JUST TRANSITION
IN THE PHILIPPINES
CONTENTS

LIST OF FIGURES 1
LIST OF TABLES 1
ABBREVIATIONS AND ACRONYMS 2
FOREWORD: NO JUST TRANSITION WITHOUT JUST TRANSFORMATION 3
INTRODUCTION: THE ORDER OF THE DAY - BEGIN THE JUST TRANSITION 5
EXECUTIVE SUMMARY 7

1 | WHAT IS JUST TRANSITION? 11
   Defining Just Transition
      History and Development 11
      A Concept from the Ground 12
      A Transition to a New System 13
      Best Practices 13
         Addressing Displacement 13
         Addressing Exploited and Extracted Resources 14
      Prominent Themes of a Just Transition Framework 14

2 | WHAT IS THE PHILIPPINES’ DEVELOPMENT AGENDA AND ENERGY LANDSCAPE? 15
   Philippine Development Agenda 15
      A Philippine Development and Energy Situationer
         Philippine Development Agenda 15
            Ambisyon Natin 2040 15
            Philippine Development Plan 2017-2022 15
   Energy Landscape 16
      Energy Generation and Consumption 16
      Inaccessible and Unaffordable 19
      Unsustainable and Carbon-intensive 21
      The Philippine Energy Plan 2017-2040 22

3 | IS THE PHILIPPINES IN JUST TRANSITION? 24
   A Discussion of Transition Policies in the Philippines
      Renewable Energy Law, Among the First in Asia 24
      Climate Change Act, Forgetting the Labor Force 25
      Typhoon Haiyan, the Imperative to Respond to Climate Change 26
LIST OF FIGURES

Figure 1. Total Primary Energy Supply By Fuel, 2016
Figure 2. Total Final Energy Consumption by Sector, 2016
Figure 3. Power Installed Capacity Mix, 2017
Figure 4. Power Gross Generation Mix, 2017
Figure 5. 2017 Transport Consumption Mix, 2017
Figure 6. Average Electricity Prices
Figure 7. Retail prices in Metro Manila beginning 11 September 2018
Figure 8. Total Primary Energy Supply by Source, 2016
Figure 9. Total Primary Energy Supply by Fuel, BAU v. CES (2000-2040)
Figure 10. Transport Energy Demand by Fuel in MTOE, 2000-2040
Figure 11. GHG Emission by Fuel, BAU v. CES (2016-2040)
Figure 12. RE Installed Capacity in MW, 2008 v. 2017
Figure 12. RE Installed Capacity in MW, 2008 v. 2017
Figure 13. Net Imported Coal in MTOE in % share in the TPES, 2008 v. 2016
Figure 14. GHG Emission by Fuel, BAU Scenario v. CES, 2016-2040
Figure 15. Registered Vehicles in the Philippines, 2017
Figure 16. Percentage distribution of employment for mining and quarrying establishments with total employment of 20 and over by industry subclass, 2015
Figure 17. Distribution of Employment for All Electricity, Gas, Steam and Air Conditioning
Figure 18. Global Coal Power Capacity – Retiring, Operating, Under Construction, and Proposed, 2010-2017
Figure 19. Total Employment of Electric Power Generation, Hard Coal Mining, Solar PV, Small Hydro, and Wind Power
Figure 20. Construction jobs from 2008-2016
Figure 21. Direct jobs across the solar PV value chain, 2018
Figure 22. Percent Distribution of Transport and Storage Establishments for All Employment Sizes by Industry Group, 2015

LIST OF TABLES

Table 1. GHG Inventory for the Energy Sector by Fuel, 2016
Table 2. GHG Inventory for the Energy Sector by Sector, 2016
Table 3. Average employment (jobs per megawatt of average capacity) over life of facility
Table 4. Jobs in Select Value Chain and Sub-sectors
## ABBREVIATIONS AND ACRONYMS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASPBI</td>
<td>Annual Survey of Philippine Business and Industry</td>
</tr>
<tr>
<td>BAU</td>
<td>Business-as-Usual</td>
</tr>
<tr>
<td>BLES</td>
<td>Bureau of Labor and Employment Statistics</td>
</tr>
<tr>
<td>CCC</td>
<td>Climate Change Commission</td>
</tr>
<tr>
<td>CES</td>
<td>Clean Energy Scenario</td>
</tr>
<tr>
<td>DENR</td>
<td>Department of Environment and Natural Resources</td>
</tr>
<tr>
<td>DOE</td>
<td>Department of Energy</td>
</tr>
<tr>
<td>DOLE</td>
<td>Department of Labor and Employment</td>
</tr>
<tr>
<td>DOTr</td>
<td>Department of Transportation</td>
</tr>
<tr>
<td>GHG</td>
<td>Greenhouse Gases</td>
</tr>
<tr>
<td>GTC</td>
<td>Green Thumb Coalition</td>
</tr>
<tr>
<td>INDC</td>
<td>Intended Nationally Determined Contributions</td>
</tr>
<tr>
<td>LCCAP</td>
<td>Local Climate Change Action Plan</td>
</tr>
<tr>
<td>LGU</td>
<td>Local Government Unit</td>
</tr>
<tr>
<td>MtCO₂e</td>
<td>Metric Tonnes of Carbon Dioxide Equivalent</td>
</tr>
<tr>
<td>MTOE</td>
<td>Million Tonnes of Oil Equivalent</td>
</tr>
<tr>
<td>NCCAP</td>
<td>National Climate Change Action Plan</td>
</tr>
<tr>
<td>NDC</td>
<td>Nationally Determined Contributions</td>
</tr>
<tr>
<td>PDP</td>
<td>Philippine Development Plan</td>
</tr>
<tr>
<td>PEP</td>
<td>Philippine Energy Plan</td>
</tr>
<tr>
<td>PSA</td>
<td>Power Supply Agreement</td>
</tr>
<tr>
<td>PUV</td>
<td>Public Utility Vehicle</td>
</tr>
<tr>
<td>RE</td>
<td>Renewable Energy</td>
</tr>
<tr>
<td>REMB</td>
<td>Renewable Energy Management Bureau</td>
</tr>
<tr>
<td>RTD</td>
<td>Round Table Discussion</td>
</tr>
<tr>
<td>TFEC</td>
<td>Total Final Energy Consumption</td>
</tr>
<tr>
<td>TPES</td>
<td>Total Primary Energy Supply</td>
</tr>
<tr>
<td>UNFCCC</td>
<td>United Nations Framework Convention on Climate Change</td>
</tr>
</tbody>
</table>
No just transition without just transformation

We commend the Center for Energy, Ecology, and Development (CEED) for coming out with Just Transition in the Philippines, a timely study for three reasons. First, the study is a reminder that the government is not delivering on its commitment to help reduce global carbon emissions by making the strategic shift towards less reliance on fossil fuel. Why, for instance, are more and more coal plants being built instead of being phased out?

Second, under the Green Jobs Act of 2016 and other related laws on the environment, the Philippines is supposed to be fully implementing a "Just Transition" program in support of various climate change "mitigation" and "adaptation" programs and measures. In relation to this, DOLE, with the help of the ILO, is preparing a long list of aspirational do-ables under the ILO-DOLE transition program, which indicates the millions of "green jobs" that can be created in each sector of the economy. And yet, there is no mention in the program that the present 2017-2022 Philippine Development Plan is not exactly green. The Plan is anchored on a so-called "Ambisyon 2040", which envisions a developed Philippines by 2040, when hunger and poverty will become history and every family will be able to enjoy a high standard of living and will be able to buy a family car. Imagine the serious environmental impact of such a middle-class car-crazed development scenario. Where does just transition come in?

And third, there is very little understanding in the Philippines of what just transition means—a very important concept if the country has to make the shift to a green societal and economic arrangement.

So, we thank CEED for educating us on the history and substance of the term "just transition". The word "just" is not there for nothing. It is integral in the effort of the trade unions to ensure that after a disaster such as wars or environmental devastations, the transitioning process is fair and just to all.
In short, transition to a better life, to a job-full economy and to a low-carbon and climate-resilient economy requires just, fair, and inclusive “transitioning” programs. How indeed can we nudge or force the jeepney drivers and operators to abandon their aging vehicles in order to promote cleaner air if, in the transition, the only choice that is given to these drivers and operators is for them to buy the expensive e-vehicles costing P1.6 million each? This is unjust transition. How can we help farmers to go organic farming if they are not given the skills needed to go organic and, more importantly, the power to make decisions on what farm culture should be developed because they do not own the lands?

Verily, just transition requires programs for just transformation in each sector of the economy. This means transition programs are meaningless without social, economic reforms. No just transition without just transformation. This, in brief, is what the CEED study is all about.

Read on!

Dr. Rene E. Ofreneo
Director of Center for Labor Justice
University of the Philippines, School of Labor and International Relations
INTRODUCTION

The changing global landscape demands that we change our relationship with the world and with each other. The global climate crisis, in particular, puts a spotlight on the need for a Just Transition towards an economy and society which responds to this changing world.

After decades of research, majority of climate scientists across the world are now highly confident that our planet is progressively warming. This warming is due to the massive amount of Greenhouse Gases (GHG) emitted to the atmosphere by human activities, with the fossil fuel industry as the main driver. Discussions of the politics and economics behind the persistent dominance of carbon-intensive industries amidst the worsening effects of climate change inevitably followed soon thereafter.

Naomi Klein in her book, This Changes Everything: Capitalism versus the Climate, accurately captures this. She explains that “[o]ur economic system and our planetary system are now at war. Or, more accurately, our economy is at war with many forms of life on earth, including human life. What the climate needs to avoid collapse is a contraction in humanity’s use of resources; what our economic model demands to avoid collapse is unfettered expansion. Only one of these sets of rules can be changed, and it’s not the laws of nature.”

This economic model of “unfettered expansion” pertains to the prevailing development paradigm which has no regard for ecological limits. It presumes that our resources are infinite, and so the extraction of these resources can be infinite as well. This disregard for limits extends to human beings, or human capital, as their wages, welfare, and surroundings are exhausted for maximum profit.

This paradigm also leads to the phenomenon of concentrated growth. Resources are siphoned from rural and indigenous communities in order to be imported and processed elsewhere, while host communities suffer from the remnants of their extracted environment. Revenue generated from profit-sharing schemes with the national government are more often than not lost to corruption, or left out of reach of local communities. Thus, rehabilitation and restoration efforts in host communities are dismal at best, and non-existent at worst. Instead of the fulfillment of the promise of “development” previously peddled to the affected communities, development is realized elsewhere.
Among the industries which reflect the reality of limitless extraction and concentrated growth is the fossil fuel-dominated energy sector. Thus, starting a truly just transition from the energy sector has significant and profound effects on any level, whether nationally or globally. It can be said that the order of the day is beginning the transition to a “low carbon economy and society.”

Globally, the 2015 Paris Climate Agreement has put forth the “decarbonization” policy. Nationally, this policy is reflected by the Philippines’ Intended Nationally Determined Contributions (INDC) following its ratification of the Paris Agreement. This commitment is also cited in the country’s Development Plan and Energy Plan. Existing laws such as the Renewable Energy Law, the Green Jobs Act, and the Clean Air Act also appear to be consistent with this policy.

However, it remains to be seen whether the country’s decarbonization policy includes and prioritizes a Just Transition agenda—an agenda that recognizes the demands and needs of workers who will be displaced and directly affected by the transition—or merely scratches the surface of just transition.

The Center for Energy, Ecology, and Development offers this paper to do precisely that: to elucidate the concept of a Just Transition through a historical discussion of its development, to ground it with the reality of climate change and the drive to decarbonize, and finally, to measure the Philippine government’s prioritization of Just Transition for sectors who will be most affected by these initiatives.

It is our hope that this paper gives just transition campaigners in the Philippines and across the globe the necessary tools to approach pressing issues concerning the harmonization and prioritization of the agenda of labor and affected sectors in the move towards a more sustainable, more ecologically just economy and development framework. We acknowledge those who have helped us keep our paper as grounded and as close to reality as possible, especially as regards the urgent demands and recommendations we shall be presenting.

We extend much gratitude to those who helped us in this endeavor, from our international partners, to local workers groups and people’s organizations, as well as individuals who offered their time, effort, and willingness to help in this initiative. We hope for our efforts in this paper will yield a Just Transition campaign which will not only be for the workers and for affected peoples, but of the workers and of affected peoples as well.

In solidarity,

Gerry Arances
Executive Director
Center for Energy, Ecology, and Development (CEED)
WHAT IS JUST TRANSITION?

The concept of Just Transition was first introduced after World War II, when the ongoing transition from a wartime to a peacetime economy brought about threats of mass unemployment to millions of veterans and members of the wartime labor force. A union leader proposed that just transition benefits granted to veterans be similarly given to atomic workers who will also be displaced by the government’s disarmament policy.

In the early 1990s, after numerous studies confirmed fossil fuels as a major cause of global warming, Just Transition as a concept re-emerged. Just Transition was once again proposed to assist fossil fuel workers who will be displaced by environmental protection policies. Today, against the backdrop of a climate in crisis and a better understanding of its social, political, and economic dimensions,

IS THE PHILIPPINES IN JUST TRANSITION?

Despite the fact that its development agenda and energy landscape lags in the global race to transition, the Philippines is in fact one of the first countries in Asia to adopt a firm and decisive policy on the imperative of transitioning to cleaner and renewable energy through the enactment of the Renewable Energy Law (RE Law) in 2008. The Philippines has since adopted other policies which represents facets of a Just Transition.
The Philippines is one of the first countries in Asia to adopt a firm and decisive policy on the imperative of transitioning to cleaner and renewable energy through the enactment of the Renewable Energy Law in 2008. Another pioneering law, the Climate Change Act declared as policy the promotion of climate justice, the need to stabilize GHG concentrations in the atmosphere, to build national and local climate resilience, and to maximize the benefits of climate change.

Reeling from the devastation of Typhoon Haiyan, the Philippines was moved to take a more pronounced role in the global climate talks. It became a rallying voice for urgent climate action and climate justice in the annual Conference of Parties to the UNFCCC.

Workers' Groups and Trade Unions

Bukluran ng Manggagawang Pilipino (BMP), SOSYALISTA, and Trade Union Congress of the Philippines (TUCP)

Climate and labor issues as systemic issues

- There is high recognition of the gravity of the issues of climate change and labor rights violations in the Philippines.
- Majority raised that the current exploitative economic system as the main driver of these issues. This drive for unfettered and concentrated growth disregards the limits of both environmental and human resources.

Former Coal Workers and Coal-Affected Community

Semirara Coal Mining Site in Semirara, Antique—the largest coal producer in the Philippines. Caluya, Antique is a coal-affected community located near the Semirara Coal Mining Site. Calaca Coal Plant in Calaca, Batangas—the oldest operating coal plant in the Philippines.

Underpaid, light work

- The work provided is usually routinary and light work that requires little to no skill, such as sweeping the premises.
- Workers are regularly paid, although below the minimum wage. Usually minimum wage for one worker is divided between three workers, who alternate in performing the work.
- This wage is still more than the average income earned by residents from agricultural activities.

Overlooked environmental concerns

- Majority of the workers in the mining site and coal plant overlook environmental concerns and hazards in their communities because of the employment created by the coal projects.

Lack of awareness of climate change

- The opposition is mainly due to the adverse impacts to the community's environment and health, and not due to issues of climate change and the role of fossil fuels as a main driver of climate change, due to lack of awareness.

---

4 Here are the key findings from roundtable discussions (RTDs), key informant interviews, and surveys with workers’ groups and trade unions, and affected workers from three identified key transitioning sectors.
The Green Jobs Act is the first law that affirmed labor as a primary social economic force in ensuring the transition into a green economy. However, it only focused on assisting people in “green jobs”, neglecting the workers who are being displaced in transitioning or retiring sectors.

The Philippines partnered with the International Labor Organization to enable the Philippine Government, workers’ organizations, and employers’ organizations to leverage the process of structural change towards a sustainable, low carbon, climate-resilient economy to create decent jobs on a significant scale and in a sustained and inclusive manner.

The Department of Transportation’s started implementation of a PUV Modernization Program, which required all PUVs to use either electric or Euro IV-compliant vehicles, among other features. President Rodrigo Duterte mandated that the modernization start with the PUJ Industry and be completed by January 2018.

The Green Economy Models is the Department of Environment and Natural Resources’ application of the Just Transition concept by ensuring that workers displaced from closed or suspended mines are able to immediately transition to green jobs that are specifically meant to rehabilitate abandoned and degraded mining sites.

The creation of Green Economy Models is the Department of Environment and Natural Resources’ application of the Just Transition concept by ensuring that workers displaced from closed or suspended mines are able to immediately transition to green jobs that are specifically meant to rehabilitate abandoned and degraded mining sites.

The DOTr’s suggested Php 80,000.00 subsidy per PUJ unit is a measly sum.

Groups claimed that there is a high possibility of a fare hike (Php 8.00-Php 20.00/Php 23.00). The DOTr, however, denied these claims, but have released no formal study on the Program’s impacts on fares.

Although most of the groups have engaged government on different levels on the PUV Modernization Program, they have not formulated a shared Just Transition Agenda for the PUJ Industry.

There is still need to raise awareness on how Just Transition can be used as a Framework to push for their agenda.

The Green Jobs Act is the first law that affirmed labor as a primary social economic force in ensuring the transition into a green economy. However, it only focused on assisting people in “green jobs”, neglecting the workers who are being displaced in transitioning or retiring sectors.

The Philippines partnered with the International Labor Organization to enable the Philippine Government, workers’ organizations, and employers’ organizations to leverage the process of structural change towards a sustainable, low carbon, climate-resilient economy to create decent jobs on a significant scale and in a sustained and inclusive manner.

The Department of Transportation’s started implementation of a PUV Modernization Program, which required all PUVs to use either electric or Euro IV-compliant vehicles, among other features. President Rodrigo Duterte mandated that the modernization start with the PUJ Industry and be completed by January 2018.

The Green Economy Models is the Department of Environment and Natural Resources’ application of the Just Transition concept by ensuring that workers displaced from closed or suspended mines are able to immediately transition to green jobs that are specifically meant to rehabilitate abandoned and degraded mining sites.

The DOTr’s suggested Php 80,000.00 subsidy per PUJ unit is a measly sum.

Groups claimed that there is a high possibility of a fare hike (Php 8.00-Php 20.00/Php 23.00). The DOTr, however, denied these claims, but have released no formal study on the Program’s impacts on fares.

Although most of the groups have engaged government on different levels on the PUV Modernization Program, they have not formulated a shared Just Transition Agenda for the PUJ Industry.

There is still need to raise awareness on how Just Transition can be used as a Framework to push for their agenda.

The Green Jobs Act is the first law that affirmed labor as a primary social economic force in ensuring the transition into a green economy. However, it only focused on assisting people in “green jobs”, neglecting the workers who are being displaced in transitioning or retiring sectors.

The Philippines partnered with the International Labor Organization to enable the Philippine Government, workers’ organizations, and employers’ organizations to leverage the process of structural change towards a sustainable, low carbon, climate-resilient economy to create decent jobs on a significant scale and in a sustained and inclusive manner.

The Department of Transportation’s started implementation of a PUV Modernization Program, which required all PUVs to use either electric or Euro IV-compliant vehicles, among other features. President Rodrigo Duterte mandated that the modernization start with the PUJ Industry and be completed by January 2018.

The Green Economy Models is the Department of Environment and Natural Resources’ application of the Just Transition concept by ensuring that workers displaced from closed or suspended mines are able to immediately transition to green jobs that are specifically meant to rehabilitate abandoned and degraded mining sites.

The DOTr’s suggested Php 80,000.00 subsidy per PUJ unit is a measly sum.

Groups claimed that there is a high possibility of a fare hike (Php 8.00-Php 20.00/Php 23.00). The DOTr, however, denied these claims, but have released no formal study on the Program’s impacts on fares.

Although most of the groups have engaged government on different levels on the PUV Modernization Program, they have not formulated a shared Just Transition Agenda for the PUJ Industry.

There is still need to raise awareness on how Just Transition can be used as a Framework to push for their agenda.
A JUST TRANSITION FRAMEWORK IN THE PHILIPPINES

A Just Transition Framework is offered as a key starting point for affected workers and communities, movements, and other institutions that aim to advance a truly Just Transition in the Philippines.

A Just Transition Framework in the Philippines:

1. Addresses immediate displacement issues of workers, communities, and other sectors at the frontline of the transition by:
   a. Placing affected groups at the center of the transition process, and
   b. Employing a democratic approach to implementing the transition to a low-carbon economy and society;

2. Promotes a transformative energy system by:
   a. Increasing access and affordability,
   b. Recognizing ecological limits, and
   c. Aligning with people's interests and developmental needs; and

3. Promotes an low-carbon economy and society founded on ecological and social justice, which:
   a. Paves a development pathway centered on the needs of the people and guided by ecological integrity, and
   b. Promotes hand-in-hand a high quality of life and livelihood among communities and a respect for the limits and dignity of the ecology.

A Swift and Just Transition Away from Fossil Fuels

Using this Just Transition Framework, the following policies are recommended:

A. Declaration of a firm policy against fossil fuels—no new fossil fuel projects will be approved, and all existing fossil fuel use in all economic sectors will be phased out by 2050;

B. Formulation of a comprehensive plan for the retirement of the fossil fuel industries, in accordance with the commitment to maintain the average global temperature below 1.5 degrees from pre-industrial levels;

C. Adoption of policies against other harmful energy projects, such as nuclear, mega-dams, waste-to-energy incinerations, and agrofuels;

D. Full implementation of Renewable Energy policy mechanisms to expedite the development expansion of clean and affordable renewable energy;

E. Adoption of the proposed Just Transition Framework, ensuring that:
   a. Affected workers in transitioning sectors are identified;
   b. Alternative jobs and livelihoods with living wages are made available for displaced workers and communities;
   c. Economic diversification is promoted for communities hosting fossil fuel projects; and
   d. All members of society are granted universal and equitable access to energy for basic needs and the fulfillment of rights.

A United Call for Just Transition

The integration of the Just Transition Framework in the Philippines requires of the people a comprehensive and united call for a genuine Just Transition. In order to arrive at a genuine Just Transition, the affected workers and groups that are the forefront of the transition must gain deeper and more comprehensive understanding of what makes a Just Transition based on their realities on the ground. From this understanding, affected workers and groups can formulate and push for their own Just Transition Agenda.
The concept of Just Transition has always been rooted in the interest of workers. The concept was first introduced after World War II, when there was an ongoing transition from a wartime to a peacetime economy. Although it was a welcome development, the transition brought about threats of mass unemployment and economic dislocation of millions of veterans and members of the wartime labor force. Oil, Chemical, and Atomic Workers Union leader Tony Mazzocchi proposed that transition benefits granted to World War II veterans be similarly given to atomic workers who will also be disenfranchised by the government’s ongoing disarmament policy. Thus, creating the concept of Just Transition—providing financial support and opportunity for higher education for displaced workers, who are transitioning together with the economy.

In the early 1990s, after numerous studies confirmed fossil fuels as a major cause of global warming, Just Transition as a concept re-emerged. This time, in the context of a warming planet, just transition was a proposed program for fossil fuel workers who will be displaced by new environmental protection policies. At the core of the program is a government fund assistance which sought to provide benefits and pay to displaced fossil fuel industry workers as they transition away from the biggest GHG emitting industry.

As climate scientists gain consensus on the major role of anthropogenic activities in driving climate change, and the impacts of climate change worsen and become more evident, the call for Just Transition has also grown stronger and wider to include not only a transition away from fossil fuel industries but from a carbon-intensive economy and society as a whole to a low-carbon economy and society.

Although now centered on the evolving issue of climate change, Just Transition continues to be rooted in the interest of labor groups. With the support of a growing number of governments and non-governmental organizations, the Just Transition language was most recently adopted into the Paris Agreement, particularly its preamble, which reads:

“Taking into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities.”

Outside the UNFCCC process, there was an earlier milestone when the 2012 Rio+20 outcome document, “The Future We Want” recognized the need to ensure workers are protected on the path to building more sustainable societies:

“We recognise the importance of a just transition including programmes to help workers adjust to changing labor market conditions.”

A year later, at the 2013 International Labour Conference, member states of the International Labor Organization (ILO)—the United Nations agency for employment and other social policies—discussed for the first time Just Transition, climate change, and its linkages to the world of work. This discussion resulted in the publication of the Report entitled, “Sustainable development, decent work, and green jobs,” and in the launch of the process to develop Just Transition guidelines.
In 2015, a month before the Paris Agreement, the “Guidelines for a Just Transition towards environmentally sustainable economies and societies for all” was unanimously adopted, aligning for the first time the issue in both the UNFCCC and the ILO.  

The Guidelines recognized the following major opportunities that the global transition could provide for the benefit of the world of work:  

1. Net gains in total employment in the form of an increased number of available decent jobs and investments into environmentally sustainable production and consumption and management of natural resources;  
2. Improvements in job quality and incomes on a larger scale from more productive processes, as well as greener products and services in sectors like agriculture, construction, recycling, and tourism; and  
3. Social inclusion through improved access to affordable, environmentally sustainable energy and payments for environmental services, for instance, which are of particular relevance to women and residents in rural areas.

The Guidelines also recognized the basic raison d’être of the concept of Just Transition, which is the need to address the general threat of job losses and unemployment that any plan towards an economic transition poses upon workers. It recognized the following major challenges that the global transition could pose for the world of work:  

1. Economic restructuring, resulting in the displacement of workers and possible job losses and job creation attributable to the greening of enterprises and workplaces;  
2. The need for enterprises, workplaces, and communities to adapt to climate change to avoid loss of assets and livelihoods and involuntary mitigation; and  
3. Adverse effects on the incomes of poor households from higher energy and commodity prices.

Far from being binding in pilot countries, however, the Guidelines are meant to provide non-binding practical orientation to Governments and its “social partners”, which is defined by the ILO as workers’ organizations and employers’ organizations.

Currently, no binding international set of standards for Just Transition has been adopted yet.

A Concept from the Ground

While states and international labor unions are at the forefront of expounding on the concept of Just Transition in the international policy-making arena, people's organizations along with labor organizations and other grassroots organizations are also working to define what Just Transition means for them, based on their realities on the ground.

In the case of the region of North America, where Just Transition was first coined as a concept, labor organizations, environmental organizations, and climate justice activists that are working with local communities stand witness to the evolution and negotiation of the scope and meaning of Just Transition among different concerned sectors.

A number of labor organizations in North America report workers and communities’ aversion to talks of transition, in general—citing negative attitude towards the shift to a clean energy system because it symbolizes the loss of employment from the fossil fuel industry, mostly the coal industry. Additionally, Just Transition is also viewed negatively due to its failure to create sufficient jobs within a clean energy system that will capture and secure all workers displaced by an obsolete fossil fuel industry.
These issues have led a number of North American organizations to initiate dialogues with communities and workers as to what Just Transition could mean for them. From the experiences of low-income communities, communities of color, other minority groups, and organized labor groups, it was reflected that Just Transition should also integrate the relevant issues of race, of low-income, and other realities specific to a community. In groups of organized labor, for example, a conversation on Just Transition involves jobs, wages, and grievances; for minority groups, it should include issues of race and low-income communities.

A Transition to a New System

Various movements on the ground recognize that climate change is not only an environmental issue but rather an intersecting crises in political, economic, and environmental systems. Necessarily, solutions that are limited to shifting from an outdated and carbon-intensive technology to clean and renewable technology are blatantly inadequate. From this premise, Just Transition then is understood and used not only to shift technologies, but as a tool that can change the current system.

The Congress of South African Trade Unions accurately defined the current system as—[a] system that constantly seeks to expand production by the cheapest means possible. This means that it depends on the exploitation of workers around the world as well as the depletion of the natural resource base of the planet. What is produced is very often not really needed by people but becomes desirable through advertising and marketing. It is also a system that creates massive waste—either in the form of production that exceeds demand, or in the form of goods that are bought but thrown away.

In consonance with this more comprehensive concept of Just Transition, CEED in its policy paper entitled “Switching On Transformative Energy” discusses the transformative power of the energy sector, as a key transitioning sector in the Philippines, in changing the current profit-oriented and exploitative system, and to foster a people-centered development.

Best Practices

At present, the fact that there are very few sectors and economies that have fully transitioned towards a low-carbon system, there are also very few best practices in Just Transition within the context of climate action. Best practices are those that have led to a measurable and long-term solution to address displacement and to simultaneously effect measurable, systemic shift towards clean energy. Nevertheless, there have been notable Just Transitions worth discussing.

Addressing displacement

In 2016, in light of the transition away from fossil fuels to cleaner sources of energy, the BlueGreen Alliance, an alliance among America’s largest labor unions and most influential environmental organizations, successfully lobbied for a national political agenda on just transition called Power + Plan.
Power + Plan is a strategy for a clean energy transition that addressed displacement by including programs for stakeholders in the transition. The strategy, formulated with an economic development approach, possessed key budget elements for worker and community protection, such as: (a) programs for job training, job creation, and economic diversification, (b) programs for economic diversification, development programs, and clean-up projects at hazardous abandoned mines that boost employment and business opportunities, and (c) benefits for retirees from the coal industry, such as healthcare and pension.  

In New York, PUSH Buffalo, a local membership-based community organization, initiated a project which makes affordable housing a reality and promotes “development without displacement”. PUSH purchases vacant homes and renovates them by incorporating dense-pack cellulose insulation, on-demand hot water heaters, radiant floor heating, and solar and geo-thermal power. PUSH Buffalo also lobbied for new community net-metering policies that enable low-income communities to cooperatively own and manage clean energy assets. These sustainable houses, a solution thought of by community members themselves, are an attempt at integrating renewable energy and energy efficiency into housing. 

Addressing exploited and extracted resources

Black Mesa, Arizona is home to large coal mines that supply coal to coal-fired power plants. Ironically, thousands of families from the Black Mesa do not have access to electricity and water. The Black Mesa Just Transition Initiative, is a community-led project aiming to establish a renewable, community-controlled energy through solar technology. It is an attempt at a holistic approach to energy development, creation and distribution of benefits, job training, and training on environmental impact. 

From the solar facilities that it will build, the project envisions a ‘green economy’ that pursues profit that is centered on “the protection and preservation of lands, waters, air, culture, and the welfare of the future generation.” Exemplified in its pilot projects is a development path that honors and integrates “sacred, ecological relationships” and “traditional practices” into economic growth.

Prominent Themes of a Just Transition Framework

Just Transition is an evolving concept, whose meaning and relevance differs among communities, organizations, movements, and institutions, and across different contexts and periods. Thus, one of the biggest challenges to Just Transition is developing it into a useful framework in one’s context.

In the climate-vulnerable Philippines, Just Transition should retain its two most prominent themes: 1) It is primarily concerned with addressing issues of mass unemployment, displacement, and economic dislocation; and (2) it is a systemic framework for the shift towards a low-carbon society.

This paper adopts these themes to examine the country’s development, energy, and climate policies, to locate a Just Transition Framework in these policies, to surface the experience, understanding, and appreciation of affected workers in key transitioning sectors, and to recommend policies that would further develop Just Transition in the Philippines.
In the era of urgent global climate action, numerous countries have begun their transition, and can already be said to have a low-carbon economy and society to some extent. Germany produced enough renewable energy in the first half of 2018 to power all of its households for an entire year. 23 Portugal generated enough renewable energy to power its whole country this March 2018. 24 Sweden will reach its 2030 renewable energy target this year. 25 London City will run on 100% renewable energy this month. 26

As for the Philippines, examining its development agenda and energy landscape will provide a context of the extent to which it has or has not transitioned to low-carbon economy and society.

PHILIPPINE DEVELOPMENT AGENDA

Ambisyon Natin 2040 (Vision 2040)

The Philippine Development Plan 2017-2022 (PDP 2017-2022) was formulated based on Ambisyon Natin 2040. Ambisyon Natin 2040 is the collective long-term vision of Filipinos over the next 25 years. A national survey of close to 10,000 citizens and focus group discussion of more than 300 citizens conducted by the National Economic Development Authority (NEDA) revealed that a majority of Filipinos aspires for a strongly rooted, comfortable, and secure life. Filipinos aspire for a Philippines with a predominantly prosperous middle class society, where no one is poor by 2040. 27 In order to achieve this vision, Filipinos have enumerated the following milestones: lowering the poverty rate, stimulating an inclusive economic growth, and creating significantly more gainful employment inside the country, among others. 28

In 2016, this collective vision was adopted as a guide for development planning, laying down four areas for strategic policies, programs, and projects: a) building a prosperous, predominantly middle class society where no one is poor; b) promoting a long and healthy life; c) becoming smarter and more innovative; and d) building a high-trust society. 29 By the following year, NEDA released PDP 2017-2022, to serve as the blueprint for the achievement of the Filipinos’ collective vision.

Philippine Development Plan 2017-2022

Much of the economic blueprint encompassed in the PDP retains a neoliberal economic framework. Described by Dr. Rene Ofreneo as a “neoliberal and extractive frame of development,” the PDP fails to put the protection of the environment at the center of the country’s development pathway amidst unchecked environmental degradation and growing climate change risks faced by the country. 30

---

28 Ibid.
It failed to place climate mitigation and adaptation strategies and other important ecological issues at the center of development planning. Programs such as making ‘green’ key economic sectors and renewing urban and rural poor communities most affected by climate realities have not been reflected as part of the Plan. Although it states that it will pursue the development of renewable energy projects, it still takes a neutral stance against future fossil fuel energy projects. It has vague action plans for managing the mining industry—an industry which has long caused massive environmental destruction and climate-vulnerability to frontline communities.

The Green Thumb Coalition (GTC), a wide network of environmental groups to which CEED is one of the convenors, echoed this analysis. According to GTC, the PDP adopts a business-centered paradigm of development, when it should be adopting a people-centered development. It fails to veer away from neoliberal policies such as trade liberalization in goods, complemented by liberalization of services and privatization, and extractive policies such as the widespread “logging and mining activities.

Thus, putting the country’s broader, macroeconomic development policies side by side with its transition policies surfaces a cognitive dissonance in terms of the country’s long-term economic vision. The Just Transition towards a low-carbon economy and society are at a risk of being preempted by the country’s PDP.

Overall, while the PDP provides for strategies to ensure ecological integrity, and a clean and healthy environment, the plan as a whole does not adopt a transition towards a low-carbon economy and society.

**ENERGY LANDSCAPE**

**Energy Generation and Consumption**

Energy generation in the Philippines at present is heavily-dominated by fossil fuels at 63%. Despite having a considerable selection of energy sources, the country has maintained oil-based fuel as its main source of energy, with a share of 22% in the energy mix. Oil-based is followed by coal at 22%, and natural gas at 6.1%. Renewable energy sources lag significantly at 37%.

In terms of energy consumption, the Power Sector and the Transport Sector are the two sectors with the highest consumption. Based on 2016 data, the Total Final Energy Consumption (TFEC) of the Power Sector is 6.4 MTOE, and of the Transport Sector is 12.3 MTOE. The Power Sector is not depicted as a separate sector in Figure 2 because the Department of Energy (DOE) does not consider it as a formal economic sector. It is subsumed in all the other sectors as electricity consumption.

---

31 In its policy paper entitled “Switching On Transformative Energy”, CEED discusses in detail the Philippine Energy Landscape. Key highlights of the discussion are shared here.
The Power Mix is also dominated by fossil fuels but with a larger share at 75.43%, while only 24.57% is generated from renewable energy.

<table>
<thead>
<tr>
<th>Source</th>
<th>MW</th>
<th>Share in the Power Mix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>8,049</td>
<td>35.4144667</td>
</tr>
<tr>
<td>Oil-based</td>
<td>4,153</td>
<td>18.2726153</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>3,447</td>
<td>15.1663147</td>
</tr>
<tr>
<td>Renewable Energy</td>
<td>7,079</td>
<td>31.1466033</td>
</tr>
<tr>
<td>Source</td>
<td>MW</td>
<td>Share in the Power Mix</td>
</tr>
<tr>
<td>---------------</td>
<td>-------</td>
<td>------------------------</td>
</tr>
<tr>
<td>Coal</td>
<td>8,049</td>
<td>35.4144667</td>
</tr>
<tr>
<td>Oil-based</td>
<td>4,153</td>
<td>18.2726153</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>3,447</td>
<td>15.1663147</td>
</tr>
<tr>
<td>Renewable Energy</td>
<td>7,079</td>
<td>31.1466033</td>
</tr>
</tbody>
</table>

Figure 2. Total Final Energy Consumption by Sector, 2016

33.1 MTOE

Source: DOE, PEP 2017-2040, Volume 1, page 1.
The Transport Sector has barely any mix of energy sources since it is heavily dependent on oil-based fuel. Petroleum products comprise 96.4% of the transport sector’s energy consumption, and electricity only 0.1%. Mass transport in Philippine roads consist mostly of jeepneys, buses, taxies, Asian Utility Vehicles, and motorized tricycles. These vehicles run primarily on gasoline and diesel.
Inaccessible and unaffordable

A 2013 report from the Philippine Institute for Development Studies (PIDS) says that 16 million Filipinos remain without access to electricity. While urban electrification is at 94%, rural electrification remains at 73%. PIDS study measured the population on a per village connection level and not on a household level. A more recent 2015 unpublished report of Department of Social Welfare and Development (DSWD), measuring the population on a household level, showed that more than 50% of Filipinos are without access to electricity. In 2017, International Renewable Energy Arena (IRENA) published a study on the Philippines, stating that 4.2 million households do not have electricity.

Due to inaccessibility of electricity, households rely on burning wood and charcoal for their daily cooking needs, and on kerosene for lighting needs. According to the Philippine Statistics Authority’s (PSA) 2015 Census of Population and Housing, wood is the most commonly used fuel for cooking by 44.1% of the total households, or 8.9 million households.

In some instances, inaccessibility of electricity may be due to unaffordability. In a survey of electricity prices of 80 countries all over the world conducted by GlobalEnergyPrices, the Philippines ranked 30th most expensive electricity price. In a different survey conducted in Asia, the electricity price in the Greater Manila Area is ranked as the third highest electricity rate in Asia.

There is also a surging inflation for fuel costs for transportation. As of September 2018, the Philippine average gasoline price has reached its highest cost in four years. Meanwhile, the Philippine average diesel price has reached its highest cost in six years.

---

22 Philippine Institute for Development Studies (PIDS), Energy Market Integration and Energy Poverty in ASEAN, Table 1. p. 3.
24 DSWD. Electric Connection per Household Connectivity. 2015.
One of the reasons for the inflating costs of electricity and petroleum in the Philippines is the fact that majority of our fossil fuel supply are imported. This means that these prices are dependent fossil fuel inflation, U.S. dollar inflation, and exchange-rate volatility. Figure 8 shows that 49% of our coal supply is imported, and 91% of our oil supply is imported.

### Table 7. Retail prices in Metro Manila beginning 11 September 2018

<table>
<thead>
<tr>
<th>Products</th>
<th>Price Range</th>
<th>Common Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gasoline (Ron91)</td>
<td>51.65 - 59.87</td>
<td>57.15</td>
</tr>
<tr>
<td>Gasoline (Ron95)</td>
<td>52.65 - 61.70</td>
<td>58.85</td>
</tr>
<tr>
<td>Gasoline (Ron97)</td>
<td>53.35 - 64.45</td>
<td>60.40</td>
</tr>
<tr>
<td>Diesel</td>
<td>42.26 - 48.69</td>
<td>46.60</td>
</tr>
<tr>
<td>Diesel PLUS</td>
<td>46.40 - 53.20</td>
<td>49.35</td>
</tr>
<tr>
<td>Kerosene</td>
<td>48.32 - 58.50</td>
<td>48.32</td>
</tr>
<tr>
<td>LPG P/11-kg cylinders</td>
<td>620.00 - 840.00</td>
<td></td>
</tr>
</tbody>
</table>

Sources: DOE, Oil Monitor as of 11 September 2018
Unsustainable and Carbon-intensive

In 2016, the Energy Sector’s GHG emissions totaled to 109.8 metric tonnes of carbon dioxide equivalent (MtCO2e). Table 1 shows the GHG inventory for each fossil fuel in 2016.\(^{39}\)

Table 1. 2016 GHG Inventory for the Energy Sector by Fuel

<table>
<thead>
<tr>
<th>Sector</th>
<th>CO(_2) Emission (MtCO(_2)e)</th>
<th>Non CO(_2) Emission (MtCO(_2)e)</th>
<th>Total GHG Emission (MtCO(_2)e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil</td>
<td>51.4</td>
<td>0.3</td>
<td>51.7</td>
</tr>
<tr>
<td>Coal</td>
<td>50.1</td>
<td>0.3</td>
<td>50.4</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>7.6</td>
<td>0</td>
<td>7.7</td>
</tr>
<tr>
<td>Total</td>
<td>109.2</td>
<td>0.6</td>
<td>109.8</td>
</tr>
</tbody>
</table>

% Distribution

<table>
<thead>
<tr>
<th>Sector</th>
<th>% Distribution</th>
<th>% Distribution</th>
<th>% Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oil</td>
<td>47.1</td>
<td>51.8</td>
<td>47.1</td>
</tr>
<tr>
<td>Coal</td>
<td>45.9</td>
<td>46.9</td>
<td>45.9</td>
</tr>
<tr>
<td>Natural Gas</td>
<td>7</td>
<td>1.3</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: PEP 2017-2040, Volume 1, p.15.

Although the transport sector is the sector with the biggest energy consumption, and the highest percentage of fossil fuel share, the power generation sector emitted the most GHG in 2016 at 50.9 MtCO\(_2\)e. The transport sector followed at 34.7 MtCO\(_2\)e.\(^{40}\) This level of emissions is projected to only increase with transport sector energy consumption continuing to grow at an average annual rate of 3.2%.\(^{41}\)

Table 2. GHG Inventory for the Energy Sector by Sector, 2016

<table>
<thead>
<tr>
<th>Sector</th>
<th>CO(_2), Emission (MtCO(_2)e)</th>
<th>Non CO(_2), Emission (MtCO(_2)e)</th>
<th>Total GHG Emission (MtCO(_2)e)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Gen</td>
<td>50.7</td>
<td>0.1</td>
<td>50.9</td>
</tr>
<tr>
<td>Transport</td>
<td>34.4</td>
<td>0</td>
<td>34.7</td>
</tr>
<tr>
<td>Industry</td>
<td>15</td>
<td>0</td>
<td>15</td>
</tr>
<tr>
<td>Other</td>
<td>8.4</td>
<td>0</td>
<td>8.5</td>
</tr>
<tr>
<td>Energy</td>
<td>0.6</td>
<td>0</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>109.2</td>
<td>0.1</td>
<td>109.8</td>
</tr>
</tbody>
</table>

% Distribution

<table>
<thead>
<tr>
<th>Sector</th>
<th>% Distribution</th>
<th>% Distribution</th>
<th>% Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Gen</td>
<td>46.5</td>
<td>47.1</td>
<td>46.4</td>
</tr>
<tr>
<td>Transport</td>
<td>31.5</td>
<td>31.9</td>
<td>31.6</td>
</tr>
<tr>
<td>Industry</td>
<td>13.7</td>
<td>13.1</td>
<td>13.7</td>
</tr>
<tr>
<td>Other</td>
<td>7.7</td>
<td>7</td>
<td>7.7</td>
</tr>
<tr>
<td>Energy</td>
<td>0.6</td>
<td>0.9</td>
<td>0.6</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>


\(^{39}\) DOE, PEP 2017-2040, Volume 1, p. 15.
\(^{40}\) DOE, PEP 2017-2040, Volume 1, p.14.
The Philippine Power Sector is also climate vulnerable. Since the power sector is mostly centralized and large scale—from generation, transmission, distribution, and supply of electricity—it is infrastructurally more vulnerable to climate change. Large transmission, distribution, and supply lines, which are not readily detachable, are more prone to toppling, cutting, or disconnection caused by severe and frequent storms. This is especially important in the case of the Philippines, which has been consistently ranked within the top ten most vulnerable countries to climate change by the 2017 Global Climate Risk Index of Germanwatch. \(^{42}\)

**The Philippine Energy Plan 2017-2040**

The Department of Energy (DOE) recently released the Philippine Energy Plan (PEP) 2017-2040, which included a Business-As-Usual Scenario (BAU) and a Clean Energy Scenario (CES). Similar to the PDP, the PEP barely incorporates a transition to a low-carbon energy sector.

Under the PEP, by 2040, whether in a BAU Scenario or a CES, oil-based fuel will still dominate the Total Primary Energy Supply, followed closely by coal. The anticipated increase in RE’s supply will clearly not overtake fossil fuels as the dominant source of energy.

---

\(^{42}\) Germanwatch, Global Climate Risk Index, 2017.
The same is true for the Transport Sector, with a projected energy demand supplied by petroleum products at more than 90%.

Thus, expectedly, the Energy Sector’s GHG emissions will increase from 109.8 MtCO2e in 2016 to 345.5 MtCO2e by 2040, even under the CES.
Despite the fact that its development agenda and energy landscape lags in the global race to transition, the Philippines is in fact one of the first countries in Asia to adopt a firm and decisive policy on the imperative of transitioning to cleaner and renewable energy through the enactment of the Renewable Energy Law (RE Law) in 2008. The Philippines has since adopted other policies which represented different aspects of not only a transition but a Just Transition. The effective implementation of these policies however is a different matter altogether.

Renewable Energy Law, Among the First in Asia

It took 18 years for the RE Law to be finally passed in 2008. Even then, it was still ahead of its time, being one the first RE Laws in Asia.

The Philippine RE Law declared as policy the acceleration of the exploration, development, and utilization of RE sources in the country, in order to achieve energy independence. The RE Policy Framework then was dubbed as “100 in 10”—since the DOE aimed to double the then-4,450 megawatts (MW) RE capacity in 2002 to 9,418 MW or almost 10 MW by 2013. It also aimed to reduce coal imports by 20% in ten years.

In order to achieve these outcomes, RE developers were granted fiscal and non-fiscal incentives such as an income tax holiday of seven years for RE developers, duty-free importations of and special reality tax rates on RE machinery, equipment and materials, among others. Electricity consumers and the local government in communities hosting RE generation facilities are also granted incentives in the form of subsidy for their electricity consumption, provided that their monthly consumption does not exceed 100 kWh every month.

Policy mechanisms were also enacted although belatedly implemented. Among the notable mechanisms are the Feed-In Tariff (FIT) System, which mandates electric power industry participants to source RE-derived electricity at a guaranteed fixed price (“the FIT rate”) applicable for 20 years; the Net-Metering Program, wherein end-users are allowed to export excess electricity generated from their own RE generation facilities; and the Green Energy Option Program (GEOP), which is a program which provides end-users the option to choose RE resources as their sources of energy.

A decade after its enactment, the “100 in 10” and coal imports reduction have not been met. RE capacity is only at 7,079 MW and coal imports increased by 28.6% when measured in terms of MTOE, and decreased by only 2% when measured in terms of its percentage share in the TPES.

---

44 Senator Loren Legarda, Keynote Speech, Convergence for 100% Reneweble Energy in the Philippines Symposium.
45 Ibid.
46 Id., Sec. 15.
47 Id., Sec. 31.
49 RENEWABLE ENERGY ACT OF 2008, Sec. 9.
50 See also Figure 3.
51 See also Figure B.
Climate Change Act, Forgetting the Labor Force

A year later, the Philippine enacted another pioneer law entitled the Climate Change Act \(^{54}\). Through this Act, the Philippines declared as policy the promotion of climate justice, the need to stabilize greenhouse gas concentrations in the atmosphere, to build national and local resilience to climate-induced disasters, and to enjoin all sectors of society to prevent and reduce the adverse impacts of climate change and, at the same time, maximize the benefits of climate change.

It created the Climate Change Commission (CCC), whose main task is to mainstream climate change in all national and local programs and plans. The CCC is also tasked to formulate a National Climate Change Action Plan (NCCAP), which will is the basis for all Local Climate Change Action Plans (LCCAP) of local government units (LGUs). These plans serve to assess the impacts of climate change, to identify vulnerable communities and areas, assess and manage risks and vulnerabilities, identify GHG mitigation potentials, and provide adaptation measures.

Although the Climate Change Act specifically seeks to provide a framework for the country’s transition to a low-carbon economy and society, it makes no mention at all of the labor force threatened with unemployment, displacement, or economic dislocation. The plans mandated of the CCC and LGUs do not require measures to support displaced workers and to provide for education or training for new skills.

In Section 15, which discusses the Role of Government Agencies in ensuring the effective implementation of a framework strategy on climate change, the Department of Labor and Employment (DOLE) was not even included to oversee the establishment of a just transition fund and other programs for displaced workers. This otherwise remarkable law on climate change seemed to have forgotten about the importance of including the labor force in the transition.

\(^{54}\) Republic Act No. 9729, An Act Mainstreaming Climate Change into Government Policy Formulations, Establishing the Framework Strategy and Program on Climate Change, Creating for this purpose the Climate Change Commission, and for Other Purposes, [Climate Change Act] 2009.
Typhoon Haiyan, the Imperative to Respond to Climate Change

In 2013, the Philippines was devasted by Typhoon Haiyan, one of the strongest cyclones in recorded history. Typhoon Haiyan caused US$3.86 billion in damages, with over 6,300 killed, 1,062 missing, 28,688 injured, 3,424,593 families affected, and 16,078,181 people affected.

Reeling from devastation, the Philippines was moved to take a more pronounced role in the global climate talks. The Philippines became an imperative rallying voice for urgent climate action and climate justice in the annual Conference of Parties to the UNFCCC. In the 2015 Conference of Parties (COP), it was among the lead proponents for the more ambitious goal of 1.5o Celsius above pre-industrial levels, which was ultimately incorporated into the Paris Agreement.

In 2015, the Philippines, together with other State Parties, finally adopted the Paris Agreement, the first ever universal, legally binding global climate deal. In 2017, the Philippines finally ratified the Paris Agreement, incorporating it as part of the law of the land. In its Preamble, the Paris Agreement also took into account the imperatives of a just transition of the workforce and the creation of decent work and quality jobs in accordance with nationally defined development priorities. Thus, by ratifying the Paris Agreement, the Philippines also incorporated the recognition of the imperatives of a Just Transition.

The climate-vulnerable Philippines made the ambitious gesture of committing to reduce 70% of its GHG emissions from Business-as-Usual (BAU) levels by 2030 as its Intended Nationally Determined Contribution (INDC). In other words, the Philippines committed to transition to a low carbon society, a commitment it had already made in earlier declared policies and enacted laws.

However, it bears stressing that the Philippines’ INDC is conditional, which means that the commitments are dependent upon the availability of financial resources, including technology development & transfer, and capacity building, that will be made available to the Philippines. Moreover, the INDC lacks concrete and detailed plans in terms of its means of implementation. Consequently, the Philippine Energy Plan 2017-2040 (PEP) failed to outline a Just Transition plan that would restructure the energy landscape in accordance with this new commitment.

Under the PEP, by 2040, whether in a BAU Scenario or a Clean Energy Scenario (CES), oil-based fuel will still dominate the Total Primary Energy Supply, followed closely by coal. The country’s GHG emissions will only decrease by 12.95% compared to its BAU levels by 2040, which is negligible compared to the 70% reduction commitment. In a BAU scenario, GHG emission will be 396.9 MtCo2e by 2040. Meanwhile, in a CES, GHG emission will drop to 345.5 MtCo2e only by 2040.

---

National Energy Policy Review

Following the adoption of the Paris Agreement and the submission of INDC, the CCC issued a resolution towards the development of a clear policy on Coal-Fired Power Plants in pursuit of a low-carbon development pathway for the Philippines. 58

This Resolution initiated the National Energy Policy Review through a “whole of nation approach”. The main objective of the review is to harmonize the policies of the DENR and DOE on new and existing coal-fired power plants in accordance with the new low-carbon development pathway.

Civil Society Organizations, especially those involved in the anti-coal movement and in the promotion of clean and affordable renewable energy, have heavily participated in the Review process. Over a year and a half since the initiation of the Review, a clear policy against the promotion of more coal-fired power plants has yet to be declared.

Green Jobs Act, Mainstreaming the Latter Half of the Just Transition Framework

The Green Jobs Act was passed into law in the second quarter of 2016. It incorporated aspects of the Just Transition Framework into existing energy and climate polities by affirming labor as a primary social economic force in promoting sustainable development, and ensuring the transition into a green economy. 59

The Green Jobs Act first and foremost identified "green jobs" or the jobs directly created by low-carbon industries, and indirectly created by a low-carbon economy and society. Green jobs are "employment that contributes to preserving or restoring the quality of the environment, be it in the agriculture, industry or services sector. Specifically, but not exclusively, this include jobs that help to protect ecosystems and biodiversity, reduce energy, materials and water consumption through high efficiency strategies, decarbonize the economy, and minimize or altogether avoid generation of all forms of waste and pollution. Green jobs are decent jobs that are productive, respect the rights of workers, deliver a fair income, provide security in the workplace and social protection for families, and promote social dialogue."⁶⁰

Under the Act, the State is mandated to identify needed skills, to develop training programs, and to train and certify workers for jobs in low-carbon industries. In recognition of the participation of low-carbon business enterprises in the creation of jobs, they are also granted incentives such as a special deduction from taxable income equivalent to 50% of the total expenses for skills training and research development expenses which is over and above the allowable ordinary and necessary business deductions; and tax and duty free importation of capital equipment, directly and exclusively used in the promotion of green jobs. ⁶¹

Other government agencies were also assigned tasks towards the mainstreaming of the creation of green jobs in government programs and plans, the creation of more green jobs, and the promotion of the rights of workers. ⁶²

However, it seems that the Green Jobs act only focuses on the latter half of the Just Transition Framework—that is, the identification, creation, and promotion of green jobs in the low-carbon economy and society. It does not however take into account the first half of the framework, which is to identify and support the workers that are affected and will be affected by this transition.

No government agency was required to establish a database of workers in transitioning sectors and industries. No information and education campaigns will be held to inform workers of the need for a transition and the means to make this transition just for them. No plans or programs were formulated to ensure that displaced workers are immediately supported. No fund was established which displaced workers can access for support during their transition. At most, the Act only mandates the skills training in green jobs.

**ILO Partnership, Pilot Application of Just Transition Guidelines**

In support of the Green Jobs Act, the Philippine government also immediately entered into a partnership with the ILO for the pilot application of the latter’s Just Transition Guidelines from mid-2016 to end of 2017. The partnership aimed to enable the Philippine Government, workers’ organizations, and employers’ organizations to "leverage the process of structural change towards a sustainable, low carbon, climate-resilient economy to create decent jobs on a significant scale and in a sustained and inclusive manner."⁶³ Two specific outcomes were expected:

---

⁶⁰ [Green Jobs Act, sec. 4(c).](#)

⁶¹ Id, sec. 5.

⁶² Id, sec. 6.

1. For the Philippine Government, workers’ organizations, and employers’ organizations to create an enabling environment for sustainable enterprises to prosper and create decent work opportunities through ex ante assessments of the employment and socio-economic impacts of environmental policies to inform policy choices at macro and sectoral levels; and

2. For the Philippine Government, workers’ organizations, and employers’ organizations to build intervention models for integrated and effective just transition measures at the industry, enterprise and local levels, where social partners, national and local authorities and other stakeholders will play key roles.

In its Policy Brief entitled “Implementing The Just Transition Guidelines in Asia and the Pacific – Lessons from the Philippines” 64, ILO reported that it achieved its expected outcomes and noted challenges faced specifically in policy-making and businesses. For policy-making, bringing the concept of climate change, its related impacts and actions, to the local community level was one of the biggest challenges. For businesses, issues of accessibility of technology and expertise and the high costs of capital investments are among the major challenges.

Among its recommendations is the prioritization of the integration of Just Transition in existing policies and the localization of the framework and guidelines in LGUs and civil society organizations.

**Green Economy Models, Rehabilitation Activities as Green Jobs**

Building on the Green Jobs Act, the Department of Environment and Natural Resources (DENR) under the leadership of then-Secretary Gina Lopez issued Guidelines to operationalize Just Transition in the Philippines through an ingenious program called Green Economy Models (GEMs).

Under Department Administrative Order (DAO) No. 2017-08, a green economy is defined as an economy that is “low-carbon and resource-efficient, and results in the generation of green jobs and in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities” 65. Although not defined in the DAO, GEMs are essentially community enterprises established specifically to: (1) create local green jobs, and (2) develop and rehabilitate degraded forest, mining, and coastal areas. The community enterprises were comprised of local households, and supported by a Community’s Management Service Center.

During her brief term, Secretary Lopez became a controversial figure for conducting an audit of all existing mines in the country, resulting in the suspension and closure of at least 26 mines. The creation of GEMs is an ingenious means of ensuring that workers displaced from closed or suspended mines are able to immediately transition to green jobs that are specifically meant to rehabilitate the degraded environment left by the destructive and irresponsible mining industry.

If properly and effectively implemented, GEMs would showcase best practices of Just Transition in the Philippines. Although the DAO is still in effect, there has been no reports or updates on its implementation since Secretary Lopez left the DENR.

**PUV Modernization Program, a Blatantly Unjust Transition**

The most recent and perhaps the most controversial policy development on Just Transition in the Philippines is the Public Utility Vehicle (PUV) Modernization Program. The Program was initiated on 19 June 2017 under the Department of Transportation (DOTr) Department Order No. 2017-011 with subject “Omnibus Guidelines on the Planning and Identification of Public Road Transportation Services and Franchise Issuance” 66.

65 Department of Environment and Natural Resources, DAO No. 2017-08, Guidelines in Operationalizing the Transition of the DENR’s Programs and Projects into Green Economy Models (GEM), 15 March 2017, sec 2.1.
The modernization of public transport services was specifically mandated in Section 5.2 of DO 2017-011, which reads:

"5. REQUIREMENTS FOR OPERATORS

xxx
5.2 Modernization of Public Transport Services

To modernize existing transport services, brand new and environmentally-friendly units shall be promoted and be given priority in the allocation of CPCs and deployment, based on route categories.

Relative thereto, the following requirements shall be adopted:

5.2.1 Environmentally-friendly units are vehicles that use an electric drive and/or a combustion engine that compile with Euro IV or better emission standards as prescribed by the DENR to reduce greenhouse gas emissions, toxic fumes, particulate matter, and other forms of air pollution;

5.2.2 The [Land Transportation Franchise and Regulatory Board (LTFRB)] shall issue a Memorandum Circular to provide for a modernization program for all PUVs, establishing the age limit of each classification based on the year of the oldest major component (i.e. chassis and engine/motor) of the vehicle and not the initial year of registration or the year of importation; and

5.2.3 Refurbished and/or rebuilt vehicles shall pass the type approval system test and issued a Certificate of Compliance with Emission Standards (CCES) as a condition to initial registration by the LTO and to the roadworthiness test of the LTO-Motor Vehicle Inspection System for renewal of registration. Refurbished and/or rebuilt PUBs, even with new engines or motors, shall note be allowed to substitute for phased-out units." (Emphasis supplied)

Although DO 2017-011 mandates all PUVs to modernize and for the LTFRB to promulgate Memorandum Circulars to govern such modernization, the government has been persistent in the modernization of the public utility jeepneys only. In fact, upon the issuance of DO 2017-011 on June 2017, President Rodrigo Duterte called on all PUJs to modernize by 1 January 2018 or in less than six months or else leave the public transport sector. 67

PUJs comprise a negligible percentage of road-based transport in the Philippines. According to the DOE, out of 9,251,560 registered vehicles 68, jeepney vehicles comprise only 209,085 or 2.26%. 69 Nevertheless, the administration chose to initiate the PUV Modernization Program on PUJs due to these vehicles brand of being among the top air polluters in the Philippines. PUJs emit huge amounts of black carbon or soot 70 which studies have claimed to be the "second most important human-made agent of climate change ". 71 A 2013 report by the CCC showed that public utility vehicles, mostly PUJs, produce 22,000 metric tons of soot emissions per year, 72 which cause a World Bank-estimated 5,000 annual premature deaths (or 12% of all deaths in the region of Metro Manila), due to respiratory and cardiovascular diseases from exposure to air pollution." 73
The DOTr, however, maintains that the PUV Modernization Program benefits both jeepney drivers and commuters. At present, jeepney drivers’ incomes are contingent upon the number of passengers they have during the day, the length of the routes they take, and their daily fuel expenses. They are not considered regular employees of their operators and thus, receive no basic benefits.

Under the Program, jeepney drivers will be considered as regular employees, and will be paid a fixed salary and benefits with no compensation linked to ridership. Meanwhile, commuters will benefit from increased road safety because PUV drivers are mandated to undergo the continuing drivers’ education through the Driver’s Academy.

As regards the specifications of PUJ units, in addition to using either electricity or Euro IV compliant fuel, the Program also mandates features that ensure reliability, safety, accessibility, environmentally soundness, and comfort, as follows:

2.1.1. Reliability. Public transport must be predictable in terms of travel time, waiting time, and schedule.

2.1.2. Safety. All PUVs must be equipped with fire extinguishers. Speed Limiters shall be installed pursuant to RA 10916 or the Road Speed Limiter Act of 2016 and its IRR. For selected PUVs, CCTVs shall be installed to monitor activity in and around the vehicle, and deter traffic violations and criminal activities. Global Navigation Satellite System (GNSS) (e.g. GPS) receivers shall be installed on PUVs to enable recording of vehicle location and speed and sharing of real-time PUV information for the convenience of commuters and operators.

2.1.3. Accessibility. Public transport must be available in every community, with accessibility for all segments of society, including senior citizens and persons with disabilities.

2.1.4. Environmental soundness. Public transport vehicles with combustion engines must have low emissions, as proven by compliance with EURO IV emission standards or better (e.g. EURO V, EURO VI), as prescribed by the DENR (Department of Environment and Natural Resources). Other preferred public transport vehicles are those using electric drives and/or running on alternative fuels, such as electric and solar.

2.1.5. Comfort. The vehicle is fitted with comfortable seats where passengers are able to relax, rest, and be productive during the journey, through the provision of WiFi access.

---

25 Ibid.
Present PUJ units currently possess none of these features. In order to comply, the present PUJ units—an open-window, 19-seater vehicle where passengers board and alight through the rear side—will have to be completely overhauled or replaced. This will necessarily spell out drastic costs for PUJ operators.

The PUV Modernization Program also limited all new or developmental routes to operators with a minimum fleet size of 15 units:

‘2.4 New or Developmental Routes

For new or developmental routes, a minimum fleet size of fifteen (15) units for any type of PUV for six (6) months shall be imposed, subject to review by the LTFRB. xxx’

Currently, small-time operators own an average of only 4 PUJ units. This new fleet requirement means that small-time PUJ operators can no longer apply for franchise in new or developmental routes unless they add at least 11 more PUJ units to their fleet. Thus, this has been heavily criticized for being biased in favor of large PUJ operators, who can afford at least 15 PUJ units.

In response, the DOTr has suggested that operators form cooperatives in order to meet the fleet requirement. However, no programs have been initiated to assist or train small-time and usually single operators in forming cooperatives or corporations with other operators.

Finally, the Program does not provide for a Just Transition Fund to assist PUJ drivers and operators in the supposed swift 6-month transition DOTr Secretary Arthur Tugade claims that the DOTr has come up with a formula to finance the Program dubbed as the “5-6-7-80,000.” He explained that the number 5 pertains to equity, 6 to the interest rate, 7 to the payment term of 7 years, and 80,000 as the amount of subsidy that will be provided by the government for each PUJ unit. No PUJ driver or operator has confirmed to have received financial support or subsidy in accordance with the “5-6-7-80,000” program.

In consideration of the short 6-month transition period provided, the stringent features on the PUJ units that are not readily available in the country, and the increased requirement on PUJ units per fleet, the PUV Modernization Program is a blatantly unjust transition program, being implemented at the expense of PUJ drivers and operators.

It came as no surprise when in the months that followed, the PUV Modernization Program was met with opposition from jeepney transport groups, with some resulting into a series of transport strikes. Resounded in the various statements of the opposition are:

1. The lack of consultation with key stakeholders (jeepney drivers and operators, primarily) by the implementing government agencies and the abrupt plan for implementation;
2. The program being a scheme to phase out all existing jeepney units — whether or not they truly are safe and environmentally sound unit;
3. The Program being anti-poor due to the unaffordable costs of the new units and the lack of sufficient and accessible government subsidy programs to assist the majority of the affected members of the jeepney sector who are small-time operators; and
4. The Program leading to corporate capture of the jeepney transport sector, since the standards set by the program — including new, mandated jeepney features and skewed incentives for transport cooperatives with larger fleet sizes — are those that usual, small-time operators would struggle to comply with.

---

71 Ibid.
Euro II Order, a Result of Disjointed Policy-Making

While the DOTr is facing heavy backlash on the PUV Modernization Program, which among others mandated PUJ units to be Euro-IV compliant or to be electric-based, the DOE issued Department Order (DO) No. 2018-08-0012, which required oil companies to sell Euro 2-compliant diesel to consumers. 83

The Department Order was issued after consecutive increases in petroleum prices. In order to address rising fuel costs, the DOE thought it a good policy to mandate the oil industry to sell Euro 2-compliant diesel, a cheaper but ten times dirtier fuel than Euro 4-compliant diesel.

DO No 2018-08-0012 should be read as a result of a disjointed policy-making process on Just Transition in government. While Congress has long declared as policy the promotion and utilization of RE sources, and the imperative to transition to a low-carbon economy and society, the DOE insists in retaining policies, where fossil fuels can remain as dominant source of energy. Since 91% of our oil supply is imported, our petroleum products would be dependent on fossil fuel inflation, U.S. dollar inflation, and exchange-rate volatility and would expectedly become more expensive as states transition to cleaner fuels.

Thus, when fuel costs rose, the DOE issued a policy that takes the transport sector a step back in its transition, and contravenes the modernization policies already being pursued by the DOTr.

83 Department of Energy, Department Order No. 2018-08-0012, Directing the Philippine Downstream Oil Industry to Offer Euro-II Compliant Diesel as a Fuel Option for the Transport and Industry Sector, 10 August 2018.
84 See Figure 8.
WHO ARE THE AFFECTED WORKERS IN KEY TRANSITIONING SECTORS?
A Survey of the Affected Workers in the Power and Transport Sectors.

Despite the fossil fuels businesses dominating the energy sector, and the Green Jobs Act requiring the DOLE and the Philippine Statistics Authority (PSA) to make a database on green jobs, there are limited employment data on workers affected by the transition. While there exists an annual survey estimating the number of employment in business and industry, these data are only focused on the formal sector and only account for regular employees. Nevertheless, all available data are provided in this discussion.

This chapter focuses on three key transitioning industries in the Philippines: the Upstream and Downstream Coal Industry and the Solar PV Industry from the Power Sector, and the PUJ Industry from the Transport Sector.

Overview of Labor in the Philippines

In the Philippines’ labor market, contractualization and underemployment are among the major issues. 43.5% of Filipino rank-and-file employees, despite performing essential tasks for a company, are hired per contract for a duration below six months and paid low salaries without benefits and insurance.

Research estimates that 63% of all employed Filipinos are hired under poor quality of work, with 6.6 million of them being employed as non-regular workers. The number of underemployment in the country rose by a significant 843,000 from 6.9 million in January 2015 to 7.7 million on 2016. The same study attributes the rise in the incidence of lack of opportunities for work to neoliberal economic policies that have stunted the growth of a national industry and agriculture, and where the primacy of profit has led to labor flexibilization and contractualization.

The Upstream Coal Industry

Since almost half of our coal supply is imported, the upstream coal industry employs a minimal number of employees. The 2015 ASPBI shows that only 5.2% of the 134 establishments in the Mining and Quarry Sector are from the hard coal mining industry, employing 9.3% or 2,915 workers of the 31,351 total employment in the Sector.

Figure 16. Percentage distribution of employment for mining and quarrying establishments with total employment of 20 and over by industry subclass, 2015

<table>
<thead>
<tr>
<th>Industry Subclass</th>
<th>Employment %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining and quarrying</td>
<td>1.6%</td>
</tr>
<tr>
<td>All other industries</td>
<td>3.7%</td>
</tr>
<tr>
<td>Support activities for other mining and quarrying</td>
<td>3.5%</td>
</tr>
<tr>
<td>Quarrying of stone, sand and clay</td>
<td>9.3%</td>
</tr>
<tr>
<td>Mining of hard coal</td>
<td>9.3%</td>
</tr>
<tr>
<td>Mining of non-ferrous metal ores except precious metals</td>
<td>72.7%</td>
</tr>
</tbody>
</table>

Source: PSA, 2015 Annual Survey of Philippine Business and Industry (ASPBI) - Mining and Quarrying Sector with Total Employment of 20 and Over: Preliminary Results
The Downstream Coal Industry

The 2015 Annual Survey of Philippine Business and Industry (ASPBI) reported that out of a total of 261 Electricity, Gas, Steam and Air Conditioning Supply Establishments, the total paid regular employment generated is 46,650.

At the industry level, distribution of electricity reported the highest number of workers with 32,488 (69.6%) of the total paid regular employees. Electric power generation followed next with 9,553 (20.5%) and transmission of electricity came as the third top employer with 4,629 (9.9%).

The downstream coal industry, comprising only a portion of electric power generation, therefore employs less than then 9,553 workers (20.5%) of the Electricity, Gas, Steam, and Air Conditioning Supply Establishments.

In terms of compensation, the total compensation paid by the establishments which consists of gross salaries and wages, separation and retirement/terminal pay, gratuities, employers’ contribution to SSS/GSIS, and other benefits amounted to Php 34.6 billion in 2015, or an average annual compensation of Php 742,696 per employee. 93

At the industry level, electric power generation paid the highest average annual compensation at Php 1.2 million, followed by the transmission sector with Php 0.8 million, while distribution of electricity paid Php 0.6 million. This average was however derived from all employees of varying ranks and of varying establishments within the power sector. Further research is needed to ascertain the average wage of a coal plant worker.

If we are to follow global trends, the downstream coal industry should expect to employ fewer workers in the coming decades. Carbon Brief reports that although global coal power capacity is still rising, the pipeline of new plants is shrinking fast. 94 The number of coal plants proposed and under construction have halved since 2015. Meanwhile, the retirement of existing plants has accelerated, reaching a cumulative of 197 GW from 2010 to 2017.

---

93 Ibid.
The Solar PV Industry

In IRENA’s Annual Renewable Energy Jobs Report in 2018, the Philippines is reported to be a leader in Solar PV Industry employment. The Philippines’ Solar Industry employs more than 34,000 people, which is significantly more than the employment from the upstream and downstream coal industries combined. In addition, the Philippines has about 33,000 jobs in small hydro, and more than 14,000 in wind power. 95

Figure 19. Total Employment of Electric Power Generation, Hard Coal Mining, Solar PV, Small Hydro, and Wind Power

The ILO also offers data on the average employment per megawatt of average capacity of the Solar PV Industry and the Downstream Coal Industry in the Philippines. According to its data, the Solar PV Industry, and other Renewable Energy Industries, creates more jobs per megawatt for manufacturing, construction, installation, and operating and maintenance, fuel processing chains. Table 4 shows that the Solar PV Industry in fact employs 27 times more workers than the downstream coal industry for manufacturing, construction, and installation. 96
The jobs that are accounted for in the Solar PV Industry are divided in the following value chain: (a) processing of raw materials, (b) manufacture of cells and modules, (c) installation and plant construction, (d) operation and maintenance, and (e) decommissioning. Notably, skills needed across these areas of employment vary, with engineering and technical knowledge, along with construction skills being the most recurring. In the installation and plant construction alone, which includes project development, at least 16 different types of high skilled and medium skilled employees are necessary.

Data from the Renewable Energy Sector from 2008-2016 show that construction jobs, or low skilled employment, grew from 90 to 23,376 jobs while full-time operation and maintenance jobs, or medium to high skilled employment, grew from 11 to 593 jobs. The differing rates of job growth may probably due to the higher level of education required of the latter kind of employment.

Table 3. Average employment (jobs per megawatt of average capacity) over life of facility

<table>
<thead>
<tr>
<th>Year</th>
<th>Capacity Addition (MW)</th>
<th>Construction Jobs</th>
<th>Full Time O&amp;M Jobs</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>4</td>
<td>90</td>
<td>11</td>
</tr>
<tr>
<td>2009</td>
<td>29</td>
<td>733</td>
<td>88</td>
</tr>
<tr>
<td>2010</td>
<td>38</td>
<td>939</td>
<td>113</td>
</tr>
<tr>
<td>2011</td>
<td>29</td>
<td>718</td>
<td>86</td>
</tr>
<tr>
<td>2012</td>
<td>31</td>
<td>717</td>
<td>85</td>
</tr>
<tr>
<td>2013</td>
<td>1</td>
<td>22</td>
<td>3</td>
</tr>
<tr>
<td>2014</td>
<td>421</td>
<td>11793</td>
<td>678</td>
</tr>
<tr>
<td>2015</td>
<td>361</td>
<td>10559</td>
<td>586</td>
</tr>
<tr>
<td>2016</td>
<td>782</td>
<td>23376</td>
<td>593</td>
</tr>
<tr>
<td>Total:</td>
<td>1696</td>
<td>48947</td>
<td>2242</td>
</tr>
</tbody>
</table>

Source: DOE, REMB

<table>
<thead>
<tr>
<th>Year</th>
<th>Capacity Addition (MW)</th>
<th>Operating &amp; maintenance / fuel processing</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solar Photovoltaic</td>
<td>5.76 - 6.21</td>
<td>1.20 - 4.80</td>
<td>6.96 - 11.01</td>
</tr>
<tr>
<td>Wind Power</td>
<td>0.43 - 2.51</td>
<td>0.27</td>
<td>0.70 - 2.78</td>
</tr>
<tr>
<td>Biomass</td>
<td>0.40</td>
<td>0.38 - 2.44</td>
<td>0.78 - 2.84</td>
</tr>
<tr>
<td>Coal Fired</td>
<td>0.27</td>
<td>0.74</td>
<td>1.01</td>
</tr>
<tr>
<td>Natural Gas Fired</td>
<td>0.25</td>
<td>0.70</td>
<td>0.95</td>
</tr>
</tbody>
</table>


Figure 20. Construction jobs from 2008-2016

Source: DOE, Renewable Energy Jobs Presentation, p. 11.
International Labor Organization, Climate Change Consciousness Week.
4 | WHO ARE THE AFFECTED WORKERS IN KEY TRANSITIONING SECTORS?

Figure 21. Direct jobs across the solar PV value chain, 2018

Table 4. Jobs in Select Value Chain and Sub-sectors

<table>
<thead>
<tr>
<th>PROCESSING OF RAW MATERIALS</th>
<th>MANUFACTURE OF CELL AND MODULES</th>
<th>INSTALLATION PLANT / CONSTRUCTION</th>
<th>OPERATION &amp; MAINTENANCE</th>
<th>DECOMMISSIONING</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Engineers</td>
<td>* Engineers</td>
<td>* Project development analyst</td>
<td>* Technician</td>
<td>* Construction workers</td>
</tr>
<tr>
<td>* Technician</td>
<td>* Technician</td>
<td>* Wholesalers</td>
<td>* Maintenance staff</td>
<td>* Material recyclers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Solar PV system designers &amp; installers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Construction workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>* Meteorologist</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: IRENA, Renewable Energy Jobs

Table 4. Jobs in Select Value Chain and Sub-sectors (continued)

<table>
<thead>
<tr>
<th>PROJECT DEVELOPMENT (SOLAR ENERGY)</th>
<th>CROSS-CUTTING / ENABLING ACTIVITIES (ALL SUB-SECTORS)</th>
</tr>
</thead>
<tbody>
<tr>
<td>* Project Designers (Engineers) (H)</td>
<td>* Insurer Representatives (H,M)</td>
</tr>
<tr>
<td>* Architects (H) (small projects)</td>
<td>* IT Professionals (H,M)</td>
</tr>
<tr>
<td>* Atmospheric Scientists and Meteorologists (H)</td>
<td>* Human Resources Professional (H)</td>
</tr>
<tr>
<td>* Resource Assessment Specialists and Site Evaluators (H)</td>
<td>* Other Financial Professionals (Accountants, Auditors and Financers) (H)</td>
</tr>
<tr>
<td>* Environmental Consultant (H)</td>
<td>* Health and Safety consultants (H,M)</td>
</tr>
<tr>
<td>* Lawyers (H)</td>
<td>* Sales and Marketing Specialists (H,M)</td>
</tr>
<tr>
<td>* Debt Financier Representatives (H)</td>
<td>* Clients (H,M,L)</td>
</tr>
<tr>
<td>* Developers / Facilitators (H,M)</td>
<td></td>
</tr>
</tbody>
</table>

Source: ILO, 2017
Considering that there is only one solar manufacturing company in the Philippines, jobs created by the Solar Industry are predominantly under the construction and installation, and operation and maintenance chains.

Although the Solar PV industry has a huge employment potential, it should also be noted that most of these jobs are for construction and installation. These fields of work have persistently been mired with issues of contractualization in the Philippines. Thus, it still needs to be ascertained whether Solar PV jobs in the Philippines are in fact regular, secure, and a steady and reliable source of income.

The PUJ Industry

In the PUJ Industry, the key stakeholders are the jeepney drivers, jeepney operators, and the commuters. In 2015, employment for the Transportation and Storage Sector reached a total of 180,547 according to ASPBI.\(^{100}\) Paid employees constituted 178,881 or 99.1% and the remaining 1,660 or 0.9% were working owners and unpaid workers.\(^{101}\) The PUJ Industry fell under the “All Other Industries” category which provided the highest employment at 75,600 or 41.87% of total employment in the Sector.

The Bureau of Labor and Employment Statistics (BLES) reports that in both bus lines and other land transport, road transport supervisors earn a monthly salary of Php 11,205.00 and Php 15,794.00 respectively. This group, was reported as the highest earning group in these subsectors in 2012. The average wage rates of employees in these two industries was reported to be Php 10,666.00 and Php 9,341.00.


\(^{101}\) Ibid.

Most drivers in land transport, particularly jeepney drivers, according to the Department of Labor and Employment, are not considered full-time employees. Jeepney drivers do not earn on a fixed salary basis, but rather depend on a “boundary system.” Under this scheme, a driver is assigned a vehicle and will only earn his pay after he has recovered for his operator the “boundary” payment, which accounts for the operator’s expenses and profit. As such, the income and earnings of jeepney, tricycle, AUV, and taxi drivers ultimately depend on the boundary rate the number of work hours set by the operator, the price of maintenance and fuel, and the number of vehicles on the road.

Jeepney operators are those who own a fleet of jeepney units and rent them to drivers on a daily basis. They earn through the daily boundary fees paid to them by drivers at the end of each day. Most operators of jeepneys are small-time operators, who own an average of only a single unit to four units of jeepneys. In terms of capital, most jeepney operators only possess an average of Php 200,000.00 to Php 400,000.00. In terms of capital, most jeepney operators only possess an average of Php 200,000.00 to Php 400,000.00.

The total of jeepney drivers nationwide is 650,000 drivers. Meanwhile public commuters who regularly avail of services by the jeepney transport total 9,000,000 people nationwide. According to recent figures by the Department of Transport, public utility jeepneys are numbered at 209,124 units nationwide. In terms of total registered vehicles, which totals to 9,251,560 registered vehicles, jeepney vehicles comprise only 2.26% of the entire road-based transport sector. Despite being relatively few in number and having smaller impact on road traffic, a larger portion of the population use PUJs than private cars for daily commutes.

---

105 Ibid.
106 Ibid.
109 Computation made by the author.
Towards developing a Just Transition Framework in the Philippines, CEED engaged workers’ groups and trade unions, and affected workers from three identified key transitioning sectors—Upstream and Downstream Coal Industry, Solar PV Industry, and PUJ Industry. To initiate the process, roundtable discussions (RTDs), key informant interviews, and surveys were conducted, wherein CEED shared its preliminary findings in this paper and the workers shared their understanding and appreciation of Just Transition based on their realities on the ground.

**Workers’ Groups and Trade Unions**

**Profile of the groups**

Representatives from the following groups participated in the RTD:

1. Bukluran ng Manggagawang Pilipino (BMP)—BMP translates to Solidarity of Filipino Workers in English. It is a political organization of militant, democratic and socialist workers and unions;
2. SOSYALISTA—a labor group composed of socialist workers; and
3. Trade Union Congress of the Philippines (TUCP)—the biggest confederation of labor federations in the Philippines.

**Key points**

**Climate and labor issues as systemic issues**

BMP and SOSYALISTA recognized the gravity of two issues faced by the Philippines: climate change and the violation of labor rights. They concurred with CEED’s analysis that the current exploitative economic system is the main driver of the current crises in our climate and labor. The drive for unfettered and concentrated growth disregards the limits of both environmental and human resources.
5 | HOW DO AFFECTED WORKERS UNDERSTAND AND APPRECIATE JUST TRANSITION?

Overall, the RTD reflected an awareness and strong concurrence of leaders from the participating groups of the compelling ecological and labor issues present in the country today, along with the thesis that it is the system of capitalism that drives both of these issues.

Alternative system

While recognizing the points made by BMP and SOSYALISTA and CEED’s analysis that climate change is a systemic issue, TUCP raised concerns as regards the proposed alternatives to a capitalist system. TUCP noted that the importance of recognizing Ambisyon Natin 2040 as the economic aspirations of Filipinos. Thus, this economic aspiration has to be harmonized with the proper economic system and development path, without also compromising ecological integrity and human rights.

Former Coal Mining and Coal Power Plant Workers

Profile of the Coal Mining Site and the Coal Power Plant, and the Informants

Key informant interviews were conducted with two former workers from each of the following site and plant:

1. Semirara Coal Mining Site in Semirara, Antique, operated by Semirara Mining and Power Corporation (SMPC), a wholly-owned subsidiary of D.M. Consunji, Inc. (DMCI) Holdings, Inc.

SMPC is the largest coal producer in the Philippines, providing more than 90% of the local coal. It possesses exclusive rights to explore, extract and develop the coal resources in Semirara Island, Caluya, Antique. It is also the only power producer in the country owns and mines its own fuel source.

Before DMCI Holdings, Inc. took major control over SMPC, the company was known as Semirara Coal Corporation (SCC). SCC was incorporated in February 26, 1980. When issues of unproductivity and inefficiency arose, along with falling coal prices and the Philippine peso devaluation, DMCI Holdings, Inc. acquired it on 1997.

DMCI Holdings, Inc.’s acquisition of SCC largely affected former workers and affected neighboring Caluya communities. Previously as SCC, approximately 1000 employees, were working for the Mining Site. Today, as SMPC, there are over 4,000 employees or up to 6,000, if resident families are also taken into account, according to the estimate of the two key informants.

The key informants are former employees of SMPC, who experienced the change in ownership of the Mining Company. They are no longer in good terms with SMPC and its workers, thus, immersion in the host community proved difficult. They are along the average age of 60-70 years old.

2. Calaca Coal Plant in Calaca, Batangas, operated by Sem-Calaca Power Corporation (Sem-Calaca), a wholly-owned subsidiary of SMPC.

Starting commercial operation since 1984, the Calaca Coal Plant is the oldest operating coal plant in the Philippines. Currently, the Coal Plant generates 900 MW of electricity from four of its online units: Unit 1 (300 MW), Unit 2 (300 MW), Unit 3 (150 MW), and Unit 4 (150 MW).

The first two units, Units 1 and 2, had originally been owned and managed by the Philippine Government through the National Power Corporation (NPC) since 1984 (Unit 1) and 1995 (Unit 2). After suffering equipment deterioration and bankruptcy, the NPC sold the Calaca Coal Plant to Sem-Calaca.

Units 3 and 4 are part of Sem-Calaca’s first phase of coal plant expansion. They started operations only in 2015. For 2018, Sem-Calaca, in partnership with Meralco Power Generation Corporation (MGen), have teamed up with Japan Marubeni Corporation to build two more 350 MW units.

The key informants are former employees of Sem-Calaca, who also experienced the transition in ownership of the Coal Plant. They are along the average age of 60-70 years old.
Key points

Transfer of ownership
The acquisition of the Mining Company and Coal Power Generation Company by DMCI Holding, Inc. generally led to poorer working conditions. This led the key informants to seek employment elsewhere.

Employment v. health and environment
SMPC and Sem-Calaca are huge employers in the neighboring localities where they are operating. Key informants claimed that majority of their former colleagues and present workers in the site and plant overlook environmental concerns and hazards in their communities because of the employment created by SMPC and Sem-Calaca.

The Semirara Coal Mining Site and Calaca Coal Plant provides routinary and light work that require little to no skill, but provides a regular stream of income. For instance, there are employees that are tasked to sweep areas within the site on occasion.

For this kind of work, employees are regularly paid, although below the minimum wage. Usually minimum wage for one employee is divided between three workers, who alternate in performing occasional routinary work like sweeping. Although the wage may be low compared to wages received in urban areas, the divided minimum wage is considered to still be more income than residents’ income from agricultural activities, like fishing and farming.

Thus, employment offered by the Semirara Mining Site and Calaca Coal Plant are considered attractive alternative to the residents’ usual livelihood which require more toil and are dependent on yields. Even though neighboring municipalities also offer employment in formal sectors, local residents prefer working for the Site or Plant.

“We have told DMCI employees of how much coal damages their health and their environment. They said, ‘It doesn’t matter if we die, as long as we have jobs.’

-A former coal mine worker in Semirara, Antique

Pictured: The Sem-Calaca Coal-Fired Power Plant, the oldest coal-fired power plant in the Philippines.
Oppositions from local residents

Similar with the experience of other communities hosting a mining site or a coal plant, the local communities in this case are experiencing adverse impacts in their fish yield and harvest. The disruption of their livelihoods has led a number of fisherfolks and farmers to oppose any further coal operation in their residences. The key informants themselves are active in the local campaign in Antique to oppose SMPC’s coal operations.

These oppositions however cause tensions between community members—those who oppose the coal operations and those who are employed by SMPC and Sem-Calaca. The groups opposing the coal operations are usually members of the immediate community hosting the operations. Those workers employed by SMPC and Sem-Calaca are more often than not from neighboring communities, since they do not directly experience the adverse impacts of the coal operations.

Profile of the coal-affected community, and the respondents

A survey was conducted with 17 residents of Caluya, Antique, a coal-affected community located near the Semirara Coal Mining Site. The respondents were handed uniform questionnaires, which inquired mainly about the following:

1. Respondents’ perceived effects of the coal operation to their environment and health;
2. Respondents’ awareness of the role of the fossil fuel industry as a main driver of climate change;
3. Philippines’ commitment to reduce its GHG emissions;
4. Concept of clean and affordable renewable energy;
5. Imperative for a Just Transition; and
6. Philippines’ existing transition policies, such as the Renewable Energy Law and Green Jobs Act.
Majority are aged between 40-65 years old, with only a handful being aged between 25-35 years old. All of the respondents heavily opposed coal mining in Semirara. Most of their livelihood are from farming seaweeds and coconuts and from fishing, which have been affected by the nearby coal mining operations.

**Key findings**

**Focus on immediate environmental and health concerns**
Respondents opposition to the coal mining operations are mainly due to its adverse impacts to their environment and health. The main objective of the group is to drive away the coal projects from their areas.

**Lack of awareness of climate change and just transition**
Respondents are not as aware of the issues of climate change and the role of fossil fuels as a main driver of climate change. Consequently, they are also unaware of the country’s global commitment to reduce its GHG emissions and on the present efforts to just transition into a low-carbon economy and society.

**Profile of the solar farm and the respondents**

A survey was conducted with 11 respondents, who are working at the Calatagan Solar Farm in **Calatagan, Batangas owned by Solar Philippines**.

The Calatagan Solar Farm is the largest solar farm in the Philippines. The solar farm comprises over 200,000 solar panels placed on a 160-hectare property, with a total solar power capacity of 80 MW at present. The construction of the farm was completed in 2016 and became fully functional in the same year.

The Farm currently has 31 employees, working under either of the two main departments: Operations and Maintenance, and Ground Support. All of the 11 respondents, one female and ten males with ages ranging from 25-40 years old, are part of the Operations and Maintenance Department. No employees from the Ground Support System were included as respondents because the formal proceeding required by Solar Philippines’ Human Resources was not completed in time for the one-day visit.
The respondents were handed uniform questionnaires, which inquired mainly about the following:
1. Labor conditions within the Solar Farm; and
2. Perceptions on the ecological and labor condition differences between the coal industry and the solar industry.

Key findings

**Good working conditions**
Respondents, who are members of the Operations and Maintenance Department, reported good working conditions within the solar company. They are paid satisfactory wages and granted benefits.

**Instances of contractualization**
Employees from the two different departments experience different labor conditions. Respondents who worked for the Operations and Maintenance Department are reportedly regular employees. Meanwhile, those from the Ground Support Department are contractual workers. Workers in the Ground Support Department has less formal skills and performed routinary maintenance of the machines in the Solar Farm.

**Recognition of green jobs**
Respondents recognized that employment within the Renewable Energy Sector, compared to the Fossil Fuel Industry, is more ecologically sound. However, respondents claim that their decision to work for the Solar Farm was largely based on wages, benefits, and tenure than on the environmental benefits of the Sector.

**Just Transition**
Respondents expressed little awareness of the imperative for a just transition to low-carbon economy and society, and the role of the renewable energy sector in this transition. Despite performing green jobs, Respondents have little awareness on the current transition policies and programs of the government, including the Green Jobs Act. They also have little to no involvement in the discourse on Just Transition.

**Transport Group Leaders**

Pictured: Jeepney transport operator presents demands and challenges facing jeepney drivers in the PUV modernization program during the roundtable discussion and workshop hosted by CEED. (Quezon City, Metro Manila)
Profile of the transport groups, and key informants and participants

Key informant interviews were conducted with the leaders of the following Jeepney Operators and Drivers Associations (JODA):

1. **Alliance of Concerned Transport Organizations (ACTO)**—a transport coalition composed of members from the PUV and PUJ industries. It currently lists 450,000 units as a part of its coalition, with 30,000 of these units being jeeps; and

2. **Alliance of Drivers and Operators of the Philippines - Genuine Organization (STOP and GO)**—STOP and GO is a transport coalition composed mostly of drivers and operators in the PUV and PUJ industries. It has 131 transport groups (ranging from the PUVs, PUJs, and tricycles) as members.

Roundtable discussions, one of which was facilitated in partnership with the office of Senator JV Ejercito, were also conducted with ACTO, STOP and GO, and the following groups:

1. Pagkakaisa ng Samahan ng mga Tsupper at Operytor Nationwide (PISTON)
2. Federation of Jeepney Operators and Drivers Association (FEJODAP),
3. Liga ng Transportasyon at mga Operator sa Pilipinas (LTOP),
4. Pasang Masda, and
5. No to Jeepney Modernization Coalition.

During the interviews and RTDs, the informants and respondents were inquired mainly about the following:

1. PUV Modernization Program; and
2. Philippines’ transition policies towards a low-carbon economy and society;
Key findings
Recognition of the imperative to modernize
Amidst rising controversy surrounding the implementation of the PUV Modernization Program, most of the transport groups recognized the imperative to modernize the PUJ industry. ACTO even expressed conditional support for the Program. Most of the transport groups expressed an understanding and appreciation of the problem of climate change and the role of the transport sector in the transition to a low-carbon economy and society.

Questioning the unjust means to modernize
However, most groups raised concerns as to the fairness of the terms of the modernization, which would cause them to incur exorbitant costs, to transition in a short and impossible period of six months, and to acquire PUJ models that are not even available in the Philippines yet. In simpler terms, the transport groups recognized the imperative to transition, but argued that the transition is unjust.

The need for a transition fund
STOP and GO expressed strong opposition to the Program to the point of staging transport strikes in several instances. They claim that the new PUJ models will cost approximately Php 1.6 million each. Unfortunately, some operators’ PUJ units were paid through a loan. On their part, they are still paying for the units that they would now have to abandon to purchase the new PUJ models. On top of this, the imposition of the minimum fleet requirement also mandates operators to purchase more units.

The DOTr’s suggestions were also not welcomed by the groups. The DOTr suggested that the operators should cooperate with each other in pooling funds and resources to comply with the fleet requirement and unit features. DOTr also proposed to subsidize at least Php 80,000 per unit per operator.

However, some small-time operators expressed reservation with forming cooperatives with other operators, as it meant transferring ownership, through registration change, of their hard-earned jeepney units to a single person or entity. As regards the subsidy, transport groups claims that this is barely enough to dampen the weight of the new models’ price.

Lack of accessible and available modernized jeepneys
Issues regarding the accessibility and availability of the new PUJ models were also raised. According to the groups, Euro IV-compliant engines are currently not available or accessible in the Philippine market. Most of the informants and participants could not come up with an exact figure for the Euro IV-compliant engines, making it harder for them to cooperate with the transition. Other groups raised that they will in fact be travelling to China to canvass for any available new PUJ models.

High possibility of fare hike
Due to the costly transition, transport groups claimed that there is a high possibility of a fare hike from the minimum Php 8.00 to around Php 20.00 or even Php 23.00. The DOTr, however, denied these claims, but have released no formal study on the Program’s impacts on fares.
Impossible transition period
The speed of the transition period is among the highly criticized aspect of the Program. While the Program was only launched on June 2017, President Duterte ordered full implementation of the Program by January 2018. Thus, PUJ operators and drivers were only given six months to transition. Notably, the six month-period had long passed and the Program has yet to be fully implemented.

Lack of consensus on a Just Transition Framework for PUJs
Finally, despite the PUV Modernization Program being a prime opportunity for the transport groups to promote their own Just Transition Agenda, it seems that the transport groups have not formulated a shared agenda. The leaders of the transport groups have engaged government in different levels, they have not united towards advocating for a Just Transition Framework for the PUV Modernization Program. The interviews and RTDs also revealed that there is still a need to raise awareness on the systemic problem of climate change, and the imperative for a Just Transition.

Lack of accessible and available modernized jeepneys
Issues regarding the accessibility and availability of the new PUJ models were also raised. According to the groups, Euro IV-compliant engines are currently not available or accessible in the Philippine market. Most of the informants and participants could not come up with an exact figure for the Euro IV-compliant engines, making it harder for them to cooperate with the transition. Other groups raised that they will in fact be travelling to China to canvass for any available new PUJ models.

High possibility of fare hike
Due to the costly transition, transport groups claimed that there is a high possibility of a fare hike from the minimum Php 8.00 to around Php 20.00 or even Php 23.00. The DOTr, however, denied these claims, but have released no formal study on the Program’s impacts on fares.
The Philippines has begun its transition to a low-carbon economy and society as a response to the climate imperative. It has adopted transition policies that are however incomprehensive and at times dissonant. These policies reveal the importance of developing a firm and decisive Just Transition Framework. This Framework, in turn, can only be developed if it is clear where the country’s transition is headed, and for whom the transition is being pursued.

**Transition to What?**

A Just Transition is a transition away from the current economic system that fosters unequal and unfettered growth—a concentrated distribution of wealth that benefits few individuals and entities while extracting wealth and resources from a majority of the human population and the environment.

The current Philippine economic system is based on neoliberal and extractive policies. Neoliberal policies have promoted trade liberalization and privatization, usually of basic goods and utilities. They have enabled the deregulation of carbon-intensive industries, and have minimized environmental safeguards and measures to protect human rights. They have allowed profit motives and market forces to govern over public interest. Consequently, they have stifled the distribution of economic gains to the poorer segment of the population, and has widened the gap between the rich and the poor.

Meanwhile, extractive policies disregard that ecological and human resources are finite, and should not be extracted and exploited without limits. These policies have enabled destructive and irresponsible industries to destroy the environment without complying with mitigation and rehabilitation plans, and without being held accountable.

This is the same economic system that has caused the climate crisis. Under neoliberal and extractive policies, carbon-intensive industries were allowed to emit huge amounts of GHG and to drive climate change.
Unfortunately, our Philippine Development Plan, together with the Philippine Energy Plan, maintain these policies as the backbone for the country’s development for the next two decades.

A Just Transition is a transition towards a low-carbon economy and society that recognizes ecological limits and promotes a development path that is inclusive of all people from different groups and sector.

In the face of compelling climate realities, the Philippines recognizes that the transition is a solution to a systemic problem. The transition is not only towards alternative technologies, such as renewable energy technologies. Rather, it is a transition towards a low-carbon economy and society, that will address the climate crisis at its roots.

The Philippines has responded to the climate imperative with transition policies. It has pioneered the Renewable Energy Law in Asia. It immediately adopted the Paris Climate Agreement, and submitted its ambitious INDC. It has enacted the Green Jobs Act, which prioritizes the issue of labor in a transitioning society. And it has taken the initiative to modernize its PUJ Industry.

However, the Philippine policy-makers have yet to come to a consensus on its vision of a low-carbon economy and society. In recent months, different government agencies have been making policies in dissonance with a Just Transition Framework, such as the PDP, PEP, and Euro-II Department Order. Therefore, it is important for the Philippines to harmonize its Just Transition policies towards a low-carbon economy and society, that is environmentally sustainable and people-centered.

Transition for Whom?

A Just Transition is primarily for the people who are at the frontline of the transition—workers in transitioning or retiring sectors, who face the risk of unemployment, displacement, and economic dislocation, and climate-vulnerable communities. It is also for all members of society who will transition together with the rest of the global economy.

A transition that does not consider the interests of the affected people remains just that—a transition. While a transition that ensures that all members of society, especially workers from transitioning or retiring sectors, are enabled and empowered to join the new low-carbon economy and society is a Just Transition.
In the case of the Green Jobs Act, the transition was limited to the people who are entering the "green economy" by taking green jobs. It does not however prioritize workers that have been displaced and will be displaced from transitioning or retiring industries.

The Green Economy Model as a concept fully integrates a Just Transition Framework. It will create an opportunity for employment in local communities that have hosted retiring mining operations. The same workers employed by the mining company may be employed in the new green jobs that serve to rehabilitate the mining site destroyed and degraded by the mining operations. However, whether the GEM captures Just Transition Framework remains to be seen in actual implementation.

As for the PUV Modernization Program, the swift and unsubsidized transition threatened grave displacement concerns among jeepney operators and drivers alike. Ironically, most of these affected workers recognize the need to transition, and express their willingness to transition. The Program, however, have failed to adopt a Just Transition Framework to enable and support the affected workers.

The Solar PV Industry proves to be a key transitioning sector for displaced workers. Creating thousands of jobs from low, medium, to high skilled labor, the Industry can employ thousands of workers transitioning from carbon-intensive industries. However, the Industry should be sure to guard against unfair labor practices and contractualization.

With its enactment of the Green Jobs Act and its partnership with the ILO, the Philippines has taken initiatives to ensure that interests of workers in green jobs are prioritized. The Philippines should now take the further step of ensuring that all members of society are empowered to join the Just Transition.
A JUST TRANSITION FRAMEWORK IN THE PHILIPPINES

Recommendations

Building on the current Philippine development agenda and energy landscape, the analysis of transition policies thus far, and the key findings from the interviews, surveys, and roundtable discussions with affected workers from key transitioning sectors, a Just Transition Framework specific to the context of the Philippines is proposed. Policy recommendations towards the promotion and integration of the proposed Just Transition Framework, which incorporates key agenda points raised by affected workers, are also offered.

A Just Transition Framework

A Just Transition Framework in the Philippines:

1. Addresses immediate displacement issues of workers, communities, and other sectors at the frontline of the transition by:
   a. Placing affected groups at the center of the transition process, and
   b. Employing a democratic approach to implementing the transition to a low-carbon economy and society;

2. Promotes a transformative energy system by:
   a. Increasing access and affordability,
   b. Recognizing ecological limits, and
   c. Aligning with people’s interests and developmental needs;

3. Promotes an low-carbon economy and society founded on ecological and social justice, which:
   a. Paves a development pathway centered on the needs of the people and guided by ecological integrity, and
   b. Promotes hand-in-hand a high quality of life and livelihood among communities and a respect for the limits and dignity of the ecology.

Based on this Just Transition Framework, the following policies are recommended.

A Swift and Just Transition Away from Fossil Fuels

A. Declaration of a firm policy against fossil fuels—no new fossil fuel projects will be approved, and all existing fossil fuel use in all economic sectors will be phased out by 2050;
B. Formulation of a comprehensive plan for the retirement of the fossil fuel industries, in accordance with the commitment to maintain the average global temperature below 1.5 degrees from pre-industrial levels;
C. Adoption of policies against other harmful energy projects, such as nuclear, mega-dams, waste-to-energy incinerations, and agrofuels;
D. Full implementation of Renewable Energy policy mechanisms to expedite the development expansion of clean and affordable renewable energy;
E. Adoption of the proposed Just Transition Framework, ensuring that:
   a. Affected workers in transitioning sectors are identified;
   b. Alternative jobs and livelihoods with living wages are made available for displaced workers and communities;
   c. Economic diversification is promoted for communities hosting fossil fuel projects; and
   d. A Just Transition Fund is established to support transitioning workers; and
   e. All members of society are granted universal and equitable access to energy for basic needs and the fulfillment of rights.
A United Call for Just Transition

The integration of the Just Transition Framework in the Philippines requires of the people a comprehensive and united call for a genuine Just Transition. In order to arrive at a genuine Just Transition, the affected workers and groups that are the forefront of the transition must gain deeper and more comprehensive understanding of what makes a Just Transition based on their realities on the ground. From this understanding, affected workers and groups can formulate and push for their own Just Transition Agenda.

The transition has only begun. Much work lies ahead. This paper offers a Just Transition Framework as a key starting point for affected workers and communities, movements, and other institutions that aim to advance a truly Just Transition in the Philippines.
ANNEX 1 | Semiara Coal Mining Site Case Study

Profile

SMPC is the largest coal producer in the Philippines, providing more than 90% of the local coal. It possesses exclusive rights to explore, extract and develop the coal resources in Semirara Island, Caluya, Antique. It is also the only power producer in the country owns and mines its own fuel source.

Before DMCI Holdings, Inc. took major control over SMPC, the company was known as Semirara Coal Corporation (SCC). SCC was incorporated in February 26, 1980. When issues of unproductivity and inefficiency arose, along with falling coal prices and the Philippine peso devaluation, DMCI Holdings, Inc. acquired it on 1997.

DMCI Holdings, Inc.’s acquisition of SCC largely affected former workers and affected neighboring Caluya communities. Previously as SCC, approximately 1000 employees, were working for the Mining Site. Today, as SMPC, there are over 4,000 employees or up to 6,000, if resident families are also taken into account, according to the estimate of the two key informants. The key informants are former employees of SMPC, who experienced the change in ownership of the Mining Company. They are no longer in good terms with SMPC and its workers, thus, immersion in the host community proved difficult. They are along the average age of 60-70 years old.

Data Narration

Worker Profiles

Residence, Physical Distance from Work Site
Respondents’ resided in areas that took on average almost an hour of travel to reach their place of work at the coal mining site.

Length of Employment
Respondents’ lengths of employment under SCC were 17 years and 18 years, respectively.

Positions
Respondent A worked as a draftsman under SCC, while the Respondent B as the designated driver of materials from the Company’s Control Department.

Regularization and Organization
Both respondents had been regular employees of SCC, with one of them having been regularized after 3 months of employment.

When asked whether SCC allowed for the organization of its employees, both respondents answered yes, and indicated the same labor union to which they belonged (Siklo). The Respondent B claimed to be active in the said union, while the Respondent A claimed to be inactive due to being confined mostly in the office.
According to one of the respondents, their labor union Siklo enjoyed a certain level of bargaining power with SCC, unlike the current labor union at SMPC that he attests to be influenced and controlled largely by executives at DMCI Holdings, Inc.

**Employment History, Possessed Skills, Succeeding Employment Opportunities Outside of Coal Company**

Both respondents claimed that not much formal work opportunities presented themselves in the Caluya Municipality, apart from the ones offered by then SCC and SMPC.

The Respondent B indicated that skills like driving and knowledge of the internal mechanics of the vehicles he used to drive were crucial in performing his job. Respondent A possessed skills in drafting house plans.

When asked whether other family and/or friends had been employed then under SCC, both respondents claimed that most of their acquaintances in the municipality have been employed under SCC until it was controlled by DMCI Holdings, Inc.

Now, long after their employment under SCC, one respondent is now engaged in fishing and selling coconuts as a source of income, while the other earns by being a self-employed tricycle driver or an informal worker in the construction industry and the occasional surveying jobs.

**Labor Conditions in the Coal Industry**

**Amount of Salary and Salary Sufficiency**

Both respondents earned Php 300.00 during their stay in the 1980s at SCC. When asked whether their SCC salary had been enough to support themselves and their family then, both respondents claimed that their salary was sufficient. However, the then-driver respondent claimed that he used to do a number of overtime work in order to earn extra income for occasional, additional expenses.

**Hours of Work**

Both respondents provided the standard 8 hours of work per day to the company, with the Respondent B claiming that he puts in additional overtime work hours of 2 shifts in order to earn more.

**Work Benefits**

Apart from the standard government-mandated benefits for employees, both respondents enjoyed the following benefits under SCC: (a) home leave, where, for every three months, workers are allowed seven paid days meant for traveling back home, and (b) sick leave that workers can encash if not used. According to both of the respondents, there were also annual medical checkups conducted by SCC.

**Work Safety Measures**

Both respondents claimed that SCC had mandated the wearing of safety equipment, such as skullguards, safety shoes, and dust masks, for its workers within the perimeters of the work site.

**Health Concerns Related to the Job**

Respondent B had experienced minor eye damage due to the coal dusts that he was regularly exposed to. The health expenses had been shouldered by SCC.

Respondent A claimed to have no health-related concern in the duration of his employment.

---

110 SMPC acquired SCC in 1997
Permission of Labor Organization within the Company
As indicated above, SCC had allowed for the forming of a workers’ organization within the company and often seriously treated as a medium for its workers to bargain.

Job Contentment
Both respondents recalled feeling contentment with their occupation, due to the lack of other formal work opportunities within their municipality.

Worker-Desired Improvements and Changes
When asked as to what they would have improved or changed in SCC to further better their experience as employees, one of the respondents stated that a stronger bargaining power allowed for their former labor union — where the company conceded to the entirety and not just to the partial demands of the workers via the union — would have improved his satisfaction with the job. The Respondent A had expressed his desire for more opportunities for earning bonus pays for support staff like himself, an amount equal to that which is received by the operations department, which earns higher bonus pays and more bonus opportunities.

Outlook on the Renewable Energy (RE) Industry v. the Coal Industry

Knowledge of Prospective or Hiring Renewable Energy (RE) Companies
In both the time where they had still been working under SCC and in the present time, both of the respondents claimed no knowledge of any prospective or hiring renewable energy companies.

Willingness to Work at RE Industry
When asked whether they would have been willing to transfer from their jobs under SCC to another offered by an RE company, both respondents expressed uncertainty, especially since their labor conditions under SCC were sufficiently satisfactory to them and they had not been aware of the drastic environmental and health effects of the coal industry then.

Outlook on the Difference between Employment under RE Industry and Coal Industry
Respondent A examined the difference in employment between the two industries in terms of salary figures for their respective employees, predicting that pay would be higher in the coal industry, especially in the operations department.

Respondent B examined the two industries’ difference in employment in terms of their health effects and safety, predicting that it would be much safer for workers to be employed under the RE industry.

Outlook on the Effect of the RE Industry to Jobs within the Coal Industry
Respondent A predicted that the renewable industry poses a threat of displacing current coal industry workers.

Meanwhile, Respondent B reiterating his previous answer, claimed that workers employed under the coal industry would find a work environment that is more suited for the betterment of their health under the RE industry. However, he shared how current workers employed under the SMPC coal company have expressed their willingness to sacrifice health in exchange for having a job and a formal source of income.
Energy and Environment Situationer

Access to Electricity at Home
Both respondents have access to electricity at home.

Monthly Electricity Bill and Affordability of Electricity
Both respondents’ monthly electricity bills range from Php 400.00 to Php 420.00. Their opinions on the affordability of their monthly electricity bill diverge, with one claiming that it is affordable, and the other claiming that it is not.

Electricity Source: Conventional (Fossil Fuel) vs. Renewable Energy
Both respondents’ electricity is sourced from energy generated by a diesel power plant and distributed by the Antique Electric Cooperative (ANTECO), an electric cooperative registered under the National Electrification Administration (NEA).

Perceived Effects of Coal Site on Health
Both respondents claim that they notice the detrimental health effects that coal inflicts on them. These health effects are primarily diseases of the lung and the skin.

Perceived Effects of Coal Site on Environment
Both respondents also claim to notice the detrimental effects that coal inflicts on the environment in their community. One of the respondents claimed that primary of these effects is the extreme heat and rainfall. The other claimed that primary of these effects is the destruction.

Comparison of Amount of Coal Plants to RE Plants
Both respondents positively stated that there are more existing coal plants existing in the country than renewable energy plants or farms.

Awareness of Concept of ‘Carbon Emissions’
One of the respondents was not aware of the concept of carbon emission, while the other claims to be aware of it.

Awareness of Coal’s Contribution to Carbon Emissions
Consequently, they are also divided in their awareness of coal’s contribution to carbon emissions, with one being aware and the other not being aware.

Awareness of Philippines’ High Electricity Rate
One of the respondents was not aware that the Philippines has one of the highest electricity rates in Asia, while the other claims to be aware of it.

Awareness of Concept of ‘Renewable Energy’
Both respondents claim to be aware of the concept of renewable energy, citing it as an energy source that does not cause harm upon the environment.

Comparison of Coal and Other Fossil Fuels as Energy Source v. Renewables-Sourced Energy
One respondent claimed that the two differ, with renewable energy being cheaper than coal, the primary fossil fuel source of energy. Meanwhile, the other respondent claimed that coal is not only more expensive than renewables as an energy source, but it is also dirtier.
Outlook on Prices Between Coal and Other Fossil Fuel-Sourced Energy v. Renewables-Sourced Energy
One of the respondents positively claimed that renewable energy is cheaper than coal. Meanwhile, the other respondent did not give an answer as to which he perceives to be cheaper.

Willingness to Pay Higher Monthly Electricity Bill if Sourced from RE
Both respondents claimed that they were willing to pay higher monthly electricity bills if the electricity is sourced from RE.

Willingness to Transition to RE Once Cheaper than Coal
Both respondents positively claimed that they were willing to transition towards RE-sourced electricity if RE is cheaper than coal-sourced energy.

Whether or Not the Country Should Transition from Coal
Both respondents claimed that the country should transition from coal.

Awareness of Transition Policies from Coal

Outlook on Energy Source Currently being Prioritized by Government
Both respondents claimed that between fossil fuel sourced energy and renewables sourced energy, the Philippine government is currently prioritizing fossil fuel sourced energy, with both indicating higher profits in fossil fuels as the government's reason for choosing preferring fossil fuels.

General knowledge or awareness on the existence of a national plan to transition away from coal
Only one of the two respondents appeared to be aware of the national plan to transition away from coal and the primary driver of such attempt at transition: which is to mitigate climate change effects.

Awareness of Concept of ‘Just Transition’
Neither of the respondents claimed to be aware of the concept of 'just transition.'

Paris Climate Agreement
Only one of the respondents claimed to be aware of the Paris Climate Agreement.

Philippines’ Nationally Determined Contribution
Only one of the respondents claimed to be aware of the Philippine NDC, indicating that it is a result of the country's participation in the COP (Conference of the Parties) 21.

Renewable Energy Act of 2008 or RA 9513
Neither of the participants claimed to be aware of the Renewable Energy Act of 2008.

Philippine Green Jobs Act of 2016 or RA 10771
Neither of the participants claimed to be aware of the Philippine Green Jobs Act of 2016.

Local government dialogue regarding the transition
Both respondents claim that no local government unit has conducted a dialogue regarding the national plan to transition.

Outlook on Possible Benefits of Energy Transition to Local Community
One of the respondents cited cleaner air and water as a possible benefit of the transition, while the other respondent cited the reduction of illnesses.
Outlook on Possible Threats of Energy Transition to Local Community

Both respondents claimed that the transition posits no threat to their local community.

Perceived Role in Community’s Shift to RE

One of the respondents sees himself contributing to the transition to RE by initiating a dialogue himself with the local government as regards the effects of coal-sourced power to the community’s environment.

The other respondent sees himself contributing to the transition to RE through cooperating with other RE advocates.

Awareness of Concept of “Energy Democracy”

Both respondents claim to be aware of the concept of energy ‘democracy’.

Openness to Community-Owned and Operated RE Facilities as Alternative to Current Energy Structure

The two respondents are divided in their answer, with one agreeing that community-owned and operated RE facilities could serve as good alternatives to the current energy structure on place in the country, while the other disagreeing to the same.
Profile
Starting commercial operation since 1984, the Calaca Coal Plant is the oldest operating coal plant in the Philippines. Currently, the Coal Plant generates 900 MW of electricity from four of its online units: Unit 1 (300 MW), Unit 2 (300 MW), Unit 3 (150 MW), and Unit 4 (150 MW).

The first two units, Units 1 and 2, had originally been owned and managed by the Philippine Government through the National Power Corporation (NPC) since 1984 (Unit 1) and 1995 (Unit 2). After suffering equipment deterioration and bankruptcy, the NPC sold the Calaca Coal Plant to Sem-Calaca.

Units 3 and 4 are part of Sem-Calaca's first phase of coal plant expansion. They started operations only in 2015. For 2018, Sem-Calaca, in partnership with Meralco Power Generation Corporation (MGen), have teamed up with Japan Marubeni Corporation to build two more 350 MW units.

The key informants are former employees of Sem-Calaca, who also experienced the transition in ownership of the Coal Plant. They are along the average age of 60-70 years old.

Data Narration

Worker Profiles

Position
The two respondents of the study are former workers of the then National Power Corporation (NPC)-run Unit 1 coal plant. One of them had disclosed his former occupation at the plant as an engineer, hired by NPC through direct hiring. Both respondents claimed to have been organized workers under the management of NPC.

Regularization and Organization
Both respondents claimed to have been organized workers under the management of NPC. However, come the assumption of management by DMCI, both claimed that worker organization was heavily discouraged within the corporation.

Employment History and Possessed Skills
One respondent possessed the exact university degree fit for the occupation he had under NPC and DMCI, while the other had maneuvered through various positions throughout his occupation under NPC and DMCI.

Network of Family and Friends Employed Under the Same Industry
According to both respondents, a significant number of their family and friends are vetted to be employed under the coal corporation, both during its management by NPC and by DMCI. In the town of Calaca, both respondents have claimed that the corporation is a major source of employment for the residents. However, despite this, both have lamented that the corporation does not hire enough residents from the town, either during the administration of NPC or DMCI.

Labor Conditions in the Coal Plant

Hours of Work
Under the management of NPC, both respondents have claimed that they had worked the regular 8 hours, with additional hours being voluntary. Under the management of DMCI, both respondents have claimed that in some instances — such as the company being undermanned and during emergencies that compel extra attention towards the plant site — hours had been compulsorily longer and unpaid. Workers not able to fulfill overtime shifts are penalized as ‘abandoning one’s post’ where they are then subsequently fired from the company.
Work Benefits
While nominally, the NPC management had provided work benefits such as health insurance and pension, the subsequent bankruptcy of the NPC-managed corporation had lead to workers not being able to claim the benefits that were due them. Meanwhile, both respondents claimed that DMCI lacks hazard pay for its workers as part of working for the company. Also, DMCI provides health insurance that has little coverage. While NPC provides a health insurance that covers not only employees but their beneficiaries, DMCI only provides health insurance that covers employees and not their beneficiaries.

Work Safety Measures
Respondents claim that both NPC and DMCI provide the basic safety measures and equipment for their respective workers. However, in terms of safety precaution under the management of DMCI, workers’ safety take a back seat in times of emergencies like typhoons and other natural disasters, as respondents claim to have been compelled to prioritize ensuring the plant against impacts of inclement weather before taking safety measures for themselves.

Health Concerns Related to the Job
Both respondents claimed no health-related concern from their occupation.

Permission of Labor Organization within the Company
Both respondents have claimed that labor unions were allowed during the management of NPC and were then disbanded come the time of management by DMCI.

Job Contentment
Overall, both respondents have claimed to have been contented with their jobs during the management of NPC and have then become severely discontented under DMCI management, leading them to leave their jobs.

Worker-Desired Improvements and Changes
Both respondents have provided desired improvements and changes merely for DMCI management — which included payment of overtime services.

Outlook on the Coal Industry v. the Renewable Energy (RE) Industry

Knowledge of Prospective or Hiring Renewable Energy Industry Companies
Both respondents, during their occupation at the coal plant site, claimed that no prospects for employment under the renewable energy had been available during the time. In the present time, however, a solar farm (the Calatagan Solar Farm) has recently been built in the neighboring town of Calaca.

Willingness to Work at Renewable Energy Industry
Both respondents, while claiming to be willing to work within a renewable energy industry for reasons of better prospects for their health and for easier tasks considering the difference between RE farms and coal plant sites, have also stressed that their choice of work between the two industries depend most highly on the kind of management of the employees, given their stark experiences under NPC and DMCI.

Outlook on the Difference between Employment under Coal Industry and RE Industry
As claimed by respondents in the above question, employment under the RE industry would be significantly better for employee health due to the lack of pollution that it causes. The solar industry, in particular, which is most prominent in the province of Batangas, provides less complicated technological process in its operation and, having no moving parts unlike in coal plants, would be relatively safer to operate.
Outlook and Extent of Knowledge on Coal as Energy Source

Outlook on effects of coal industry on natural resources
Given Calaca residents’ continuing outcry against the establishment of the coal plant site within their town, both respondents shared what residents have claimed to be the primary pollution caused by the plant: air pollution through coal dust traveling in the wind.

Awareness on concept of ‘carbon emission’
Both respondents have displayed a relative awareness of the concept of ‘carbon emissions’, lumping them together with the broader concept of air pollution.

Awareness on contribution of coal industry to carbon emissions
Only one of the respondents had claimed an explicit awareness of the link between the coal industry and carbon emissions.

Outlook and Extent of Knowledge on Renewable Energy as Energy Source

Awareness of concept of ‘renewable energy’
Both respondents claimed to be aware of the concept of renewable energy.

Comparison of renewable energy to fossil fuel energy sources
One of the respondents, while recognizing the cleaner and safer aspect of renewable energy as a main energy source, expressed doubt as to its accessibility (given the current, relatively higher price of RE source) and its efficiency and sufficiency (given scant RE sources currently installed in the Philippines and the much needed development of RE technology available in the Philippines).

Whether or not Philippines should transition to renewable energy
Given the above concerns stated, one of the respondents has expressed reservation in making RE a main energy source for the Philippines.
ANNEX 3 | Calatagan Solar Farm Case Study

Profile
A survey was conducted with 11 respondents, who are working at the Calatagan Solar Farm in Calatagan, Batangas owned by Solar Philippines.

The Calatagan Solar Farm is the largest solar farm in the Luzon Island. The solar farm comprises over 200,000 solar panels placed on a 160-hectare property, with a total solar power capacity of 80 MW at present. The construction of the farm was completed in 2016 and became fully functional in the same year.

The Farm currently has 31 employees, working under either of the two main departments: Operations and Maintenance, and Ground Support. All of the 11 respondents, one female and ten males with ages ranging from 25-40 years old, are part of the Operations and Maintenance Department. No employees from the Ground Support System were included as respondents because the formal proceeding required by Solar Philippines’ Human Resources was not completed in time for the one-day visit.

The respondents were handed uniform questionnaires, which inquired mainly about the following:
1. Labor conditions within the Solar Farm; and
2. Perceptions on the ecological and labor condition differences between the coal industry and the solar industry.

Data Narration

Worker Profiles

Residence, Physical Distance from Work Site
Respondents reside within the province of Batangas, although not particularly in Calatagan. Their residences are situated in areas that are usually almost an hour’s worth of travel going to their place of work at the solar farm.

Length of Employment
The length of employment of each respondent varies from 7 months to 1 and a half years.

Positions
Respondents’ job with the solar farm ranged from positions of Senior Operations Engineer, Operations and Maintenance Engineer, Operations and Maintenance Technician, Senior Maintenance Engineer, Safety Officer, Site Nurse, and Utility/Messenger.

Regularization and Organization
The above respondents, being mostly regularized employees, are currently not organized or not part of a labor union within the company. It was noted by the respondents, however, that there is a union currently being formed for the Ground Support personnel. Only the respondents who holds the positions of Site Nurse and Utility/Messenger are not regular and are probationary employees.

Employment History and Possessed Skills
Skills possessed by the eight respondents employed as Operations and Maintenance Engineers and Operations and Maintenance Technicians, include knowledge in electrical engineering, and general knowledge in technicalities of electricity. Six of the Operations and Maintenance department respondents have had varied previous occupations as a building engineer, service manager in electrical companies, electrician, forklift operator, worker at a solar energy-centric non-governmental organization, and operations engineer at various telecommunication companies.

Two of the respondents employed as Operations and Maintenance Engineers and Technicians are fresh graduates with no prior employment history.
Skills possessed by the three respondents employed as site nurse, utility/messenger, and safety officer include medical skills focused on the pulmonary area which had been acquired under technical training, skills gained from personal experiences of being a warehouseman and utility staff, and skills acquired from COSH (Construction Occupational Safety and Health)/BOSH (Basic Occupational Safety and Health) training, respectively. The prior occupational experiences of the three aforementioned respondents respectively include jobs as a Pulmonary Department staff and medical sales representative, office staff as utility as well as a bodyguard and forklift operator, and engineering staff.

Network of Family and Friends Employed in the Same Field
Five of the eleven respondents have claimed to know of family and/or friends that are also currently employed in solar farms. An average number of 2.2 family and/or friends of the respondents have been stated to also be employed in solar farms.

Labor Conditions in the Solar Farm

Amount of Salary and Salary Sufficiency
Except for three respondents, the rest of the interviewees have preferred not to disclose their salary figures and marked them as confidential. One Senior Operations Engineer and two Operations and Maintenance Engineers meanwhile disclosed their salary figures as the following, respectively: one that ranges from PHP50,000 to PHP65,000 per month, PHP20,000 and PHP20,400.

The Senior Operations Engineer responded have claimed his salary to be enough to support himself and his family, while the two Operations and Maintenance Engineers (notably both fresh graduates) who earn PHP20,000 to PHP20,400 per month have claimed their salary to be insufficient to support themselves and their respective families.

Six of the remaining eight respondents who have not disclosed their salary figures have also claimed their monthly salary to be enough to support themselves and their respective families, with one of them (the utility/messenger respondent) providing the qualification that his salary is not enough to make room for the health expenses of one of his children.

Two of the remaining eight respondents who have not disclosed their salary figures did not provide answers to the sufficiency of their monthly salary.

Hours of Work
Eight of the eleven respondents provide an average of 48 hours of work per week under compressed time. This translates to 9 and a half hours of daily work for 5 days. All of these eight respondents are employed as Operations and Maintenance Engineers and Operations and Maintenance Technicians.

The three remaining respondents employed as site nurse, safety officer, and utility/messenger, work the regular 8 hours per work day.

Work Benefits
All respondents have claimed to have the regular work benefits, such as government-mandated insurance programs (Social Security System — a state-run, social insurance program in the Philippines to workers in the private, professional, and informal sectors, Philhealth — social health insurance, PAG-IBIG — shelter financing for Filipinos employed by local and foreign-based employers).

All respondents also claim to be insured under a private health maintenance organization chosen by Solar Philippines.
Work Safety Measures
All respondents have stated that their company provides safety equipment and safety measures to follow within the work site. All are tasked to wear safety vests, helmets, shoes, and gloves within the perimeters of the solar farm. They are also provided rain coats and boots for rainy weather, as the solar farm is situated on a field the soil of which softens when raining.

Health Concerns Related to the Job
All respondents have claimed to have zero health concerns relating to their job.

Permission of Labor Organization within the Company
Two respondents did not provide an answer to the inquiry on whether the company allows for the organization of its workers.

Four respondents have answered that they are unaware whether the company allows for the organization of its workers.

Five respondents have claimed that the company allows for the organization of its workers.

Job Contentment
Respondents were asked to rate from 1-10 (1 being the highest and 10 being the lowest) their satisfaction with their current jobs in the solar farm.

A score of 10 was given by one of the respondents, belonging to the Operations and Maintenance department.

A score of 9 was given by 3 respondents, one Senior Operations Engineer, one Operations and Maintenance Engineer, and one Operations and Maintenance Technician.

A score of 8 was given by 6 respondents, three of them Operations and Maintenance Engineers, one a site nurse, one a utility/messenger, and one a safety officer.

No score was given by one of the respondents, a Senior Maintenance Engineer.

Worker-Desired Improvements and Changes
3 respondents provided answers to the inquiry on the possible improvements that the company could undertake to make their experience with work better; the rest have not provided answers.

2 of the 3 respondents indicated the provision of support for outside training (the company already provides in-house training) as a possible work improvement. They are both from the Operations and Maintenance department.

1 of the 3 respondents indicated that the provision of extra time for duty or overtime as an opportunity for him to earn more is a possible area of work improvement. This respondent works as a probationary utility/messenger employee.

Outlook on the Renewable Energy (RE) Industry v. the Coal Industry

Knowledge of Prospective or Hiring Coal Industry Companies
2 of the 11 respondents know of prospective and/or hiring coal industry companies.

9 of the 11 respondents do not know or are not certain of prospective and/or hiring coal in
**Willingness to Work at Coal Industry**

3 of the 11 respondents, all of them being in the Operations and Maintenance Department, positively stated that they are willing to work at the coal industry without indicating conditions.

3 of the 11 respondents, all of them engineers at the same department, have stated that their answer depended on the following conditions: their financial conditions and if the position and salary offers from the coal industry are higher than their current salary figures and positions in the solar farm.

5 of the 11 respondents have positively stated that they are not willing to work at the coal industry.

**Outlook on the Difference between Employment under RE Industry and Coal Industry**

4 of the 11 respondents, all 4 of them belonging to the Operations and Maintenance department, claimed that it is significantly safer to work at the renewable energy industry and significantly riskier to work at the coal industry. The first half of these 4 respondents have previously expressed willingness to work at the coal industry, while the other half have expressed that they are not at all willing to work at the coal industry.

3 of the 11 respondents, all 3 of them also belonging to the Operations and Maintenance department and have expressed willingness to work at the coal industry, claimed that work at the coal industry is more complicated in terms of operations as compared to solar farms.

1 of the 11 respondents, working as utility/messenger, claimed that there is more air pollution caused by the coal industry as compared to the solar industry.

3 of the 11 respondents, one working as safety officer, one as a site nurse, and another belonging to the Operations and Maintenance department, have not given answers to the inquiry.

**Outlook and Extent of Knowledge on Coal as Energy Source**

**Outlook on effects of coal industry on natural resources**

Air pollution was cited as a primary effect of the coal industry on natural resources by 3 respondents from the Operations and Maintenance department.

Meanwhile, typical effects that mining has on natural resources, was cited by 3 respondents from the O and M department. These mining effects were not expounded on by the said respondents.

On the other hand, depreciation of raw material sources was cited by 1 respondent-utility/messenger and 1 respondent-safety officer.

Waste disposal issues was cited by 1 respondent from the Operations and Maintenance department.

2 respondents did not answer.

**Awareness on concept of ‘carbon emission’**

5 respondents are aware of the concept of ‘carbon emissions’, with 4 of them belonging to the Operations and Maintenance department, and 1 of them a site nurse. Their accompanying explanations for their understanding of the concept were general, citing carbon emissions as ‘harmful to the environment.’

6 respondents are not aware of the concept of ‘carbon emissions’, with 4 of them belonging to the Operations and Maintenance department, 1 of them a safety officer and another 1 utility/messenger.
Awareness on contribution of coal industry to carbon emissions

7 respondents, all of them from the Operations and Maintenance department claimed to be aware of the contribution of the coal industry to carbon emissions.

4 respondents, on the other hand, claimed to be unaware of such contribution, with 1 of them belonging to the Operations and Maintenance department, 1 a site nurse, 1 a safety officer, and another 1 a utility/messenger.

Outlook and Extent of Knowledge on Renewable Energy as Energy Source

Awareness of concept of ‘renewable energy’

7 respondents, 6 from the Operations and Maintenance department and 1 a utility/messenger, claimed to be aware of the concept of renewable energy.

4 respondents, 2 from the Operations and Maintenance department, 1 a site nurse and 1 a safety officer, have claimed to be unaware of the concept.

Comparison of renewable energy to fossil fuel energy sources

Renewable energy is differentiated from fossil fuel sourced energy through the sources of the energy they generate, according to 5 respondents, 4 from the Operations and Maintenance department and 1 a utility/messenger.

Renewable energy is differentiated from fossil fuel sourced energy through the emissions they cause and their general effects on the environment, with fossil fuels being more harmful than renewables, according to 2 respondents from the Operations and Maintenance department.

2 respondents claimed to not know what primarily differentiates renewable energy to fossil fuel sourced energy.

Whether or not Philippines should transition to renewable energy

7 respondents, all from the Operations and Maintenance department, claimed that the Philippines should transition to renewable energy.

1 respondent, a utility/messenger, answered that the country should transition on the condition that prices offered by renewable energy are cheaper.

2 respondents, a site nurse and a safety officer, claimed that the Philippines should not transition to renewable energy.

No answer was given by 1 respondent from Operations and Maintenance department.

Awareness of Transition Policies from Coal

Respondents were asked regarding their awareness of a number of key concepts and agreements concerning the national government’s commitment to transition away from coal.

Paris Climate Agreement

‘Yes’ was answered by 3 respondents, all Operations and Maintenance department engineers. All 3 of them explained that it is an agreement made by countries to address or mitigate climate change.

‘A little’ was answered by 1 respondent Senior Maintenance Engineer.

‘No’ was answered by 7 respondents, 4 of them from the Operations and Maintenance department, 1 of them a site nurse, 1 a safety officer, and 1 a utility/messenger.
‘A little’ was answered by 1 respondent Senior Maintenance Engineer.

‘No’ was answered by 7 respondents, 4 of them from the Operations and Maintenance department, 1 of them a site nurse, 1 a safety officer, and 1 a utility/messenger.

**Philippines’ Nationally Determined Contribution**

‘Yes’ was answered by 1 respondent Senior Maintenance Engineer. He explained that it comprises a commitment to reduce the country’s carbon emissions.

‘No’ was answered by 10 respondents, 7 of them from the Operations and Maintenance department, and by 1 site nurse, 1 safety officer, 1 utility/messenger.

**Renewable Energy Act of 2008 or RA 9513**

‘Yes’ was answered by 4 respondents, all of them Operations and Maintenance engineers, 2 of these engineers being senior engineers. 2 of them explained that the Act is to promote use of renewable energy, while 1 of them expounded that the Act incentivizes business investments in renewable energy. 1 of them did not provide an explanation for their answer.

‘A little’ was answered by 3 respondents, 1 site nurse, 1 safety officer, and 1 utility/messenger. All of the 3 did not provide additional explanation.

‘No’ was answered by 4 respondents, all from the Operations and Maintenance

**Philippine Green Jobs Act of 2016 or RA 10771**

‘Yes’ was answered by 3 respondents, all of them Operations and Maintenance engineers (1 a senior). 2 of them that the Act promotes jobs that contribute to the protection of the environment, while 1 of them did not explain their answer.

‘A little’ was answered by 1 respondent safety officer.

‘No’ was answered by 7 respondents, 1 a site nurse, 1 utility/messenger, and 5 employees from the Operations and Maintenance department.

**General knowledge or awareness on the existence of a national plan to transition away from coal**

‘Yes’ was answered by 2 respondents, both Operations and Maintenance engineers, 1 of them generally citing the existence of Department of Energy programs (without enumeration) and another 1 citing RA 9513 or the Renewable Energy Act as a manifestation of the national plan to transition away from coal.

‘No’ was answered by 9 respondents.

**Local government dialogue regarding the transition**

All respondents were not aware of any local government dialogue conducted, as regards the aforementioned plan to transition.

‘Yes’ was answered by 1 respondent Senior Operations Engineer. His answer, however, cited the recent municipal government’s plan to promote the Solar Philippines’ solar farm as a tourist spot, a move that does not necessarily comprise of a dialogue as regards the national plan of transition away from coal.

‘No’ was answered the 10 remaining respondents.
ANNEX 4 | PUV Modernization Program Case Study

Profile

Alliance of Concerned Transport Organizations (ACTO) is a transport coalition composed of members from the PUV and PUJ industries. It currently lists 450,000 units as a part of its coalition, with 30,000 of these units being jeepneys.

Alliance of Drivers and Operators of the Philippines - Genuine Organization (STOP and GO) is a transport coalition composed mostly of drivers and operators in the PUV and PUJ industries. It has 131 transport groups (ranging from the PUVs, PUJs, and tricycles) as members.

Data Narration

The interviewees total nine individuals, with three of them being driver-operators/operators and the other six being drivers. Operators of Philippine jeepneys are the registered owners of the units being driven in the roads. Drivers are those that rent the jeepneys on the daily so they could be driven on the road. The usual set-up between operators and drivers mandate that drivers are allowed to drive the jeepney units rented to them by the operators. The total fare paid by the passengers to the driver for the day serve as the driver’s daily income. Subtracted from this income are the daily rental fee (“boundary” fee) owed to the operator and the fuel expenses shouldered by the driver. Repair and maintenance expenses are shouldered by the operator.

A driver-operator is an operator which also drives one of the jeepney units that he or she owns.

Transport Experience: Operators

The three operators all pay maintenance expenses for their jeepney units for every 1 to 3 months. One of the operators, who has acquired her jeepneys on a loan, also pays a daily mortgage fee to the lender that has loaned the capital by which she bought the jeepney units. She pays her daily mortgage fee through the daily boundary fees given to her by her drivers.

Two of the operators are driver-operators, while one is merely an operator.

The respondent who is merely an operator owns a fleet of jeepneys comprised of 4 units, earning a total of PHP 4,000 a day, with his boundary rate at PHP 1,000 per day per unit.

The two respondents who are driver-operators spend 6 and 11 hours respectively in driving their jeepney units on the road and grossly earn an average of PHP 450 a day from the passenger fare collected. One of the respondents, who owns her jeepney units through a loan, has expressed that her daily income from driving and from collecting boundary fees from her other drivers is barely enough to sustain her and her family throughout their expenses — which include tuition fees of children along with health care payments.

Transport Experience: Drivers

The average of the boundary fees paid on the daily by respondent drivers total PHP 675. Their expenses for fuel are on the average of PHP 780. These expenses, subtracted from their average gross income, give them an average net income of PHP 816 that they take home everyday. Of the two main expenses that they shoulder on the daily, drivers point to the price of fuel as that which most affects the amount of income that they take home.

The fuel used most by drivers is diesel — from petroleum, a fossil fuel — which has an average price of PHP 36.00 per liter. At the end of each day, drivers load the jeepneys with an average of 21 liters, enough for a full tank of fuel, before returning the jeepneys to the operators.
The number of hours spent by the drivers on the road range from 8-10 hours per day, with only one of the driver-respondents spending 18 hours daily on driving. Driver-operator respondents spend less hours in driving, with their hours ranging from 6 to 11 hours per day.

The routes traveled by all drivers range from 4 kilometers (the minimum for jeepneys) to 15 kilometers.

**Outlook on the Situation of the National Mass Transport**

On the question of the quality of mobility within main roads, near which the drivers operate, all of the respondents have claimed poor mobility due to persisting massive, heavy traffic. Asked of the reason for such heavy traffic, a majority of the respondents have pointed to the unbridled increase of cars on the road, the group of private cars vastly outnumbering public transport vehicles.

On the question of the safety of the main roads and passageways, most respondents have claimed that the passageways are relatively safe due to few accident incidences.

**Outlook and Extent of Knowledge on Renewable Energy as Energy Source**

With an exception of one respondent, all respondents have very little to no knowledge of the concept of renewable energy as an energy source, especially on its difference from fossil fuels. The few that possessed an idea of what renewable energy is have discussed renewable energy within the context of the PUV Modernization Program.

Discussions within transport groups of the Program and the vehicles (some of them solar-powered) that have been vetted by the Government to serve as new types of public utility vehicles have informed respondents of the notion of renewable energy as an energy source. From these discussions among their peers, respondents have formed an opinion that renewable energy — especially as replacement to diesel — is not a sufficient energy source. Their reasons as to why range from issues of the reliability of solar-powered and other forms of electric vehicles in terms of long and numerous travels to issues of resilience and sturdiness of these vehicles, especially in bumpy roads and unpaved roads (found usually in rural areas).

Asked whether the Philippines should shift towards renewable energy as the country's leading energy source, most respondents claimed to not have formed an opinion on the matter, provided their lack of thorough knowledge surrounding renewable energy.

**Outlook and Extent of Knowledge on Government Program on Transition Away from Coal**

Anent their lack of awareness of the issues surrounding the concept of renewable energy, respondents have also claimed that they are either unaware or not affected by and not concerned with the issue surrounding fossil fuels and their impact on the issue of global warming and on the environment in general.

Although most respondents are outspoken with regard to the PUV Modernization Program as a policy, majority of the respondents have claimed to be unaware of the climate context surrounding the PUV Modernization Program and other government programs that serve to aid in the fulfillment of the country’s Nationally Determined Contribution.
Outlook on the PUV Modernization Program

All of the respondents have expressed disagreement with the PUV Modernization Program in its present form and implementation. Components of the modernization policy that were criticized by respondents included the following:

(a) on the proposed subsidy by the government to financially assist in acquiring new models that fit the new standards for jeepney vehicles (costing approximately PHP 1.6 million per unit), respondents have claimed that the subsidy (PHP 80,000) is barely enough,

(b) on the emission standards (Euro IV) and the respective engine fit for the emission standards, respondents have claimed that no such available technology currently exists or is accessible in the market and that they anticipate an equally high price for the technology should it become available. Respondents have also criticized the need for the new engine technology, claiming that the present engine installed in all jeepney units could be rehabilitated to fit emission standards as prescribed in the modernization policy.

(c) on the fitness of the new models (solar-powered and other electric vehicles) as new public utility vehicles, most respondents have claimed that the new models do not prove fit for the road and travel conditions experienced by the present jeepney units. Issues of resilience of the new technology, compared to old but sturdy jeepney units, have been claimed by respondents to be a potential factor to the worsening of the Philippine traffic condition. Respondents have claimed that not only drivers but commuters might be affected should solar-powered and other electric vehicles fail to deliver a better or similar distance capacity and speed capacity that present jeepney units deliver.

However, despite their criticisms of the PUV Modernization Program, respondents have claimed openness to the need to modernize jeepney units, in terms of rehabilitating beaten down and old models that do not prove to be roadworthy anymore. Their reservation with modernization is concerned mostly with the threat of a total phaseout of the present jeepney units for entirely new types of vehicles.
ANNEX 5 | Outcome of the Worker's Groups Round Table Discussion

Profile

Representatives from the following groups participated in the RTD:

1. **Bukluran ng Manggagawang Pilipino (BMP)**—BMP translates to Solidarity of Filipino Workers in English. It is a political organization of militant, democratic and socialist workers and unions;

2. **SOSYALISTA**—a labor group composed of socialist workers; and

3. **Trade Union Congress of the Philippines (TUCP)**—the biggest confederation of labor federations in the Philippines.

Key findings

The Round Table Discussion conducted with workers’ groups revealed that although a collective workers’ agenda on Just Transition is yet to be formulated, workers already have a profound understanding of just transition.

All the workers’ groups recognized the context in which Just Transition is considered as an urgent necessity. They raised two important points in their discussions. First is that just transition is a response to our generation’s biggest challenge—climate change. Our current economy and society depends on dirty, fossil fuels, which brings about climate change. Just Transition means shifting from dirty, fossil fuels to clean, renewable energy.

Second is that Just Transition is a shift from a profit-driven, growth-dependent society to a need-driven, and development-based society. It recognizes the ecological limits of the world and thus, restructures and reshapes our economy and society. As to what that economy and society are, they have yet to determine.

However, despite the fact that Just Transition will necessarily create new, green jobs, the workers’ groups were wary of the fact that it may also lead to the displacement of workers. Transition to a green economy may not necessarily be just, and instead occur at the expense of workers.

Thus, for an emerging concept, Just Transition is a phenomenon that workers’ groups are well-informed of—from its context and rationale to its pressing issues. More importantly, they are aware of the crucial role they play in ensuring that any transition to a green, sustainable economy will be just. It seems that their main challenge now is to shape their own agenda on Just Transition.
ANNEX 6 | Outcome of the Transport Groups Round Table Discussion

Profile
Roundtable discussions, one of which was facilitated in partnership with the office of Senator JV Ejercito, were conducted with the participation of:
1. Alliance of Concerned Transport Organizations (ACTO),
2. Alliance of Drivers and Operators of the Philippines - Genuine Organization (STOP and GO),
3. Pagkakaisa ng Samahan ng mga Tsuper at Operytor Nationwide (PISTON),
4. Federation of Jeepney Operators and Drivers Association (FEJDAP),
5. Liga ng Transportasyon at mga Operator sa Pilipinas (LTOP),
6. Pasang Masda,
7. No to Jeepney Modernization Coalition.

Key findings
The Roundtable Discussion on Just Transition conducted with transport groups reveal transport leaders’ awareness of the environmental framework behind the push for the national modernization of public utility vehicles.

Most Just Transition solutions arrived at by leaders of the sector after the Discussion zero in on issues surrounding the PUV Modernization Program, but hold useful, underlying principles that could apply in examining every other transition program by the government.

Collectively, the convened transport groups shared the following demands regarding the formulation and implementation of the Program:

(a) Ensuring the accessibility of low-emission technology and ensuring substantial compensation and assistance by the government for all members of the sector affected by the transition
(b) Direct dialogue and consultation by the government with key stakeholders from the ground
(c) Adjusting implementation strategies for the transition in a manner that takes into account the challenges posed by the transition for members of the affected sector

The following are the documented, concrete demands to the government by the convened transport groups in response to the formulation and implementation of the Program:

STOP and GO (Samahan ng Tsuper at Operator ng Pilipinas - Genuine Organization)
1. The Motor Vehicle Inspection System — a mechanism ensuring roadworthiness of a registered vehicle (taking into account both safety and environmental compliance) — should be fully operational before the full implementation of the Program. Those that do not pass or will not pass the mechanism are the only ones that should be compelled to modernize.
2. Suspend the compulsory implementation of the Department Order 2017-011 (the root law of the PUV Modernization Program)
3. Encouraging voluntary rather than compulsory surrender of unroadworthy jeepney units and the extending of direct financial assistance by the government who voluntary surrender such units.

ALTODAP (Alliance of Transport Operators and Drivers Association of the Philippines)
1. Ensure that the country’s local manufacturing sector and other sectors that will directly aid in the transition towards jeepney modernization are ready to participate in the transition, especially since the mandated engines compliant with emission standards are not accessible to the local manufacturing sector.
2. Lower interest rates of loan assistance programs by banks, in aid of the jeepney operators.
3. Provide government aid and education for the new fleet system that it will introduce to small-time operators.
LTOP (Liga ng Transportasyon at Operators sa Pilipinas)
1. Allocate greater national budget for the modernization program.
2. Provide opportunities for direct participation of transport groups to the discussions on the Program
3. Prioritize key and ground members of the transport sector in every dialogue regarding the modernization program

PASANG MASDA
1. Provide a longer period for full transition — from less than a year to 5-7 years od transition.
2. Release of modern jeepney models next year to ensure deeper understanding on the parts of drivers and commuters of how fully modernized public utility vehicles will function.
3. Provide a commuter-oriented modernization program, primarily in terms of convenience and safety.

FEJODAP (Federation of Jeepney Operators and Drivers Association of the Philippines)
1. Provide discussion and dialogue to affected transport sector members on why modernization is needed.
2. Do not rush the modernization process, especially on the part of modernization.
3. Educate single-operators on managing the new fleet system imposed by the Program.
4. Ensure retained ownership of single operators over their vehicle units amidst a cooperative model encouraged in the Program.
5. Immediately defer implementation of the Program while its components are still being polished.
6. Provide Implementing Rules and Regulations (IRR) for the PUV Modernization Program before full implementation.
7. Ensure participation of transport groups in the drafting of the IRR of the Program.

ACTO (Alliance of Concerned Transport Organizations)
1. Take into consideration the impact of the modernized model on fare prices.
2. Take into consideration the wages of the regular commuters and the impacts of the price of modernization on these commuters.
3. Concentrate efforts of (rehabilitative) modernization on the 20% of jeepney sector that most urgently need modernization efforts (i.e. those that are dilapidated, et.al.)
4. Ensure gradual implementation of the modernization program.
5. Take into consideration, in the study and implementation of the program, the differences between the country’s local setting and the foreign setting of the government’s models of modernization.
6. Ensure modernization of roads and strengthen traffic rules and regulations in light of the modernization program implementation.
7. Take into account the accommodation of training programs towards the age bracket of the affected drivers and operators. Ensure employability of older generation of drivers in the implementation of the modernization program.
8. Protect the ground members of the transport sector from monopolization by bigger corporations and entities over the more expensive modernized vehicles.
9. Provide further studies on the proposed fleet system to make it more understandable for single-operators.

NO TO JEEPNEY MODERNIZATION COALITION
1. Review of the Department Order for the PUV Modernization Program before its implementation.
WORKS CITED


Department of Energy.

Department of Labor and Employment (DOLE).


IBON Foundation.


International Labor Organization. "Guidelines for a Just Transition towards environmentally sustainable economies and societies for all" n.d.


International Trade Union Confederation. "Just Transition: Where are We Now and What’s Next?” n.d.


Philippine Department of Transportation,


ACKNOWLEDGMENT

Sponsored by the Rosa Luxemburg Stiftung with funds of the Federal Ministry for Economic Cooperation and Development of the Federal Republic of Germany. This publication or parts of it can be used by others for free as long as they provide a proper reference to the original publication.

DISCLAIMER

The content of the publication is the sole responsibility of the Center for Energy, Ecology, and Development and does not necessarily reflect the position of Rosa Luxemburg Stiftung.

ABOUT CEED

The Center for Energy, Ecology, and Development is a think-do institution that conducts research and advocacy, and partners with communities in promoting an ecologically just, people-centered energy sector and development path.