Responsible Energy Initiative India

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How can India Enable a People-centric Clean Energy Transition?

Framework for Responsible Renewable Energy Deployment

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Issue Brief | February 2025

Suggested citation: Chowdhury, Parineet Kaur, Nicole Almeida, and Akanksha Tyagi. 2025. *How can India Enable a People-centric Clean Energy Transition? Framework for Responsible Renewable Energy Deployment*. New Delhi, India: Council on Energy, Environment and Water.

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Acknowledgment: We express our heartfelt gratitude to Karnataka Renewable Energy Development Limited (KREDL) for their invaluable and consistent support towards this work. We would also like to thank the Energy Department, Government of Karnataka, Karnataka Solar Power Development Corporation Limited, and Karnataka Power Transmission Corporation Limited for their inputs and feedback at various stages of this work. We would like to express appreciation to the district officials, Gram Panchayat, and the people of the districts of Koppal, Gadag, Chitradurga and Chamarajanagar in the state of Karnataka for their support in the primary research that informed this work. We extend our gratitude to our former colleagues Neeraj Kuldeep, Rahul Patel, Atish Padhy and Arvind Poswal for their contribution to this work. We are grateful to Vijayanand, Head - Health, Safety & Environment, and Sustainability, Hero Future Energies; Nishant Kumar, Vice President (Sustainability & Quality), Ayana Renewable Power Private Limited; Nagasimha Swamy, Manager ESG, British International Investment; Jaicy Paul, CGM (ESG & Climate Finance), State Bank of India; Harsh Singhal, Partner, Prosperete; Mrinali Karthick, Advisor and Climate Research Lead, Land Conflict Watch; Priya Pillari, Director – State Action Plan, Asar; Sangita Ganesh, Policy Analyst, Ashoka Trust For Research In Ecology And The Environment; Pooja Chandran, Program Manager, Foundation for Ecological Security; Devina Kuttappa, Assistant Manager, Energy Transitions, Vasudha Foundation, and Rishabh Jain, Senior Programme Lead, CEEW for their inputs.

Organisations: The **Council on Energy, Environment and Water** (CEEW) — a homegrown institution with headquarters in New Delhi — is among the **world's leading climate think tanks**. The Council is also often ranked among the **world's best-managed and independent think tanks**. It uses data, integrated analysis, and strategic outreach to explain — and change — the use, reuse, and misuse of resources. It prides itself on the independence of its high-quality research and strives to **impact sustainable development at scale** in India and the Global South. In over fourteen years of operation, CEEW has impacted over 400 million lives and engaged with over 20 state governments. Follow us on LinkedIn and X (formerly Twitter) for the latest updates.

The **Responsible Energy Initiative** (REI) India is a multi-year programme that **enables the renewable energy sector in India** to adopt business models and value chains that are people-centric and ecologically positive.

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India's ambitious climate goals need accelerated deployment of renewable energy.

Image: iStock

About CEEW

The Council on Energy, Environment and Water (CEEW) — a homegrown institution with headquarters in New Delhi — is among the **world's leading climate think tanks**. The Council is also often ranked among the **world's best-managed and independent think tanks**. It uses data, integrated analysis, and strategic outreach to explain — and change — the use, reuse, and misuse of resources. It prides itself on the independence of its high-quality research and strives to **impact sustainable development at scale in India** and the Global South. In over fourteen years of operation, CEEW has impacted over 400 million lives and engaged with over 20 state governments. Follow us on LinkedIn and X (formerly Twitter) for the latest updates.

About REI India

The Responsible Energy Initiative (REI) is an industry-CSO collaboration working to ensure **renewable energy (RE) in Asia achieves its full potential** and creates value in a way that is **ecologically safe, rights-respecting, and socially just**. The India inquiry is being run by Forum for the Future, TERI, and WRI India, with expert support from Landesa, the Business and Human Rights Resource Centre, the Climate Group, CEEW, and the Consensus Building Institute. Find out more about the initiative and discover insights from our active inquiry on our Medium page.

The initiative has been supported by the S&P Global Foundation, the UK's Foreign, Commonwealth & Development Office (FCDO) in India, the MacArthur Foundation, and the Stichting SED Fund.

REI India's vision

Through a responsible energy ecosystem, REI embraces the power of nature to create, renew, and restore. The REI cohort strongly believes that the renewable energy sector must operate in harmony with planetary boundaries across value chains. Being responsible means respecting human rights and the dignity of all, adhering to principles of justice and equity, and supporting people to thrive. REI advocates for a **just and equitable energy transition** that enables deep positive transformation, fostering flourishing and resilient communities and society. REI India's work is inclusive, rights-respecting, and participatory, centring on the dignity and wellbeing of individuals and communities at every step. The cohort's efforts inherently address the climate emergency and biodiversity crisis within the RE sector by **bringing together government bodies, businesses, financiers, and communities**. REI enables the capacity of social, institutional, and environmental systems to adapt to future challenges and opportunities, aiming to ensure fairness, resilience, and vitality across generations and geographies.

Renewable energy technologies, particularly solar and wind, have emerged as affordable, modular, and scalable solutions in India's climate action plans.

Image: iStock

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An inclusive clean energy transition requires securing buy-in from communities, where they are willing to participate by sharing their resources.

Image: iStock

Executive summary

India is among the leading renewable energy (RE) markets, providing valuable learnings for many emerging economies in their diversified adoption and deployment. Over the last decade, RE technologies, particularly solar and wind, have emerged as affordable, modular, and scalable solutions in India's climate action plans, including achieving net zero emissions by 2070. Further, the RE sector brings several economic co-benefits, such as increased investments and new employment opportunities. Hence, as India strives to develop while decarbonising, an accelerated deployment of large-scale RE technologies is imperative.

However, the speed and scale of deployment could have socio-environmental trade-offs that all stakeholders of the RE ecosystem should responsibly manage. Like any infrastructure, RE technologies require vast tracts of land, and changes in current use patterns, such as agriculture, could impact the livelihoods of dependent communities or the local ecology. For instance, in the case of RE projects set up on private land, landowners get monetary compensation from the sale or lease of land. However, indirect dependents, such as tenant labourers (often from marginalised sections of the society), are impacted adversely as they do not receive any compensation or rehabilitation support. On the other hand, if the land is a government 'wasteland', it may have ecological or cultural significance, such as being a habitat for endangered species, which could be affected due to the RE project or accompanying transmission infrastructure. Amid these realities, the future deployment of RE technologies must be more socially inclusive and environmentally safe.

Such an inclusive clean energy transition can only be made possible by securing buy-in from communities, in which they would be willing to participate by sharing their resources. The key to gaining such support is the 'responsible deployment' of RE, which takes a people- and environment-centric approach. This approach requires a shift in the culture and business practices of RE companies, which include investors, project developers, engineering, procurement and construction (EPC) players, contractors, and asset management players.

We propose a framework for the responsible deployment of RE projects to enable this shift. The framework aims to provide standard guidance for all actors in the Indian RE sector by answering key questions, such as what defines responsible deployment, the guiding principles, how actors can self-evaluate their actions, and where they lie on the spectrum of responsibility.

This framework results from extensive primary research and detailed discussions with communities, local government actors, and RE developers and investors. It also incorporates learnings from the available frameworks and standards (Figure ES1). The detailed methodology is provided as supplementary information.

This **Responsible deployment of an RE project** occurs when it is implemented in a manner that:

- Is people-centric
- Enhances community value
- Is transparent and truthful
- Ensures ecological sustainability

It will be possible when all actors in the RE sector, such as developers (and their contractors), investors, and policymakers, adopt the following four **Principles of Responsible Deployment** that we propose.

Principles of Responsible Deployment

Principle 1

Prioritise people-centric practices in RE projects by implementing inclusive engagements with communities and enhancing value creation for them.

This principle will enable the stakeholders to secure greater community buy in for the projects and establish constructive relationships.

Principle 2

Foster trust by undertaking transparent, truthful, and timely dialogue with communities.

This principle will enable stakeholders to establish open lines of communication with communities for timely access to relevant information that enhances their decision-making ability.

Principle 3

Maximise impact by driving business integrity among all actors engaged in the deployment of an RE project.

This principle will enable stakeholders to work coherently to maximise the impact of responsible business practices.

Principle 4

Create resilient and thriving ecological systems by integrating biodiversity protection, environmental restoration, and circular practices.

This principle will enable stakeholders to make regenerative ecological systems that also aid local economic growth.

Figure ES1 Approach and methodology undertaken to develop the framework

1 Understanding the on-ground challenges in deployment and impacts of large-scale RE from multiple stakeholders' perspectives

- **Community:** Literature review combined with semi-structured discussions with community members during primary research*
- **RE developers:** Key informant interviews (KIIs)* with developers (corporate offices, project teams, and business partners such as land aggregators and EPC firms), investors (domestic and international), and impact assessment firms
- **Policymakers:** Primary research* and structured discussions with state-level authorities such as district collectors, officers in revenue department, gram panchayat, KREDL, KSPDCL, KPTCL and Energy Department, Government of Karnataka
- **Research community:** Focused discussions with national and international civil society organisations (CSOs), think tanks, among others

2 Understanding the principles and practices of responsible deployment, policies and processes governing RE projects, and corporate practices

- Review of current state and national level policies and regulations
- Review of national and international frameworks, standards, guidelines and compliances such as IFC's Performance Standards on Environmental and Social Sustainability, Business Responsibility and Sustainability Reporting, EO100™ Standard for Responsible Energy Development
- Review of corporate social responsibility practices, corporate reporting, current procedures followed for key processes such as grievance redressal, community development, stakeholder management among others
- Review of international best practices for responsible deployment

3 Co-developing the responsible RE deployment framework

- Feedback discussions with RE developers, financiers and procurers to understand the market fitment, India-specific guidance among other aspects
- Review by RE developers, investors, subject experts, CSOs, research organisations among others

Source: Authors' analysis

*Primary research was conducted in 18 villages across four districts in Karnataka with consultations with community members, local government actors, RE developers and state-level departments. Data collection was via focused group discussions and KIIs using semi-structured questionnaires.

KREDL: Karnataka Renewable Energy Development Limited, KPTCL: Karnataka Power Transmission Corporation Limited, and KSPDCL: Karnataka Solar Power Development Corporation Limited

In this framework, responsible actions are defined by the scope of activities undertaken, sphere of influence, and sustainability of interventions. Based on these criteria, the framework proposes **four levels of ambition**: Compliant, Adopter, Leader, and Pioneer (Figure ES2).

- **Level Zero is 'Compliant'**, indicating companies adhering to the laws of the land.
- **Level One is 'Adopter'**, indicating companies going beyond compliance to **consciously adopt readily undertaken responsible practices**, albeit the sustenance of these activities is short-term. An 'adopter' also ensures the **creation of a company-wide culture** towards responsibility.
- **Level Two is 'Leader'**, indicating companies **adopting known best practices for business responsibility** that have a short-to-medium-term sustenance. 'Leader' also ensures that its **business partners**, such as EPC players in the case of RE developers, **adopt these practices**.
- The highest level is **Level Three, 'Pioneer'**, which indicates companies **devising and implementing new responsibility practices** and creating **self-sustaining systems** which ensure the impacts of their initiatives even after they move on. 'Pioneers' also **advocate for responsible deployment among the key stakeholders**, such as policymakers, and motivates them to adopt these practices.

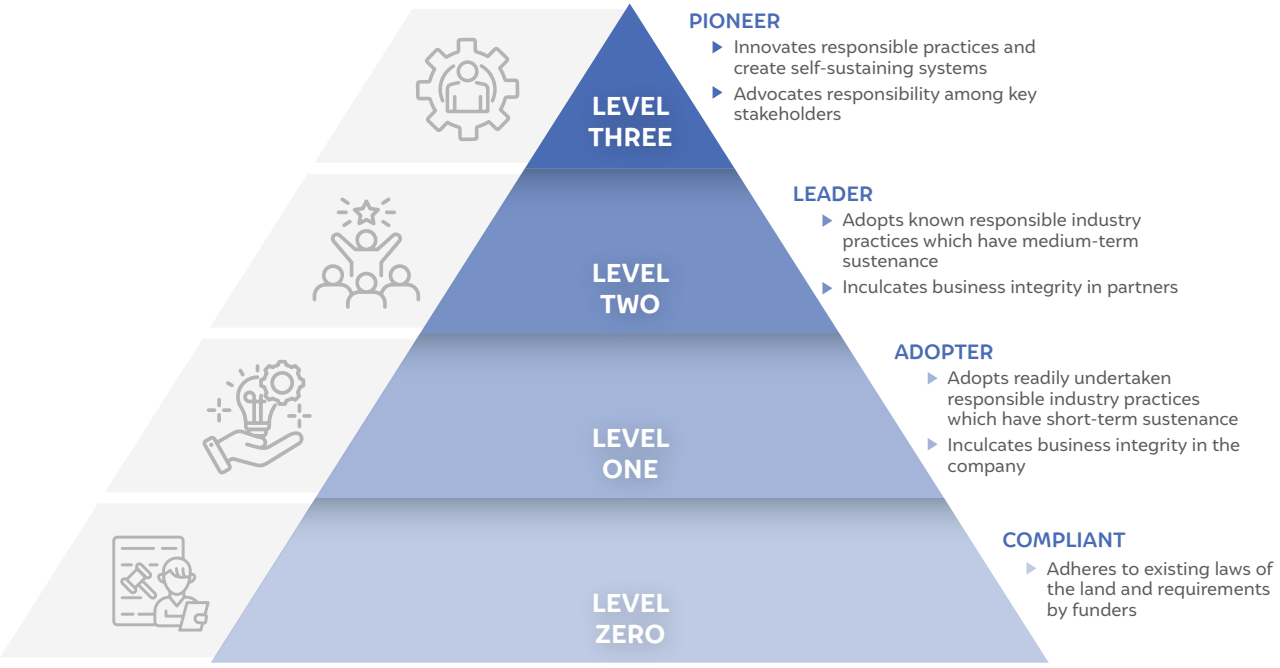
Renewable energy companies can self-evaluate their actions to see where they are on the spectrum of being responsible entities.

> Responsible actions are defined by the scope of activities undertaken, sphere of influence, and sustainability of interventions.

Among all the actors, RE project developers have the maximum potential to drive responsible deployment of these technologies. Here are the **five recommendations for RE developers to kick off their journey of responsibility**:

- **Adopt low-impact siting practices for RE projects**: Start by maintaining a checklist of indicators with explicit inclusion and exclusion criteria for identifying project land. Strengthen it with more advanced screening, focusing on minimising social impacts, and ensuring projects' resilience to climate risks.
- **Evaluate and institutionalise funding requirements for implementing responsible practices**: Core funds and grants can be considered that provide utilisation flexibility, and do not impact project viability.
- **Set up an internal cell to operationalise this 'Framework for Responsible Deployment' that goes beyond the Environment, Social, and Governance department**: This must include representatives from teams such as business development, land, and legal, to ensure internal alignment within the organisation, where different teams would consciously collaborate to improve outcomes for all.
- **Build the capacity of on-ground and company actors such as project teams, land aggregators, maintenance contractors etc. to familiarise and understand responsible practices**: Training should encompass the core principles of responsible deployment, with themes like transparency, community development, and ecological resilience at the centre of all communications.
- **Assess and re-establish the selection criteria for subcontractors such as land aggregators and EPC contractors**: This is to identify opportunities to maintain business integrity at each stage of project deployment, such as site identification, construction, and operations. This includes the processes of tendering, Expression of Interest, pre-qualification, pre-bid meeting, bidding, bid evaluation, negotiation, and contract formulation.

Figure ES2 The four levels of responsible RE deployment



Source: Authors' analysis

Messages from stakeholders

"Through initiatives like the Pavagada Solar Park, Karnataka has showcased innovative models to propel India's renewable energy ambitions. The Karnataka Renewable Energy Development Limited (KREDL) is dedicated to advancing these goals **and acknowledges the importance of responsible deployment practices**. Our collaboration with the Council on Energy, Environment and Water (CEEW) to develop a responsible renewable energy framework underscores this commitment. We believe this framework will significantly enhance KREDL's efforts to expedite the deployment of renewable energy across Karnataka."

K. P. Rudrappaiah

Managing Director
Karnataka Renewable Energy Development Limited (KREDL)

"The CEEW's initiative to develop sector-wide guidance on Responsible Renewable Energy Deployment has been particularly warmly welcomed by Norfund. The ambitious pace with which the rollout of large renewable energy projects happens in India comes with challenges related to local environmental and social values and vulnerabilities. **The need for assessment and timely mitigation of adverse impacts is only surging**. The current institutional setup to enable fast rollout, with limited obligations to conduct any such, and the fast-paced timelines with high competition on project costs, raises everyone's reliance on all players in the sector to take initiative and show leadership, to ensure that India's Renewable Energy is also India's Sustainable Energy. We are hopeful that CEEW's efforts will lead and guide the entire sector towards sustainable practices, and cultivate the continued appetite by investors like Norfund to promote India's renewable energy future".

Rasmus Liebig-Andersen

Senior Manager E&S, Renewable Energy,
Norfund

"KfW is supporting India's green energy transition with a portfolio of around 5.4 billion Euros. Thereby, we consider it as essential that our projects are ecologically safe and socially just. To minimise any potential negative effects on or risks to people and the environment, we subject **all planned projects in our partner countries to an environmental and social impact assessment (ESIA)**. Many aspects of the ESIA are reflected in CEEW's responsible RE framework. We congratulate CEEW on the relevant work and hope it will further contribute to a people-and planet-centric energy transition in India."

Stefan Kliesch

Head of Energy Team, New Delhi office
KfW Development Bank

"At Hero Future, we believe that renewable energy must be built on a foundation of integrity, transparency, and inclusivity. **Our projects prioritize meaningful community engagement, ethical business practices, and environmental stewardship**. We don't just generate clean energy—we ensure that our impact is positive for people, nature, and future generations. This framework aligns with HFE's values and we look forward to its industry-wide adoption."

Vijayanand

Head - Health, Safety & Environment and Sustainability
Hero Future Energies

"At Fourth Partner Energy (FPEL), we have developed a Sustainability Framework that focuses on 6 core areas: Climate Action, Water Stewardship, Energy Efficiency, HSE, Diversity & Inclusion and Employee Learning & Development. This Framework serves as a rulebook to FPEL's executive leadership to plan, execute, review and report on our projects. Our commitment to sustainability is deeply ingrained in our business philosophy. In addition, in our efforts to improve the quality of lives in the communities which house our renewable energy projects – FPEL focuses on **building strong engagement with the locals to understand their cultural, social, and economic context**. They are our people, our 'fourth partners' who safeguard FPEL's assets and support us over the lifetime of our solar and wind plants. The responsible renewable energy (RE) framework developed by CEEW aligns with FPEL's commitment to sustainable development by incorporating key themes such as land use, social and environmental impacts, grievance management, and ecosystem responsibility. It supports FPEL's ongoing efforts to ensure project deployment is conducted with a strong emphasis on social and environmental responsibility."

Vivek Subramanian

Co-founder & Executive Director
Fourth Partner Energy

This framework provides guidance for actors in the Indian RE sector, defining responsible deployment and how they can self-evaluate their actions.

Image: iStock

Background

India's ambitious climate goals and growing energy needs necessitate transitioning to cleaner energy systems to reduce greenhouse gas emissions, and mitigate climate change. Improvements in technology, cost economics and policy support have led to an accelerated rollout of renewable energy (RE) in India. RE technologies further attract investments, boost employment, and provide economic benefits. The sustained deployment of large-scale RE is imperative to reach net zero goals. Large-scale RE, like other infrastructure projects, require vast land. This can be private or government land that might have ecological or social significance to surrounding communities. Further, there are other resources, such as water and access routes, whose usage and access can be impacted by these projects. Overall, the diversion of the land and other shared resources influences the local region, leading to social and environmental impacts. These impacts could include:

- Loss of livelihood opportunities, particularly for landless agricultural labourers, forest-dwellers, and nomadic pastoral communities.
- Competing common resource use, such as land and water, that could increase stress.
- Loss of biodiversity and endangered species due to project siting in their habitats or surroundings.

Many of the social impacts are starker across cross-sectional identities of gender, class, and other socio-economic minorities.

At the same time, RE projects offer significant opportunities in project deployment for equitable benefit sharing, livelihood generation and restoration, undertaking local area development, and building ecological resilience. This could include:

- Revenue-sharing in land procurement.
- Early and inclusive community engagement and participation across the lifecycle of the project.
- Regeneration of local ecosystems and biodiversity.
- Sustainable community development via capacity building and access to finance.

Therefore, RE developers must refocus their strategies on mitigating the social and environmental impacts of their projects, and usher in an inclusive energy transition.

Such an inclusive clean energy transition can only be made possible by securing communities' buy-in and willingness to participate by sharing their owned resources. The key to gaining such support is the 'responsible deployment of renewable energy (RE) projects', which takes a people- and environment-centred approach. This, however, requires a shift in the culture and business practices of RE companies[1] and on-ground actors toward mitigating and avoiding the social and environmental impacts and planning for a just and equitable future.

To enable this, we propose a framework for the responsible deployment of RE projects. It aims to provide standard guidance for all actors in the Indian RE sector by answering key questions such as what defines responsible deployment, the guiding principles, how actors can self-evaluate their actions, and where they lie in the spectrum of responsibility.

Acknowledging that RE developers have the highest opportunity to adopt this framework, it will be accompanied by a *Guidebook for Responsible Deployment for Renewable Energy Developers*. The guidebook will help them operationalise the principles through a detailed set of activities at each stage of the RE project, and progress to greater levels of responsibility.

This document introduces the framework that key stakeholders of the RE sector, namely, developers, investors, and policymakers, could adopt for responsible business practices. It would also bring these actors to the same understanding of responsible deployment, allowing concerted actions to scale this approach.

RE developers must refocus their strategies on mitigating the social and environmental impacts of their projects and usher in an inclusive energy transition.

1. RE companies in this document refer to investors, project developers, engineering, procurement and construction (EPC) players, contractors, and asset management players, unless otherwise specified.

Responsible deployment is when it is implemented in a manner that is people-centric, enhances community value, is transparent and truthful and ensures ecological sustainability.

Image: iStock

Introduction

This Framework for Responsible Renewable Energy Deployment in India is targeted at the key private sector actors, namely investors, project developers, EPC players, contractors, asset management companies, and operation and maintenance (O&M) service providers. It results from extensive primary research, detailed discussions with communities, local government actors, and RE developers and investors, and incorporates learnings from the available frameworks and standards (Figure ES1). The detailed approach and methodology for developing this framework are provided as supplementary information. The framework defines responsible deployment, presents the foundational principles, introduces the four levels of responsibility, and includes a call to action for RE developers.

Responsible deployment of an RE project is when it is implemented in a manner that:

- Is people-centric
- Enhances community value
- Is transparent and truthful
- Ensures ecological sustainability

Further, RE developers should nudge other actors involved in project deployment to follow the **Principles of Responsible Deployment** introduced in this framework. By ensuring their actions adhere to these key principles, companies can ensure locals and communities are essential stakeholders in project deployment. The framework introduces four principles, the foundation of which is adherence to universally applicable principles on human rights, land, labour, and the environment. This is essential to enhance the transformative potential of RE and build a system based on just, equitable, and sustainable practices. Further, this is essential for RE developers to maintain competitiveness in a globalised world by following similar standards of human rights, land, labour, and environment. The framework includes internationally adopted principles on human rights and dignity, biodiversity conservation and restoration, dignified work, cultural heritage, land rights and shared resource use, and climate resilience.

It is crucial to know that 'responsibility' is not binary but a spectrum—it can vary depending on the scope of actions, sphere of influence, and sustainability of practices. Therefore, the framework introduces four levels of performance. The framework ends with a 'Call to Action' for RE developers that outlines the entry points to operationalise this framework. The guidance is for both projects and organisations.

> 'Responsibility' is not binary but a spectrum—it can vary depending on the scope of actions, sphere of influence, and sustainability of practices.

RE companies should enhance value creation for communities to improve developmental outcomes.

Image: iStock

Principle 1

Prioritise people-centric practices in RE projects by implementing inclusive engagements with communities and enhancing value creation for them

This principle aims to ensure that the decisions, activities, and outcomes of RE project development are people-centric. It requires keeping communities at the forefront of all decisions and having open, accountable, and inclusive engagements. Further, enhancing value creation for communities involves long-term investments in the local communities surrounding projects, to build resilience and enhance the quality of life.

Given the significant resource footprint of large-scale RE projects, communities could be adversely impacted. For instance, land diversions for RE project development could affect the livelihoods of the direct and indirect dependents, as well as the cultural heritage of the region. Renewable energy projects also compete with common resources such as water and firewood, potentially increasing the stress on these resources. These impacts can be more profound and varied among the community members, and influence the communities' acceptance of RE projects. Such issues could also lead to project delays and cost overruns for RE companies. By approaching project development through a community-centric lens, companies ensure that communities are considered vital project stakeholders, and can avoid potential impacts.

Community-centric engagement includes mechanisms for meaningful and inclusive communications involving communities within the project's area of influence to minimise the various social and economic impacts. This can be achieved by siting projects on low-impact land parcels based on ecological and financial considerations, selecting an appropriate land procurement model based on community preference, and adopting a transparent and participatory process to arrive at compensation rates with a vision to generate intergenerational livelihood opportunities. Further, it includes incorporating community feedback in project design, such as ensuring through-passage for people, livestock, and wildlife, developing a governance mechanism to use shared resources, and having a grievance redressal mechanism.

In addition to community-centric engagement, RE companies should enhance value creation for communities to improve developmental outcomes. These interventions include exploring innovative models of profit or equity sharing with landowners, restorative local water resources management, and investing in sustainable community developmental needs.

Outcomes

This principle aims to ensure the following outcomes:

- Secure greater buy in from communities for smooth project development and establishing constructive relationships.
- Undertake interventions—in areas such as land procurement, shared resource governance, and community development—through consensus-building among diverse stakeholders, including marginalised social groups.
- Share benefits from RE projects equitably with all community members. One example is the creation of a local skilled workforce to address critical needs, such as health, unemployment, and education.

Community-centric engagement includes mechanisms for meaningful and inclusive communications involving communities.

Transparent working methods, bidirectional communication channels, and prompt, accurate updates help RE companies build trust with local stakeholders.

Image: iStock

Principle 2

Foster trust by undertaking transparent, truthful, and timely dialogue with communities

This principle aims to ensure that RE companies and local stakeholders always engage in honest and timely dialogue. By developing transparent working methods, creating bidirectional communication and discussion, and being truthful in all interventions, RE companies lay the foundations for building trust with local stakeholders.

Lack of transparency in aspects such as project design (access routes and boundaries), grievance redressal mechanisms, quantum and quality of employment opportunities, and relevance of community development activities could lead to dissatisfaction among communities, and sentiments of feeling unheard. By being upfront, providing relevant and timely information, and engaging with communities promptly, companies can avoid such sentiments.

Renewable energy companies have multiple avenues to exercise transparency and truthfulness when developing projects. These include ensuring legal and financial transparency in land negotiations and contracts; making information regarding project design, timelines, use of shared resources, developmental activities, and livelihood impacts accessible to relevant local stakeholders; upholding truthfulness at all stages of stakeholder engagement; and avoiding the pitfalls of making false promises regarding employment opportunities, contract terms, and others.

Outcomes

This principle aims to ensure the following outcomes:

- Companies adopt a culture of transparency and truthfulness across the project lifecycle.
- Establish open lines of communication between developers and local communities for timely access to relevant information.
- Build trust between the company and the people living in the project's area of influence.
- Enhance the decision-making ability of local community members via access to complete and transparent communication.

RE companies can exercise truthfulness by avoiding the pitfalls of making false promises regarding employment opportunities and contract terms.

All actors should uphold responsible practices to drive positive social, environmental, and economic impacts, and add value to communities.

Image: iStock

Principle 3

Maximise impact by driving business integrity among all actors engaged in the deployment of an RE project

This principle aims to ensure effective coordination and alignment among all actors engaged in the lifecycle of an RE project towards responsible practices. These actors include contracted material suppliers, land aggregators, contracted EPC firms, and O&M firms. Business integrity across these actors will support the effective implementation of responsible interventions such as community value creation, ecological resilience and complete, timely transparency, without which the system has a risk of failure. The impact will only be realised if all actors in RE deployment collectively implement them.

Many project development activities, such as land aggregation, construction, and project operations, are outsourced by RE developers. For instance, the land aggregators are the first contact between communities and the RE company, whose mandate is to facilitate the land aggregation process based on the availability and willingness of landowners. However, these actors often are not certified realtors, and may not have adequate training or capacity to undertake responsible business practices. Often, they end up making promises that hold no ground, and utilise practices that do not resonate with RE companies' policies. This could lead to community discontent and impact the project outlook, hurting the reputational integrity of the RE company.

Similarly, other actors include asset management companies that operate and maintain RE projects, EPC firms that do construction and engineering services, etc. These new actors are not privy to the project's history, but remain the only point of contact with the communities in the long run. Thus, their training and capacity building becomes essential. All resources and guidance related to the project, as well as responsible development actions, should be shared with all such actors.

To inculcate business integrity among all key actors, RE companies should establish accountability mechanisms and undertake effective capacity building, clearly setting targets underlying responsible actions and practices.

Developing and evaluating new business models and contracts with different actors is essential, ensuring that responsibility is incorporated into all actions and subsequent outputs. All actors should uphold responsible practices to drive positive social, environmental, and economic impacts, and add value to communities. This could be in the form of creating jobs for locals across the different phases of project deployment, transparent communication regarding land procurement by land aggregators, and formal grievance redressal mechanisms maintained by different actors on the ground, depending on their involvement in the project deployment.

Outcomes

This principle aims to ensure the following outcomes:

- Ensure all actors in the RE project deployment are working collaboratively to maximise the impact of responsible business practices.
- Embed a culture of responsibility that minimises risk across the project lifecycle and drives powerful change in the energy transition system.
- Create leaders of responsible practices across all actors in the RE value chain through training and capacity building.

RE developers must share all resources and guidance related to responsible actions with on-the-ground actors.

Conserving and restoring ecological systems and biodiversity would help RE companies fulfil their crucial role towards people and the environment.

Image: iStock

Principle 4

Create resilient and thriving ecological systems by integrating biodiversity protection, environmental restoration, and circular practices

This principle aims to ensure that RE companies enhance environmental resilience and community well-being across the entire value chain of the project lifecycle. This includes protecting and conserving biodiversity at the project site, managing local resources and regeneration, integrating circular products and processes in the value chain, minimising environmental impacts, and nurturing local terrestrial ecological systems.

Deployment of large-scale RE requires significant natural resources, such as land and water. These resources are also essential for the survival of wildlife, endangered species, natural green cover, and ecological preservation and evolution. Further, these ecological systems are integral to communities' growth and development, and are heavily dependent on them for their survival. Thus, these competing uses of natural resources could impact communities and ecosystems that often rely on them.

Conserving and restoring ecological systems and biodiversity would help RE companies gain the credibility and support of stakeholders and fulfil their crucial role towards the people and the environment. They can do this by responsibly siting RE projects in areas with the least ecological conflicts and dependencies, curating ecological impact mitigation strategies utilising a consultative approach in the early stages of project deployment, and undertaking circularity in material development, consumption, longevity and disposal. Companies should also utilise local knowledge and expertise to regenerate and restore ecological health and biodiversity, recognising the value of ecosystem services.

Outcomes

This principle aims to ensure the following outcomes:

- Create regenerative ecological systems that aid local economic growth, community health, and prosperity.
- Ensure the safeguarding, conservation, and restoration of biodiversity and open natural ecosystems.
- Establish a circular economy in processes and materials across the project lifecycle.

RE companies should create regenerative ecological systems that aid local economic growth, community health, and prosperity.

The levels of responsible RE deployment indicate the ambition of responsibility, its indicators, and the journey towards becoming a pioneer in responsible actions.

Image: iStock

Levels of responsible RE deployment

Inculcating responsibility in deployment is not a binary classification, wherein companies are either 'responsible' or 'not responsible'. Instead, it is a spectrum of activities and interventions, with scope for newer best practices and responsible actions at every step of the journey. The levels of responsible RE deployment indicate the ambition of responsibility, its indicators, and the journey towards becoming a pioneer in responsible actions (Figure 1).

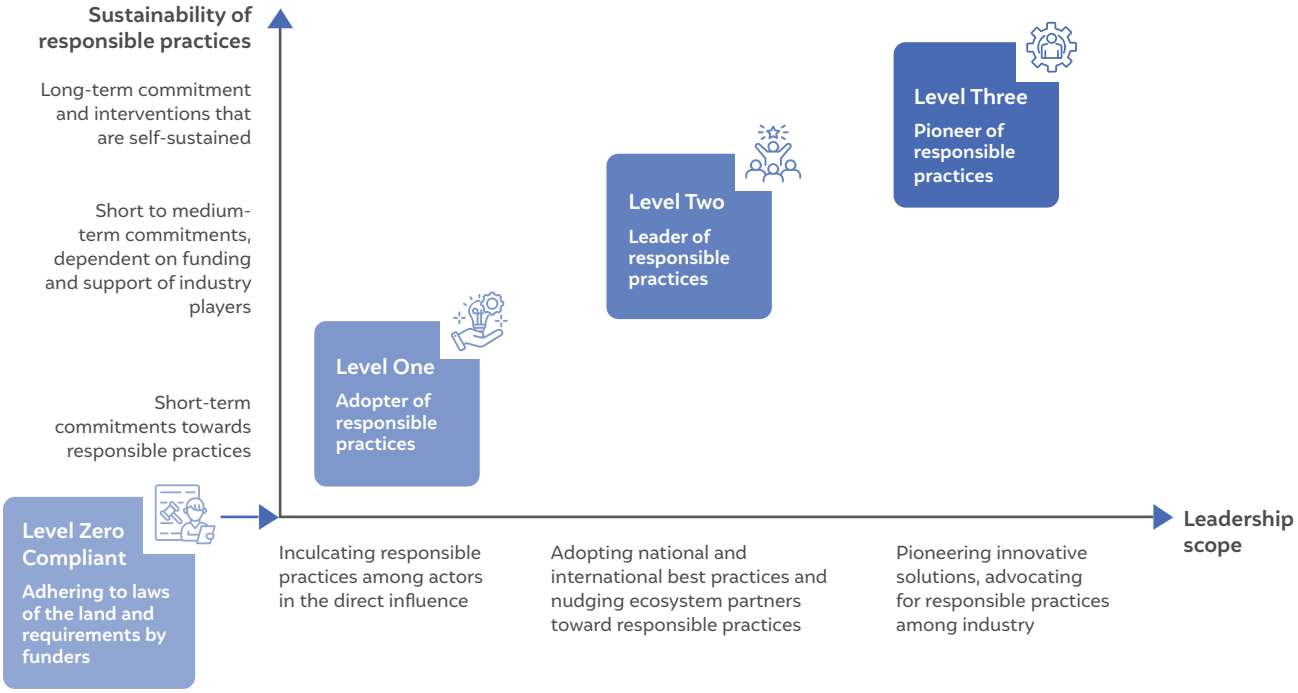
The first step is complying with existing laws and regulations, which all RE companies are assumed to be already following. This level is indicated as Level Zero, 'Compliant' (Figure 1).

When companies go beyond compliance and adopt readily undertaken responsible actions and practices, they can reach Level One, 'Adopter' (Figure 1). However, the sustenance of these activities is short-term. For developers, it can look like assessing community needs to undertake one-time community developmental activities. At this level, companies attain an organisation-wide culture of responsibility, indicating that everyone within their sphere of influence adheres to this culture.

As companies adopt known national and international best practices, and ensure that they and their business partners follow responsible practices, they can reach Level Two, 'Leader' (Figure 1). Business partners may include manufacturers, suppliers, contractors, etc. Further, the sustenance of responsible activities at this level is short- to medium-term. For developers, it can look like following a checklist of exclusion criteria for land selection for all projects. Level Two, thus, demonstrates leadership through medium-term visions, adopting best practices and nudging business partners to adopt responsible practices during project deployment.

When companies start innovating new practices, reshaping norms, setting new precedents, and using their influence to advocate for responsible practices in the broader RE ecosystem, they reach the highest level of responsibility, Level Three, 'Pioneer' (Figure 1). Further, the sustenance of responsible activities is long-term. For developers, it can look like creating systems and capabilities which ensure their interventions can continue to benefit communities even after they move on from the projects. Level Three, thus, is characterised by visionaries who not only champion responsible practices, but also advocate them among the key stakeholders to support wider adoption.

Figure 1 Responsibility is a spectrum spread across four levels



Source: Authors' analysis

To operationalise the framework, RE developers must reflect on, re-strategise, and re-establish deployment goals through a lens of responsibility.

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Call to action for RE project developers: next steps on your responsibility journey

Among all the actors in the private sector, RE project developers have the maximum power to implement responsible business practices. To operationalise the framework, RE developers must reflect on, re-strategise, and re-establish deployment goals from a responsibility lens at an organisational and aggregate project level. This section addresses some **immediate next steps RE developers must undertake to evaluate their current position and move forward on their responsibility journey**.

Strategic actions at the organisational level

Multiple synergies can be identified at an organisational level, which can aid RE developers in undertaking responsible deployment of renewable energy. At the organisational level, the senior management should lead the way by propagating awareness regarding responsible deployment as a critical tool for risk mitigation, value maximisation, and social responsibility, ushering in a culture shift in the company's modus operandi. As a part of operationalising this framework, the following measures can be evaluated and undertaken:

1. **Evaluate and institutionalise funding allocations**: Responsible practices may require additional funds and human resources. So, RE developers must evaluate the requirements and set up mechanisms to allocate funds. These could include company funds and grants. Such funding should be directed towards the needs identified at project sites rather than defined top-down via established company policy. A stock of current funding channels and outlets must be understood to undertake such an exercise.

> RE developers need to evaluate whether current contracts disincentivise the adoption of responsible practices and instead offer incentives to not follow them.

2. **Evaluate current siting practices**: A key intervention to fulfil the principles of responsible deployment is the responsible siting of land. Renewable energy project developers need to analyse their current siting practices and must maintain a checklist of indicators with explicit inclusion and exclusion criteria for identifying land. This includes filtering land parcels based on minimal environmental impact, minimising impacts to biodiversity, endangered species, etc. A more advanced screening should focus on minimising social impacts and ensuring the resilience of projects from climate risks. This means filtering out sites with cultural significance, forest lands, multiple cropping agricultural lands with significant social dependencies, areas prone to floods and cyclones, and others.

3. **Assess selection criteria for sub-contractors**: Renewable energy developers are responsible for their contractors. Hence, contractor selection and engagement must also be done from a responsibility perspective. This includes the processes of tendering, Expression of Interest, pre-qualification, pre-bid meeting, bidding, bid evaluation, negotiation, and contract formulation. Developers should identify opportunities to maintain business integrity at each stage of project deployment, such as site identification, development, construction, and operations.

4. **Evaluate contracts**: To create an ecosystem of responsible players, RE developers need to evaluate whether current contracts disincentivise the adoption of responsible practices and instead offer incentives to not follow them. For example, if timelines are tight, they might lead to contractors circumventing established procedures, and seeking quick financial gains. It is, thus, essential to evaluate contracts with all actors like land aggregators, EPC firms, etc, with a lens of responsibility, keeping in mind the core principles outlined in the framework.

5. **Build evidence for responsible deployment internally and establish effective communication strategies**: To drive responsible deployment at an organisation level, there needs to be a shift in the values and business culture. This includes active

internal discussions on responsible behaviour, and promoting the senior leadership vision of responsible deployment as a core tenet of organisational practices and duties.

6. **Champion responsible RE in the overall ecosystem**: Following the four levels of responsibility, RE developers can champion the adoption of responsible practices throughout the sector, from policymakers, investors and procurers of clean energy, to become a 'Pioneer'. This would enhance the outcomes of their actions by creating a demand for such practices among the key stakeholders. It would also help in the creation of a self-sustaining model, wherein developers can effectively invest in more responsible practices as the narrative for responsible deployment for RE strengthens across the entire ecosystem.

7. **Set up an internal cell to operationalise the framework**: A crucial step for RE developers will be to set up an internal cell to undertake the required checks elaborated above and monitor progress. This cell is not limited to the Environment, Social, and Governance vertical, but includes representatives from teams such as business development, land, and legal, to ensure complete implementation. It would enable internal alignment within the organisation where different teams would consciously collaborate to improve outcomes for all. For instance, the sustainability or quality, health, safety and environment (QHSE) management teams should coordinate with the land team to incorporate appropriate siting practices for social and environmental risk mitigation. Such synergies can be identified by this dedicated cell, and activities be streamlined accordingly.

> A crucial step for RE developers will be to set up an internal cell that lies outside the ESG vertical to undertake the required checks and monitor progress.

Strategic actions at the project level

Similar to synergies at the organisational level, various interventions can be undertaken at an aggregate project level to minimise duplication of work in every iterative project. At the project level, these principles can help guide the actions of on-ground actors. They can be operationalised in the following ways:

1. **Build capacity of actors on the ground**:
   a. Train company representatives who have direct or indirect communication with local stakeholders and communities on the ground. This includes individuals in teams such as QHSE, land, and construction supervisors. Training should encompass the core principles of responsible deployment, with themes like transparency, community development and ecological resilience at the centre of all communications.

   b. Build capacity of non-company representatives hired by RE developers, such as land aggregators, EPC and O&M firms. These are important actors in the ecosystem, whose behaviour can shape company image and reputation, affecting the sentiment towards the project among the communities. Thus, it is crucial to build their capacity along the lines of the company mandate, and incorporate responsible practices in their actions. Capacity building must start early from the stage of tendering itself, to select the correct contractors. Post selection, training needs to be conducted to help them internalise the meaning of and approach for responsible deployment, covering all principles highlighted in this framework.

2. **Make a repository of challenges faced on the ground, community asks, and best practices**:
   a. Developers can maintain a project-wise, portfolio-wide repository of any implementation-related challenges and the tested solutions to inform future actions. This includes creating proper methods of documentation, channels of communication with actors on the ground, and understanding processes of grievance management to better equip company representatives for future projects.

b. Repository of community asks and best practices: In addition to creating a repository of impacts and challenges, it is equally essential to learn from best practices and replicate them in other geographies. Further, key community asks identified during stakeholder consultations can be an important inputs to funding strategies.

3. **Evaluate modes of engagement with the community**: In line with company-wide evaluations, on-ground channels and modes of communication also need to be examined to understand key gaps and potential scope for conflicts with communities. These include communication, consultation, consensus-building and grievance management. Current methods of consensus building, obtaining prior and informed consent, and grievance management need to be evaluated, along the responsibility principles, keeping in mind the aim of impact mitigation for the company and community value enhancement towards a people-centric energy transition.

4. **Re-evaluate internal procedures**: Documentation, compliances, monitoring and evaluation methods need to be assessed from a lens of transparency and truthfulness. This includes documentation of processes on the ground, including stakeholder consultations, grievance management, locally hired staff, contractors etc. Systems should be set up to ensure the proper flow of these documents between different actors and stakeholders, if not already established.

5. **Estimate additional funding requirements**: Investing in community development, undertaking proper, timely, and adequate communication, and effective community impact mitigation require financial capital. Thus, it is crucial to estimate likely additional expenditures and secure funding for such activities at each project level. Once a formalised understanding of cost implications is established, it will be easier for developers to undertake such practices and raise funds from relevant channels.

Developers should identify opportunities to maintain business integrity at each stage of project deployment, such as site identification, preparation, development, construction, and operations.

Glossary of terms

Benefit-sharing	Benefit implies a deliberate strategy, requiring dedicated human and financial resources. It yields tangible and improved socioeconomic benefits to impacted stakeholders.
Bidding	Bidding is a part of the tendering process and is a competition among different parties to win a tender. The parties are called bidders, and their quotations for the work proposal is called bidding.
Common resources/ shared resources	These are resources that are not privately owned and the rights of use are communally shared; there are freely available to anybody who wants to use them.
Consensus-building	This is a process to address the interests of all stakeholders, and achieve an agreement that results in benefits to all.
Endangered species	A species considered to be facing very high risk of extinction in the wild.
EPC players	These are businesses that provide engineering, procurement, and construction services for projects. This includes creating the initial design and engineering plans, sourcing materials and tools, and overseeing the construction of project, as well as coordinating with contractors and subcontractors.
Expression of Interest (EoI)	This is a formal document or statement indicating a person or company's intention to participate in a potential opportunity, signifying their serious interest without making a full commitment at that stage.
Forest-dwellers	Individuals who live in forests and depend on them for their livelihood, and have knowledge of resources and conservation practices.
Land aggregators	Land aggregators or land facilitators are individuals/organisations involved in the process of land aggregation, which refers to consolidating smaller parcels or pieces of a particular land into a larger connected plot.
Landless agricultural labourers	These are individuals engaged in agricultural production without owning any land, and are typically temporary workers.
Nomadic pastoral communities	These are individuals who depend on domesticated livestock, and migrate in an established territory to find pasturage for their animals.
Pre-qualification	It refers to a process where a buyer assesses potential suppliers or contractors beforehand, to determine if they meet the necessary criteria to participate in a bidding process for a specific project.
RE developers	Companies that may bid, develop, build, and operate projects that generate electricity from renewable sources.
RE companies	In this framework, 'RE companies' refer to investors, project developers, EPC players, asset management players, and other contractors.

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Interested in collaborating with CEEW and REI India?

Are you ready to raise your ambition and tackle socio-environmental risks within the renewable energy sector? Do you want to work with changemakers focused on driving responsible energy practices? Perhaps you're interested in becoming a friend of REI India? Or in providing the vital funds needed for us to carry out our work?

Whether it's working one-to-one, or by joining forces with other changemakers in the sector, there are many ways we can collaborate.

Together, let's enable the renewable energy sector in India to adopt business models and value chains that are people-centric and ecologically positive.

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