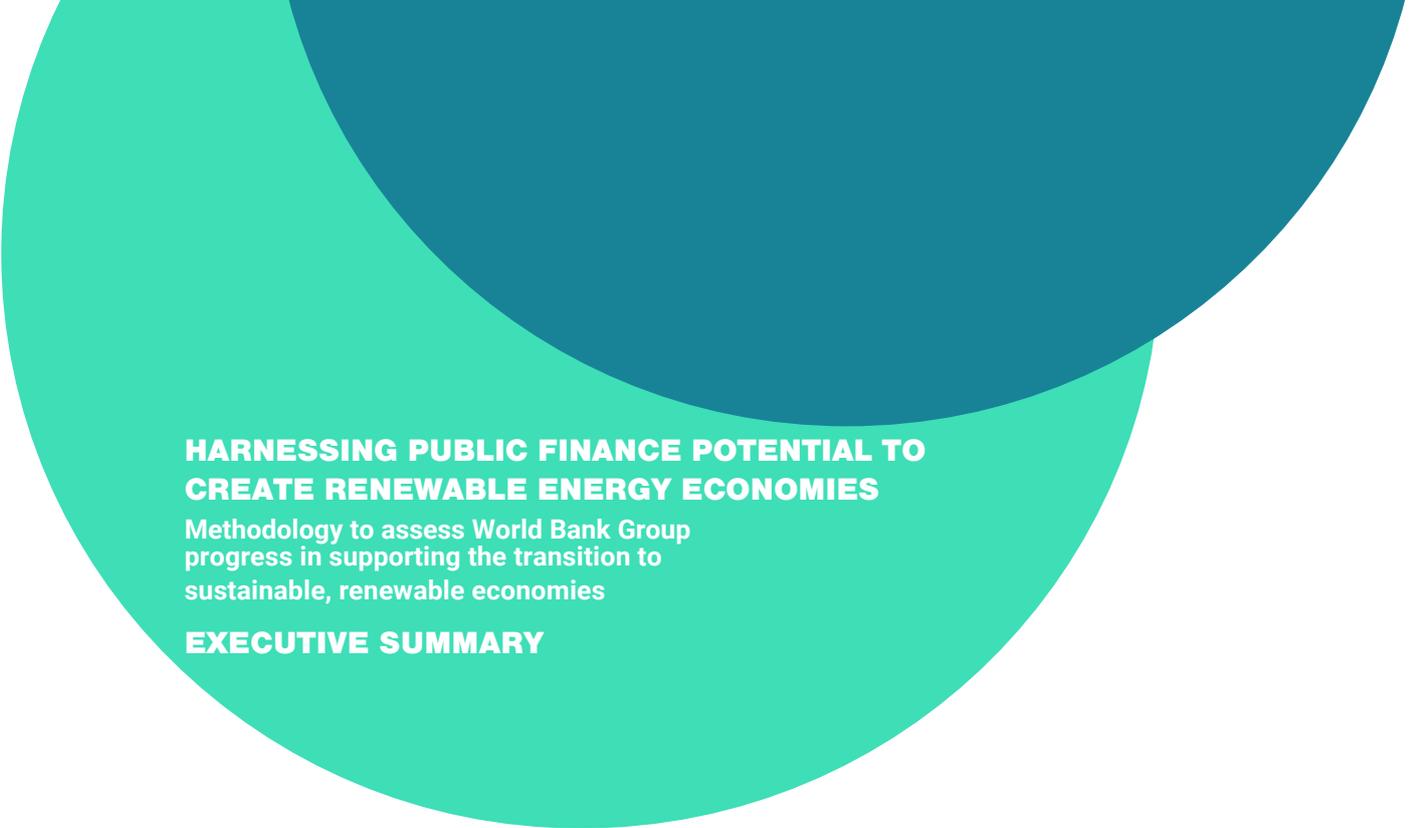


# HARNESSING PUBLIC FINANCE POTENTIAL TO CREATE RENEWABLE ENERGY ECONOMIES

Methodology to assess World Bank Group progress in supporting the transition to sustainable, renewable economies

## EXECUTIVE SUMMARY





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## EXECUTIVE SUMMARY

**I**nternational Energy Agency, *World Energy Outlook 2021*: “The path to net-zero emissions is narrow: staying on it requires immediate and massive deployment of all available clean and efficient energy technologies.”

The Multilateral Development Banks (MDBs) including the World Bank Group (WBG) have committed to aligning their policies, practice and investments with the Paris Agreement. At COP27 in Sharm el Sheikh the MDBs were told to reform in a way that can deliver the transformation needed to address a climate emergency in a way that does not further burden already indebted lower- and middle-income countries.

In this context, civil society groups are proposing a methodology, based on current science and international commitments, to hold the WBG to account on delivery and implementation of its Paris alignment by harnessing public finance potential to create renewable energy economies. Our recommended approach should help drive the scale of energy systems transformation needed to end the climate crisis, while supporting lower income people and countries to thrive. It presents a comprehensive taxonomy of sustainable renewable energy technologies which should be used to transform the whole economy. This will require a just energy transition while delivering the 2030 sustainable development goals (SDGs), protecting human rights and dignity, and safeguarding the natural world.

This methodological approach is clear on three points:

- ▶ The World Bank must align its investment, policy advice and capacity building with the Paris agreement to tackle climate change effectively.
- ▶ The answer is a fully sustainable renewable energy powered economy. There is no room for fossil fuels (fossil gas, oil, coal) and false solutions – such as carbon capture, usage and storage and storage (CCUS), blue hydrogen, nuclear, large hydro - if we are to keep global temperature rise within the 1.5C trajectory.
- ▶ The energy transition should happen in a way that does not further place the burden and cost of the transition on communities who had done least to cause climate change, including women and indigenous peoples.

## METHODOLOGY

This methodology for driving and monitoring the WBG Paris alignment methodologies is in three parts: trajectory, taxonomy and a whole economy approach. Each section sets a fundamental element that is needed to drive the scale and urgency of transition, while building a thriving renewable energy economy for all.

### Section 1: Trajectory for delivering Paris alignment keeping on course for 1.5°C

Global authorities give no ambiguity in the trajectories needed for carbon emissions and the energy sector to become Paris aligned. The Inter-governmental Panel on Climate Change (**IPCC**) **assessment report six (AR6)** says “we assessed, limiting warming to around 1.5°C requires global greenhouse gas emissions to peak before 2025 at the latest, and be reduced by 43% by 2030” and “achieving net zero carbon dioxide emissions globally in the early 2050s.”

The International Energy Agency (IEA) states that achieving net zero requires:

- ▶ A huge decline in the use of fossil fuels.
- ▶ Immediate and massive deployment of all available clean and efficient energy technologies.
- ▶ No new oil and gas fields approved, and no new coal mines or mine extensions are required.

We propose that the energy solutions, especially those supported with public finance, should be aimed at ‘real zero’ (deliver zero carbon greenhouse gas emissions across the full energy cycle) rather than net zero, to avoid the dependence on unproven technologies, false solutions or unsustainable carbon offsets.

Delivering Nationally Determined Contributions (NDCs) and Long-Term Strategies (LTS) that countries have pledged under the Paris Agreement must be viewed as the minimum criteria for Paris alignment, as the current national targets will take us on a trajectory well beyond 2°C of warming. Delivering the 1.5°C goal of the Paris Agreement will need much higher ambition.

A transformation of the energy system at this scale will require a just energy transition (JET) approach which helps fossil fuel-dependent countries to hold open discussions

and consultations on the phase out of fossil fuel sectors, and the establishment of new renewable energy economies. Consultation and implementation of JET strategies should include workers, impacted people and consumers, including those living in energy poverty. They must promote gender equality, to ensure the transition benefits all and leaves no one behind.

## Section 2: Taxonomy with social and environmental accountability: definitions for zero carbon, renewable economies

The WBG requires a clear science-based taxonomy of technologies which will guide policy reform and investment decision. This is a clear definition of the technologies which can be included and excluded from consideration for investment.

The trajectories in section 1 show there is no room in a 1.5°C aligned transition for fossil gas, oil or coal, and this means a clear definition for and exclusion project which will provide fossil fuel lock-in. In addition, there is no time to place hope in untested and false solutions to divert resources from delivering a 1.5°C aligned trajectory.

**Renewable energy transition taxonomy table** (see Annex 1 for full version)

EXCLUSIONS	INCLUSIONS/INCLUSION WITH CAUTIONS
 <b>Coal extraction, transport and use</b>	 <b>Clean cooking options, non-fossil fuel</b>
 <b>Oil – extraction, transportation, and use</b>	 <b>On and offshore wind power</b>
 <b>Fossil Gas – extraction, transportation, and use</b>	 <b>Solar photovoltaic, on shore or floating</b>
 <b>LNG infrastructure</b>	 <b>Solar thermal</b>
 <b>Carbon capture, use, and storage (CCUS)</b>	 <b>Mini-hydro</b>
 <b>Blue Hydrogen</b>	 <b>Renewable mini-grid</b>
 <b>Nuclear power</b>	 <b>Sustainable wave and tidal power</b>
 <b>Large hydropower</b>	 <b>Geothermal</b>
 <b>Industrial biofuels</b>	 <b>Green hydrogen (from renewables)</b>
 <b>Waste-to-energy (WtE)</b>	 <b>Energy system stability</b>
 <b>Unsustainable renewable technologies</b>	 <b>Sectoral initiatives</b>

### **Scientific, environmental, social and rights-based criteria**

Science based taxonomy must ensure<sup>43</sup> environmental integrity by delivering:

1. Climate change mitigation, Paris aligned to a 1.5°C trajectory
2. Resilient to the impact of climate change
3. Sustainable use and protection of water, marine, and forest resources
4. Pollution prevention and control
5. Protection of healthy ecosystems

In addition, it must meet social and human rights criteria:

- a. Safeguards compliance
- b. Respects the needs and concerns of local communities, centering them in the development of energy options and prioritising the voices of women, vulnerable and marginalised people and indigenous communities.
- c. Free, prior, and informed consent (FPIC) of Indigenous Peoples
- d. Upholds human rights, decent work principles, and land rights of impacted communities
- e. Access to functioning grievance redress mechanisms

This taxonomy must be driven by a clear set of scientific, environmental, social and rights-based criteria.

A sectoral approach to delivering energy services will allow for much greater opportunity to address and manage the whole energy system. In many cases a sector or city-wide energy systems approach can optimise delivery of energy services, through increased focus on delivering the activity (mobility, cooking, lighting, communications, education, health provision). Doing this will ensure a focus on the development outcome rather than the supply of energy or electricity.

The WBG estimates that demand for critical minerals could rise by 500% by 2050. Mining and waste management of precious metals and minerals for batteries and renewable technology electronics must protect people and planet. A focus on efficient, well managed energy systems can minimise demand for and consumption of these minerals. The WBG should consider what role its investments play in mineral extraction, battery technology and electronic waste recycling so it is fully part of a just transition approach, with highest possible social and environmental safeguards throughout the life cycle of the technology.

### **Section 3: Delivering ‘whole economy’ just transition across all WBG investments**

World Bank Climate Change Action Plan (CCAP) 2021-2025<sup>1</sup>: “We will support a “whole of economy” approach that focuses on policies and plans to create the right enabling environment for climate action and deliver transformative change, including private sector led growth. Beyond greening projects, the WBG will focus on the greening of entire economies, while supporting a just transition.”

Whole economy alignment with the Paris Agreement will require the WBG to use all its tools and investments to drive the transition, including project grants, financial intermediaries, policy, planning and capacity building. Alongside project investments, it is critical to get the policy and financing structures in place at national and sub-national levels to drive the transition.

Coherence of Paris Alignment methodologies must be across all the WBG funding including:

- ▶ Direct finance project funding
- ▶ Development policy finance
- ▶ Indirect investments including through financial intermediaries.
- ▶ All technical and policy support
- ▶ Guarantees through Multilateral Investment Guarantee Agency (MIGA)

Client countries need consistent and coherent advice and investment that will drive Paris alignment and energy transition across their whole economy. The WBG should ensure the CCAP is aligned to the Paris 1.5°C goal and support countries in setting a rapid decarbonisation trajectory through their Country Climate and Development Reports (CCDRs)<sup>2</sup>. The Paris aligned CCDCR should then be directly integrated across the Country Partnership Framework (CPFs), the central tool for reviewing and guiding the WBG's country programs and gauging their effectiveness.

At a national level the WBG should support national policy targets and financing which:

- ▶ Enhance renewable expansion and uptake, including energy market regulation and policy to encourage for on and off-grid renewable deployment.
- ▶ Develop training and skills development to building national technical and policy capacity for public sector workers and energy sector workforce to support the transition, ensuring women and marginalised groups are included.
- ▶ Support small renewable energy entrepreneurship and small off-grid and mini-grid power production.

This will lay the foundation for delivery of effective transition across the whole national economy.

## RECOMMENDATIONS FOR THE WORLD BANK GROUP

The following are recommendations for the WBG to refresh its policy and practice so that it is using a whole economy approach towards supporting countries to establish renewable energy economies.

These are entry points where WBG practice can be implemented quickly:

- ▶ **Paris Alignment should ensure** that the WBG Paris Alignment aims to deliver a 1.5°C trajectory, with clear milestones and targets for investment; and establish a rights- and science-based taxonomy of energy technologies to guide investments within the Paris Aligned strategy, importantly removing natural gas from its list of acceptable energy technologies.

- ▶ **Climate Change Development Reports (CCDR) should be reviewed against the 1.5°C trajectories, introduce a rights- and science-based taxonomy and involve civil society groups in extensive consultations to ensure the CCDR responds to local needs, opportunities, and safeguards.**
- ▶ **Innovation in financial support for renewable energy transition** that prioritises investments in renewable-ready grid and energy management infrastructure, bundling of small-scale renewable technologies including small, decentralised projects, and investing in energy efficient urban infrastructure.
- ▶ **The International Finance Corporation's (IFC's) work with the private sector and private banks and funds should immediately stop financing new coal, oil and gas projects**, and close loopholes, and ramp up support for sustainable renewable energy investments.
- ▶ **The WBG should sign on to the Glasgow Statement on International Public Support for the Clean Energy Transition** on phasing out fossil fuel investments and ramping up renewable energy and efficiency investments in low- and middle-income countries.
- ▶ **The WBG's role in JETPs moving forward should ensure an equitable process** for the selection of countries receiving JETP support, not support the development of any fossil fuels and other false solutions, establish clear lines of accountability that provide affected communities with access to grievance redress mechanisms and uphold the highest standards of transparency.

## ANNEX 1 RENEWABLE ENERGY TRANSITION TAXONOMY TABLE

### Scientific, environmental, social and rights-based criteria

All renewable energy and energy efficiency initiatives, including policy reform and financial provisions, must be driven by scientific and social, rights-based criteria as follows:

1. Science based taxonomy must ensure<sup>59</sup> environmental integrity by delivering:
  1. Climate change mitigation, Paris aligned to a 1.5°C trajectory
  2. Resilient to the impact of climate change
  3. Sustainable use and protection of water, marine, and forest resources
  4. Pollution prevention and control
  5. Protection of healthy ecosystems

In addition, it must meet social and human rights criteria:

- a) Safeguards compliance
- b) Respects the needs and concerns of local communities, centering them in the development of energy options and prioritising the voices of women, vulnerable and marginalised people and indigenous communities.
- c) Free, prior, and informed consent (FPIC) of Indigenous Peoples
- d) Upholds human rights, decent work principles, and land rights of impacted communities
- e) Access to functioning grievance redress mechanisms

### Exclusions

Technology	Comment	Inclusion/exclusion
Coal – mining, transport, and use for power, industry, and domestic uses	Exclusion includes expansion of existing coal mines for whatever purpose, and plant rehabilitation	Excluded
Coal power retirement with replacement by gas or other fossil fuel-based development, or replacement of fuel with unsustainable biofuels	While coal retirement is urgently needed, replacement with unsustainable energy systems excluded from the taxonomy is not considered sustainable	Excluded
Nuclear	The limited supply of fuel, potential for radioactive accidents, and waste that lasts for tens of thousands of years make nuclear energy sources unsustainable.	Excluded

Oil – extraction, transportation and use for power, transport sector, domestic and industry		Excluded
Fossil Gas – extraction, transportation, use in domestic, power, and industrial use		Excluded
LNG infrastructure	Exclusion should include terminals for export or import of LNG or technologies dependent on using LNG. LNG infrastructure leads to long term lock-in to high carbon infrastructure	Excluded
Carbon capture, use and storage (CCUS)	Unproven technology with unclear costing. Does not remove the production and transportation emissions of the fossil fuel burned and has risk of carbon leakage.	Excluded
Blue Hydrogen	Fossil based with carbon dioxide waste product	Excluded
Large hydro power	Does not meet social or environmental sustainability criteria; potential land rights conflicts	Excluded
Industrial biofuels	Does not meet social or environmental sustainability criteria; potential land rights conflicts	Excluded
Waste-to-energy (WtE)	Waste-to-energy projects are fundamentally unsustainable as it incentivizes waste production, also noting that plastic fuel stock is fossil-based feedstock and therefore not Paris compliant.	Excluded
Unsustainable renewable technologies (any technology type)	Any renewable energy project that does not meet environmental standards, does not consult affected communities, or undermines land rights.	Excluded

**Inclusion**

These technologies can be applied where they meet environmental standards, projects consult with affected communities, does not undermine land rights or rights of indigenous peoples as detailed in the taxonomy section above.

Technology	Comment	Inclusion/exclusion
Clean cooking options, including ultra clean wood or charcoal stoves, renewable biogas, and innovations in affordable electric cooking	Focus on delivering affordable, accessible, and appropriate cooking to the target populations.	Included
On and offshore wind power	Ensuring this meets on and offshore planning and land rights	Included
Solar photovoltaic, on shore or floating	For large scale solar farms, ensuring this meets planning and land rights	Included
Solar thermal	Ensuring this meets environmental and social standards	Included
Mini-hydro	Ensuring this meets environmental and social standards	Included
Renewable mini-grid	Ensuring this meets environmental and social standards	Included
Sustainable wave and tidal power	Ensuring this meets environmental and social standards	included
Geothermal	Ensuring this meets environmental and social standards, including land rights of affected communities.	Included with caution
Green hydrogen (from renewables)	The renewable energy source must be socially and environmentally sustainable and water source sustainable	Included with caution
Energy system stability	Combination of <ul style="list-style-type: none"> <li>▶ grid modernisation to maximise renewable energy integration</li> <li>▶ extension renewable energy hubs,</li> <li>▶ mini-grids and household systems;</li> <li>▶ energy storage and</li> <li>▶ demand management to stabilise energy supply</li> </ul>	Included
Sectoral initiatives	Including: <ul style="list-style-type: none"> <li>▶ Public and active transport</li> <li>▶ Home insulation</li> <li>▶ Passive cooling</li> <li>▶ Renewable schools, clinics</li> <li>▶ Industrial innovations such as zero carbon steel</li> <li>▶ Zero carbon building materials</li> </ul> Looking for clustering and city-wider or sector-wide economies of scale	Included



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