

# REFLECTION PAPER

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## **JUST ENERGY TRANSITION:** Community ownership, Jobs and the future of Renewable Energy systems

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To gather input from a number of stakeholders on this topic, COSATU, NALEDI and Project 90 by 2030 with the support of Friedrich Ebert Stiftung, hosted a discussion event in Johannesburg on 7th August 2018. The discussion topic was informed by presentations on a Just Energy Transition, the South African energy system, ownership within the national renewables programme and community ownership of energy. The event was attended by about 60 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 a full summary of content from the event, but captures some of the main themes and aims to stimulate further discussion.

# The Just Energy Transition and Energy System in South Africa<sup>1</sup>

## The basics of a Just Energy Transition

An 'energy transition' is taken to be a shift to an energy system that is better for people and the planet than what we currently have. This new system should be better in terms of the following metrics: human health, sustainability, environmental impact, climate change, economics, employment and social equity. We must move toward universal access to affordable electricity. This energy transition is required because our current energy sector, dominated by fossil fuels, has many negative effects on our citizens and ecosystems and it is now possible to have renewable energy dominated systems that outperform fossil fuels on these metrics.

A Just Energy Transition (JET), is where the process of shifting energy systems is made as fair and just (derived from justice) as possible. In part this includes looking after people in the current energy system (such as workers in the coal sector) who could be negatively affected (such as job losses) by this energy transition. We need a JET for several reasons:

1. While all citizens will benefit from the energy transition in the long term, there will be people who will be negatively affected in the short term.
2. Energy underpins many of the basic human rights so there is an ethical and moral obligation to apply principles of justice to the transition.
3. The energy transition is highly probable due to market economics alone (as renewable energy is now cheaper than fossil fuel based energy), but if left solely to markets, there is unlikely to be adequate attention given to social aspects such as worker re-skilling and re-employment.

Of critical importance is that a JET will not spontaneously happen. There will need to be a government backed plan to make sure the transition is fair and just.

## Operational context of an energy transition

A JET is not a rigidly defined process or concept yet, and there are several broad contexts in which an energy transition could happen. The three main categories are listed below, but only the Transformative context will really deliver a JET, that maximises and prioritises justice. We should aim for this in South Africa.

CONTEXT	FEATURES
HYPER CAPITALIST GREEN ECONOMY	Nature is financially measured as "natural capital" Transition is within the market, and "ecosystem services" can be traded and offset Energy is a commodity Only needs a free market and limited regulation Social justice or equity is not prioritised
REFORMIST GREEN ECONOMY (E.G. REI4P)	Reformist aspects: promotion of green jobs Mainly technocratic, but does attempt to protect vulnerable in welfarist manner Transition should be depoliticised and expert driven No systemic change Energy is still a commodity
TRANSFORMATIVE	Holistic change of society, not market driven Shift towards circular systems of production and consumption Prioritise equitable ownership and democratic control Energy is not a commodity, but a social good of the 'commons'

## SA Energy System: our starting point for transition

To understand where we need to transition to, we must have a brief look at what we currently have. Only the very basic points are provided here, as a detailed study covers this in more detail<sup>2</sup>. Our energy system has primary sources of energy that are converted into the end carriers. For example, coal is a primary source that is converted to electricity in a power plant, while oil is converted to petrol at a refinery. In terms of primary energy sources, South Africa (SA) has large reserves of coal and uranium (for nuclear power) along with very good wind and solar resources. Conversely, SA has very small oil and natural gas reserves and relies heavily on imports of these. Biomass is also an important resource, especially for low income households, while hydropower is limited in SA.

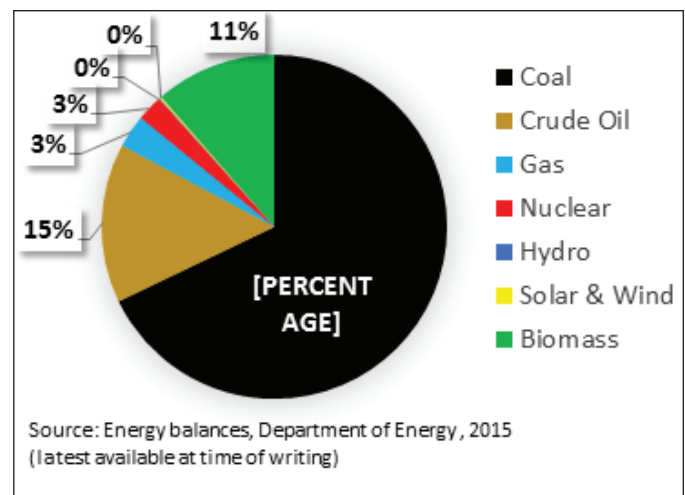


Figure 1: Primary energy sources in South Africa

Of these inputs to the energy system, coal and oil account for more than 80%, which means we are heavily reliant on fossil fuels. The fundamental change we need is a shift away from the use of fossil fuels. This can largely be achieved by switching to renewable sources for electricity production in conjunction with the wider use of electricity to replace the direct use of coal (by industry for heat) and petroleum products (mostly in transport).

Looking at ownership we see that transnational and multinational corporations along with state owned entities feature across the current energy system value chain. Small scale residential generation of electricity is emerging from rooftop solar photovoltaics, but a model of social or community ownership of medium/utility scale energy generators is essentially absent in SA.

# Ownership within the national renewables programme<sup>3</sup>

The national Renewable Energy Independent Power Producers Procurement Programme (REI4P) has 92 utility scale RE projects as of August 2018. In response to a demand for information on the ownership structures of these Independent Power Producers (IPPs), Project 90 by 2030 conducted a short study<sup>4</sup>. This was primarily a scoping exercise, as gathering information outside of the public domain would have been a lengthy process involving correspondence with every project developer.

Based purely on information available in the public domain (accessible via the internet), we wanted to access the distribution of local versus foreign ownership for these projects<sup>5</sup>. This was partially to address the concern that the financial benefits from these projects do not stay in SA. Furthermore, we looked at black and community ownership<sup>6</sup>.

In brief, the work revealed that publically available information on this topic is limited and company structure is often very complex. Despite the limitations, an estimation of 44% local ownership was drawn, and within this, 12% was community ownership<sup>7</sup>. There was not enough info for black ownership statistics although some BBBEE<sup>8</sup> companies are present in multiple projects.

Issues that emerged included the following: The auction system excludes smaller companies due to financial resources needed to bid. Project debt and equity can be sold after 3 years, which not only complicates the ownership structure in relation to REI4P requirements, but distances the owner from the project and could have effects on accountability and commitment. Black ownership is largely passive in the sense that it mainly relates to finance aspects and there is limited skills transfer. In terms of community ownership within the REI4P, many issues have been raised including:

- Problems with community identification.
- Inadequate community consultation.
- Members in the community have little input to community trusts.
- Delays in dividend payments.
- Some developers use Community Trusts as black ownership.
- Socio-economic development benefits not well aligned to community needs or municipal integrated development plans.



# Community ownership models<sup>9</sup>

What is community ownership?

There are many interpretations but International Renewable Energy Agency (IRENA) suggest it should satisfy 2 out the following criteria, where 'local' is geographically related to the project.

- Local stakeholders own majority of a project.
- Control rests with local stakeholders.
- Majority socio-economic benefit distributed locally.

There are about 5 main types of ownership models that are sometimes branded as community energy, but only the last one in the table below can really deliver a transformative JET.

MODEL	CHARACTERISTICS
Open investment	Majority shareholding remains with private developer Individuals/small businesses can hold junior ownership rights or shares Investors can live anywhere and have no decision making powers Minimum investment criteria may be high No community economic/social development
For profit community-based	Established by citizens, and can be 100% community-owned Simply an investment for local citizens Profits from energy sales returned to investors No dispersed benefits or affordability of access No economic/social development
Community benefit (or Community compensation)	Driven by private developers Negotiated 'benefit' for local communities Amount/nature of benefit varies. Community have no control/decision making power
Community connected (or Split ownership)	Legal requirement to offer percentage of ownership to local communities No community control over decisions No distributed benefits – only benefits to investors
Not-for profit community-based	Non-profit, 100% community (or worker) owned and controlled Can be cooperatives, foundations, community trusts, or non-profit enterprises Minimal investment from members to join All revenue returned/recycled to project Democratic control: 1 person = 1 vote Membership is voluntary, but widely dispersed in community Sometimes there is subsidised membership for members in financial difficulties.

For the remainder of this paper, the term 'community energy' is used for Not-for profit community-based ownership of RE, as that is the truest form of community ownership, and the aspirational goal for a transformative JET.



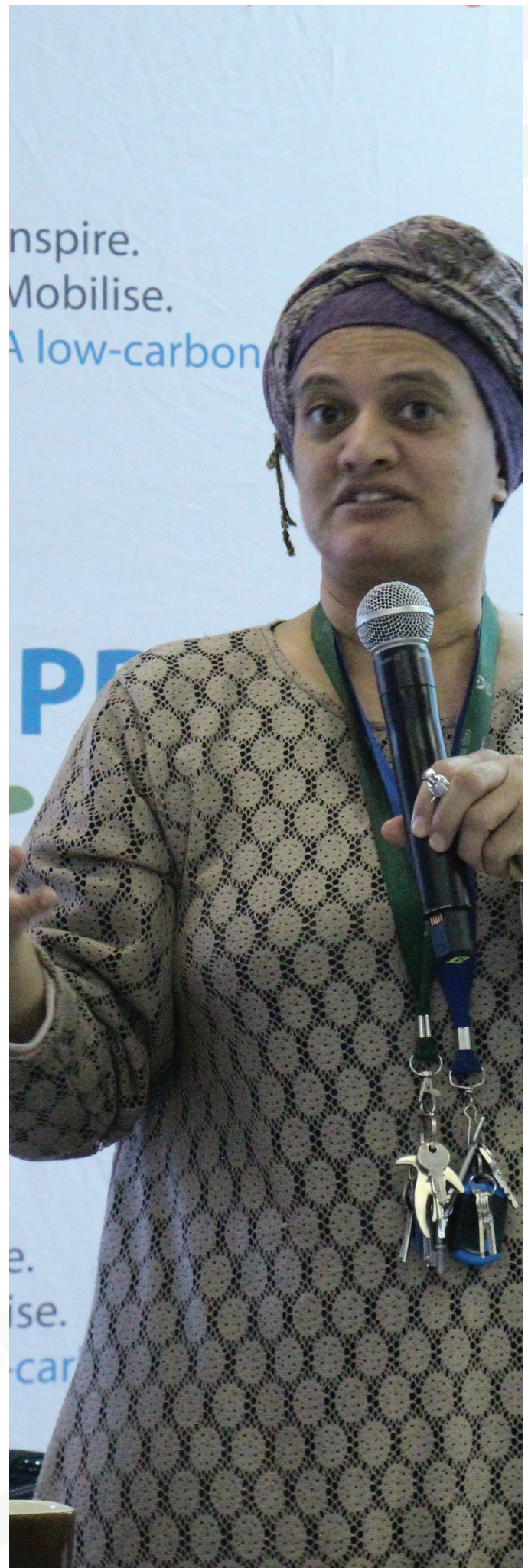
## General success factors for community energy as demonstrated by international examples

- Policy certainty from government
  - Essential to development planning and securing funding
- Feed-in tariff (FiT)<sup>10</sup>
  - Assists long term planning, entry of smaller projects
- Financial support
  - Soft loans, debt guarantees, reduced repayment rates, tax relief
- Priority grid access
- Local government support
  - Spatial planning for projects, municipal investment
- Technical support programmes
  - Government agencies assist with project development.
- Right to sell electricity directly to members
  - Remove intermediaries, links to micro and mini grids

## Considerations and issues that could affect community energy in SA

- Structure of state owned entity Eskom
  - Monopoly over electricity at present. There is a need for clarity as to how it would be compatible with community energy
  - Political interference and vested interest in coal
- Policy uncertainty in the energy sector
  - The updated Integrated Resource Plan (IRP) is still not finalised and government has no JET plan as of yet.
- Financing
  - Feed-in tariff currently illegal in terms of Treasury regulations
  - Funding should be relocated to local manufacturing or renewable energy and development of the RE sector
  - Municipal finance models need to change to accommodate community energy.
- The setup of NERSA
  - Needs to be properly capacitated and independent
- The setup of the REI4P
  - If this is the government supported vehicle for RE in SA, where does community energy fit in?
- Lack of technical support for communities
  - There is a need to develop structures to provide necessary assistance to community energy projects

Ownership factors into a JET both as a goal and a process. We aspire to a future energy system with better social equity, which alternative community ownership structures can help address. In reaching this goal, these communities must have ownership in the transition process so they can contribute to decision making and planning.



# Themes and concerns raised in the Roundtable discussion

The themes and ideas listed below are a summary of those that were raised by participants at the Roundtable event on the 7th August 2018.

## Pilot projects

For community energy to become established in South Africa, there will need to be pilot projects. The SA context is different from the examples from other countries, so adaptations will need to be made. The educational and income disparity in SA also means that communities are highly varied in their readiness to tackle community energy. Successful pilot projects will also prove to decision makers that it is a viable option for SA and must be factored into energy planning.

## Labour vs environmental movement

On issues relating to RE and JET, there has often been a divide between labour and environmental justice movements. One of the underlying causes of contestation is around ownership of energy generation facilities. For example, the RE IPPs have received support from the environmental sector (as they contribute to low carbon energy system), whereas the labour movement have typically been against the privatisation of energy. Here we see that community or socially owned RE can be an area of mutual ground that both sides can agree to and work on. A further concern raised was around the language used in the media. Pointing fingers at organisations and individuals is not conducive to collaboration on the areas where interests do align.

The labour and environmental movement were, not so long ago, allies in the fight for a better future for South Africa. There is general agreement that the best way to tackle the issues around climate change and JET is through collaboration and united effort. Ideological differences and public accusations and belittling have caused a rift between the two groups. These differences, however, are not impossible to overcome and the ideals of one group are able to coincide with the other.

The path to reuniting of the two groups is one of constant communication, mutual support and collaborative ventures. Joint research between these two groups is a good starting point to bridge the gap.

## Need for Policy certainty

In SA there have been extended delays around important policy updates around energy planning. The update to the IRP (which indicates what new capacity is needed and when) has been drawn out and contested, and is no longer suitable for current energy landscape.

For RE (and community owned RE) to progress, there must be:

1. A finalised IRP, that is accepted by stakeholders, which maps out how RE capacity at utility scale will increase. While the plan must be regularly updated (every 2 years), there must be a base increase in RE which players in the value chains (such as component manufacturing) can rely on.
2. A JET plan to ensure this transition towards RE is fair and just.
3. Planning must work towards universal access to affordable energy

In addition (or included within) these two policy documents, there should be provision for community ownership. These will also need to address the financing of community energy and how it links to municipal structures and revenues.

## Next steps for REI4P in context of community ownership

The REI4P was a starting point for utility scale RE in SA, and there are clearly aspects that need to be improved. If the programme is to continue, then a proper analysis must be done on the issues around the community ownership within the programme, and improvements made. If communities have no decision making powers, as is presently the case in REI4P, is it really ownership?

In addition to improving the design for further bid windows, where issues with the initial community trusts and benefit structures have been identified, action should be taken to improve the situation.

## Role of municipalities

To support community energy projects, the appropriate level of governance interaction will be with municipal councils or ward committees. To fulfil this role, both these players need to tackle the issues of changing energy systems, a JET, revenue structures and electricity cross-subsidisation. This will need to be coupled with knowledge and awareness of community energy models.

## Other non-private alternatives to community energy

In addition to the community models described here, there may be options for public/social ownership structures that extend beyond the scope of communities. Would a state-run, non-profit public utility be an option for providing some energy services in SA? Is there a possibility to convert Eskom into this type of operation?

## Financing

If there are to be community energy projects in SA, will they receive any financial support from government? The ongoing financing of new coal projects is a hindrance to any expansion of the RE sector. The divestment movement can have impact in this sphere. Furthermore, since coal and nuclear are not really compatible with community ownership, the continued funding of new projects based on these technologies entrenches the current ownership structures of multinational corporations and state owned entities.

## Skills training

For both a JET, and for community energy projects, there will be a need for skills training. While there have been some programmes for RE skills training (such as SARETEC<sup>11</sup>), these will need to be ramped up and made accessible to the appropriate people.

Coal also used for production of components required by RE sector. Currently the RE sector requires components and products that are directly or indirectly produced from coal. While there could be a niche market for coal for some material manufacture, there are a number of alternatives:

- Plastic like compounds can be made from gas or biological feedstocks.
- The Fischer-Tropsch process from Sasol could be adapted to produce components from hydrogen etc.

## Jobs:

In relation to JET work, there is a knowledge gap around comparable job numbers from different energy generation sectors. Independent work should be done to have job data in the same unit across sectors to inform JET planning. In terms of calculating how many jobs may be affected during an energy transition, the timeframe must also be considered as a percentage of those currently employed in the fossil fuel sector would have retired by the time their plants are decommissioned anyway. For RE there is an interesting question around whether the nature of ownership would affect jobs numbers, type, quality, and localisation. Would working conditions be better at a community run power plant?



# Some points for further discussion:

- Who will take the lead on a pilot community energy project in SA? Where will the start-up funding come from if necessary? Could this be crowd funded?
- Regular events to address JET and community energy should take place. A big challenge will be widening the audience beyond those currently interested, and to get communities themselves involved.
- While many stakeholders are likely to be involved in the finalisation of the IRP, who will push for a JET plan and the need for recognition of community energy in national planning?
- If the REI4P programme continues, how do we ensure the community ownership aspects are improved based on learnings to date? Which organisations are going to take this forward?
- How will information of JET and community energy reach local government and municipalities? What strategies can be drawn on to get them on board?
- Should National treasury and development finance institutions be approached regarding funding for work on both JET (including skills training) and community energy? Where else could funding come from?
- What strategies are there for getting government and decision makers to take the JET and community energy seriously. What are the pressure points for leverage? What messaging from labour and CSOs is required? How do we get government “to work with people not just business”?
- Which institutions will lead on work relating to alternative materials to those currently produced from coal? How can this be linked to a JET?
- How do we start the process of getting objective and comparable jobs data across the energy generation technologies? This should also be applied to other sectors in the broader context of a just transition.
- Should Chapter 5 of the NDP chapter include community energy?
- Will the introduction of electric vehicles strengthen the case for community energy as there will be increased need for distributed charging stations?
- The rehabilitation of mines can not only be combined with a JET, but may offer good locations for community energy pilot projects.
- How would NERSA fit in with community energy? Will regulations regarding the size of generators requiring licences need revision?

We hope to engage further on these important points, and will be looking for opportunities to do joint work on them, and how they relate to a JET plan for SA.

## Notes:

<sup>1</sup> Full presentation here: <https://90by2030.org.za/wp-content/uploads/2018/08/P90-Richard-Halsey-JET-and-Energy-Ownership.pdf>

<sup>2</sup> <https://90by2030.org.za/wp-content/uploads/2018/02/Energy-Sector-Transformation-in-SA-June-2017.pdf>

<sup>3</sup> Full presentation here: <https://90by2030.org.za/wp-content/uploads/2018/08/P90-Neil-Overy-REI4P-and-Small-Scale.pdf>

<sup>4</sup> For release in 2019

<sup>5</sup> Local ownership is defined as companies which are based in South Africa, that is, they have their head office in the country. Conversely, foreign ownership is defined as those companies which are based outside of the country and have their head offices overseas

<sup>6</sup> The REI4P stipulates a minimum of 40% local ownership wherein there is a minimum 12% black ownership and 2.5% community ownership

<sup>7</sup> This was across all 92 project considered, and with equal weighting per project. The consolidated IPP office reports indicate 48% local ownership and 11% community ownership

<sup>8</sup> Broad-Based Black Economic Empowerment

<sup>9</sup> Full Presentation here: <https://90by2030.org.za/wp-content/uploads/2018/08/P90-Neil-Overy-Community-Energy.pdf>

<sup>10</sup> Where a technology (and sometimes location) specific tariff is determined, and then offered by the purchaser of electricity to the generator, typically with guaranteed purchase periods of 15 to 25 years

<sup>11</sup> South African Renewable Energy Technology Centre, <https://www.saretec.org.za>



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