We are facing a global environmental crisis and a global economic crisis. We need solutions to both – now. Trade unions, social movements and environmental organisations in South Africa have formed an alliance to campaign for the creation of one million climate jobs, now, to address these crises jointly.

Our initial research shows that more than three million new climate jobs can be created. We believe that it is feasible and affordable for government to directly create or oversee the creation of at least one million climate jobs.

Climate jobs are decent, people- and publicly driven jobs that reduce the causes and impacts of climate change.

Climate jobs are based on three principles: ecological sustainability, social justice and state intervention.

Climate jobs are jobs that:
1. reduce the amount of greenhouse gases we emit, to make sure that we prevent catastrophic climate change;
2. build our capacity to adapt to the impacts of climate change (e.g. jobs that improve our food security);
3. provide and secure vital services, especially water, energy and sanitation (this includes reducing wasteful over-consumption).
About the One Million Climate Jobs Campaign

The One Million Climate Jobs Campaign is an alliance of labour, social movements and other civil society organisations in South Africa that recognise the value of a collective approach to the crises of unemployment and climate change. It is based on well-researched solutions for how South Africa can immediately begin a just transition to a low carbon economy.

Climate change will exacerbate inequality and poverty in South Africa because it reduces access to food, water, energy and housing. Therefore the One Million Climate Jobs Campaign is mobilising thousands of South Africans around real solutions to slow down climate change and promote the protection and enhancement of human quality of life and the natural environment.

Forty civil society organisations played a role in the process of establishing the Campaign:

Abahlali baseMjondolo
Africa Centre for Biosafety
Alternative Information and Development Centre
Civil Society Research and Support Collective
Coalition for Environmental Justice
Congress of South African Trade Unions
Cooperative and Policy Alternative Centre
Democratic Left Front
Earthlife Africa Cape Town
Earthlife Africa Johannesburg
Environmental Monitoring Group
Food and Allied Workers Union
Geasphere
groundWork
Institute for Zero Waste
International Alliance on Natural Resources in Africa
National Council of Trade Unions
National Union of Metalworkers of South Africa
National Union of Mineworkers
New Women’s Movement
Oxfam Australia
Progressive Youth Movement
Public and Allied Workers Union of South Africa
Rosa Luxemburg Foundation
Rural People’s Movement
South African Municipal Workers Union
South African Transport and Allied Workers Union
South African Water Caucus
Timberwatch Coalition
South Durban Community Environmental Alliance
Southern African Faith Communities Environmental Initiative
350.org
Trust for Community Outreach and Education
Umphilo waManzi
University of Cape Town
University of Glasgow
University of KwaZulu-Natal: Farmer Support Group
University of Stellenbosch: Sustainability Institute
University of Witwatersrand: School of Economics and Business Sciences
University of Witwatersrand: Society, Work and Development Institute
WWF

One Million Climate Jobs

A just transition to a low carbon economy to combat unemployment and climate change

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Tel: 021-4475770 / Fax : 021-4475884
info@climatejobs.org.za
www.climatejobs.org.za
About this booklet

This booklet presents the main findings of a collective research project that forms the foundation for the One Million Climate Jobs Campaign.

Forty civil society organisations, including trade unions, participated in the production of a series of technical papers that cover: Agriculture & Food Security; Energy; Water; Health; Housing & Construction; Transport; Zero Waste; Ecological Restoration; Leisure & Tourism; Manufacturing; Sanitation; Trade; Climate Change Impact Assessments; Financing Climate Jobs; and Transforming Local Government.

All references for the information in this booklet can be found within the technical papers, which are available on www.climatejobs.org.za.

We hope that by producing and sharing this knowledge we will stimulate further research by the labour movement and other civil society structures, as well as by the state.

Addressing climate change requires a massive change in how we live, how we produce and consume, and how we relate to nature and each other. There are a number of specific areas that are easy to start with, all of which have significant job creation potential:

- Produce our electricity from wind and sun in a way that is driven by the energy needs of all people, and that protects nature.
- Park private cars and get onto our feet, bicycles, trains, taxis and buses.
- Convert our homes and public buildings so that they use less energy and use water more efficiently.
- Grow enough food for all people through techniques such as agro-ecology that are labour intensive, low in carbon emissions, protect soil and water, and provide healthy food.
- Protect our natural resources, especially water, soil and biodiversity, to make sure that we can continue to meet the basic needs of all people.
- Provide basic services such as water, electricity and sanitation so that we address the legacies of apartheid and build the resilience of our people to withstand the effects of climate change.
Executive summary

We are facing a global environmental crisis and a global economic crisis. We need solutions to both — now. Trade unions, social movements and environmental organisations in South Africa have formed an alliance to campaign for the creation of one million climate jobs to address these crises jointly.

Our initial research shows that more than three million new climate jobs can be created. We believe that it is feasible and affordable for government to directly create or oversee the creation of at least one million climate jobs.

Our campaign has two starting points:

First, we need work. South Africa has one of the highest levels of unemployment in the world, and this underpins a more generalised social crisis of extreme poverty, hunger, crime, substance abuse, and domestic violence. This in turn affects our health and education system, with women and children bearing the heaviest burden. We paid a heavy price for the global economic crisis through job losses and lost state revenue — and there is no end in sight. There are already more than seven million unemployed people in South Africa, more than six million people in the informal sector, and millions who have given up looking for work or are involved in survivalist activities such as begging.

Our second starting point is that we have to slow down climate change, build our defences against its impacts, and prevent catastrophic climate change. Climate change will exacerbate poverty in our country because, at the very least, it will reduce water availability and food security, and increase general insecurity through floods, droughts, and forced migration. South Africa, as the 12th biggest carbon polluter in the world and the largest in Africa, must urgently reduce its carbon pollution, as must other big polluters across the world.

We must use our wealth in natural resources in a climate-friendly way to create jobs and livelihoods.

We can and must:

✓ produce our electricity from wind and sun in a way that is driven by the energy needs of all people, and that protects nature;
✓ park private cars and get onto our feet, bicycles, trains, taxis and buses;
✓ convert our homes and public buildings so that they use less energy and use water more efficiently;
✓ grow enough food for all people through techniques such as agro-ecology that are labour intensive, low in carbon emissions, protect soil and water, and provide healthy food;
✓ protect our natural resources, especially water, soil and biodiversity, to make sure that we can continue to meet the basic needs of all people;
✓ provide basic services such as water, electricity and sanitation so that we address the legacies of apartheid and build the resilience of our people to withstand the effects of climate change.
This will take government regulation and international agreement. It will also take a great deal of work, and this means many new jobs.

One million new climate jobs would cost R92 billion, and our research shows that there is over R250 billion available annually to finance climate jobs. There is also at least R200 billion available to kick-start investment in renewable energy and other climate-friendly development.

Real solutions to climate change demand that we reduce our use of fossil fuels, and it is possible to do this without compromising our quality of life – throughout our history, industry has always changed in response to new technologies and environmental conditions.

Shifting away from fossil fuels will result in the decline and eventual replacement of some industries, particularly energy-intensive industries and mining. If we plan and manage this well, workers will be protected. If we rely on markets for the solutions, workers will pay the price – we already see this in gold, coal and other mining-related industries as a result of mining becoming more capital intensive. The One Million Climate Jobs Campaign, alongside labour movements, demands a just transition to a low-carbon economy to ensure that no worker is negatively affected by our actions to reduce our carbon pollution.

A million new jobs will counter both future job losses and the current crisis of unemployment. Measures must be put into place to make sure that workers who lose their jobs in energy-intensive industries are retrained and employed in new climate-friendly industries.

A million climate jobs are not nearly enough, but will go some way to reducing poverty and restoring dignity. Moreover, the campaign will stimulate important economic sectors, which, in turn, will stimulate employment growth. This gives effect to the long-standing strategy of trade union movements to stimulate sustainable development and growth through redistribution.

We know that South Africa alone cannot stop climate change, but by creating a million climate jobs in our country, we will offer a model for genuine responses to climate change. This is more and more important given the failure of the global elites to secure a binding agreement to slow down climate change through cutting carbon pollution.

Finally, in making these proposals for fighting to slow down climate change, we have no illusions that this will come easy. We face the opposition of powerful vested interests who make super-profits from the existing mining- and energy-intensive system in South Africa – this is the foundation upon which the capitalist economy in South Africa was built and continues to develop. Our campaign will succeed only through the mass mobilisation of millions of people – workers, unemployed people and activists.

Furthermore, we are aware that in the long term, climate change requires a massive change in how we live, how we produce and consume, and how we relate to nature and each other. We need systems change, and we need a bridge between where we are now and this vital but longer-term outcome. The One Million Climate Jobs Campaign offers such a bridge.
<table>
<thead>
<tr>
<th>INITIATIVE</th>
<th>JOB CREATION</th>
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<tbody>
<tr>
<td>Renewable energy</td>
<td>Over 150 000</td>
</tr>
<tr>
<td>South Africa supplying half its electricity from renewable energy within ten years; 50% of households having installed solar water heating systems by 2020; construction of 150 000 residential digesters</td>
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<tr>
<td>Ecological restoration</td>
<td></td>
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<tr>
<td>Public works programmes such as Working for Water, Landcare, Working for Coast, Working for Wetlands, Working for Fire, and Working for Waste</td>
<td>Up to 400 000</td>
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<td>Construction and building industry</td>
<td></td>
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<tr>
<td>Retrofitting regulation; inner city; municipal housing unit</td>
<td>Up to 70 000</td>
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<tr>
<td>Health</td>
<td></td>
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<tr>
<td>Employment of community caregivers</td>
<td>Up to 1 300 000 (the majority part-time)</td>
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<tr>
<td>Rainwater harvesting (RWH)</td>
<td>65 000</td>
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<tr>
<td>Introducing RWH to 10% of the South African population (jobs in design, building, installation, maintenance and education; link with small-scale agriculture, etc.)</td>
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<tr>
<td>Transport</td>
<td>460 000</td>
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<td>Increasing use of public transport; expansion of rail general freight with 18%; promotion of a South African owned and controlled shipping industry, etc.</td>
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<tr>
<td>Manufacturing (in relation to RE)</td>
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<tr>
<td>Manufacturing of climate mitigation and adaptation products for domestic households; climate adaption products in water reaching 50% of households; sales, maintenance and transport of the above products</td>
<td>38 000</td>
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<tr>
<td>Eco-housing and sanitation</td>
<td></td>
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<tr>
<td>Construction of 200 000 RDP houses a year using eco-housing methods; and recycling of recovered materials for floors</td>
<td>8 700</td>
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<tr>
<td>Waste</td>
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<tr>
<td>Zero waste economy</td>
<td>Over 400 000</td>
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<tr>
<td>Tourism</td>
<td></td>
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<tr>
<td>Half of tourist lodges in SA sourcing their food through community agricultural projects; energy and water efficiency retro-fitting in hotels; waste management initiatives in the accommodation sector; and investment in programmes such as EPWP and projects undertaken by Open Africa</td>
<td>220 000</td>
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**What do we mean by ‘climate jobs’**

**Climate jobs are decent, people- and publicly driven jobs that reduce the causes and impacts of climate change.**

Climate jobs are based on three principles: ecological sustainability, social justice and state intervention.

**Climate jobs are jobs that:**
1. reduce the amount of greenhouse gasses we emit, to make sure that we prevent catastrophic climate change,
2. build our capacity to adapt to the impacts of climate change (e.g. jobs that improve our food security),
3. provide and secure vital services, especially water, energy and sanitation (this includes reducing wasteful over-consumption).

**Decent jobs:** Decent jobs are jobs that are safe, provide healthy working conditions, and offer social protection, security and fair wages. They are jobs that, at the very least, meet the International Labour Organisation standards of ‘decent work’ and are in alignment with goals such as meeting the social needs of the majority of the population. In this sense they should be useful jobs.

**People-driven jobs:** Economic development must be driven primarily by people, not profits. The necessary funding for climate jobs must be allocated by the state, but the implementation and monitoring of the programme must involve local communities.

The numbers exclude all job estimates from the research papers, which are formulated as ‘significant number of jobs’, ‘jobs per million rand invested’, ‘jobs per MW installed’ and the like. Only when the papers had explicit numbers of job creation were they included. Some of the initiatives are overlapping, but it has been attempted not to do any double-counting of job estimates. For simplicity, all job numbers have been rounded off to whole hundreds.
Publicly driven jobs: The state must be actively involved in creating jobs that address climate change, employing and training new climate workers, and retraining workers where necessary. Some jobs could be created directly by the state in a climate service, as with the Expanded Public Works Programme. Others could be the outcome of state policies, regulations, subsidies and incentives, such as the energy efficiency required by law for new buildings. We also need to remove barriers to a low-carbon economy, such as subsidised pricing for the energy-intensive users. This emphasis on the state to prevent catastrophic climate change does not exclude the private sector altogether, but we cannot rely on business to take urgent action as their bottom line of profitability and accountability to shareholders mostly prevents them from doing what is required socially and environmentally.

Call for new climate jobs agency

The Public Administration and Allied Workers Union, a COSATU affiliate, is proposing that government creates a new agency to manage the re-deployment of workers from declining sectors to new sectors. Such an agency, which would incorporate the Sector Education and Training Authorities, would be responsible for the training and re-skilling of workers for new climate jobs.

Just transition: COSATU, NACTU and government express their commitment to making a just transition to a low-carbon economy. This means prioritising the needs of working people in the social and economic disruptions that this transition will involve. Workers must be given opportunities for re-training and re-employment in new climate-friendly sectors. We must ensure that the development of these new industries does not become an excuse for lowering wages and social benefits, and that these new jobs provide opportunities to redress gender imbalances in employment and skills.

Limiting job losses: Our preliminary research shows that we can create at least three million new jobs in combating climate change, and we believe that even more jobs are possible. Over several years, a transition to a low-carbon economy will result in some loss of jobs in energy-intensive and extractive industries, but as fossil fuels become scarcer and more difficult to extract, many workers in these industries stand to lose their jobs in any case. If we create climate jobs immediately, we will protect workers against the inevitable decline of the fossil fuel industry, and protect employment over the long term.

Green Jobs: Green jobs are any environmentally friendly jobs that do not pollute or harm nature. These jobs do not necessarily have anything to do with cutting green house gas emissions or building the resilience of communities to withstand the effects of climate change. We distance ourselves from loose formulations about green jobs. Green capitalism is about making profits from climate change, not solving the problem. It relies on false solutions such as carbon trading, dangerous technologies such as carbon capture and storage, ‘smart’ genetically modified crops and nuclear energy, while keeping the existing institutions of profit accumulation intact. Our campaign is about attacking the causes and consequences of climate change and global joblessness, not the cosmetics of the market.

More jobs in renewable energy than coal and nuclear

There are about 27% more jobs in renewable power stations than in conventional energy (coal and nuclear). The quality of jobs in renewable energy is also substantially better. They would also be decentralised and closer to where energy services are demanded, which would mean less loss in transmission and much greater reliability.
Bus Rapid Transport System creates more jobs and improves working conditions

The Johannesburg Bus Rapid Transport System (the Rea Vaya) illustrates the importance of securing a just transition to a low-carbon economy.

The Rea Vaya routes currently operational in Johannesburg replaced the services of 575 minibus taxis. After retraining, the taxi drivers are the new bus drivers. Assuming that every one of the 575 displaced taxis employed one driver, there has been a big increase in jobs – to date, Rea Vaya has employed over 7,566 people.

Employment conditions for those who transferred from the taxi industry have also improved substantially. Taxi drivers are employed under very precarious conditions and usually paid on a trip basis with no regulation of hours of work and leave, and no benefits. Those taxi drivers who volunteered to be retrained as bus drivers are now employed under conditions regulated by the bus industry. They work regular shifts and earn regular salaries. Some say they are earning ‘much more’ than they did as taxi drivers.

Rea Vaya has increased jobs, improved working conditions, and reduced carbon emissions.

1. Climate change

We need new climate jobs so that people have work. But we also need jobs to save lives. Here’s why:

Climate change exacerbates the poverty stresses that South Africans already face, such as access to food, water, energy and decent shelter. It is the poor and vulnerable households and communities who are most severely impacted and least able to withstand these problems.

The earth is now warming rapidly. Scientists do not know how long we have before we hit abrupt climate change. An educated guess is 20 years, but it could be 50 years, or less than 5 years. One statistic is worrying. Before industrialisation, the concentration of carbon dioxide in the atmosphere was about 280 parts per million (for every million molecules of air, 280 molecules were carbon dioxide), and this had not changed for thousands of years. In the last hundred years we put another 100 parts per million into the air – our current concentration of carbon dioxide is 390 parts per million.
What causes climate change?

Greenhouse gases occur naturally in the atmosphere. They warm our planet and make it possible for life to exist on earth as we know it. When we burn fossil fuels such as coal, natural gas and oil, we add more greenhouse gases into the atmosphere. Emitting more and more greenhouse gases is like covering our planet with thicker and thicker blankets, which makes it warmer and warmer.

Climate change is the direct consequence of the burning of fossil fuels.

Warming our planet results in many changes to how our planet works. In South Africa, climate change will result in greatly reduced and much more variable rainfall, much higher average temperatures, and more frequent and more severe droughts, floods and heavy storms. We are already experiencing the impacts of climate change, but what we are most worried about is abrupt climate change.

Scientists warn about abrupt climate change because they don’t know enough about the full impacts of climate change, or how our planet works. Over its history, the Earth has fluctuated between warm periods and ice ages. This warming and cooling correlates with the levels of carbon in the atmosphere, which consists mainly of carbon dioxide and methane. When the Earth cools, the temperature and carbon levels decrease gradually. But when the Earth warms, the process is different – at first the temperature and carbon levels rise gradually, but then they suddenly increase. There are a range of feedback effects that cause sudden warming, such as when frozen soils in the Arctic regions warm up. The frozen soils store methane, but when the Earth warms up and the soils defrost, this methane is released into the air and acts like yet another blanket over the Earth.

Abrupt climate change will destabilise our planet. If it occurs in our current global economic and political system, abrupt climate change will have three main effects.

First, there will be famine in many places where the rains fail. Second, there will be hundreds of millions of refugees from drought, famine, floods and storms. These refugees will come up against borders patrolled by soldiers with machine guns, and discrimination against these climate refugees will grow. Third, climate change will bring war – if the balance of geographic and economic power changes, governments will go to war.

We’ve seen how droughts caused famine, refugees and war in Chad and Darfur over the past 40 years. In 1969 the rains failed. They have not come back. There are many conflicts in Darfur and Chad, including great powers competing for oil. But at grassroots, herders and farmers are killing each other for grazing and other natural resources that have become scarce.

The impacts of climate change are made worse by of our existing environmental crisis. By contaminating our water, destroying the ecosystems we depend on, and threatening our biodiversity, we have created a situation where our natural environment can neither cater adequately for our needs, nor withstand the impacts of increased natural disasters.

We do not know the scale of abrupt climate change, only that hundreds of millions of people will die. In the meantime, the effects of climate change are already evident in more intense and more frequent natural disasters: droughts in Swaziland, Ghana, Kenya, Chad, Sudan, the Horn of Africa, Central Asia, parts of Mexico and the US, Australia, and Russia; hurricanes and cyclones in the US, Haiti, Central America, Burma, and Bangladesh; and flooding in Australia, Pakistan, the US and Central Europe.
Climate change is a deeply political issue – it reflects relations of power and inequality and demonstrates the fundamental injustice in the present distribution of power and resources in the world. Climate change is the result of the over-consumption and waste of the elites, mainly in the rich industrialised countries of the North. But it is the people of the South and the poor and vulnerable communities of all nations who suffer most from the impacts of climate change. It is also the poor and vulnerable people who do not have the resources to adapt, while rich people in both the North and the South have the means to protect themselves and their lifestyles.

2. Mass unemployment

South Africa’s unemployment level is one of the worst in the world, if we exclude countries that are experiencing civil war. This is a crisis on an unprecedented scale.

When unemployment reached 25% in the United States, the period was universally known as the Great Depression. In South Africa, a 25% unemployment rate is now regarded as normal. At this very moment, there is no doubt that unemployment poses the greatest threat to our society. Almost half the working population in our country don’t have work, and many will never find work during the rest of their lives, or be involved in educational institutions. As is often said, their anger is a “ticking time bomb” for the future.

Each year, as we experience the impact of the global economic crisis and failed economic policies, more people lose their jobs and more people in work become casualised, which places them in precarious or insecure work conditions.

Officially, about 25% of the working age population is without work, but this figure does not include ‘discouraged workers’ (people who have given up seeking work) or people who undertake survivalist activities such as begging and growing vegetable gardens. The real unemployment rate hovers closer to 40%.

Job quality, job security and good wages are also important issues to take into account. In 2008 more than half of all workers earned less than R2 500, and one third of all workers earned less than R1 000. Unemployment breeds desperation, which means that many workers are prepared to accept low wages and insecure work conditions. Labour brokers add to this by stripping workers of their basic rights. According to COSATU, 30% of all workers are employed through labour brokers.

In the national income, the wage share has declined from 56% in 1996 to less than 47% in 2008. A number of sectors have seen a massive loss of earnings. In mining, for example, between 2000 and 2010 the share of wages shrank from 44% to 33% of value added. This amounted to a loss of R100 billion in mining wages over the decade.

Unemployment is a critical determinant of poverty and inequality in South Africa as there are very few alternatives to providing a livelihood; there are low levels of subsistence agriculture and only a small peasantry. Without work, millions of people have no means to provide for themselves, or to pay for essential services such as water, electricity and sanitation.

For millions without a job, it is not just the inability to afford the basic needs of life but also the loss of dignity that destroys us and our communities. This is why many of our suburbs and townships have become places of fear and misery, with violence, abuse and crime a daily reality.
Why South Africa must reduce its carbon pollution

Although a relatively small economy, South Africa’s emissions are in line with highly industrialised countries such as Britain and Italy, primarily because of its energy-intensive mining and minerals-processing industries, coal-produced electricity and coal-to-liquids plants. It is responsible for about half of Africa’s emissions and is the 12th biggest emitter globally.

South Africa must be held accountable for its own contribution to climate change, and must address its high emissions as part of an international strategy to slow down climate change.

Electricity generation is responsible for about 40% of the country’s emissions. 93 percent of electricity is generated from coal-fired power plants, which feed our mines and minerals beneficiation industries. Less than a fifth of electricity generated is used in homes, and even within the residential sector there is extreme energy injustice.

The United Nations Framework Convention on Climate Change is working to a limit of 2°C for global temperature rise. To stay below this limit, we need to reduce emissions drastically by 2050.

If we drafted a fair carbon budget for the world, each person would be entitled to 2.7 tons of carbon pollution per year, and South Africa would have a carbon pollution allocation of 5.2 gigatons (Gt) until 2050. South Africa currently emits about 540 megatons (Mt) of carbon pollution every year. This means that we will exceed our fair global share of atmospheric space within ten years, and we have already overshot our own political targets. The planned development of new emissions-intensive coal-powered stations makes our situation even worse – the Medupi and Kusile power stations will add at least 60 Mt per year.

South Africa needs to reduce its emissions to an average of 132 Mt per year, or lower, from now until 2050.

2°C may be too high

The 2°C is a political target, not an environmental target. We still do not know enough about how our planet works to know exactly how much change will result from a warming of 2°C, or even what concentration of carbon in the atmosphere would limit temperature rise to 2°C, or lower. What we do know is that our planet is warming faster than we expected, and that global temperature rise has more severe consequences than we expected. Temperature increase has already reached 0.8°C and we are already experiencing many changes. Many governments and civil society organisations and countries are calling for a limit on global temperature rise at 1.5°C.

If we plan well and use our fair share of carbon pollution space creatively, we will be able to develop new systems and industries that will allow us to make a just transition to a low carbon economy. This transition will require extensive development of new sectors, and this in turn will require some increase in emissions. But we must make sure that we use our emissions space to shift away from our dependence on fossil fuels, and not, as we currently do, to support export growth by energy-intensive and resource-extractive industries.

For example, if we invest in renewable energy, we will secure a diversified and decentralised energy supply and also dramatically reduce our emissions from electricity generation. However, large renewable energy rollout is mining and materials intensive. If we expand renewable energy, we will need extensive manufacturing capacity and mining for iron, steel, cement and rare earths. Fortunately, South Africa does possess many of the inputs required, and if we use them in domestic manufacturing, we will be able to reduce emissions while protecting jobs in these industries.
How we can create a million new climate jobs

Preliminary research shows that more than three million new climate jobs can be created, and we believe that many more jobs are possible if we make ambitious commitments to cut our carbon pollution and enhance our resilience to climate change.

The One Million Climate Jobs Campaign proposes that we:

1. produce our electricity from wind and solar power;
2. reduce energy use through energy efficiency in industries;
3. reduce energy use in homes and buildings by constructing new buildings to be energy efficient and by retrofitting existing buildings;
4. reduce our use of oil in transport by improving and expanding our public transport system;
5. produce our food through organic small-scale agro-ecology
6. protect our water, soil and biodiversity resources.

The richest 4% of South Africans are responsible for more carbon pollution than the poorest 80%.

South Africa’s high emissions do not reflect equal high standards of development across our population. Access to energy, especially electricity, is highly unequal. Between a fifth and a quarter of households in South Africa lack access to electricity altogether, and even many electrified households use it only for lighting because it is too expensive.

In addition to the disparity between poor and wealthy members of society, there is also a disparity between electricity used to service people’s needs and electricity for highly energy-intensive industry, which has neither resulted in a large diversification of the economy nor an expansion of labour-intensive employment. This disparity is set to continue, with about two thirds of the planned new coal power in the Integrated Resources Plan 2010 (government’s 20-year energy plan) being accounted for by growth in industrial demand. The projected demand is also significantly over-calculated.

Large expansions in generation capacity seem to be driven not by concern for expansion of supply to meet the needs of the poorest people in the country, but rather by demand forecasts that are based on massive increases in industrial capacity. South Africa’s electricity demand has historically been dominated by the mining and industrial sectors, with mining using almost the same amount of electricity in the country as the entire residential sector.

The industrial sector accounts for over 40% of total energy consumption in the country, and over 50% of electricity. Industrial electricity demand is in turn dominated by key firms in the Energy Intensive User Group, an industry lobby group that together accounts for about 45% of electricity use in the country. In contrast, two million poor households use about 0.45% of the electricity sold by Eskom, and only 2.4% of residential electricity.
Publicly owned and community-controlled renewable energy

The National Union of Metalworkers (NUMSA) has rejected the notion of private generation and delivery of electricity to our people because corporate interest is about profit maximisation rather than meeting social needs. For this reason NUMSA’s call is for a publicly owned and community-controlled renewable energy sector made up largely of parastatals and cooperatives.

Why renewable energy?

South Africa has excellent potential to produce energy from wind and sun. Compared to coal, renewables have considerably less carbon emissions, few external costs (especially with regard to the environment and health), and result in significantly less air and water pollution. Compared to nuclear, it is significantly cheaper and safer, and produces less waste.

Renewables can be built in less time than either coal or nuclear, create more jobs than either, and use less water than either. Renewable energy improves energy security by mitigating peak oil and coal. It also enables decentralised energy production, which means that it can be built off-grid and reduce energy poverty, especially in rural areas.

Jobs to supply energy

Renewable energy reduces both carbon emissions and the environmental and social costs of electricity generation. If we produce at least half our electricity from renewable energy within ten years, we will cut our greenhouse gas emissions by at least a fifth – and it is possible to produce all our electricity from renewable sources by 2040.

Renewable energy creates more jobs than nuclear and coal-power stations put together. In a situation where our coal resources are running out and jobs in coal are declining, our government can reduce further job losses by making a strong commitment to renewable energy.

Energy is a basic human need, and electrification a key development objective. Electricity has enormous benefits over other forms of domestic energy options such as paraffin and coal, such as improved health, safety, and education. If we supplied adequate energy for heating and cooking, we would ensure not only a reduction in immediate household pollution but also a higher quality of life. And if we supplied this energy from clean source options such as wind, sun, and biogas digesters, we would be meeting an important development need, decreasing our overall emissions, and creating new jobs. We should also provide other energy technologies in non-electrified households, such as solar water heaters.

In the next ten years, many of our old coal power stations will have reached the end of their lifespan. By that time, we could supply at least half our electricity needs through harnessing the wind and sun. If we fast-track renewable energy now, we may not even need to build Kusile power station, plus we could retire some of our old, heavily polluting and inefficient power stations earlier. Instead we could provide clean energy and create decent, permanent jobs with better working conditions.
Climate-friendly housing technologies can be used to address energy and sanitation needs in shack settlements. For example, biogas digesters could be used to process sewage and provide energy. Rainwater harvesting would ensure water for general sanitation, and the energy from biogas digesters could be used to heat water for showers. Biogas digesters could also provide energy for lighting, which would enhance safety at night.

A number of detailed studies show that there is strong potential for job creation in renewable energy. With a target of 50% renewables within ten years, more than 150,000 direct and permanent jobs would be created in manufacture and installation, maintenance and extending the electricity grid to link the renewable energy plants. This would cut our emissions by at least 20%.

Beyond the first ten years, we should continue to build and develop our renewable energy plants so that by 2040 we are meeting all our electricity requirements from renewable sources. In the time until then, we should improve our storage technology, and also phase out coal-power stations so that our emissions from electricity is nearly zero. Our electricity generation should also be decentralised by then.

Free Basic Electricity

Free Basic Electricity should be increased to 200 kWh/month for poor households.

About 19% of electricity produced in South Africa is used in our homes, but many people are not connected to the grid or can’t afford electricity. They depend on fuels such as paraffin, wood, coal, gas, candles and dung, and in rural areas, people rely on firewood which often must be collected from long distances.

Many of these fuels have severe health effects, especially lung disease, and most are not safe. Women are primarily responsible for cooking, water heating and other household chores, and therefore bear the brunt of the health impacts. Paraffin fires also burn children and cause highly destructive shack fires all over the country each year.

Electrification and adequate Free Basic Electricity will reduce the need for households to use these types of fuels. Electrification has many benefits – especially health, safety and education.

Government offers Free Basic Electricity of 50 kWh/month to households, but there are many problems with this subsidy. Firstly, 50 kWh/month is not enough to meet the needs of all the people living in many households, and it is not enough for cooking, water heating and other household chores, and therefore bear the brunt of the health impacts. Paraffin fires also burn children and cause highly destructive shack fires all over the country each year.

Electrification and adequate Free Basic Electricity will reduce the need for households to use these types of fuels. Electrification has many benefits – especially health, safety and education.

If we implemented energy efficiency alongside renewable energy, we would reduce the demand for electricity and lower the costs. Energy efficiency means using less energy to provide the same services. If we implemented a 20% energy efficiency target by 2025, at least 27,000 new jobs would be created. Energy efficiency, including retrofitting old buildings and houses, could create about 120,000 jobs.
A big portion of electricity use in households is for water heating, especially in high-income households. Solar water heaters can reduce domestic demand for electricity, reduce greenhouse gas emissions, provide water heating to poor communities, and provide employment through manufacturing and installation of systems. Solar water heaters must be installed nationally in both low- and high-income households. Country-wide rollout of solar water heaters would create thousands of jobs.

Implementing zero waste in South Africa would be – at the very least – the equivalent of not building Kusile power station.

If we adopt zero waste principles, we can create at least 400,000 jobs in the current economy, and reduce our carbon pollution by about 35 Mt. Zero waste is a cheap and effective strategy to combat climate change. It is a comprehensive programme of waste reduction, reuse, recycling and composting that offers dramatic potential for emissions reductions. It is cheaper than other forms of waste management, will not require additional funds to implement, and can be undertaken rapidly and at all levels. It has many benefits, such as returning organics to farms to improve crop-healthy production, and reducing the pressure for raw materials.

Reducing emissions through improving health care

We can improve health care and reduce energy use by making primary healthcare central to our health system. Primary healthcare would rely more on local health clinics, community health workers and home-based care which would be more energy efficient in many different ways. Primary healthcare improves quality of life and reduces our carbon emissions. Up to 1.3 million (mainly part-time) jobs can be created in promoting primary healthcare methods including home-based care.

Jobs in improving our transport systems

Transport is a significant contributor to carbon emissions, and our current transport system has enormous social and ecological costs. Small but significant shifts in how we transport ourselves and our goods could create at least 460,000 jobs. For example, a commitment to shift 10% of private car commuters to public transport would create about 70,000 jobs and reduce pollution by 24 Mt per year. There is potential for even greater job creation and emissions cuts if we commit to more ambitious targets and actions.

Transport currently accounts for more than 10% of South Africa’s greenhouse gas emissions – of this, 85% is from road transport, and of this, half is from private cars. Across the entire transport sector, a number of actions can be taken to reduce emissions and improve environmental and human health.

As a starting point, expanding our public transport networks so that they are efficient, safe and reliable will cut emissions by reducing our use of oil. Public transport is also one of the most important contributions we can make to improving people’s lives and overcoming the divisions of apartheid, especially for women.

By 2040, we could have zero emissions from transport if we:

1. start now to shift to using public transport for commuting;
2. develop and use new forms of transport that are based on non-carbon-based fuels; and
3. design our city and urban spaces so that we do not need energy-intensive forms of transport.
A very large number of new jobs must be created to:

- greatly expand the rail passenger and general freight network;
- manufacture new rail-rolling stock, buses and taxis;
- maintain or adapt existing transport fleets, either to be more energy efficient or to accommodate cleaner or alternative fuels;
- construct bus rapid transit lanes;
- promote coastal shipping and make operational interventions to reduce shipping emissions;
- manufacture bicycles and construct cycle lanes;
- construct safe pedestrian walk-ways and green spaces to promote pedestrian mobility.

**Improving and expanding commuter public transport**

In the transport sector, the most obvious and immediate climate change action is to get people out of their cars and into public transport. If we encouraged only 10% of car commuters (1.5 million people) to use taxis, buses and trains, about 70 000 new jobs would be created in direct transport operations and indirect jobs such as maintenance and manufacturing.

- If 200 000 more people caught taxis, there would be an additional 18 000 jobs
- If 500 000 more people rode buses to work and school, there would be an additional 3 500 buses and 42 000 more workers in bus operations, vehicle maintenance and part supply, as well as in bus building.
- If 800 000 more people used Metrorail trains, we would need an additional 113 train sets and about 10 000 new jobs.

All public transport vehicles must be produced locally to maximise the job-creation benefits of an expanded and improved public transport network. There is also a need for significant improvements in public transport infrastructure, including bus stops, better lighting and security on pedestrian access routes.

**Public transport reduces deaths and financial costs from road accidents and traffic congestion**

A massive ramping up of safe, affordable and efficient public transport will save human lives, reduce stress-related illnesses, and reduce financial losses resulting from road crashes and traffic congestion.

In 2009 there were 13 768 road crash fatalities in South Africa, costing the economy R13.4 billion. Half of the fatalities involved cars, 12% taxis, and 0.8% buses. Given that 32% of commuters travel by car and 25% by minibus taxi, it is clear that public transport is proportionately safer than travelling by car – there’s a higher chance of being in a crash involving a car than a taxi.

About eight million vehicles use our roads every year, and this figure is growing by a staggering and unsustainable 20% every year. Traffic jams cost South Africa R13.2 billion every year from loss of productivity – cancelled meetings and late arrival at work. Motorists also experience high levels of stress and stress-related illness directly linked to their driving experiences.

**Expanding rail general freight and promoting rail long distance passenger travel**

Rail trumps road freight hands down in terms of carbon emissions, costs and capacity to move large and heavy volumes. Yet in South Africa, only 12% of general freight volumes are moved by rail, and only a tiny percentage of people use trains for monthly visits home, holidays or business travel. The South African rail system uses a combination of diesel and electric locomotives. The fuel consumption of modern railway diesel locomotives is 50% or less than that of road freight vehicles carrying equivalent combined volumes. Electric locomotives have an even lower carbon footprint. As transport needs grow, we should concentrate on expanding rail, including fast rail between major centres, and phase out road transport over time.
Reducing emissions from trucking

Emissions can be reduced in the trucking industry simply through using less fuel – by reducing speed, improving driver handling, and improving maintenance regimes. If a truck travels at 96 km per hour instead of 115 km per hour, it would cut fuel consumption by 17%. Emissions can also be reduced by using much cleaner fuels.

Increasing shipping and developing coastal shipping

Shipping is the lowest emitting form of freight transport and there is also considerable scope for emissions reductions through new technology and changing operational practice. We can reduce our freight transport emissions and create jobs by promoting a South African owned and controlled shipping industry, and developing coastal shipping. If we developed coastal shipping, we would contribute to increasing local, climate-friendly production and consumption.

Cycling and walking

We should expand and improve non-motorised forms of transport like bicycles and walking which emit no carbon and keep people healthy. This means constructing bicycle lanes and improving conditions for both cyclists and pedestrians. This would also mean manufacturing affordable bicycles in South Africa that are suitable for our conditions.

Jobs in housing and construction

Housing and construction is a key area for both mitigation and adaptation. New housing will increase our emissions, but in the same breath, the provision of safe, robust housing must be part of our strategy for enhancing resilience against climate change, and as a basic part of alleviating poverty. We can create about 250 000 jobs by providing energy-efficient, good-quality, low-cost housing using climate-friendly methods and technologies.

Because low-cost houses were outsourced to companies whose motive was profit rather than provision of housing, government is now faced with a bill of R58 billion to repair poorly build houses. This money would build the equivalent of 1 160 000 new, energy-efficient and ecologically sound houses.

A climate-friendly approach to housing and construction is already established. Such an approach could allow for larger and more habitable houses at the same cost as conventional housing methods. Significantly, climate friendly construction is about 25% more labour intensive than conventional construction methods. Climate friendly housing and construction involves:

- labour-intensive work;
- maximisation and training of local labour;
- no machines on site unless absolutely necessary;
- maximum use of on-site and/or recycled materials;
- roofing designed to capture rain water;
- biogas digesters that produce methane from biomass and animal and human solid waste for energy;
- energy efficiency in design.
As part of more sustainable human settlements planning, advanced algal ponds can contribute to addressing climate change, sustainability, jobs, water quality and local government turn-around. The algae digest solids in waste water and convert the nutrients into algal biomass which can be harvested and used as fertiliser or animal feed. Heavy metals in the waste water remain trapped in a fermentation pit, and pathogens can be killed using a daily alkaline spike. At least 80,000 direct jobs could be created by a modest national implementation of algal ponds.

Greenwalls and greenroofs are becoming part of progressive construction and landscaping in some countries. They can make it possible for low-cost houses, public buildings and even shacks to be used for food production.

Greenwalls and greenroofs are vertical gardens supported by a simple structural system and built against a building or dwelling. A greenroof is a garden on the roof of a suitable home or building. Both have a low demand for water and maintenance, can be made easily from recycled materials, and are easy to assemble.

Greenwalls and greenroofs provide shade, maintain a stable interior temperature, and can cool a building by as much as 11°C. They reduce rainwater flow off roofs and walls, slow down the rate of runoff, improve the quality of water flowing into streams and waterways, enhance food security and reduce the energy and emissions costs of food by enabling the growth of fresh produce close to homes and communal areas.

Water scarcity in South Africa will increase because of changes to rainfall and increased evaporation resulting from climate change, which will make water more expensive and even less accessible. A range of creative actions can be implemented to ensure water security, including addressing priority provision, protecting our natural water resources, and ensuring affordable water supply. These measures will create hundreds of thousands of new jobs.

Water security is already a challenge – many parts of South Africa are semi-arid and the country already imports water into water-poor regions through inter-basin transfers, including from Lesotho. Many millions of South Africans have no piped water, and many who do are forced to survive on the free water allocation of 25 litres per person per day, which is inadequate even for healthy and young people.

We can help to secure our water supply through restoring damaged water resources such as rivers and wetlands, and protecting them. Ecosystem restoration projects can create up to 400,000 jobs. The benefits of ecosystem restoration include: improving water quality and meeting human needs for ecosystem services; generating new income streams for poor communities; improving carrying capacity for wildlife and livestock; conservation of topsoil; and recharging groundwater. Under the Expanded Public Works Programme, government employs people to protect ecosystems, and couples employment with skills development, including life skills, which increases health care.
Ecosystem restoration preserves carbon in soils, which is critical for fertility, and enhances and protects livelihoods in rural areas where many people depend directly on nature at least partly for food, medicine, grazing and building materials.

Ecosystem restoration and protecting our natural resources is closely coupled to food and water security. Only 13.5% of South Africa’s land is arable, and we are losing about 34,000 hectares every year mainly because of urbanisation and desertification. This results in a loss in food production, and impacts on water quality and water security because it reduces the ability of natural systems to purify and supply water.

Fixing municipal leaks is relatively easy, involves labour-intensive work, and is suited for direct municipal employment. Ethekwini (Durban) municipality has undertaken a leaks programme that save 73 million litres a day, and result in an energy cost saving of R5 million per annum. If similar programmes were implemented in South Africa’s municipalities, over 150,000 new jobs could be created.

Rainwater harvesting (RWH) saves water and energy, and creates jobs and business opportunities. It offers a simple and cheap way for citizens to secure a personal water supply – with only minor negative impacts. If linked to small-scale food production, RWH also contributes to local food security. If only 10% of our households implemented RWH, at least 65,000 jobs could be created. A more ambitious extension of RWH to shopping centres, airports, schools and factories, amongst other possibilities, could easily double this number of jobs, with a large amount of the work being done directly by municipalities.

Addressing climate-unfriendly, people-unfriendly trade rules

A just transition to a low-carbon economy requires state intervention. The imperatives of climate change and job creation on the one hand potentially conflict with trade rules rigged to meet the needs of transnational corporations on the other. Solutions to climate change lean heavily on local production to create jobs and reduce emissions. Local production – whether for the manufacture of renewable energy or transport or food – will require a range of initial protections such as: subsidies to local producers, non-price-competitive contracts, and import tariffs to help make foreign products uncompetitive. These essential measures would discriminate against foreign companies and investors and could therefore be non-compliant with the vast complex of trade rules explicitly designed to prohibit such measures. The struggle against climate change requires a struggle against the trade rules ‘rigged in favour of the rich’.

Putting the public back into local government

Municipalities are key to creating decent jobs and implementing the major systems changes that are necessary to combat climate change. However, there is generally high municipal dysfunction as a result of a range of issues, including corruption and inappropriate legislation. In addition, privatisation of public services destroys the public service ethos that is crucial for the success of municipalities.

Privatisation allows business to provide public services – which gives them a commercial value. These services change from being a basic human need to something that is bought and sold – like anything at a supermarket. This translates into: you pay for what you get; the more you pay, the better you get. The price paid by the poor is prepayment meters and disconnections.
Jobs to secure our food supply

Industrial agriculture is a significant carbon polluter, mainly because it is energy intensive and wasteful. Climate-friendly food production would reduce our carbon pollution, improve food security and food sovereignty, protect the natural resources that we depend on, and create hundreds of thousands of jobs.

Industrial agriculture is responsible for 11% of South Africa’s emissions. Industrial farms, which are dominated by large corporations, are highly mechanised and use high levels of ecologically and socially costly chemicals such as oil-based fertilisers, herbicides and pesticides. Industrialising food production led to a loss of 750,000 agricultural jobs between 2000 and 2010 as a result of mechanisation and casualisation of labour. In addition, this sector’s contribution to climate change is much greater when we include carbon emissions from transporting food – not only from one end of the country to another but also between countries.

Food sovereignty is the right to healthy and culturally appropriate food produced through ecologically sound and sustainable methods, where people define their own food and agricultural systems.

The global economic crisis resulted in a reduced demand for South Africa’s exports, and this indicates the importance of developing internal local markets for the food we produce.

In contrast, small-scale family farmers and peasants use farming techniques that protect natural resources, are more labour intensive, more productive per hectare, and driven by meeting social needs rather than profits. In South Africa we must support communal landowners and the beneficiaries of land reform to realise the potential for localised food supply from small-scale farmers, ensure food security and sovereignty in rural and peri-urban communities, and shift patterns of production away from methods that poison the land, deplete soil nutrients, and pollute water resources, to techniques that rely on traditional seed varieties, support seed saving and seed security, and diminish corporate control over the food chain.

Agro-ecology is recommended as a low-carbon, resource-preserving type of agriculture that protects nature and boosts economic activities and employment in rural areas. Shifting to agro-ecology could halve greenhouse gas emissions from agriculture. Sustainable agro-ecosystems maintain their natural resource base, rely on minimum artificial inputs from outside the farm system, manage pests and diseases through internal regulating mechanisms, and recover from the disturbances caused by cultivation and harvest. Agro-ecology results in food production that is delinked from fossil energy, increases carbon sinks in soil and above-ground biomass, and avoids greenhouse gas emissions by reducing energy use.

Sustainable urban food gardens: Abalimi Bezekhaya

Abalimi Bezekhaya (People’s Garden Centre) in Cape Town is a community of organic, urban, micro-farming household and community projects. They documented that if a person converts 250–500 square metres of urban wasteland to organic food gardens, he or she could sell produce at street prices to earn an income of R1,500 per month (after costs). Abalimi also showed that a family of five or six people could provide all its fresh produce needs all year round from a garden of 100 square metres. Overall, the project supports about 3,000 micro-farmers.
Climate change will make our food more expensive, partly because of reduced productivity due to higher temperatures and changes in rainfall, and partly because of more extreme and more frequent droughts and floods. One prediction is that climate change will result in a doubling of global food prices in the next 20 years, and a dramatic decrease in global yields of maize, soya bean, wheat and rice. Temperature increases will affect the type and yields of many crops.

In South Africa we have already seen a 66% increase in the price of bread in the last three years. This is partly due to commodity speculation but also because we import wheat, the price of which was affected by flooding in Australia, fires in Russia, and drought in Europe, which damaged crops. Food security must be addressed as part of a national climate change strategy through both diversifying local food supply and enabling poor and vulnerable people and communities to purchase food.

Localisation of food production in Gauteng

In Gauteng alone, it is possible to create nearly half a million new jobs in local food production in urban areas.

Gauteng currently consumes eight times more food than it produces – it depends heavily on imported food. But research has shown that it is possible for the province to produce all its own basic fresh produce. Local food production creates jobs and improves our food security.

Gauteng is one of the best farming regions of South Africa because of its fertile soils and generally favourable climate. Research shows that if about 27 000 hectares of land in the province were cultivated, divided into 600 square metre plots, about 450 000 people could be working to produce the province’s fresh food. The success of such a venture depends on:

1) the localisation of the entire food value chain; and

2) a high level of support such as local transport networks, central packaging and distribution facilities for small food producers, support for small vendors of fresh producers at strategic urban locations, access to micro-finance, and establishing training centres and skills development programmes on agro-ecological methods.
In South Africa, about 1.3 million households (5.2 to 7.8 million people) in rural areas have access to land. It is possible to create hundreds of thousands of jobs and livelihoods in labour-intensive farm-related industries. Citrus, avocados, vegetables, macadamia nuts, pecan nuts and olives are considered to have the largest job-creation potential. Field crops and livestock are also important.

Urban agriculture supports food production that is collectivised and socialised. Collectivisation could involve not only production but also consumption of healthy foods in community restaurants and food kitchens, which in turn would create employment.

‘Food insecurity’ is a sanitised term for hunger. One in every four children under the age of six shows signs of stunted growth due to malnutrition. This means that we are producing a new generation which is damaged physically and intellectually. When households are unable to meet their food needs, it is often because food is too expensive, not because there is not enough food in the country. Climate change will make food more expensive and reduce the amount of food that the country produces and sells locally. Ensuring food security must be a national priority.

The country is experiencing deepening food insecurity. Almost half (40%) of South Africans are food insecure; even in Johannesburg, 42% of households are classified as food insecure, and this increases to 70% in the poorest areas.

Climate jobs are necessary. To say that we cannot afford to create them is to say that it is too expensive to go on living. A range of options is possible for financing these jobs – if we use even only one of these options, tens of billions of rand will be made available.

Can we afford climate jobs? Our current pattern of corroding our planet is already extremely costly – and the costs increase by the day. In addition to the unfathomable expense of unmitigated climate change, the costs imposed on society by our high levels of unemployment are immense. The longer we wait, the worse the problem becomes, and the more work and resources must then be allocated to deal with it.

From another angle, a state- and people-driven programme to create one million new jobs in combating climate change would not only address unemployment and climate change but also lead to people-centred development with enormous benefits for health and wellbeing. From an economic perspective, it is never ‘expensive’ to a nation to organise, educate and train previously unemployed people in work that creates public assets and productive wealth, like wind and solar power stations, or public transport facilities.

It must be primarily government that allocates the resources and implements a programme to halt climate change, and this must be monitored and effectuated by communities.
If there is political will, there is always money

Governments show us time and time again that if there is political will, money can be found for any project or emergency. After the 2008 financial crisis, rich nations came up with trillions of dollars to bail out bankers from their creditors. In South Africa, government has so far spent R70 billion on the corruption-ridden arms deal, and directly spent R40.3 billion on the 2010 FIFA World Cup. Further, it has committed R1.5 trillion to future electricity production.

It is clear that South Africa has money. The challenge is to channel this money into providing for our most pressing needs as people, and to withstand the pressure from the minerals energy complex and international nuclear lobby to expand electricity production with no regard to climate change, human wellbeing, environmental risks or resource depletion.

At present, government is devoting R1.5 trillion to future electricity production, mainly for expanding the networks and building new coal-power plants, and has expressed a commitment to nuclear power. These are options that create few jobs, result in significant greenhouse gas emissions, and pollution in the case of coal, and in the case of nuclear energy leave a legacy of poisonous waste which remains dangerous for thousands of years.

A closer look at the estimated cost for Eskom’s ‘Capacity Expansion Programme’ for 2005–2011 shows the cost at R140 billion, with a projected cost of R500–550 billion until 2017. This excludes six nuclear reactors at a cost of R1 trillion by today’s estimate, noting that experience suggests this cost will increase significantly. And the parastatal has not disclosed the cost of interest on loans like the US$3.75 billion World Bank loan. These plans are most of all designed to feed the insatiable electricity appetite of mining and smelting industries. For example, the 2010 Integrated Resource Plan triples the 2010–2030 electricity demand from both the ferrochrome and aluminium industry with no justification.

<table>
<thead>
<tr>
<th>INITIATIVE</th>
<th>FUNDING ALTERNATIVES</th>
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<tbody>
<tr>
<td>Idle corporate bank deposits (10% extraordinary tax on corporate bank deposits presently not reinvested; or alternatively borrowed at low interest)</td>
<td>R48 billion or more, depending on political will</td>
</tr>
<tr>
<td>Alternative 1: Progressive taxation on high incomes (An increase of the tax rates – from 38 to 40% for the part of income that lies above R400 000–R750 000, from 40 to 45% for the part income that lies between R750 000 and R1 million and from 40 to 50% for the part of income lying above R1 million a year)</td>
<td>R13.5 billion</td>
</tr>
<tr>
<td>Alternative 2: Progressive taxation on high incomes (A transition tax of 5% for the part income above R150.000 per year)</td>
<td>R20 billion</td>
</tr>
<tr>
<td>Financial transaction tax (Extending the tax of one quarter of a percent that already exists on stock trading to the bond market)</td>
<td>R48 billion, assuming trading remains at the same level</td>
</tr>
<tr>
<td>Carbon tax (at R165/t CO2 instead of proposed R75/t CO2)</td>
<td>R82 billion</td>
</tr>
<tr>
<td>Halting Capital Flight</td>
<td>During the last decade, ‘unregistered capital flows’ from South Africa amounted to over R100 billion and more every year</td>
</tr>
<tr>
<td>Reallocation of investments to renewables and questioning the ferrochrome and aluminium industry electricity demand hike</td>
<td>According to Eskom, the current coal power plans amounts to R450–500 billion, interests on loans not included. Cancelling half of these plans, and the hunt for foreign loans, would save hundreds of billions of rand in spending and tens of billions of rand in interests on loans</td>
</tr>
<tr>
<td>Restructuring Eskom’s Tariffs (A 10c per kWh levy on the largest ‘Key Industrial Consumers’)</td>
<td>R8.5 billion per year in income</td>
</tr>
<tr>
<td>Pension funds and prescribed assets (Declaring 10% of the PIC funds and 5% of the private retirement fund industry assets to be prescribed as assets that must fight climate change)</td>
<td>R140 billion in loans</td>
</tr>
<tr>
<td>Using the accumulated and yearly under spending of the money paid by workers to the Unemployment Insurance Fund (UIF)</td>
<td>R6–9 billion is under-spent per year. In addition, today’s surplus of R40 billion accumulated under spending could be released form UIF as a kick-start of climate jobs</td>
</tr>
<tr>
<td>TOTALS: Yearly funding (using the lower numbers in the table above): Additional funds available, like the UIF surplus, as well as borrowing, prescribed assets and reallocation of investments to renewable energy</td>
<td>Total annual potential new funding: More than R250 billion Additional resources: More than R400 billion</td>
</tr>
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</table>
Conclusion

In national terms, the climate and unemployment crises are threats to a stable social order and a healthy and capable future generation of South Africans. In global terms, the climate crisis is a threat to human survival.

Real solutions to climate change require a massive change in how we live, how we produce and consume, and how we relate to nature and each other. The solution is a very significant systems change. This means a rational use of our finite resources to meet basic human needs rather than the mindless manufacture of luxuries to serve profit maximisation for the very few. Within this larger system, there are specific areas that are easy to start with, notably renewable energy, public transport, agro-ecology, energy efficiency in housing and construction, and protecting our natural resources. All these areas have significant job-creation potential.

Since there is no way to increase the capacity of the environment to bear the economic, population and resource demands made on it, it follows that the adjustment must come entirely from the operation and structure of the economy. The One Million Climate Jobs Campaign links the climate crisis and the intensifying crisis of mass unemployment that is destroying our communities. It is imperative that we address these concerns together.

The solutions that the One Million Climate Jobs Campaign is proposing are part of a package of solutions that will ultimately require a massive transformation in how we allocate and manage our natural resources while meeting the essential needs of all people living in South Africa. These solutions address the causes and impacts of climate change to ensure a better quality of life, and the protection and enhanced functionality of natural systems. These solutions will create new jobs and emphasise a just transition to a low-carbon economy, which means that workers will be protected.

Winning the demands of the One Million Climate Jobs Campaign will not be easy. Our government, like many governments around the world, is increasingly made to feel the power of the tiny elite that control the global financial system. Only a broad-based campaign that unites the power of the labour movement with social movements, environmental organisations and other civil society organisations will constitute the counter-power to ensure change.

As the environmental and economic crises deepen, the demand for a million climate jobs can become a material force, like the Freedom Charter did during the crisis of apartheid. We invite you and your organisation to join the One Million Climate Jobs Campaign.

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