

REFLECTION PAPER

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Considering renewable energy jobs within a just energy transition in South Africa

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The just energy transition

A just energy transition (JET) is made up of two parts. The 'transition' is towards a sustainable, low-carbon, and equitable energy system, which is better for people and the planet than what we currently have. The 'just' component means that we make the shift as fair as possible, particularly for those workers in legacy energy systems where jobs will be at risk. South Africa (SA) needs to move away from an energy mix dominated by fossil fuels and toward increased proportion of renewable energy (RE) for environmental, social and economic reasons. In addition, we must move toward a situation where safe, efficient and healthy energy services are affordable to all citizens. This transition will bring up many challenges, and consequently it is imperative that adequate resources are given to planning for a JET. So far, national government has not prioritised this planning, or even given full recognition to the need for an energy transition. There are numerous vested interests within the fossil fuel sector to maintain the status quo for 'business as usual' as long as possible. To tackle this resistance to change, SA must think long term and find ways to overcome a trajectory that only benefits a small minority at the expense of our environment and the majority of citizens.

The role of jobs

Within this process of promoting overall positive change in the energy sector, a key aspect is that of jobs. This covers jobs at risk in the coal, oil, gas and petroleum industries along with new opportunities in the RE sector. However, the jobs discussion is far broader than this simple scope, and we should be aware of it becoming a fossil fuel jobs vs renewable jobs debate. The energy transition will occur within a wider societal transformation, and there will be many interlinking factors. Even the nature of 'a job' is changing, and we must think about the role of livelihoods and alternative income generation models for workers. To gather input from a number of stakeholders on this important topic, the Catholic Parliamentary Liaison Office (CPLO), in collaboration with Project 90 by 2030, hosted a roundtable discussion in Johannesburg on 28th November 2017. The discussion topic (A Just Energy Transition in South Africa: Renewable Energy Jobs - The Reality and the Potential) was informed by presentations from representatives from the RE industry, labour movement and research institutions¹. The event was attended by about 50 people from civil society, labour, local and national government, private industry and research institutions.

This reflection paper brings out a few of the important points provided by each presenter and then identifies other key themes that emerged from the event. This paper is not full summary of content of the event, but captures some main themes and aims to stimulate further discussion about this important topic. The nature of this topic is complex, and since participants at the event represented different stakeholders, some themes and concerns were raised by specific groupings and not by others.

Current employment data for RE (Mike Levington)

Jobs in RE can be broadly split by the scale of the generation facilities: large and small. The national Renewable Energy Independent Power Producers Procurement Programme (REI4P) has created 31 207 job-years² since its inception in 2010³. The REI4P covers large scale RE, and although RE has a distributed nature, most of the jobs have been created in the Northern and Eastern Capes. Even though the programme was rated as very successful, for almost two years it has been stalled since Eskom has refused to sign further power purchase agreements. This action has not only decreased the jobs that would have been created till this point, but has led to job losses along the value chain in related industries. There has been some criticism that a fair proportional of the jobs that were created were not local, but the exact figures are hard to gauge beyond the localisation requirements of each project.

In terms of small scale RE, overall job data in SA is essentially unavailable, as this industry is effectively unregulated at present. Even making estimates from the installed capacity is problematic due to lack of data. For example, there is a 10 fold difference between registered and estimated capacity for rooftop solar photovoltaics. A further issue that has emerged is that the recent amendments to the Electricity Regulation Act (ERA) can be seen to be stifling the rooftop solar photovoltaic (PV) industry. Despite this, the ever increasing prices of Eskom's grid electricity will continue to push the appeal of small scale embedded generation (SSEG) such as solar PV.



Socio-economic and labour considerations (Hameda Deedat)

In terms of jobs, the labour movement do not feel that capitalism has provided an adequate platform for worker employment in terms of widespread access to decent, sustainable jobs. This is a systemic issue and, although unlikely to change in the short term, must be addressed in the long term taking into account grassroots and community needs. Better jobs and employment opportunities in the long term requires a better system context for work that is not dominated by corporations, and this includes the energy sector.

Climate change and environmental concerns linked to fossil fuel use are important, and often it is the working class that are affected the most by pollution and environmental damage. This links closely to the negative health impacts that are a result of the current economic system. However, there are intrinsic difficulties in simply replacing jobs in the fossil fuel sector with jobs in RE. This is based on the different skills required, geographical location of industries and rate of job creation. Within the context of a JET, there will need to be a more holistic view of job creation extending not just to the full value chain in the energy sector but to the rest of the economy too. While job losses may be as a result of an energy transition, job opportunities should not be limited to this sector, but this will require concerted management and forward thinking by government.

In general, the labour movement support an energy transition (for environmental, health and sustainability reasons), but the issue comes down to how to make it just within the economic system we have, while working toward a better system in the long term. Ownership is an important factor in the transition and ties closely to the benefits that workers can receive from a job. Technology must be used, but we must maintain a place for people if mechanisation in the energy sector increases, and this may include a shift to service type jobs. Furthermore, the decentralised nature of future energy systems will mean that those who are employed directly will need to be organised in a different way to the centralised model of today. Independent Power Producers (IPPs) can be contributors to the transition, but the format will need to shift from the predominantly private- and foreign-owned status quo to a more socially owned model.

Jobs potential in RE (Nthombifuti Ntuli)

The Council for Scientific and Industrial Research (CSIR) has done modelling on the numbers of RE jobs based on the base case in the draft Integrated Resource Plan⁴ (IRP) from 2016. This gives an indication on the potential for RE jobs within the REI4P, although the IRP is still under review (as at December 2017) and the allocations to RE may change. This analysis looks at construction along with operation and maintenance (O&M) jobs, mainly in wind and solar PV within a framework of assumptions⁵. It also considers direct, indirect and induced jobs. So, for example, in the year 2040 the solar PV industry could be responsible for a total of 35 000 job-years. Wind would contribute substantially more to around 90 000 total job years. For all the graphs from the modelling please see the full presentation⁶. The forecast numbers will change depending on how the IRP is finalised, and real job creation will depend on implementation, but the important point is that RE can contribute meaningfully to employment creation across a wide range of associated industries. The total O&M jobs increase over time as these are permanent jobs relative to the lifetime of the plants within the power generation fleet.

A concern is that this modelling is done on an existing draft IRP, and ideally the IRP process itself should take jobs (and other socio-economic factors) in account when deciding the best energy mix. There are also questions about the validity of how indirect and induced jobs are calculated, but if the same model were applied across a number of energy generation technologies, then at least a relative comparison between energy sources can be made in terms of job creation. Further work is required to quantify the total jobs in order to present the net jobs effect of the energy sector transition. A more extensive body of work will not only be useful in the development of a JET plan, but will allow for benchmarks to be set and for comparisons to be made with other countries.



Themes and concerns raised in the Roundtable discussion

1. Gaps in energy sector jobs data

Not only are there gaps within the RE jobs data (particularly at small scale), there has not been a full, independent analysis of jobs (current and future) across different energy sectors in SA. The CSIR's work on the IRP job predictions is very useful, but it is not the complete picture required for JET planning. While it is clear that a JET does not simply mean replacing current fossil fuel sector jobs with those in RE, both of these sectors are key employers affected by the transition, so having unbiased, comparable data will help in JET planning. There has also been a call to have jobs data presented in a way that is easier for all stakeholders to understand, and this means having standardised units that are properly explained.

2. Need for a national JET plan that factors in jobs, re-skilling and re-training

The energy transition is inevitable and has already started, so the focus should be on how to expedite it while ensuring it is fair and just, with particulate attention to jobs and livelihoods. While there is interest from a number of stakeholders, government is yet to show real acknowledgment of the need for holistic long term planning around the JET, and in particular, how this JET plan will handle job losses and creation as a result of the transition. Retraining and reskilling will be crucial in this regard, but work on how to manage this difficult topic has not really started. Without planning the transition will continue to benefit those with political and financial power, rather than helping those most affected by the transition, particularly in the form of employment creation and transfer.

3. State Capture is counter to progressive transformation

State capture⁷ has affected many state owned entities involved in energy and needs a mass movement to counteract it, and can be a rallying point among stakeholders in the energy sector. Corruption at all levels adversely affects the ability to provide more jobs to the working class, and state capture also provides a way for those minority with corporate power (including the mining and energy sector) to maintain the status quo and delay a JET plan, that will benefit the majority, from gaining real traction.

4. A move toward social ownership must be part of a JET

Decentralised systems of energy production are more suitable to social ownership along with decent jobs where workers have more control. Herein there should be a link between trade union and RE industry interests, while academics and research institutions can help to optimise the system design. The issue of jobs is closely linked to ownership with in the energy sector, and a JET must take this into account.

5. Localisation is required within a JET, but is complex

Localisation of jobs is a difficult subject. In the current system, many coal jobs are actually held by workers from other provinces or countries. Therefore providing these workers with new job opportunities at their current location might not actually be most suitable to them. Furthermore, new jobs in RE are unlikely to be geographically aligned with job losses in the fossil fuel sector. Moving forward with a JET plan, there needs to be more information on the current work force and future localisation potential. This links to the need for more comprehensive overview of jobs data in the energy sector to allow for good decision making.

6. Political inertia regarding JET must be tackled

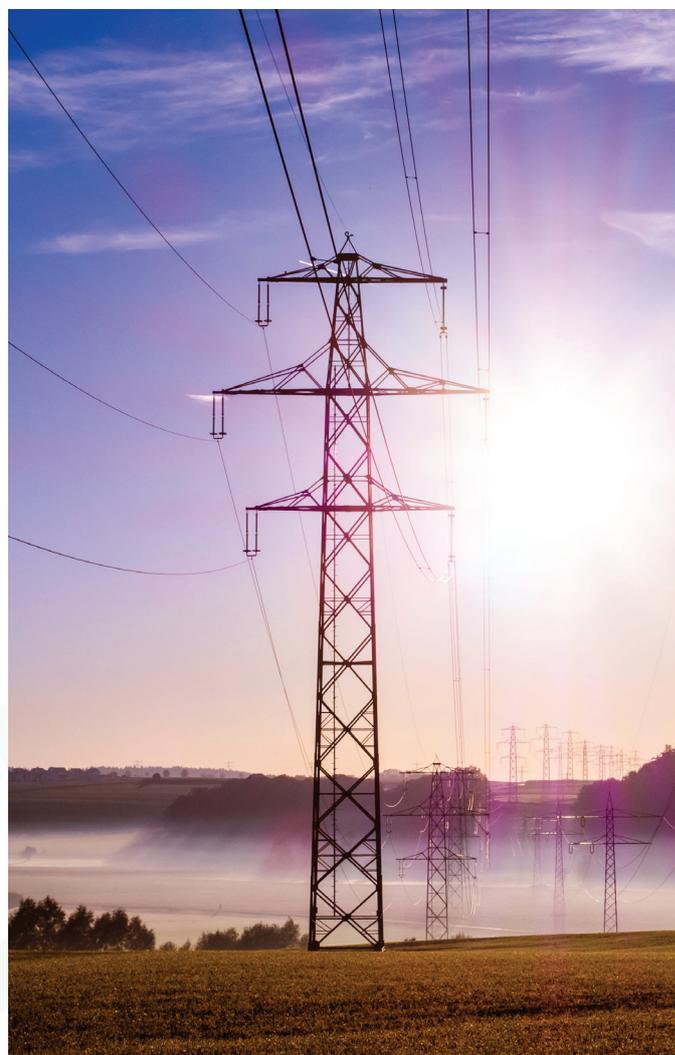
A key underlying problem is a lack of political will to engage with both the JET and alternative models of ownership or employment. 'Business as usual' is resistant to change and this includes how jobs are created and distributed. There are some government departments that are looking into jobs issues, but the dots are not being joined by the political leadership. All stakeholders affected but a JET must co-operate on how to get government to take this issue seriously.

7. Systemic economic system issues need to be dealt with

There is broad recognition of the faults of the current capitalist-based economic system, and how this relates to unemployment and financial inequality. However there is also recognition that in the short term we need to start building the future we want within the system we currently have, while also working toward longer term change to a better economic system.

8. Education around JET is required

Despite a JET being such a key issue to SA, it is still a fringe issue. Like climate change, it is a topic that needs to be bought into the mainstream so that it can be properly acknowledged. Education around this topic needs to be directed not only at decision makers and those directly affected by the changes, but also to the wider public and be bought into school syllabuses.



Some points for further discussion:

- Who is going to lead on consensus building around a JET plan? How do we empower this entity in a collaborative way? If government does not take the lead, then how does the entity that does take the lead have sufficient resources to do so?
- How do you restructure provincial economies (particularly Mpumalanga and Limpopo) to deal with the transition? How will municipal revenue structures be affected?
- How do we increase the amount of stakeholders engaging on this topic, particularly to those directly affected by job losses and to those who are less familiar with the conversation?
- REI4P – how do we improve this in terms of employment localisation and ownership?
- National energy sector jobs data and modelling – who will do this in an objective way, and how do we make the results accessible so it can be used in JET planning?
- How do you regulate SSEG (for safety reasons) but without it becoming a deterrent? Added to this, how do you mitigate against the negative effects of middle income consumers going off the grid?
- How do we deal with the differing geographical distribution of energy sector players in relation to job losses and creation in a JET? For example, the REI4P has mainly provided jobs in the Northern- and Eastern Cape, whereas most job losses in the coal sector will be in Mpumalanga. Other than recognition that RE jobs will not necessarily replace lost coal jobs, how do we create innovative solutions to this problem?
- Reskilling and re-training programmes – who will run and fund these? How are they designed? All of this will require extensive consultation with current workers whose jobs are at risk.
- How will mechanisation affect all players in the energy sector, and how do you plan for adequate jobs to be created in light of this trend?
- Eskom is in a management and financial crisis, while its monopoly structure and reliance on coal is not compatible with a JET. How do you restructure such a key player in economy in a way that promotes progressive change in the electricity sector with the least disruption? Furthermore, how do we get government to take the idea of restructuring Eskom seriously, as it has been ignored for years?



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Notes:

- ¹ Mike Levington – Director of Kabi Solar, Hameda Deedat – Acting Executive Director of Naledi and Nthombifuti Ntuli – Research Group Leader at the Council for Scientific and Industrial Research.
- ² A job-year is one year of work for one person.
- ³ Further jobs statistics are provided in the full presentation available here: <https://90by2030.org.za/wp-content/uploads/2018/02/Roundtable-Nov-2017-Jobs-Presentation-Levington.pdf>
- ⁴ The IRP is the electricity infrastructure plan for SA and sets out what new capacity will be built from what sources until 2050.
- ⁵ Capacity additions as per IRP 2016 Base case, gradual increase in local content, 20 year plant lifespan, continuous roll out of RE and a 2015 R/\$ exchange rate.
- ⁶ Available here: <https://90by2030.org.za/wp-content/uploads/2018/02/Roundtable-Nov-2017-Jobs-Presentation-Ntuli.pdf>
- ⁷ A systemic type of political corruption, where private and vested interests are able to influence state decision-making processes to their own advantage.