Western Coalfields Limited (WCL) has planned to open an additional twenty coal mines by 2023-24 to achieve a production target of 75 million tonnes. He said that these figures give us an indication that India has no plans to exit from coal nor does it have a proper energy transition plan in place. He added that these recent trends prove that coal is still going to be a major contributor in the energy sector mix of India.

He then explained the recent coal financing trend globally as well as in India. He pointed out that from 2015 onwards more than 100 banks and financial institutions around the world have divested from coal. They have developed strict policies on coal related business. On the other hand, he said that 35 global banks financed USD 2.7 trillion for fossil fuels and also the World

Bank financed 12 billion in the fossil fuel industry in India Japan Bank for International Cooperation (JBIC) and other commercial banks in Japan invested over USD 450 million in National Thermal Power Corporation (NTPC). Based on an upcoming study by Centre for Financial Accountability (CFA), he illustrated that financing of about 146 coal plants in India took place during 2005 - 19 period with a generation capacity of over 1 GW and this involved an investment of USD 10 trillion. He mentioned that out of this investment, surprisingly 91 percent of the finance came from Indian banks and non-banking financial institutions (NBFI) and the rest 9 percent from external commercial borrowings (ECBs). He then shifted his focus to the major international financiers in the coal industry. China topped the list with INR 23,720 crores, followed by Japan, UK, US and South Korea. With regard to top ten international financing institutions, he said that China Development Bank (CDB) topped the list with INR 12,422 crores followed by Japan Bank for International Cooperation, Industrial and commercial bank of China Limited (ICBC), and Korea Exim Bank. He pointed out that 59 Indian banks and NBFIs financed 41 percent of INR 8.08 trillion for 116 coal power plants and out of this the major investors are NBFCs with INR 4.18 lakh crores, followed by public and private banks. He then explained about the top ten Indian banks and non-banking investors in coal. Power Finance Corporation Limited (PFC) topped the list with INR 1.99 lakh crores followed by Rural Electrification Corporation Limited (REC), State Bank of India (SBI), Industrial Development Bank of India (IDBI) and Punjab National Bank (PNB). He also illustrated that as far as the top five state-wise lendings are concerned, Uttar Pradesh topped the list followed by Chhattisgarh, Madhya Pradesh, Tamil Nadu and Odisha. He raised concerns over the growing stressed assets and non-performing assets in the coal power sector. He also mentioned that the private sector has the largest stressed assets to an extent of 89 percent. He emphasised that on one side India is rapidly investing in renewable energy but on the other side it is aggressively pushing the coal industry as well. The government talks about the need to privatise coal but at times it reiterates that the monopoly of coal must be back with the public sectors. He concluded by saying that this kind of double standards by the Indian government should stop and it should take a serious stance on where it stands on coal related policies and frame proper guidelines and mechanisms to move away from coal.

Topic 3: Can the banking sector redeem itself while catalysing “just transition” of the Indian energy sector?

Mr. Thomas Franco began his talk with a thought-provoking message – “Just transition depends on the government and whether it wants justice for the majority of the people.” He went on to elaborate about how SBI is the biggest lender in the energy sector with outstanding loans to the extent of INR 1,97,359 crores as per the Parliament Committee report, followed by Bank of Baroda, Canara Bank, Bank of India and Punjab National Bank. These banks usually get into a consortium led by SBI and its decision has a major impact on energy finance. He added that SBI has become a replica of the government and its orders are followed by SBI and the rest of the consortium. He enlightened us about the various issues in the energy sector. He elaborated on the following points that were outlined by CFA based on the critical review of the 37th report of the Parliament Standing committee on energy finance .

- No proper norms issued by Reserve Bank of India (RBI) with regard to lending for various sectors. A clear-cut criteria in lending has to be in place with a prior analysis regarding the impact on the environment and climate before approving a project.
- Promoters of projects who have not done due diligence are not held accountable with the current mechanism in place.
- Fixing of accountability between bank and financial institutions. Whenever a loan goes bad it is the lower ranked officials who are held responsible and given a charge sheet but the actual decision is done by the board and these members are not penalised.
- Depositors' money in the banks become loans which in-turn become non performing assets (NPAs).
- De-licencing while lending to the growth and energy sector: Licensing is a must if we are aiming at 'just transition'.
- Lack of proper power purchase agreements (PPAs): The agreements unfortunately favour the private sector instead of the public sector.
- Over projection of demand: This is done by unrealistic projections by the government.
- Restructuring loans if there is scope for recovery: Due diligence has to be followed on bad debts analysis to figure out whether the reason is due to wilful default or due to constraints in the energy sector.
- Apathy towards the Paris Agreement: The public sector banks do not insist on checking whether proper environmental clearance has been obtained before granting loans to new projects.

The following suggestions were put forth by him as a probable solution to the above findings:

- ❖ Privatization of the energy sector should be put an end to and the government alone should have full control. This would reduce the NPAs to a huge extent as public sectors operate with a motive of serving the people.
- ❖ RBI should rethink its norms on lending. Banks should lend to projects only after they have obtained proper environmental clearance (EC).

He concluded his talk by saying that the onus of "Just transition" lies with the government. If the government is willing to take the responsibility of obtaining proper environmental clearance on new projects and addresses issues on climate change and other related concerns, then 'Just transition' is definitely possible.

Day 2

Right from coal mining to power distribution, the energy sector has a plethora of problems of which most of them contribute to climate change. Coal financing is one of the maintaining factors in this scenario. Thus, the discussions about policy instruments and incentives on day two of this workshop helped us understand a strategic way forward to discourage financing of new coal and encourage a just transition towards renewable energy.

Topic 1: TANGEDCO's Recipe for Recovery: Retiring Old Coal, Stopping New Build & Boosting Renewables

Mr. Ashish Fernandes, who belongs to Climate Risk Horizon, presented the topic based on his recent study in collaboration with his colleague Mr. Harshit Sharma. This study presents a simple strategy for recovery of financial debts by TANGEDCO, which is an electrical power generation and distribution public sector undertaking of Tamil Nadu government. He started his presentation with the fact that TANGEDCO has around INR 22,000 crores of financial dues. This is for several reasons including the fact that the cost of electricity supply is INR 2 more than the recovered amount per unit of electricity.¹ Nowadays, Renewable Energy (RE) is cheaper than most of the existing coal energy and RE with storage is cheaper than constructing new thermal power plants. Around 3.1 GW of coal power projects have been commissioned and another 3.5 GW of new coal power projects are at early stages of construction in Tamil Nadu. Thus, the study has proposed the following cost-recovery strategy:

1. Giving up coal usage by phasing out plants that are 20 years and older can save INR 6,097 crores in the first year and INR 30,485 crores in next five years. Also, INR 1,670 crores can potentially be saved by avoiding the cost of retrofit .
2. Not building more coal power plants and freezing expenditure on early stage plants can save upto INR 26,514 crores.
3. Switching retired conventional energy sources with renewable energy can potentially save INR 1,459 crores in the first year and INR 7,295 crores in next five years.

This overall strategy can help Tamil Nadu DISCOMS and the state government to potentially save a big amount of INR 34,100 crores in first year and INR 57,766 crores in next five years. He concluded his presentation by saying that there is a significant cost-benefit from implementing the above strategy and it will also prevent TANGEDCO from expensive power purchase/ fixed cost obligations, thus, boosting energy transition in Tamil Nadu.

Topic 2: Decarbonising energy sector in Tamil Nadu: incentives and instruments

Since India is looking ahead to achieve the nationally determined targets (NDC) of 33-35 per cent reduction in “emissions intensity” by 2030 relative to 2005 and 40 percent of the total electricity capacity to be based on non-fossil fuel sources by 2030, it is a crucial topic of discussion not only for Tamil Nadu but also for the whole country. The presenter of this topic, Mr Soumya Dutta, is a co-convenor of South Asian Peoples Action on Climate Crisis (SAPACC)

¹[PRAAPTI](#)

and a member of the advisory board of the UN Climate Technology Centre and Network. He has recently done immense research and field work in several districts of western Rajasthan, and could thus share practical knowledge about the crucial incentives and instruments that are promoting a rapid transition to low-carbon Renewable Energy (RE) sources. These can consequently improve financial, social and environmental circumstances in each and every state in India.

In the above context, he first talked about the different level of challenges associated with decarbonisation of energy sector, as follows:

Level 1: Electricity (power) production sector, mainly based on coal, lignite, natural gas, diesel generators etc.

Level 2: Industrial heat production for manufacturing cement, steel etc, using coal, oil and gas.

Level 3: Use of fuels such as diesel, kerosene, petrol, CNG and LPG in the transportation sector, agricultural sector and for domestic purposes.

Level 4: Embedded carbon emission from production.

Level 5: Embedded carbon emission from consumption.

He then presented the five important reasons for decarbonisation as well as denuclearisation of the energy sector, which are:

1. Climate change and its impacts such as rising natural disasters, decreasing agricultural productivity and emergence of new diseases.
2. Combustion of fossil-fuel like coal and oil emit SO_x, NO_x, CO, Hg etc., which leads to massive health impacts on people of all ages and premature deaths in India due to rising air pollution.²
3. Water pollution from releasing chemicals and water from boilers into nearby water bodies severely impacts fisheries and agriculture.
4. Scarce water resources are utilised by water guzzling sectors like thermal power plants and nuclear power plants, leading to their depletion.
5. Impact of radio-active nuclear waste.

He then stressed on the official data which says that in the southern Indian states like Tamil Nadu, Karnataka, Andhra Pradesh and Telangana the contribution of RE in power generation has jumped up in recent years.³ He then shared his own analysis, which shows that coal and lignite thermal power generation (around 10,000 MW) leads to 52-55 million tons of carbon dioxide emission per year, which can vary with commissioning of new power projects, decommissioning of old power projects, lack of coal supply etc. However, this level of emissions are alarming for Tamil Nadu. He mentioned that an additional 12-15 percent of emission comes from transportation, processing and mining activities before the coal/lignite is even used for energy production. Another crucial pollution source analysed and presented by him for Tamil Nadu was petroleum consumption for transportation, industrial heating etc., which was found to

²[Health and economic impact of air pollution in the states of India: the Global Burden of Disease Study 2019](#)

³[Southern States generate 50% of India's renewable energy](#)

be 15 million tonnes in year 2019 (excluding aviation turbine fuel and shipping fuel) leading to 45-47 million tonnes of CO₂ emissions and additional 12-15 percent due to exploration, drilling, refining and transportation.⁴

Following the challenges and reasons for decommissioning, he talked about the solutions to decarbonising the power sector:

1. Present average power demand is around 15,000 MW and present total installed RE capacity is 16,000 MW in Tamil Nadu. Even though the installed capacity exceeds demand, the actual energy output is just about 20 percent of this, due to low efficiency of current technology.
2. Advancement in technology is the need of the hour to increase the PLF (Plant Load Factor) of solar power from 18 percent to 25 percent.
3. Average PLF of modern turbines is 24 - 25 percent.
4. A combined installed RE capacity of 50,000 MW - 60,000 MW is necessary for running Tamil Nadu's energy sector completely on renewable power at present power consumption levels.
5. The energy storage through methods like pump, gravity etc., should be 20 percent of total RE capacity for complete dependence on RE.

At the current level of energy demand, an additional 45,000 MW of RE is needed, which requires around INR 220,000 crores of investment, he said. There can be further increase in investment, for the following reasons: :

1. Additional power evacuation through low voltage grids placed at good sites.
2. Meeting demand fluctuations by investing in storage capacity of 6 - 24 hours.
3. Funding for increasing energy production efficiency by 50 to 60 percent to meet additional energy demand in the next 10 years.

He also mentioned that Tamil Nadu has excellent solar and wind power generation potential. The government announced the Tamil Nadu solar policy, 2019, with a target of 9,000 MW of new solar capacity to be added by 2023. The 3,500 MW of this new capacity will be from the consumer category i.e. rooftop photovoltaic and 5,500 MW from the utility category. However, extra-efforts are required for stringent implementation to boost consumer category contribution by 2023. Also, the large land requirement of 2 lakh acres (assuming 4 - 5 acres/megawatt) to install 50,000 MW of higher efficiency solar panels by 2030 is a major obstacle in implementing energy transition to renewables in Tamil Nadu. This can be addressed by taking advantage of existing transition support mechanisms such as the Pradhan Mantri Kisan Suraksha Abhiyan Utthan Mahabhiyan (KUSUM) Yojana. However, there are certain bureaucratic hurdles and a lack of knowledge among farmers and local people that prevents them from taking advantage of such incentives. He concluded that the currently available mechanisms should not only focus on decarbonisation but also de-corporatisation of the energy sector, along with decentralisation. The cost-benefits from decarbonisation of the energy sector in Tamil Nadu through strategies discussed by Mr Ashish Fernandes can be doubled by combining it with the benefits from

⁴[Energizing India's progress, annual report, 2019-20](#)

installing solar photovoltaics on agricultural lands by farmers. Thus, farmers should be encouraged by banks and bureaucrats to take up such opportunities to generate extra income and parallelly contribute to energy transition to create a win-win situation.

If you missed the event, please find the Day 1 recording [here](#) and Day 2 recording [here](#).