

Towards an Inclusive and Cohesive Low Carbon Development (LCD) in Jharkhand

Under the Project

Building an Inclusive and Cohesive Public Climate Financing Framework

Roundtable Discussion, 26th November 2022, in Collaboration with St. Xavier's College, Ranchi

Content of the Presentation

About CBGA past experiences, project rationale and objectives	Page 3
Impact of Covid'19 on Jharkhand's Economy	Page 6
Leveraging the state financing for climate actions is need of the hour!	Page 4
Why the energy Sector?	Page 9
Methodology	Page 12
Issues in the Landscape of Efforts, Budgets and Cohesive Policies for Low Carbon Development (LCD) of Jharkhand	Page 13
Policy Suggestions for the LCD of Jharkhand	Page 23

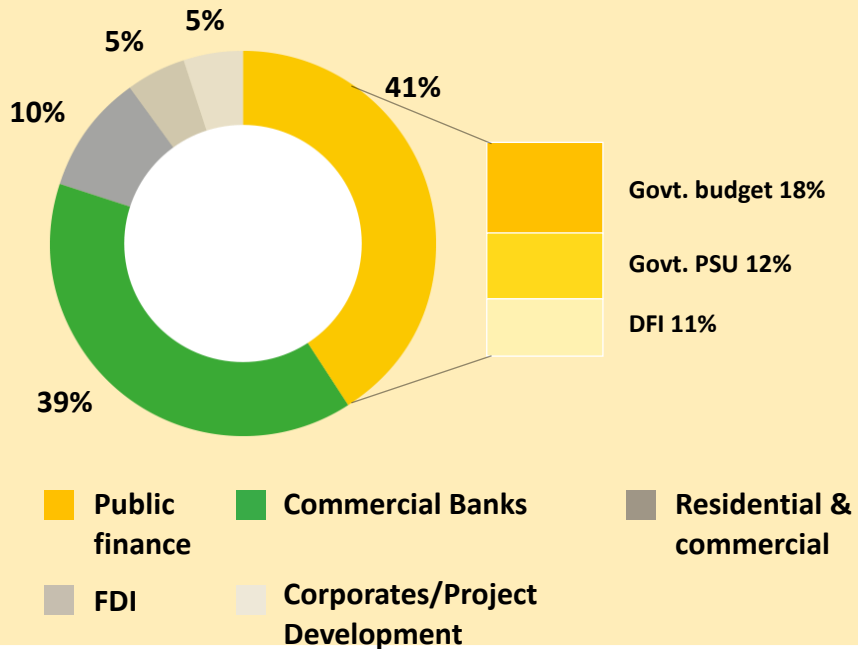


CBGA Areas of Work in Climate Finance



Tracking available public finance at the National and sub-national level

Public Financing Accounts for 41% of Climate Finance in India



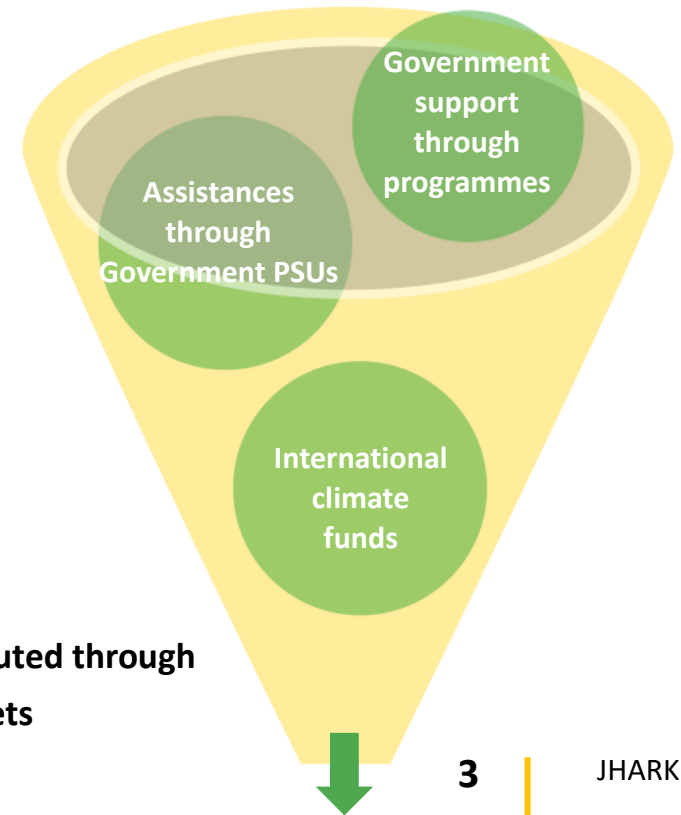
Developing knowledge resources

Developing and conducting capacity building programmes

Strengthening the financing of State Action Plan of Climate Change

Policy engagement for bringing in equity and inclusion in climate actions

Governance is central to managing and leveraging Climate Finance



All routed through budgets

Source- Climate Finance Landscape of India, 2019, by CPI

Leveraging Jharkhand state's financing for climate actions is need of the hour!



When the economic recovery path is consistent with sustainable development the economy should be strong enough to withstand sudden shocks (pandemic or climate).

Globally a lot of rethinking and planning is taking place to avoid practices detrimental to the environment. Hence the agenda of climate change and economic recovery go hand in hand.

Energy is one of the main drivers of any economy and has great potential to reduce greenhouse gas emissions. Our research focuses on clean energy transition in Jharkhand.



There is need to bring in public discourse, policy recommendations how to mainstream climate concerns in developmental actions and leverage climate finance through cohesive public financing and policies.

Impact of Covid-19 on Jharkhand Economy



The overall estimates of **growth rate** of Jharkhand Economy for FY-2020-21 was (-)4.7 per cent*.



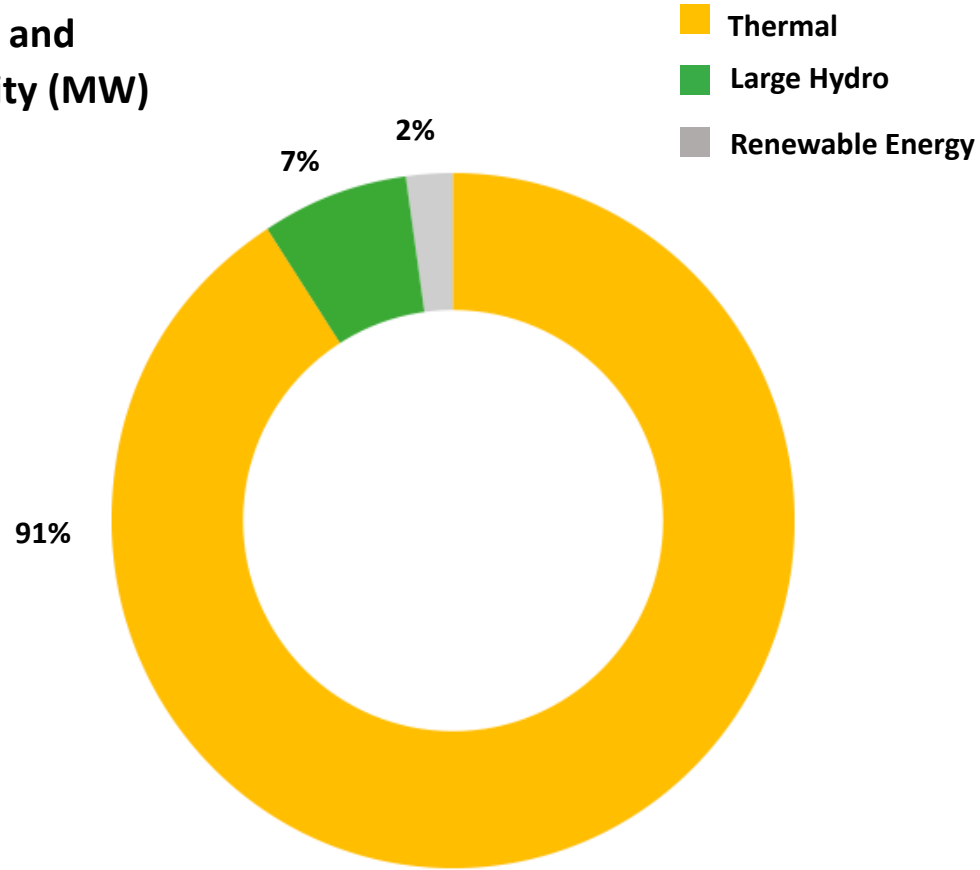
Highly impacted sector are - **Construction**, Manufacturing, Road Transport



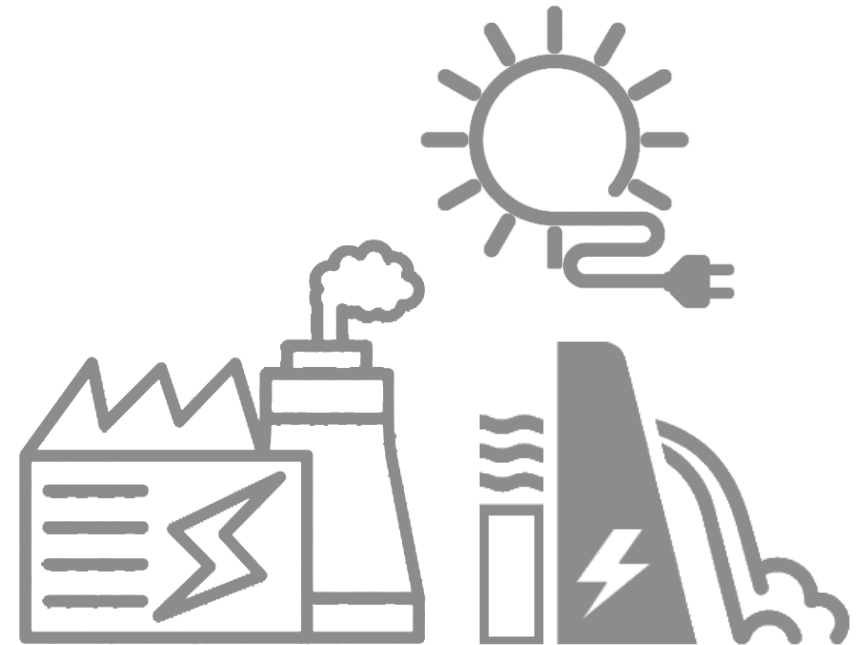
Unemployment Rate (UER) of Jharkhand is 16.5 per cent, which is much higher than national UER of 7.1 per cent for month of November 2022**

Current Energy Mix in Jharkhand

Share of Total installed and allocated power capacity (MW)



Source: CEF (Center for Energy Finance) 2020



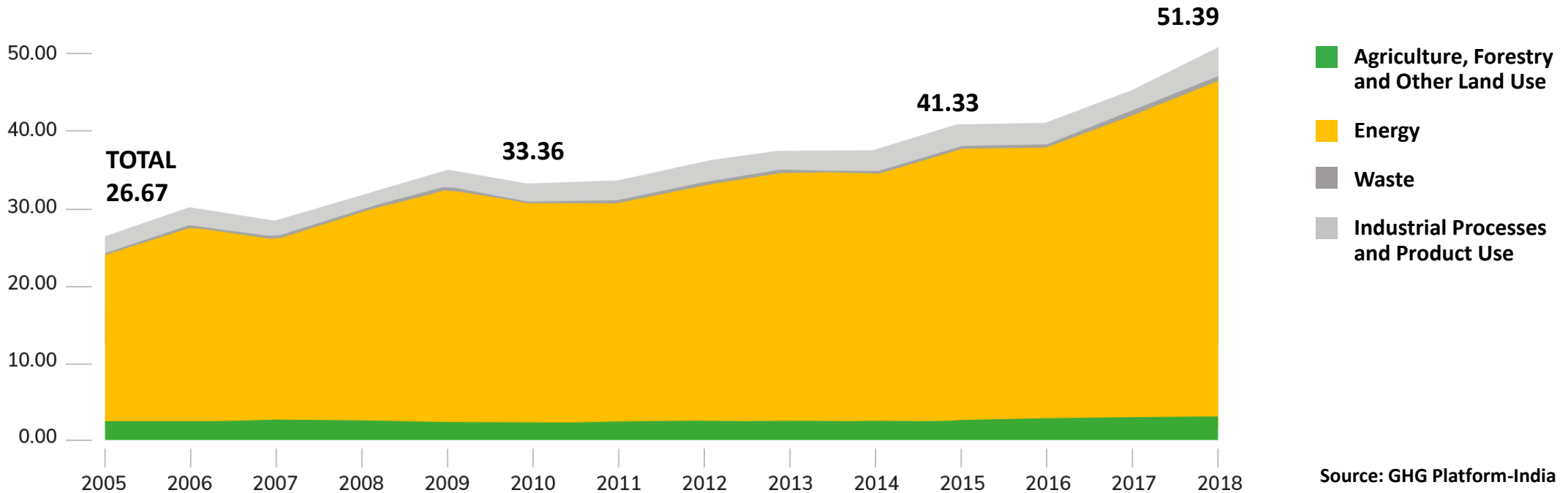
Why the energy sector?

Have the highest Greenhouse Gas (GHG) emission compared to other sectors

Is showing a rising trend

From 2005 to 2018, there has been a 102% increase!

Emission estimates (Mt CO2e)



Source: GHG Platform-India

Project Objective and Rationale

Project Objective

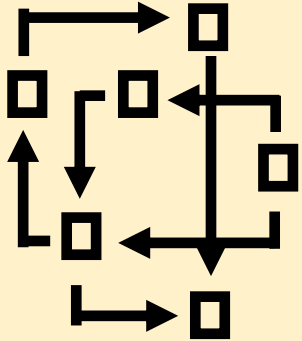
The project aims to bring in **cohesiveness in public policy** for accelerating low carbon development and making it robust to cope with pandemic shocks, reducing climatic vulnerabilities and bringing social benefits



Project Rationale

- **Resources required for meeting India's Nationally Determined Contribution (NDC) is very high:** around INR 11 trillion per year. Not possible to expect a significant proportion of this to be financed through govt. (Union and States') budget.
- **Need for complementing public climate finance resources with external resources:** Flow of high volumes of private sector investment in climate mitigation actions not going to be automatic but need to be induced through cohesive policies and interventions by governments (Union and State).
- **Need for public finance de-risking investments in climate mitigation actions:** At the level of States, this would require designing and pursuing such climate financing arrangements. This in turn, requires generation of adequate information and knowledge resources that external (domestic private sector and international) actors could draw upon.

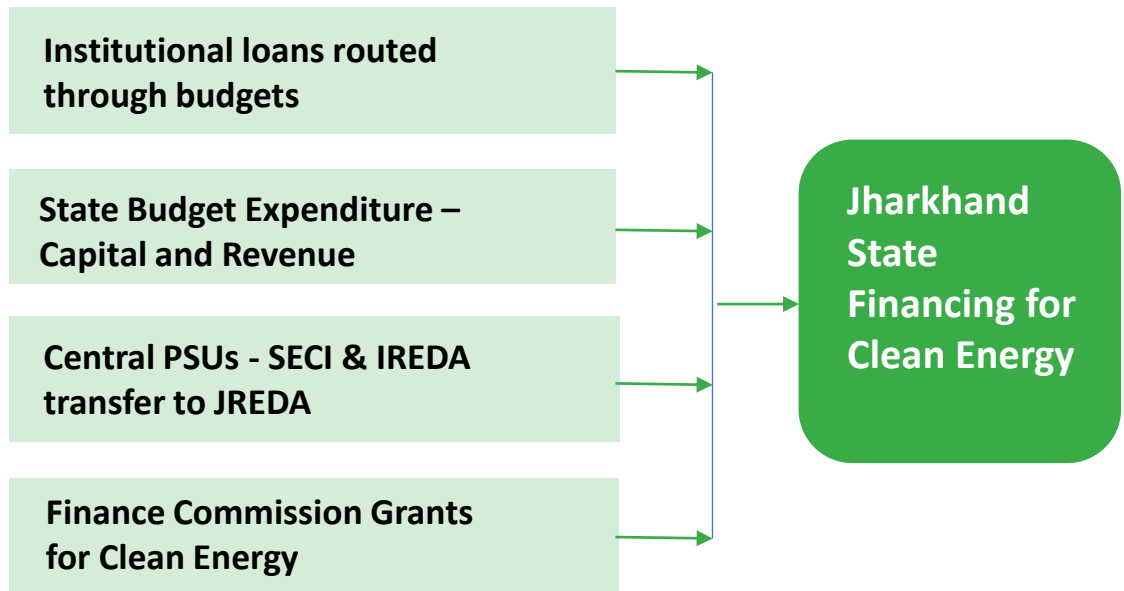




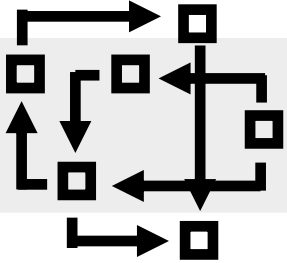
The resource envelope of Jharkhand power sector was assessed and plausible estimates on finances were made across the following aspects and channels:

- Budgetary allocations from the Energy Department, Government of Jharkhand
- Share of international loans in budgetary allocations from the Energy Department
- Internal and Extra Budgetary Resource (IEBR) reimbursement to Jharkhand through Central PSUs in the power and renewable energy sector
- Finance Commission Grants (if any) with respect to clean energy

Different channels of energy financing



Methodology



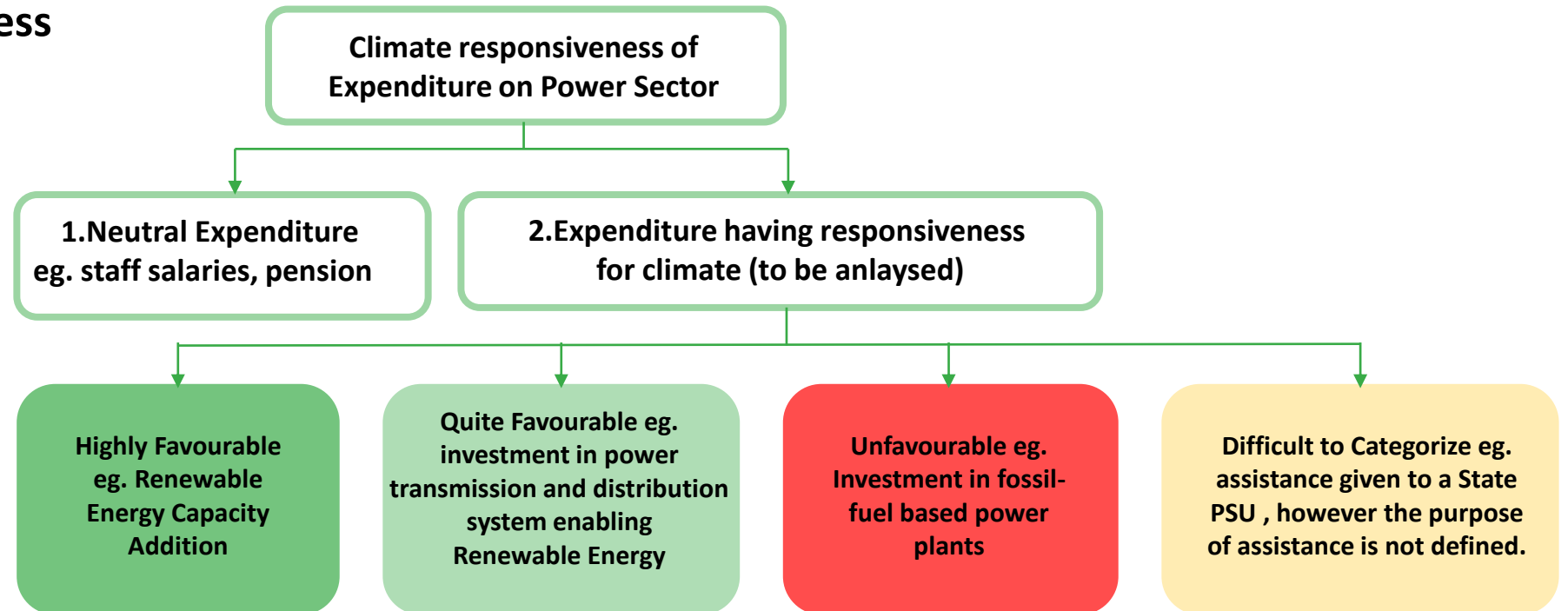
Understanding the coherence of State Budgetary Expenditure in reaching a clean energy transition to make progressive budget decisions to leverage climate financing: categorisation framework

Climate Responsiveness Categorization

Step 1: Identification of key department(s) for power sector

Step 2: Identification of Budget lines that is, neutral or “with climate mitigation responsiveness”

Step 3: Rating the responsiveness of budget expenditure for Climate Change Mitigation (clean energy transition)



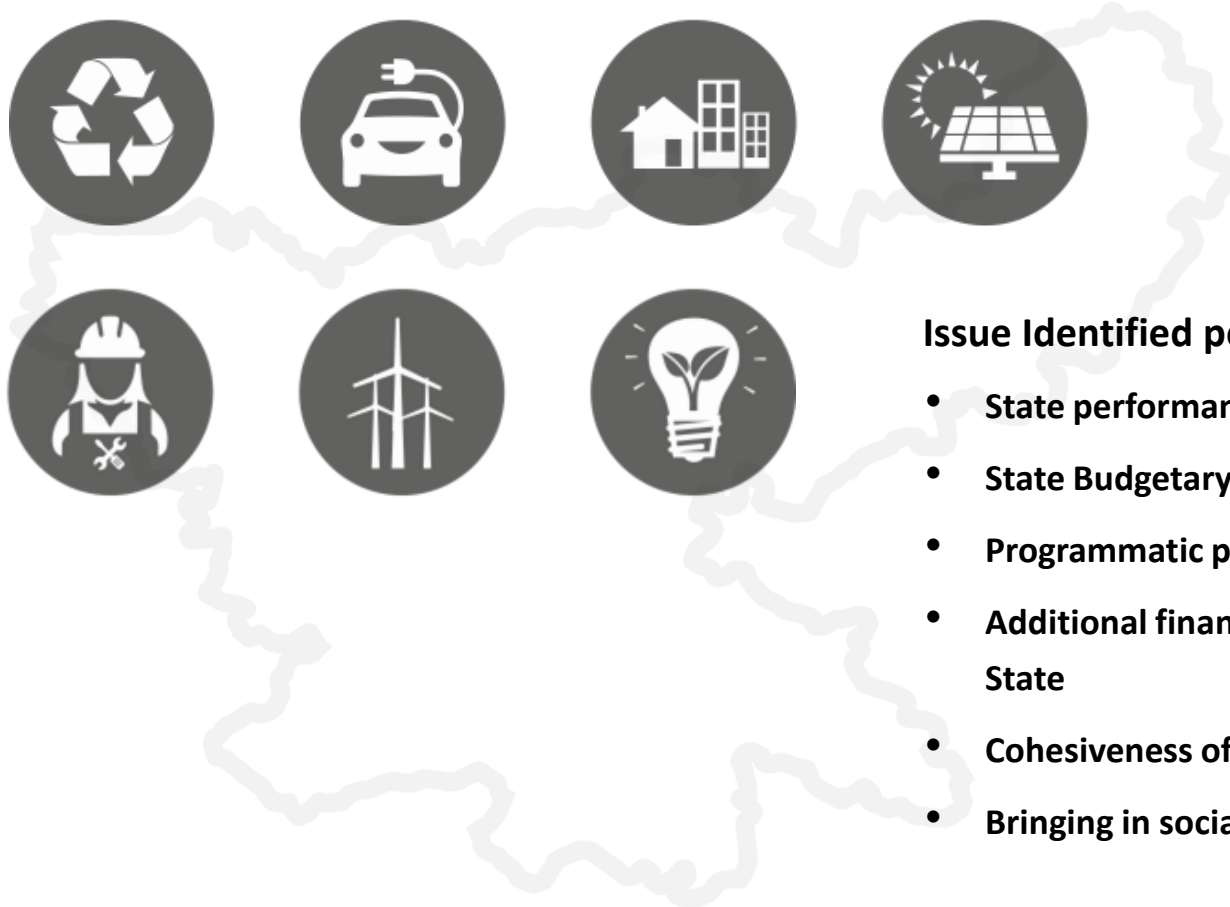


Key findings from Climate Responsiveness Categorization

Expenditure towards various categories of climate mitigation impact of Jharkhand State Power Budget towards Climate Change Mitigation (in Rs. crore)

Categories	Highly Favourable	Quite Favourable	Neutral	Unfavourable	Total
2017-18 A	1,381.87	174.00	4,260.93	15.00	5,831.80
2018-19 A	281.86	653.95	3,219.39	0.00	4,155.20
2019-20 A	155.00	95.57	2,897.85	0.00	3,148.42
2020-21 A	729.80	888.01	5,228.97	0.00	6,846.78
2021-22 BE	593.00	1,358.74	2,414.99	0.00	4,366.73
2021-22 RE	710.91	872.01	3,709.53	0.00	5,292.45
2022-23 BE	1,019.00	1,159.02	2,626.92	50.00	4,854.94

Issues in the Landscape of Efforts, Budgets and Cohesive Policies for LCD of Jharkhand



Issue Identified pertaining to:

- State performance of clean energy addition
- State Budgetary provisions
- Programmatic planning for clean energy addition
- Additional financing channels for clean energy transition to the State
- Cohesiveness of clean energy policy for leveraging finance
- Bringing in social sector improvement

Issue: State unable to meet its RE targets

The Government of Jharkhand set up a target of 2650 MW of renewable energy sources by 2022 to reduce its dependence on conventional sources of energy. However, only 92 MW of solar power has been added till 2022. Thus, there is a massive gap. (10.98%)

No policy documents have been released by the state for the targets of other RE components, thus making it difficult to track the progress.

Physical Progress made by Jharkhand in Renewable Energy Capacity Addition (MW)

Total till 2022 291.22 MW

	Achievement till 2022	RE Target by year 2022 as per Jharkhand RE Policy	RE Target by year 2026 as per Jharkhand Solar Policy
Solar power	91.82	2650	4000
Bio Power	4.3		
Wind Power			
Hydro Power	195.1		

Source: Ministry of New and Renewable Energy (MNRE) data
Accessed in September 2022

Issue: State Budgetary provisions for clean energy

Stressed Public finance situation post pandemic in Jharkhand and its probable implication in terms of non-prioritisation of requisite energy sector spending

Less than 1 per cent of state total budget expenditure being spent for addition of Renewable Energy

Favourability of power sector budget for **clean energy transition has been low**

Jharkhand state spending on power sector versus total state budget expenditure (Rs. Crore)

	Jharkhand Total Budget Expenditure	Energy Sector Budget	Renewable Energy Budget	Energy Versus Total State Expenditure (%)	RE versus Total Energy Expenditure (%)
2018-19 A	65512	4155	282	6.3	6.8
2019-20 BE	85429	5323	807	6.2	15.2
2019-20 A	70732	3148	155	4.5	4.9
2020-21 BE	86370	4953	584	5.7	11.8
2020-21 A	73854	6847	730	9.3	10.7
2020-21 RE	80007	3638	584	4.6	16.1
2021-22 BE	91277	4367	593	4.8	13.6
2021-22 RE	89208	5293	711	5.9	13.4
2022-23 BE	101101	4855	1019	4.8	21.0

Source: CBGA analysis of Jharkhand state budget and detailed demand for grants for department of energy, Jharkhand

Impact of Covid-19 on Jharkhand Economy



Total budget expenditure of various state departments over the years- post and pre-covid (Rs Crore)

Department	2017-18 A	2018-19 A	2019-20 A	2020-21 BE	2020-21 RE	2020-21 A	2021-22 BE	2021-22 RE	2022-23 BE
Urban Development and Housing	3,028.4	2,066.4	2,559.2	2,549.8	2,827.1	2,912.1	2,827.1	2,641.7	3,055.0
Drinking Water and Sanitation	1,661.5	1,683.6	1,180.2	3,089.1	3,372.2	1,278.9	3,372.2	1,850.0	4,054.4
Transport, Roads and Buildings Department	263.0	153.5	186.5	385.9	258.2	376.5	258.2	258.5	261.6
Water Resources Department	2,094.9	1,883.8	1,722.7	1,559.0	1,667.6	1,422.7	1,667.6	1,677.5	1,894.5
State Total	67,704.3	65,511.9	85,429.0	70,731.7	80,007.1	73,853.8	91,277.0	89,207.9	1,01,101.0

Share of various department budget in total state budget expenditure (%)

Department	2017-18 A	2018-19 A	2019-20 A	2020-21 BE	2020-21 RE	2020-21 A	2021-22 BE	2021-22 RE	2022-23 BE
Urban Development and Housing	4.5	3.1	3.8	3.8	4.2	4.3	4.2	3.9	4.5
Drinking Water and Sanitation	2.5	2.5	1.7	4.6	5.0	1.9	5.0	2.7	6.0
Transport, Roads and Buildings Department	0.4	0.2	0.3	0.6	0.4	0.6	0.4	0.4	0.4
Water Resources Department	3.1	2.8	2.5	2.3	2.5	2.1	2.5	2.5	2.8

Source: CBGA analysis of Jharkhand State Budget and Detailed Demand for Grants

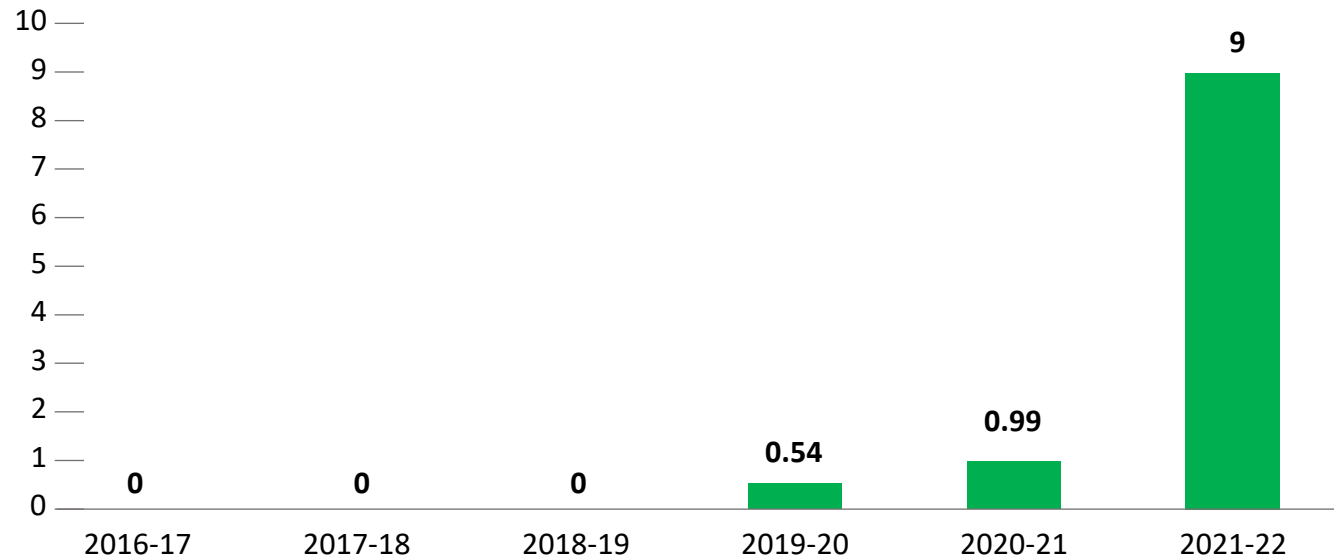
Issue: Other financing channels supports for clean energy transition

Huge dependence on loan component for building Transmission and Distribution infrastructure

Fund transfers from Central PSU-IREDA has been poor in Jharkhand

No grants for renewable energy sector from Finance commission recommendations to any state

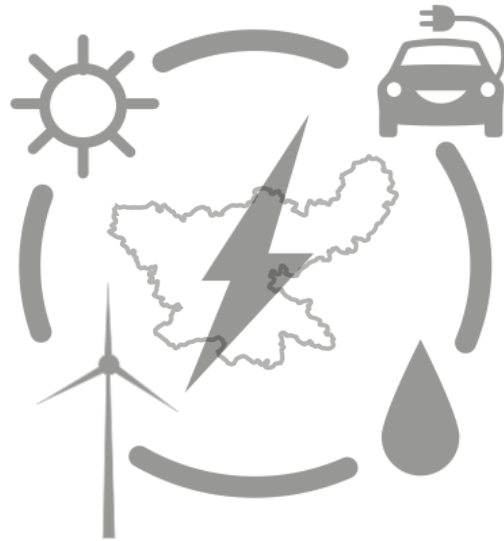
Disbursement through central PSUs such as Indian Renewable Energy Development Agency (IREDA) to Jharkhand (Rs crore)



Issue: Programmatic Planning Across Sectors

Jharkhand till date **does not have an EV policy** in public domain and implementing rigid vehicular norms can be a challenge without it

State is **dependent on coal mines** for its energy demands but they are not profitable



Key urban schemes such as Swachh Bharat Mission and AMRUT does not mainstream climate concerns in their planning and implementation.

No designed programmes for **low carbon development of Urban Development sector**

Planning for Green Budget of Jharkhand is immediate requirement for laying cohesive public policies for climate actions

Key Objectives under Solar Energy Policy, 2022



Deploy a cumulative capacity of 4000 MW in the state by 2027 through a diversified project portfolio across scales, locations and applications.

Increase the share of solar electricity in DISCOM's energy purchase to 12.5% by 2023-24, subsequently increasing in line with the State Commission's notified RPO trajectory.

Support domestic manufacturing of solar PV technologies, its components such as energy storage and related ancillaries.

Provide avenues for private players and all electricity consumers to collaborate with the Government and invest in projects across various categories and applications.

Targets for the Solar Development in the state over the 5 years as per Solar Policy

*The minimum size of the solar PV power plant at single location shall be 1 MW.
 **The minimum size of the Rooftop solar PV power plant at single location shall be 1 KW.

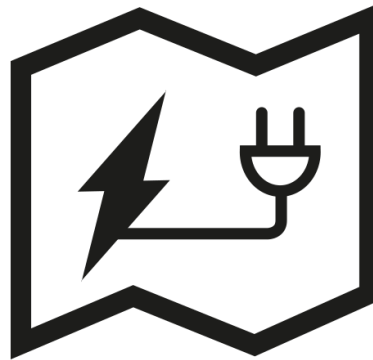
Source: Jharkhand State Solar Policy 2015

	New capacity (MW)		
	Solar Photovoltaic Power Plants*	Rooftop Solar Power Plants**	Solar Thermal Power Plants
2015-16		25	5
2016-17	250	50	10
2017-18	500	100	10
2018-19	500	125	10
2019-20	750	200	15
Total	2100	500	50

Issue: Related to cohesiveness on clean energy policy for leveraging finance



Lack of monitoring process on the performance of renewable energy targets in government renewable energy policies



While measures have been announced to improve private participation, state yet to establish a **roadmap for implementation** to continue programs as with mainstreaming climate actions across the sectoral policies and accordingly dis-aggregated budget allocations need to be ensured.

Issues: Cohesiveness on clean energy policy

Lack of **monitoring process** in the State RE policy of its performance on achievement of RE targets

While the measures are announced for improving private participation such as exemption, land clearance to project developers etc., there is **lack of single window clearance system** or **land pool** demarcated for RE project in Jharkhand.

Lack of robust strategy for **reducing transmission and distribution losses** under stipulated limit

RE policy acknowledge the promotion of off grid RE technologies, but the **lack of implementation guidelines** is another fallout

Despite union government guidelines by MoHUA on Climate Smart Cities Assessment Framework (CSCAF) 2019, Jharkhand yet to build a road map for implementing the union level programmes in a business as usual manner without mainstreaming **climate actions in Urban development policies** or budgetary allocations.

Issue: Related to social concern inclusion

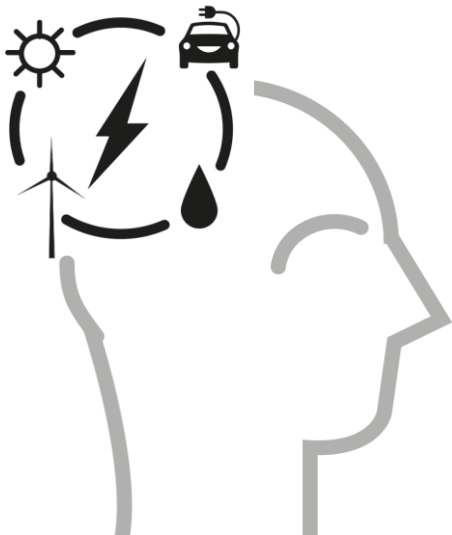


Lack of **clear targets on job creation and skilling** in Renewable Energy Policy despite policy acknowledges the socio economic development as key co-benefit.

Department is committed to participate in initiatives like *Aam Admi Bima* Yojana, upgradation of ITIs, Converting ITIs in centres of Excellence, conversion of Employment exchanges into Model career centre etc. However, existing skilling programmes have not yet included **clean energy industry related skilling objectives**.

State rural livelihood missions (SRLMs) and various departments already operating several skilling schemes mandated for welfare of vulnerable segment of population- Women, farmers, SC- ST , rural youth etc. Currently, there is **lack of disaggregated information on interfacing programmes and departments with job opportunities in DRE application**.

There is no specific target for training is stipulated and enrolment has been poor even though some courses are operational in **solar industry related skilling**.



Issue: Lack of clear targets and inclusion of social benefits

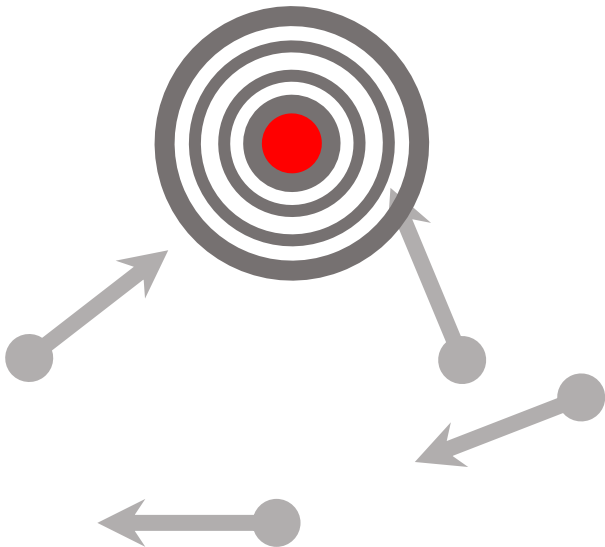


Jharkhand state budget does not have a **separate section for the skill development** or creation of green jobs.

The state government has developed policies bolstering renewable energy, but the policymakers have fallen short in terms of addressing the **issue of coal-dependent workers** that makes the energy transition quite challenging.

The mining districts have an existing financial mechanism called the **District Mineral Fund**. This is designed for mines affected workers to reduce poverty and inequality (Green skills still a far reach).

As per the new solar policy of 2022, state will facilitate complete **solarization of 1000 villages**, and creation of new jobs within the operative period of this policy. Would help create off grid solar specific jobs in the rural regions- successful implementation is still a challenge.



Policy suggestions

1. State needs to priorities the renewable energy sector spending as highly favourable for LCD transition and need for phasing down unfavorable expenditure

Highly Favourable

- Grant- in- aid to Jharkhand Renewable Energy Development Agency
- Jharkhand solar pump scheme

Quite Favourable

- Transmission and Distribution
- Backward Area Grant Fund for Electrification
- Farmers connection (Mukhyamantri Krishi Vidyut Rishta Nishchay Yojana)
- Electrification for Irrigation purpose

Neutral

- Repayment of loans, Salaries, Grant in aid to Jharkhand State Power (holding) Company Ltd.

Unfavourable

- Thermal Power Generation
- Coal blocks investments



Policy suggestions

1. State needs to priorities the renewable energy sector spending as highly favourable for LCD transition and need for phasing down unfavorable expenditure

Expenditure towards various categories of climate mitigation impact of Jharkhand State Power Budget towards Climate Change Mitigation (in Rs. crore)

Categories	Highly Favourable	Quite Favourable	Neutral	Unfavourable	Total
2017-18 A	1,381.87	174.00	4,260.93	15.00	5,831.80
2018-19 A	281.86	653.95	3,219.39	0.00	4,155.20
2019-20 A	155.00	95.57	2,897.85	0.00	3,148.42
2020-21 A	729.80	888.01	5,228.97	0.00	6,846.78
2021-22 BE	593.00	1,358.74	2,414.99	0.00	4,366.73
2021-22 RE	710.91	872.01	3,709.53	0.00	5,292.45
2022-23 BE	1,019.00	1,159.02	2,626.92	50.00	4,854.94

2. There needs to be a just transition and livelihood development in the state



Unlike other states, where just transition is about creating alternatives to formal mine workers and formal coal economy, in Jharkhand, just transition is about structural changes and a broad-based socio-economic transition involving:

- Economic diversification & industrial restructuring;
- Social infrastructure investments;
- Mine reclamation and coal-mine area re-development;
- Restructuring of coal PSUs.

Policy suggestions

3. State can develop a framework for creation of livelihood from Decentralised Renewable Energy (DRE) technologies and capacity building of local population for livelihood in clean technologies

Decentralised / off- grid Renewable Energy (DRE) powered livelihood solutions have the potential to reduce the reliance of livelihood on diesel and can supplement the grid supply. Apart from creating jobs, these applications would help achieve self-reliance which is important for inclusive and green economic recovery of Jharkhand

So far, only solar energy has been added to the RE targets as other source policies are yet to be formalised by the state

Instead of reinventing the skilling policy, some existing schemes being operated by social welfare department, for example Model Solar Villages scheme in the solar policy 2022, service sector training of women, can have inclusion of certain domain specific trainings for service sector related job opportunities in DRE sector or other climate mitigation interventions. There should be organisations to coordinate and train Self Help Group (SHG) women for providing after-sales and repair service at the local level, and thereby facilitate in creating green jobs.

Schemes such as Suryamitra can be incorporated at state level. Designing a skilling programme for interstate replenishment of the requirement of the workforce in the RE industry through Rural Self Employment Training Institutes (RSETIs).

Physical Progress made by Jharkhand in Renewable Energy Capacity Addition (MW)

Total till 2022 291.22 MW

	Achievement till 2022	RE Target by year 2022 as per Jharkhand RE Policy	RE Target by year 2026 as per Jharkhand Solar Policy
Solar power	91.82	2650	4000
Bio Power	4.3		
Wind Power			
Hydro Power	195.1		

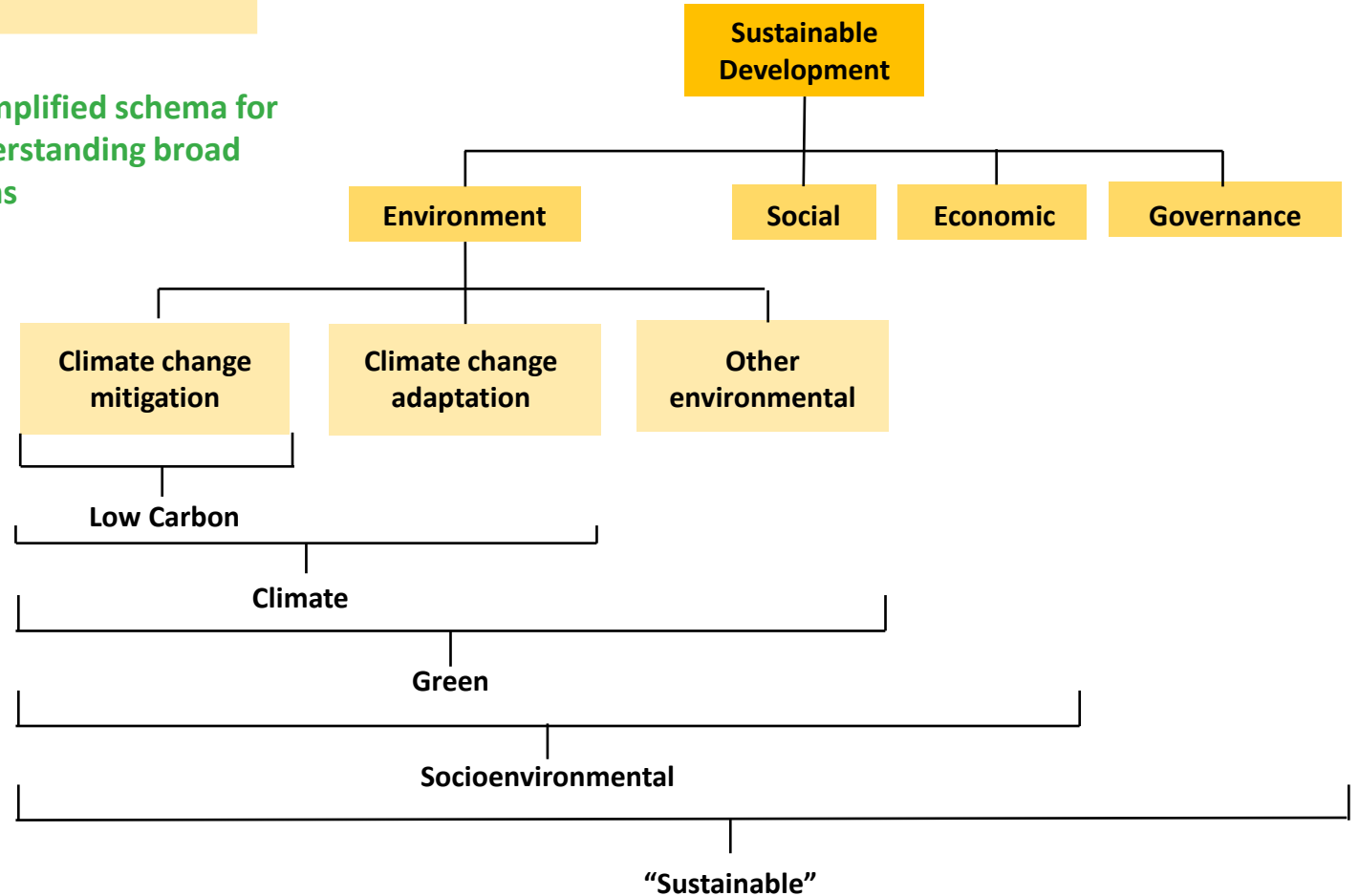
Source: Ministry of New and Renewable Energy (MNRE) data Accessed on 5th November, 2021

Policy suggestions

4. Jharkhand should adopt green budgeting process

There is need for developing climate responsive budgeting tools which links the budgetary allocation with expected outcome indicators and there is need of annual appraisal of performance of climate budget or green budget being implemented by the state.

A simplified schema for understanding broad terms

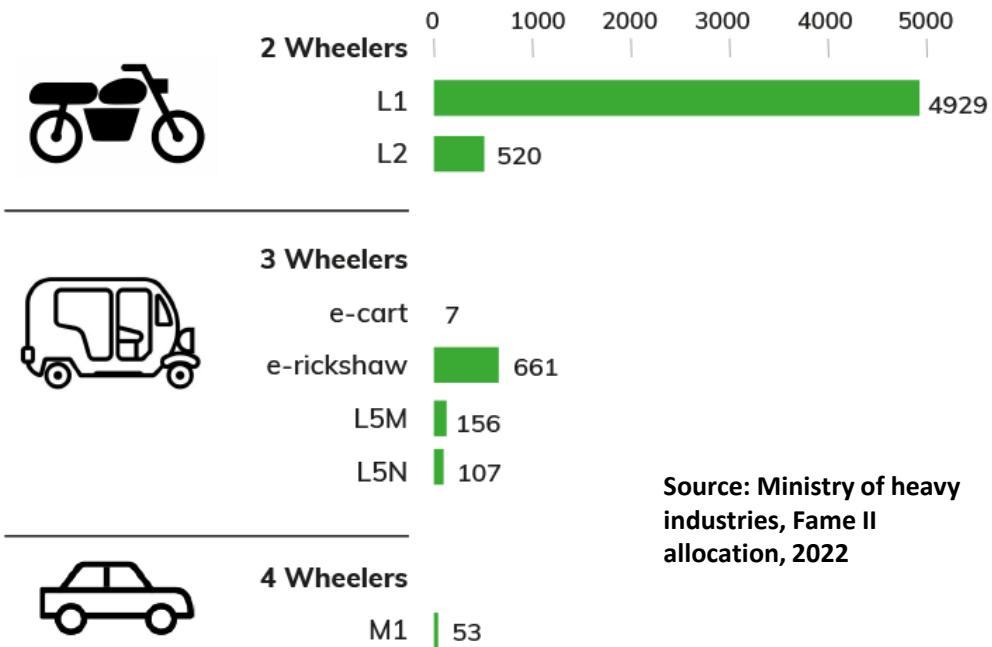


Policy suggestions

5. Jharkhand government can design and invest in interventions for building cohesive environment for electric mobility

The onset of fame II (central scheme) has brought a significant improvement in the state regarding its EV mobility. Several vehicles types have been added to both public and private sector domains. There also needs to be greater cohesiveness in the state financing for the transport department.

Fame II allocation for the state of Jharkhand



Source: Ministry of heavy industries, Fame II allocation, 2022

Expenditure for the implementation of Electric vehicle Policy (Rs Crore)



Department	Transport Department
Major Head	5055- Capital Outlay on Road Transport
Sub-Minor Head	26- Implementation of Electric Vehicle Policy
2018-19 BE	0
2018-19 RE	0
2018-19 A	0
2019-20 BE	0
2019-20 RE	0
2019-20 A	0
2020-21 BE	0
2020-21 RE	5
2021-22 A	5

Source-CBGA's analysis of Jharkhand State Budget Documents;* Detailed Demand for Grants for Jharkhand State Transport Department (Transport Department, Jharkhand Government 2022)

Policy suggestions



6. State could leverage external funds to augment with public finance resources – Can be achieved through cohesive environment to investors

Covid-19 has given a massive setback to the finance of the energy sector of the state. Prior to 2019, the energy sector had a minimum of 6 percent and in 2021 it rose to 9.2 percent of the total share of the budget, but due to the onset of covid, the state's priorities had to change significantly and has mostly remained below 5%.

Some of the major issues with attracting investments need clarity by the investors.

- Non-availability of power transmission and evacuation
- Non-availability of land and single window clearance system
- Unclear tax exemptions etc.
- State can put demand for direct grant for RE sector for the subsequent finance commission.

7. Green Bond could be facilitated to achieve long term renewable energy targets

Jharkhand is heavily dependent on external loans for transmission and distribution network. Often this increase the burden on state finances due to the requirement of co-financing by the grantee state. Currently, high Transmission and Distribution (T&D) losses are proving debacle for private investment in RE sector. Jharkhand should explore new climate finance mechanisms like Green Bonds for leveraging investment in transmission and distribution infrastructure in association with technical assistance from IREDA and MNRE.

Policy suggestions

8. There is a need to mainstream climate change concerns and actions in various other urban developmental programs and schemes in Jharkhand

Key Urban Developmental Schemes (Rs Crore)

Major Head	2215- Water Supply And Sanitation	2217- Urban Development	2217- Urban Development
Minor Head	All expenses	All expenses	All expenses
Sub-Minor Head (Scheme)	3221- Swachha Bharat Mission (SBM) - Urban	2613- AMRUT	2916- National Urban Livelihood Mission
2018-19 A	58.40	94.59	18.73
2019-20 A	115.31	219.64	27.13
2020-21 BE	109.27	373.09	67.00
2020-21 (A)	115.31	219.64	24.15
2021-22 BE	79.85	100.00	67.00
2021-22 RE	79.85	100.00	30.62
2022-23 (BE)	199.04	200.00	30.00

Source: CBGA analysis of Jharkhand State Budget and Detailed Demand for Grants



Thank You

Work presented is from under draft Working Paper:

Towards an Inclusive and Cohesive Low-carbon Development (LCD) in Jharkhand

About Project:

Building an Inclusive and Cohesive Public Climate Financing Framework

The project aims to bring in cohesiveness in public policy for accelerating low carbon development and making it robust to cope with pandemic shocks, reducing climatic vulnerabilities and inclusion of social benefits in climate financing at State level

Contact: info@cbgaindia.org, ssrath@cbgaindia.org and Jyotsna@cbgainida.org