Odisha’s Public Policy Priorities for Transitioning Towards a Green Economic Recovery

Under The Project

“Building knowledge and capacity for Greening the Economic Recovery in the states”
Content of the Presentation

- Profile of Odisha
- Impact of Covid-19
- Green Economic urgency!
- Why the energy sector
- Methodology
- Installed capacity
- Major Issues
- Policy Suggestions
About the Study – “Green Economic Recovery”

Why?

• Ongoing COVID-19 pandemic distorted the entire cycle of public finance led to compression in state budgetary expenditure.
• Recovery packages are not coupled with long term climate financing targets
• Complementing the stressed public resources amid pandemic situation with external (private / International) climate resources for place holding the co- benefits is need of hour
• Adding dimension of equity and inclusion to existing climate budgeting frameworks is need of hour (to motivate states for climate mainstreaming)
• Lack of specific knowledge on how to?
  • build cohesiveness in public actions for thriving climate investments and its requirements?
  • how to prepare climate responsive proposals based on evidence research

Focus area

All sector of economy contributing to GHG emissions. Intends to:
• Assess the impact of the COVID-19 pandemic on different sectors of the State economies and climate financing
• Assess existing climate financing framework in three states and present factsheets and knowledge resources
• Identify the focus areas for capacity building and attention of stakeholders Governments / institutions with regard to adoption of climate financing alternatives and, mainstreaming the climate concerns in public finance

Select States

Bihar

Odisha

Jharkhand
Public Policy design is critical as a poorly designed recovery process will be ineffective in delivering desired social, economic and climate outcomes. GER offers opportunity to meet these troika of objectives.
Green Economic Recovery Project- Objective and Outcomes

**Project Objective**
The project is meant to build knowledge and capacity for facilitating greening the recovery of the State economies in India, following the sharp economic downturn due to the COVID-19 pandemic.

**Intended outcomes**

- **Mapping** Sectors of economy and identifying cohesive and inclusive public climate actions in select three states for creating cohesiveness in public financing for leveraging climate investments and bringing in social benefits ex. Job creation
- **Developing knowledge resources** on various opportunities of external climate financing (international) to complement public finances and place hold Knowledge resources in public discourse
- **Developing and conducting capacity building programmes** to enable informed decision making at state level for climate finance proposals and interventions
As per the Economic Survey 2020-21, Odisha’s economy contracted 4.9 percent during the onset pandemic.

There was a slight dip in energy sector spending, from 2018-19 Actual (1.88%) to 2020-21 Actual (1.49%)

Priority was given to social sector spending. For example, the distribution of rice; there was a Rs 17,000 crore allocation for special livelihood plan for employment generation, and a Rs 2,200 crore package for the welfare of weaker sections. (Odisha Economic Survey 2020-21).
Green Economy Recovery (GER) is need of the hour!

There is need to drive an economic recovery pathway which is in-sync with sustainable development and make the economy strong enough to withstand any sudden shocks (pandemic or climatic).

A lot of rethinking happening on avoiding economic practices which are detrimental to environmental and keeping climate change in agenda during economic recovery. Energy is amongst the key driver of any economy has huge potential for GHG emission reduction. Our study focuses on clean energy transition in Odisha.

There is need to bring in public discourse, policy recommendations how to mainstream climate concerns in developmental actions and green economy recovery?
Why the energy sector?

Shows a rising trend. Have the highest GHG emission compared to other sectors

From 2005 to 2018, there has been a 164% increase!

Trend analysis predicts that in 2022, the energy sector will contribute to 107 Mt of CO₂, therefore the need for clean energy is imminent.

Emission from various sectors (Mt CO₂e)

- Total: 109.34
- Energy: 84.40
- Waste: 60.56
- Industrial Processes and Product Use: 44.66

Source: GHG Platform-India
The resource envelope of Odisha 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 Odisha**
- **Share of international loans in budgetary allocations from the Energy Department**
- **Internal and Extra Budgetary Resource (IEBR) reimbursement to Odisha 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

- **Institutional loans routed through budgets**
- **State Budget Expenditure – Capital and Revenue**
- **Central PSUs - SECI & IREDA transfer to OREDA**
- **Finance Commission Grants for Clean Energy**

**Odisha State Financing for Clean Energy**
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)

Climate responsiveness of Expenditure on Power Sector

1. Neutral Expenditure eg. staff salaries, pension

2. Expenditure having responsiveness for climate (to be analysed)

- Highly Favourable eg. Renewable Energy Capacity Addition
- Quite Favourable eg. investment in power transmission and distribution system enabling Renewable Energy
- Unfavourable eg. Investment in fossil-fuel based power plants
- Difficult to Categorize eg. assistance given to a State PSU, however the purpose of assistance is not defined.
### Key findings from Climate Responsiveness Categorization

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

<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>Highly Favourable</td>
<td>11.20</td>
<td>235.93</td>
<td>21.87</td>
<td>2.22</td>
<td>52.57</td>
<td>954.57</td>
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<tr>
<td>Quite Favourable</td>
<td>1965.43</td>
<td>1764.70</td>
<td>2320.66</td>
<td>1819.00</td>
<td>1483.70</td>
<td>1967.80</td>
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<tr>
<td>Difficult to categorise</td>
<td>21.11</td>
<td>22.31</td>
<td>25.96</td>
<td>24.38</td>
<td>37.62</td>
<td>550.11</td>
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<tr>
<td>Unfavourable</td>
<td>308.69</td>
<td>123.42</td>
<td>63.27</td>
<td>0.00</td>
<td>225.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>2306.43</td>
<td>2146.36</td>
<td>2431.76</td>
<td>1845.59</td>
<td>1798.88</td>
<td>3472.48</td>
</tr>
</tbody>
</table>

Source: CBGA analysis of Budget and Detailed Demand for Grants for Energy Department, Odisha
## Trends in Odisha’s Total Budget Expenditure (TBE) for energy sector budget

<table>
<thead>
<tr>
<th>Year</th>
<th>Energy Sector Budget</th>
<th>Renewable Energy Budget</th>
<th>Energy Versus Total State Expenditure (%)</th>
<th>RE versus Total Energy Expenditure (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018-19 BE</td>
<td>1,983</td>
<td>10</td>
<td>1.65</td>
<td>0.5</td>
</tr>
<tr>
<td>2018-19 A</td>
<td>2,146</td>
<td>10</td>
<td>1.88</td>
<td>0.47</td>
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<tr>
<td>2019-20 BE</td>
<td>2,251</td>
<td>10</td>
<td>1.62</td>
<td>0.44</td>
</tr>
<tr>
<td>2019-20 A</td>
<td>2,432</td>
<td>10</td>
<td>1.94</td>
<td>0.41</td>
</tr>
<tr>
<td>2020-21 A</td>
<td>1,846</td>
<td>2.22</td>
<td>1.49</td>
<td>0.12</td>
</tr>
<tr>
<td>2020-21 RE</td>
<td>2,032</td>
<td>100</td>
<td>1.51</td>
<td>4.92</td>
</tr>
<tr>
<td>2021-22 BE</td>
<td>1,799</td>
<td>49.57</td>
<td>1.06</td>
<td>2.76</td>
</tr>
<tr>
<td>2022-23 BE</td>
<td>3,472</td>
<td>54.56</td>
<td>1.74</td>
<td>1.57</td>
</tr>
</tbody>
</table>

Source: CBGA analysis of Budget and Detailed Demand for Grants for Energy Department, Odisha
## Impact of Covid-19 on Odisha Economy

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

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>Odisha Total Budget Expenditure</td>
<td>120028</td>
<td>113948.5</td>
<td>139000</td>
<td>125167.6</td>
<td>150000</td>
<td>135000</td>
<td>170000</td>
<td>200000</td>
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<tr>
<td>Urban Development and Housing</td>
<td>5161.8</td>
<td>4536.5</td>
<td>5578.7</td>
<td>5257.05</td>
<td>6179.65</td>
<td>4802.67</td>
<td>5802.58</td>
<td>7257.56</td>
</tr>
<tr>
<td>Transport</td>
<td>590.73</td>
<td>213.88</td>
<td>639.58</td>
<td>450.35</td>
<td>844.56</td>
<td>568.98</td>
<td>872.82</td>
<td>1192.35</td>
</tr>
<tr>
<td>Water Resources</td>
<td>10196.05</td>
<td>7448.05</td>
<td>9713.43</td>
<td>6112.26</td>
<td>9374.46</td>
<td>4831.06</td>
<td>8266.85</td>
<td>10044.96</td>
</tr>
<tr>
<td>Panchayati Raj &amp; Drinking Water</td>
<td>13725.35</td>
<td>15417.46</td>
<td>18419.03</td>
<td>16400.41</td>
<td>17605.85</td>
<td>14983.88</td>
<td>19800.54</td>
<td>21741.44</td>
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</tbody>
</table>

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

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<tr>
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<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban Development and Housing</td>
<td>4.3</td>
<td>3.98</td>
<td>4.01</td>
<td>4.2</td>
<td>4.12</td>
<td>3.56</td>
<td>3.41</td>
<td>3.63</td>
</tr>
<tr>
<td>Transport</td>
<td>0.49</td>
<td>0.19</td>
<td>0.46</td>
<td>0.36</td>
<td>0.56</td>
<td>0.42</td>
<td>0.51</td>
<td>0.6</td>
</tr>
<tr>
<td>Water Resources</td>
<td>8.49</td>
<td>6.54</td>
<td>6.99</td>
<td>4.88</td>
<td>6.25</td>
<td>3.58</td>
<td>4.86</td>
<td>5.02</td>
</tr>
</tbody>
</table>

Source: CBGA analysis of Odisha State Budget and Detailed Demand for Grants
Issues for implementing GER in Odisha

- Clean energy addition in the state is inadequate
- State budgetary provisions for clean energy
- Program planning for clean energy addition
- Cohesiveness of clean energy policies
- Financing of clean energy to state through other channels
- Social sector improvement through job creation
The Government of Odisha has set up a target of 2750MW of renewable energy sources by 2022 to reduce its dependence on conventional sources of energy. In 2021, Odisha made significant progress in adding renewable energy capacity with an increase of 68MW over the previous year. The unachieved target from stipulated target in the Odisha Renewable Energy Policy need to be achieved through planning.
Installed Capacity of power from different sources (MW)

Install Capacity (MW)

<table>
<thead>
<tr>
<th></th>
<th>Renewable Energy</th>
<th>Hydro Power</th>
<th>Thermal Power</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>522</td>
<td>2,151</td>
<td>6,547</td>
<td>9,220</td>
</tr>
<tr>
<td>2021</td>
<td>596</td>
<td>2,151</td>
<td>5,027</td>
<td>7,774</td>
</tr>
<tr>
<td>2022</td>
<td>627</td>
<td>2,163</td>
<td>4,858</td>
<td>7,648</td>
</tr>
</tbody>
</table>

Share of Installed Capacity (%)

<table>
<thead>
<tr>
<th></th>
<th>Renewable Energy</th>
<th>Hydro Power</th>
<th>Thermal Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019</td>
<td>5.7</td>
<td>23.3</td>
<td>71.0</td>
</tr>
<tr>
<td>2021</td>
<td>7.7</td>
<td>27.7</td>
<td>64.7</td>
</tr>
<tr>
<td>2022</td>
<td>8.2</td>
<td>28.3</td>
<td>63.5</td>
</tr>
</tbody>
</table>

Source: CEA data, 2019, 2021, 2022
State is dependent on loans for its energy demands

- The Budget of Odisha’s Department of Energy is estimated at Rs 1,799 crore for FY 2021-22 (BE). Of this, Rs 150 crore is the expenditure received as loans and advances.
- Between 2017-18 and 2020-21, disbursement through Central PSUs such as Indian Renewable Energy Development Agency (IREDA) fell from 40.12 crore to 13.91 crore.
- No grants were recommended for the renewable energy sector for any State in the Fourteenth and Thirteenth Finance Commission.

Major Head: 6801- LOANS FOR POWER PROJECTS

<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>3095- UDAY</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2886- Odisha’s share for UMPP (Loan to GRIDCO)</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>63.3</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>21E2- Accelerated Power Development Reform Programme (Loans to DISCOMs under APDRP)</td>
<td>0</td>
<td>105.5</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3009- Integrated Power Development Scheme (Loan to DISCOMS)</td>
<td>50</td>
<td>100</td>
<td>106.2</td>
<td>88.1</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>3009- Integrated Power Development Scheme</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>2</td>
<td>0</td>
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<tr>
<td>3103- Odisha Transmission System Improvement Project - JICA - EAP</td>
<td>0</td>
<td>20</td>
<td>44</td>
<td>100</td>
<td>100</td>
<td>336.3</td>
</tr>
<tr>
<td>2612- CAPEX Programme for development and upgradation of Distribution System (Loans to GRIDCO)</td>
<td>121.7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Grand Total</td>
<td>171.7</td>
<td>225.5</td>
<td>150.2</td>
<td>251.4</td>
<td>250</td>
<td>559.8</td>
</tr>
</tbody>
</table>
Major skilling schemes in climate mitigation

Odisha follows a few schemes that indirectly impact the GER of the state:

- Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
- Suryamitra Skill Development Programmes
- Green Skill Development Programme
The EV policy of 2021 for Odisha primarily focuses on providing subsidy and financial incentives for the public and private vehicles.

To smoothly transition the policy, the State government would facilitate ease of business primarily for the stakeholders that are directly involved in the purchase and installation of EV in the State.

As of 2022, there are 18,824 electric vehicles in the State, which is less than 0.2% of the 95,50,505 vehicles that were registered in the state.

The EV policy of Odisha 2021 has put a target of 20% of all registered vehicles to be electric by 2025 which needs planning at the state.
Solar polices need to be exclusively implemented in the state. Odisha state is following central scheme like KUSUM Scheme.

There is need to mainstream more programmes for low carbon development of Urban Development sector.

Planning for Green Budget of Odisha could think about monitoring indicators and immediate requirement for clean energy transition.

Skilling programs need a focused strategy for focusing on green jobs.
Odisha’s Climate Budget offers opportunity for GER planning

Odisha has laid down strategies in various sectors of the economy for making them responsive to the needs of climate change mitigation. However, most of the existing strategies operate in a sporadic manner and lack a long-term vision for financing. To institute a framework for green economic recovery and leverage climate financing, each sectoral policy should mainstream concerns of climate change, environmental sustainability and inclusivity.

Odisha Climate Budget

The state is the first that has introduced a dedicated budget with an appraisal mechanism and a separate budget on climate change. This budget statement has identified priority climate actions based on their climate relevance and sensitivity. This also provides a measure of transparency to potential investors and improves investor confidence in government policies. Odisha is the first state in the country, which received clearance for the first project with Green Climate Fund (GCF) financing. Odisha’s Climate Budget 2020-21 based on a climate impact appraisal framework is definitely a pioneering and positive step in the right direction, which other states in the country should follow as a tool for Green economy recovery planning.
Policy Suggestions

1. Stipulated target in the Odisha Renewable Energy Policy need to be achieved through planning

The Government of Odisha has set up a target of 2750MW of renewable energy sources by 2022 to reduce its dependence on conventional sources of energy. In 2021, Odisha made significant progress in adding renewable energy capacity with an increase of 68MW over the previous year. The unachieved target from stipulated target in the Odisha Renewable Energy Policy need to be achieved through planning.

Source: Ministry of New and Renewable Energy (MNRE) data Accessed on 5th November, 2022
Policy Suggestions

2. The state should explore new climate finance mechanisms like green bonds for investing in transmission and distribution network

Odisha is heavily dependent on external loans for transmission and distribution network. Often this increases 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 a debacle for private investment in RE sector. The state 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.

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

Source: IREDA Annual Report 2021-22
3. Need to leverage external funds to augment with public finance resources – Can be achieved through cohesive environment to investors.

- Non-availability of power transmission and evacuation infrastructure
- Non-availability of land and single window clearance system
- Unclear tax exemptions etc.

Budgetary allocation by the Odisha Energy Department (Rs Crore)

Source: Detailed Demand for Grants for Odisha State Energy Department (Energy Department, Odisha)
Policy Suggestions

4. Use of Solar
Till 2021, Odisha had an installed solar capacity of 430MW. However, the state has a production potential of 2,578 MW. This gap between potential and realisation is mainly due to a gap in capital investments and policy framework. Odisha has also lagged in its renewable energy policy target of 2200MW by 2022. The approach needs to change drastically if the state has to become a self-sufficient solar producer of the country.

5. Electric Vehicle Policy
As per EV policy 2025, one in every five vehicles registered in Odisha will be electric, targets the State’s electric vehicle (EV) policy. This is an ambitious target, even for States that have a head start in EV adoption. Financial planning and augmenting financial resources through budgets could be key in building cohesive ecosystem from public financing channels.
6. Skill Development
Retraining/upgrading the skill of locally placed semi-skilled technicians and service providers for off-grid renewable technologies offers practical solution to reduce the skill gap that is available in the remote areas to adopt renewable energy technologies.

7. Odisha Climate Budget
State has dedicated climate budget and identify climate relevant and climate sensitive.
- M & E indicators and Cost benefit Analysis
- Green budgets including other objectives!
Policy suggestions

8. State can put forth demand for direct grant for renewable energy sector by the subsequent Finance Commission

Considering the centrality of the financial strength of DISCOMs to the soundness of State finances, the fifteenth Finance commission recommended an additional borrowing space of 0.5 per cent of GSDP for States, during the four-year period 2021-22 to 2024-25.

However, the performance matrix recommended by 15th Finance Commission for monitoring the performance improvement of the states in power sector due to extra borrowing space, does not include renewable energy addition or other climate mitigation oriented actions as the performance criteria.

A grant for Renewable energy sector should be demanded by the state with forthcoming finance commission.
9. Odisha step up the policy guidelines for implementation of Union government guidance on Climate Smart Cities for low carbon development of cities

Union government is promoting and supporting the development of renewable energy, build climate resilient infrastructures, and adoption of energy efficient technologies in cities.

For example, the Climate Smart Cities Assessment Framework (CSCAF) of MoHUA is an initiative which was launched in February, 2019 for 100 Smart Cities as a guiding framework for cities towards climate actions. CSCAF serves as a tool for states and cities to assess their current climate situation and provides a roadmap for cities to adopt and implement relevant climate actions. In compliance with these union government guidelines, Odisha should set guidelines on implementing the union level programmes for climate smart cities. There is a need to make climate change mitigation concerns an integral part of Urban Development programmes and schemes in odisha, as it brings in local co-benefits by reducing air pollution, improving the longevity of created capital assets.
Policy suggestions

9. Odisha step up the policy guidelines for implementation of Union government guidance on Climate Smart Cities for low carbon development of cities (continued)

Key Urban Developmental Schemes (Rs Crore)

<table>
<thead>
<tr>
<th>Major Head</th>
<th>Minor Head</th>
<th>Sub-Minor Head (Scheme)</th>
<th>2019-20 RE</th>
<th>2019-20 A</th>
<th>2020-21 RE</th>
<th>2020-21 (A)</th>
<th>2021-22 BE</th>
<th>2021-22 RE</th>
<th>2022-23 (BE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2215- Water Supply And Sanitation</td>
<td>All expenses</td>
<td>3221- Swachha Bharat Mission (SBM) - Urban</td>
<td>90.00</td>
<td>167.41</td>
<td>135.00</td>
<td>22.12</td>
<td>215.00</td>
<td>165.00</td>
<td>250.00</td>
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<tr>
<td>2217- Urban Development</td>
<td>All expenses</td>
<td>2613- AMRUT</td>
<td>593.81</td>
<td>674.21</td>
<td>26.16</td>
<td>26.16</td>
<td>3.38</td>
<td>3.38</td>
<td>601.32</td>
</tr>
<tr>
<td>2217- Urban Development</td>
<td>All expenses</td>
<td>2916- National Urban Livelihood Mission</td>
<td>46.95</td>
<td>23.87</td>
<td>42.00</td>
<td>8.15</td>
<td>9.94</td>
<td>9.95</td>
<td>9.95</td>
</tr>
</tbody>
</table>

Source: CBGA analysis of Odisha State Budget and Detailed Demand for Grants
Thank You

Work presented from working paper:
Odisha’s Policy and Budgetary Priorities for Transitioning towards Green Economic Recovery

Authors: Subrata Sekhar Rath and Jyotsna Goel

About Project:
Building Knowledge and Capacity for Green Economic Recovery of the States in India
The project is meant to build knowledge and capacity for facilitating the green recovery of the State economies in India, following the sharp economic downturn due to the COVID-19 pandemic. The research will help in developing knowledge resources and recommendations that State Government actors could refer to for incorporating climate mitigation actions under their economic revival measures.

Contact: ssrath@cbgaindia.org and info@cbgaindia.org