

# Understanding the arc of global just transition: case studies from India, South Africa and the US

*The memo uses case studies from the United States, South Africa, and India to explain the different stages these countries are currently at in terms of realizing their just transition agenda – their position on the “arc” of just transition. The memo then develops policy recommendations from the case studies that will be applicable for countries working to achieve a just transition.*

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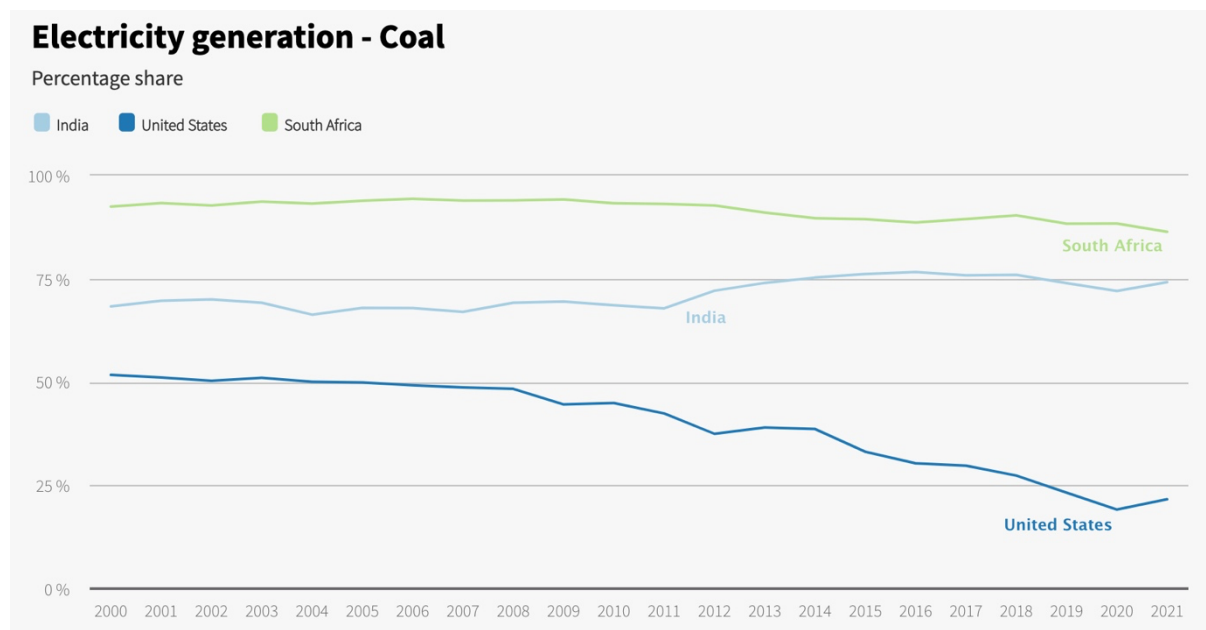
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## Introduction

To keep global warming to well-below 2 degrees Celsius or even achieve a 1.5 degree target, fossil fuels and particularly coal need to decline rapidly in the next few decades. Coal sector has been responsible for nearly 0.3 degrees of the 1 degree increase in average temperatures globally<sup>1</sup>.

The coal-based power sector is in terminal decline in Organisation for Economic Co-operation and Development (OECD) countries. For example, in the United States (US), coal power generation has declined by over 20% in the last decade. However, the story of coal power varies in other parts of the world. In countries like South Africa, coal power generation has plateaued. But for many countries in Asia such as India, coal power generation and use is still rising slowly (**Figure 1**). However, even in non-OECD countries, although coal power still dominates, its long-term future is in jeopardy due to the net zero pledges that the countries have made.

**Figure 1: Percentage of electricity generation from coal in India, US, and South Africa<sup>2</sup>**



As the coal sector declines, it is important to ensure a just transition for coal workers, their communities, and regions dependent on coal for local jobs, revenues, and social services. This is not just a justice issue but is also important for the political support for energy transitions.

The concept of just transition – a process meant to address current and past harm to fossil fuel-dependent workers and communities during a necessary clean energy transition – has gained momentum in the last 5-6 years especially after it was enshrined in the historic Paris agreement<sup>3</sup>. National and sub-national governments, multilateral banks, national and local unions, coal companies, and various other institutional stakeholders have now actively started working on just transition. In the last year and a half, the international Group of Seven (G7) countries consisting of the US, Canada, France, Germany, Italy, Japan, and the United Kingdom (UK) have

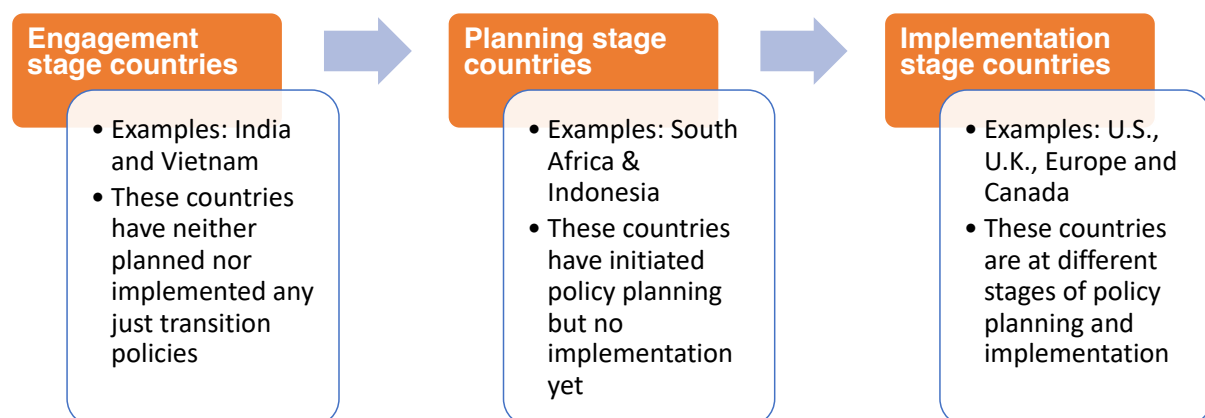
signed Just Energy Transition Partnerships (JETP)'s with South Africa, Indonesia, and Vietnam. The goal of these JETPs is to help these emerging economies transition away from coal<sup>4</sup>. A similar JETP is being negotiated between G7 and India, with more details likely to emerge in the months to come.

While it is clear that there is national and international momentum around just transition, different countries around the world are at different stages of just transition planning and implementation. In the next section, we explain this ladder of just transition planning and implementation using case studies from the US, South Africa and India. Using these case studies, we provide general policy recommendations applicable for countries working on just transition.

### The arc of just transition

There are three main stages of just transition, and countries currently engaging with just transition will fall within one of the three. These stages are: engagement, planning, and implementation.

**Figure 2: The arc of just transition away from coal**



#### 1. Implementation stage countries

The first category of countries are those where coal based energy is in overall decline. These countries have already gone through years or decades of discussions about whether just transition is important and how to create a just transition plan. Over time, key sectoral stakeholders have formed strong opinions about what just transition should look like. When progressive governments have been elected at national and local levels, they have enacted just transition legislation and related policies that aim to provide economic support to workers and communities who are (or will be) negatively impacted. Substantive amounts of budgetary allocation have also been made to support just transition legislation and policies. Some key implementation countries include the US, the UK, Germany and other European Union countries<sup>5</sup>.

**Case study of the US:** The US federal government and various state governments have already enacted just transition-related laws and policies targeted at fossil fuel

communities. The *Infrastructure Investment and Jobs Act*, *Inflation Reduction Act*, and the *CHIPS and Science Act* collectively provide at least [\\$100 billion](#) USD for economic transition of fossil fuel communities. States like Colorado, Illinois, Minnesota, and New Mexico have enacted explicit legislation focusing on fossil fuel workers and communities in transition. For instance, Colorado passed just transition legislation that created an Office of Just Transition (OJT), which is now working to implement the remainder of the legislation. Specifically, the OJT is working with other Colorado state-level departments to “assist workers and communities that will be adversely affected by the loss of jobs and revenues due to the closure of coal mines and coal-fired power plants”<sup>6</sup>.

In the US, most just transition-related laws and policies currently focus on some form of local economic diversification, remediation of coal infrastructure, retraining and skilling workers to new clean energy jobs.

Despite being ahead of the curve compared to other countries, key just transition challenges remain in the US. They include:

- Lack of understanding about the scale and type of vulnerability of energy communities at a county or local level.
  - Tax revenue data is not collected by local governments and the number of indirect jobs are unknown.
  - Timescale understanding of which communities will be hit by energy transition and when is missing.
- There are many just transition initiatives at federal and state levels but no provision for long-term strategies for economic diversification of fossil fuel communities.
  - No clear economic diversification strategy aimed at creating industrial policies in fossil fuel communities in transition.
  - Lack of coordination between federal and state levels remain a challenge.
- Fossil fuel communities face significant barriers to accessing federal funds like complex application processes and high matching funds requirements.

## 2. Planning stage countries

The second category is comprised of countries where the growth of the coal sector has stopped but there have not been any actual declines. Very few coal power plants and mines have been closed in these countries. In these countries, key stakeholders have been actively engaging in just transition discussions. Hundreds of workshops, meetings and policy discussions have happened between different stakeholders about what a just transition should look like in the country. Unions, companies, and governments have very strong opinions about just transition and each have clearly articulated a stance on how a just transition needs to happen. However, in these countries, no policies have been finalized. Therefore, no implementation has

occurred yet. All just transition action is at a planning stage. Some key planning countries include South Africa and Indonesia.

**Case study of South Africa:** the province of Mpumalanga in South Africa is home to nearly 90 percent of South African coal production and over 70 percent of the coal power plant capacity<sup>7</sup>. Most of these coal plants are old and could be retired. Just transition discussions in the country and in Mpumalanga started almost a decade ago with labour unions dominating the discussion<sup>8</sup>. Over time, the discussions have become heated within the country. Some labour unions such as the National Union of Mineworkers – South Africa’s leading coal mining union – are pushing for a just transition agenda that focuses exclusively on front line coal mine workers who will be impacted by the transition. Environmental groups like Groundwork or Center for Environmental Rights focus on a just transition that is much broader, which involves transformation of the whole economy<sup>7</sup>. Government departments, unions, and environmental groups have written several white papers on what they think should be part of the just transition agenda. To channelize all the discussions, the South African government created the Presidential Climate Commission (PCC), whose key task is to develop a framework for just transition. Over time, PCC has also conducted several convenings to engage workers, communities, and other stakeholders impacted by any future coal closures.

Meanwhile, during the CoP26, the US and several EU countries collectively offered a JETP partnership of \$ 8.5 billion USD to South Africa to catalyse its transition away from coal. Almost a year after this political declaration, South Africa said that this is less than 10% of what they need in the next five years. Negotiations and discussions are still ongoing between rich countries and South Africa regarding the modalities of this finance.

While just transition discussions have only intensified in South Africa, especially after the JETP declaration, nothing has been implemented yet. Some initiatives such as repurposing of Komati coal plant in Mpumalanga have been declared but the actual implementation will take time.

Going forward, some key just transition challenges for South Africa include:

- Lack of explicit policies on just transition prevents any large scale implementation of just transition in the country.
- Massive funding is required to retire coal plants and fund just transition for workers.
  - South Africa and its main utility ESKOM are in massive debt. Substantive funding along with technical know-how is required to transition ESKOM’s power plants and deal with worker transition issues.

### 3. Engagement stage countries

The third category of countries are those countries where the just transition concept is brand new. The concept has entered the civil society and policy landscape only in the last few years. No key stakeholders, whether they are unions, environmental groups or policy makers, have formed any opinion on the topic. Therefore, in these countries, policies have neither been formed nor implemented. Some key engagement countries include India and Vietnam.

**Case study of India:** Just transition has only existed in India as a topic for the last four years. In the beginning, think-tanks and independent researchers wrote research reports defining what a just transition means in the Indian context. They also published reports about the coal ecosystem that included the number of jobs, total coal-related tax revenues, and the role of state owned enterprises in the energy transition<sup>9</sup>. Think-tanks and independent researchers also engaged with coal dependent state governments, coal companies, and unions. The federal Ministry of Coal also enlisted the World Bank to create a framework on just transition with a specific focus on environmental remediation of coal mines. All these efforts led to institutionalization of just transition ideas in the country. First the Federal Ministry of Coal started a just transition division, then Coal India Limited (India and the world's largest coal mining company) created a just transition committee. Finally, the state of Jharkhand – India's most coal dependent state – created a just transition taskforce to study how the state can transition away from coal without hurting workers and communities that depend on coal for their livelihood.

Overall, in India, although much progress has been made on just transition in the last few years, policy formulation and implementation has still not begun. Right now, some key just transition challenges in India are:

- Lack of understanding of energy transition and just transition in different government departments and amongst officials.
- Lack of meaningful coordination between coal companies', state governments', and federal governments' just transition thinking.

### **Policy recommendations for countries navigating a just transition**

Just transition is a complex process that will span decades and will involve the planning and implementation of a network of policies. Based on the understanding that different countries are at various stages of formulating and implementing just transition policies, we recommend the following for enhancing global just transition efforts:

#### ***1. Tailor JETPs to each country based on country reality***

As new JETP's are signed between G7 and emerging economies or existing JETPs are further worked upon, it is important for G7 policymakers to understand the country realities especially with regards to just transition. For example, a JETP with

India could initially focus on sensitization of stakeholders, conducting workshops and training of stakeholders who can then play a key role in just transition. Therefore, given the different stages of transition, JETPs need to be tailored for each country.

## **2. Create peer-to-peer networks for states and stakeholders to learn from one another**

As countries navigate this transition, it is important to facilitate linkages between them, which will allow countries and actors in different stages of just transition planning to learn from one another.

This type of national and sub-national peer to peer collaboration has worked in the past and led to fruitful outcomes in the clean energy space. For example, in 2018, the Colorado Energy Office and Gujarat Energy Research Management Institute in India signed a [memorandum of understanding](#) to promote regular policy exchange on renewable energy integration and transportation electrification, and for promoting collaborative research activities between these two states. However, such linkages and the associated peer-to-peer learning is currently missing in the just transition space, including between coal dependent states that are facing similar socio-economic declines from the energy transition.

Yet, such partnerships are necessary between and across different categories of stakeholders such as between state/provincial government officials, trade union representatives and representatives from state level civil society organizations.

## **3. Create a global research network to foster effective research questions and data analysis**

Researchers and think-tanks in countries like the US, South Africa, and India have a lot to learn from one another in terms of the types of just transition research questions they can ask and the methodologies to be used. For example, Indian researchers have conducted multiple studies evaluating the scale and type of coal dependency at a local level in India. Such an analysis is still missing in South Africa and remains incomplete in the US. Therefore, creating a research network will help scholars regularly exchange ideas and knowledge around just transition, in order to fill research gaps and support this transition.

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