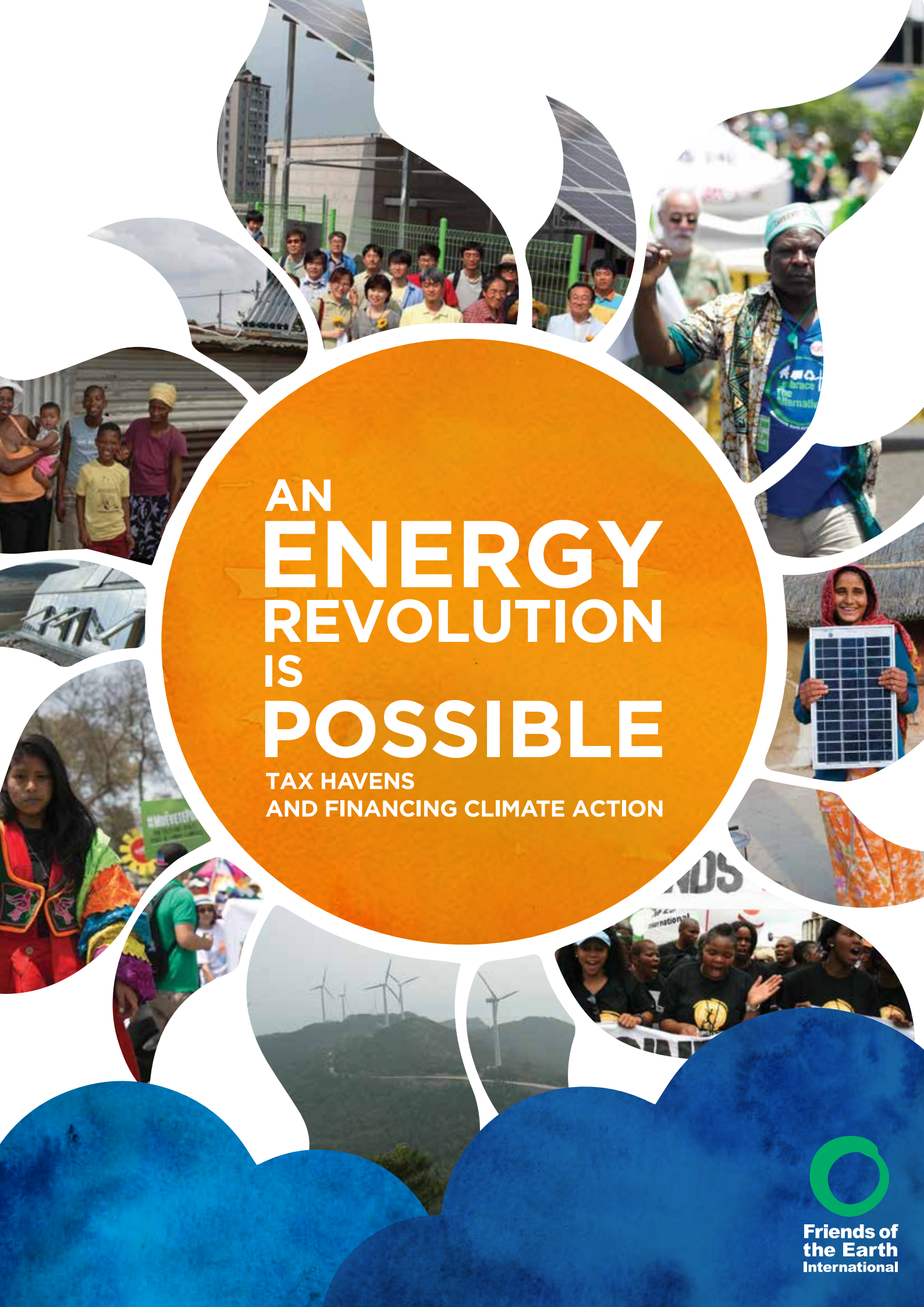


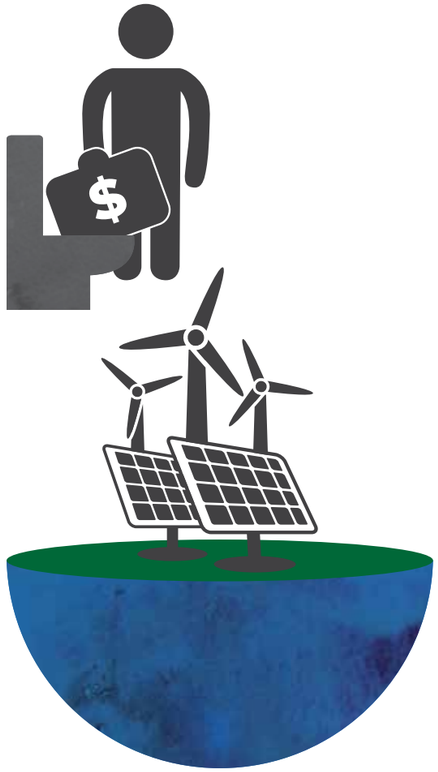
AN ENERGY REVOLUTION IS POSSIBLE

TAX HAVENS AND FINANCING CLIMATE ACTION

Friends of the Earth International

GOVERNMENT REVENUE LOST THROUGH TAX HAVENS

COULD POWER HALF THE WORLD WITH 100% RENEWABLE ENERGY BY 2030



AN ENERGY REVOLUTION IS POSSIBLE

Globally every year up to $600 billion dollars of government revenue is lost through tax avoidance through havens, to say nothing of tax evasion.[1] Friends of the Earth International calculates that *government revenue lost to tax havens over a 15 year period could power Africa, Latin America and much of Asia with 100% renewable energy.*

Put another way, *government revenue lost through tax havens could power half the world with 100% renewable energy by 2030*. This would bring renewable energy to millions, while protecting the environment from dirty fossil fuels and the climate change they cause.

It is a gross injustice that the world's richest multinational corporations and individuals do not pay their fair share of tax. The practice of wealthy corporations and individuals hiding their profits abroad in tax havens, denies governments of vast sums of money that could be used to fund education, health and renewable energy.

The next 10 to 15 years are critical to prevent the most dangerous effects of climate change. The Paris Climate Agreement while paying lip service to ambitious temperature targets completely fails to deliver the scale of action needed to stop the climate crisis. In addition, one fifth of the world's population lacks access to electricity and all the development benefits that energy access brings. We urgently need an Energy Revolution.

The extra investment to power half the world with 100% renewable energy is on average $507 billion per year over a 15 year period. This is well below the estimates for annual tax revenue lost through tax havens globally.

The money that could finance it exists, but it is hidden away for the benefit of the world's elites. Governments need to act immediately at both national and international levels in order to stop tax avoidance and evasion. And, while we use these figures as illustrative of what these vast cash reserves could do – rather than as prescriptive – part of the resources freed up for national governments as tax revenue could and should be used to fund renewable energy.

This report demonstrates that, while the finance for an Energy Revolution certainly exists, the political will to drive the transformation is shockingly absent.

CLIMATE CHANGE AND TAX HAVENS

Business-as-usual is no longer an option. After more than twenty years of insufficient action on climate, carbon emissions continue to rise.

We live in a world of unacceptable and growing inequality where nearly 1.2 billion people – or a fifth of the world's population – lack access to electricity and more than 2 billion people lack access to clean cooking fuels.[2] Yet major corporations and the wealthiest 1% dodge paying their fair share of tax and pollute without limit.

Tax havens or 'secrecy jurisdictions' are jurisdictions which, through deliberate legal loopholes, enable people or businesses to minimise or escape entirely the taxes they should pay on substantial economic activity.[3]

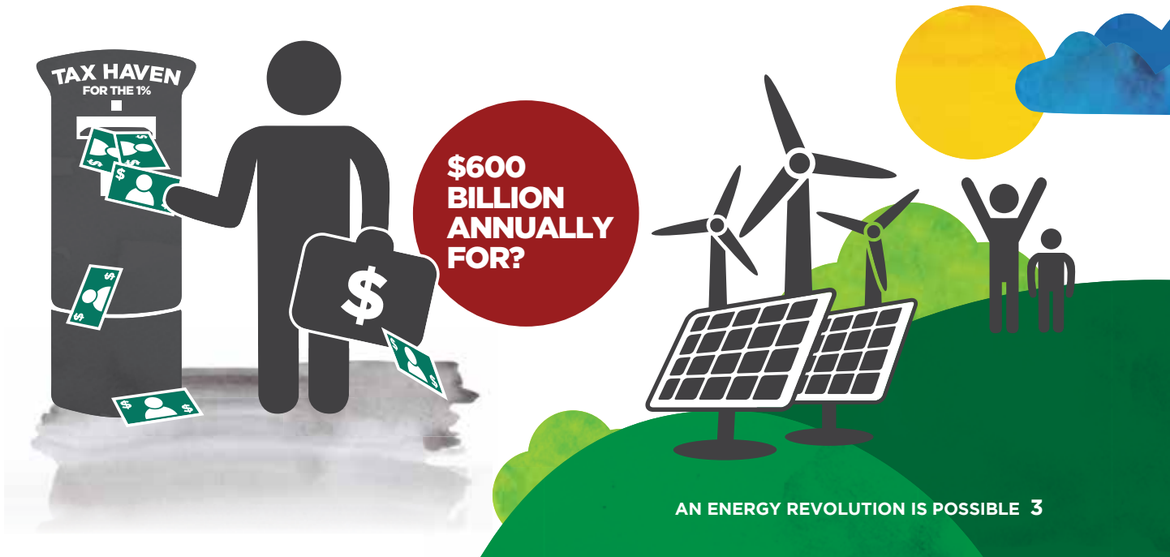
Tax havens undermine government's ability to address climate change, by dramatically reducing the revenue available to fund the transition to 100% renewable energy, provide access to energy and deliver public services that address inequality. Hundreds of billions of dollars are lost from public budgets each year, which has especially harmful effects on countries from the global South.

Climate change is already happening – wreaking devastation on communities and ecosystems around the world. Without urgent and drastic action to reduce global greenhouse gas emissions, we face far worse runaway climate change, with impacts that would dramatically overshadow anything we see today. Exceeding climate tipping points will mean greater hunger, drought, floods and weather extremes – as well as mass extinctions and the forced migration of millions of people. Climate change hits the poorest and most vulnerable people hardest, people who did not create this crisis in the first place.

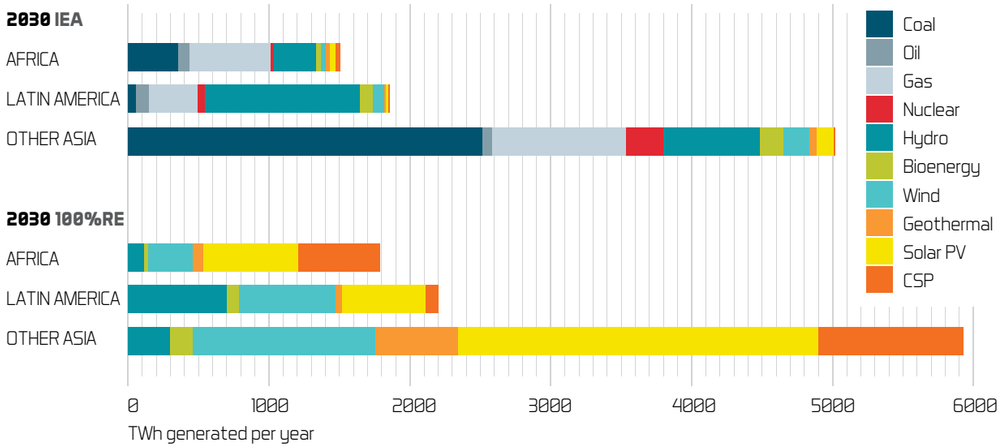
Energy production from fossil fuels is historically and currently one of the main contributors to sky-high levels of carbon emissions and tackling this is central to stopping a climate disaster. To create a climate-safe, just and sustainable world it is crucial that we completely transform the way we produce, distribute and consume energy. Friends of the Earth International believes that the transformation of the energy system is connected to the transformation of economic structures and the need to dismantle corporate power, which underpins the exploitative global economy.

This report is a wake up call to policy makers, NGOs and governments alike. It is not a policy position on how governments' should spend all revenue lost through the use of tax havens, nor a technical blueprint for a renewable energy future. Friends of the Earth International believes that the energy transformation process will be and must be complex. It involves not just changing the energy source from fossil fuels to renewable energy, but a deeper transformation including democratic ownership of renewable energy resources. This is a call to work together on new and innovative ways to address the crises threatening our planet and its people.

Our findings demonstrate the urgent need to stop tax havens in order to create a climate-safe future, while establishing that a 100% renewable energy revolution is financially well within reach. The finance to bring about an Energy Revolution exists. We must demand it.



Renewable Energy generation prediction



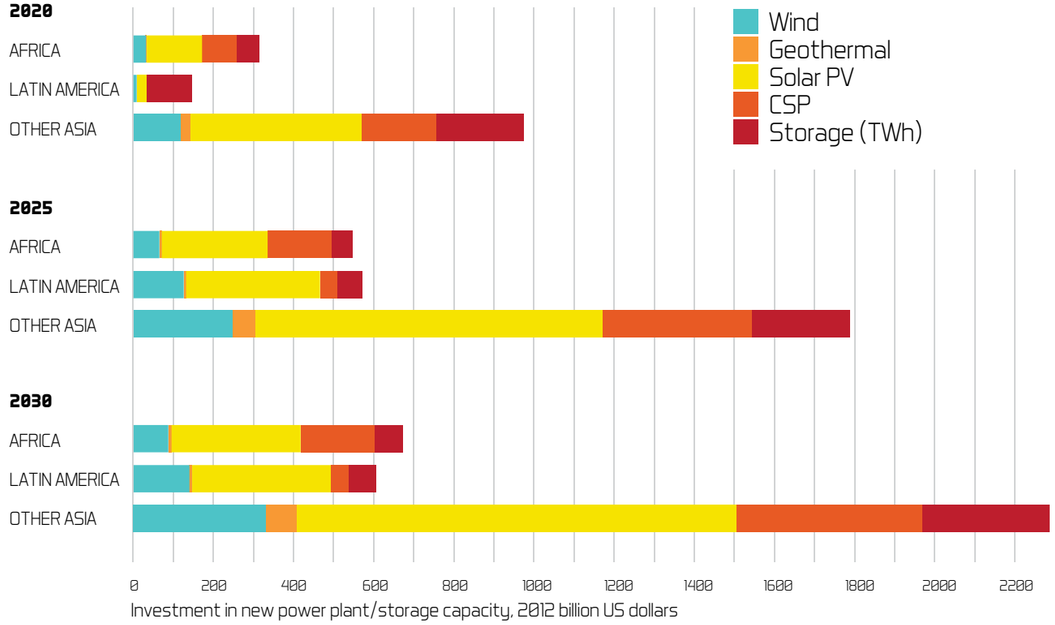
ESSENTIAL PRINCIPLES FOR 100% RENEWABLE ENERGY

Friends of the Earth International calculated the costs of meeting the International Energy Agency's predicted energy demand with 100% renewable energy to certain parts of the developing world. While the technical feasibility of this vision is important, it is imperative that renewable energy policy is guided by certain principles that guarantee a just and sustainable energy system for all.

Our definition of 100% renewable energy is one that adheres to the following principles.[4] It must:

- provide energy access for all as a basic human right be under direct democratic control and governed in the public interest based on locally-appropriate technologies
- reduce energy consumption and waste, where appropriate, and prioritise energy efficiency
- ensure communities' rights to free, prior and informed consent and must not lead to further human rights violations such as land grabbing.

Investment required in additional renewable power plant capacity[5]



A PRICE TAG FOR 100% RENEWABLE ENERGY

Under the International Energy Agency's (IEA) business-as-usual projections, globally $20 trillion will be spent on building power plants and transmission infrastructure, but only 12% of electricity would be provided by solar and wind power. However fossil and nuclear power plants have significant fuel costs.[6] Greenpeace's 2015 Energy [R]evolution analysis update, also based on IEA demand projections, shows that switching to 100% renewable electricity globally by 2050 would save $42 trillion in fuel costs alone.[7] Their analysis confirmed that over the long run, the extra upfront investment costs of renewable power generation will be paid back by savings in fuel costs.

But we ask how much extra investment would be required to generate 100% of electricity with renewables, in regions of the developing world most affected by and least responsible for climate change? Our result, for achieving this goal by 2030, is $7,603 billion.

The calculations for this analysis use projections of electricity demand from the International Energy Agency's World Energy Outlook 2014[8] (WEO2014). The regions selected – Latin America, Africa and 'Other Asia' (includes only non-OECD countries, India and excludes China) are based on the WEO2014 regional classifications. The 'Other Asia' category is a slight modification from the 2015 An Energy Revolution is Possible Report and IEA's country groupings, as it includes India. Any differences in costing is a result of this addition, and a full list of countries in each grouping can be found in Appendix 1 of the full report.

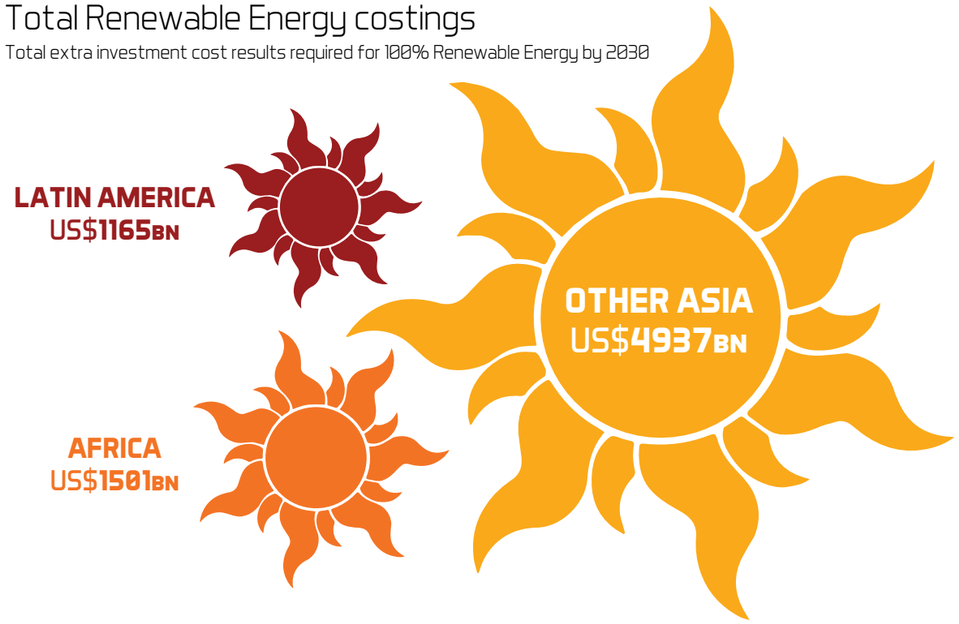
While there are significant wealth disparities between and within these regions, on average they represent many of the poorest regions of the world.

The World Energy Outlook projects electricity demand for all regions of the world based on conventional expectations of population growth and economic activity. It predicts a dramatic rise in energy demand and supply for regions in the global south, yet per-capita energy use for 2030 still has some parts of the world remaining at relatively lower levels of energy usage. Any other modelling was beyond the scope of this study and IEA projections are the internationally-recognised benchmark. We reiterate that a 100% renewable energy future must prioritize access to energy for all, community or social control and ensure the rights of communities. Furthermore, this report aims to highlight global inequality.

Based on the WEO2014 projected demand, we have calculated how much renewable power infrastructure would be necessary to meet this demand, taking into account strategies such as energy storage and spare capacity for excess generation that would be required to create a reliable renewable power grid and multiple micro-grids. We also

Total Renewable Energy costings

Total extra investment cost results required for 100% Renewable Energy by 2030



recognise that many parts of the developing world may and should leapfrog large transmission grids altogether, opting for energy independence with local renewable generation and storage in micro-grids, particularly in rural areas and on small islands.

We used the IEA's projections of performance (annual capacity factor) and costs for the various types of renewable power sources in each region of the world to calculate the required investment in renewable power infrastructure. We calculated the additional investment required over and above the renewable generation already included in WEO2014 projections.

The energy mix we present is based on regional generation capacity factors, however it only represents one possible scenario. It should be the right of communities, and in some cases, governments and other stakeholders to determine their own locally appropriate renewable energy mix. In most areas of the global south we have looked at, there are excellent renewable energy resources. Solar and wind are likely to be the dominant renewable power source. In each region, we modelled that between 62 and 88% of energy could come from variable renewables coupled with storage:

- Wind turbines
- Solar photovoltaic panels
- Concentrating solar thermal power with integrated thermal energy storage
- Other forms of short-term energy storage such as batteries and pumped hydro.

The remaining energy can be provided by renewable sources that can be more easily dispatched when needed, to ensure reliable grid operation even during times of low wind and solar output:

- Geothermal in areas with good, accessible geothermal resources
- Hydro dams that already exist – but no new hydro dams built from today due to environmental and social impacts
- Bioenergy in minimal amounts (2-4%), the same levels of generation as projected in WEO2014.

Transmission costs are not accounted for, as projecting future transmission needs is beyond the scope of this analysis, and it is difficult to project how much they would differ from business-as-usual. Extending the electricity network will need to occur under a fossil or renewable future, considering the current setup leaves 1.3 billion people without energy access, developing countries will need to invest in transmission to new power plants and provide power to areas that currently do not have any electricity grid connections. But some areas may leapfrog the grid entirely.

Although we have listed several energy sources which are renewable and could be part of a sustainable and just energy future, we reiterate that our planet and its people need a much bigger transformation than merely switching energy sources. We need an Energy Revolution.

REVENUE LOST THROUGH TAX HAVENS

There is much debate about the exact amount of global tax revenue lost through the use of tax havens for evasion and avoidance. This is due to fragmented data at both national and international levels, and the fact that these phenomena are deliberately hidden. Yet it is clearly a very substantial amount of money that undermines public budgets and service delivery, particularly for countries in the global south.

Researchers at the IMF recently estimated the long-term, total global tax losses to corporate tax avoidance at up to $600bn per year.[9]

A study from the Tax Justice Network (TJN) found that profit shifting by US multinationals alone resulted in around $130bn of revenue losses globally in 2012.[10] If scaled up on the assumption that US multinationals are no more or less aggressive on tax than other multinationals, the TJN estimate implies total losses of around $650bn a year – roughly consistent with the IMF findings. In addition, it is estimated that $190bn of revenue is lost annually due to tax evasion from the non-declaration of assets hidden offshore – that is, in tax havens.[11]

The findings of this study are modelled on a scenario in which global tax revenue loss continues at the same level over the next 15 years. Friends of the Earth International calculates the extra investment required to power half the world with 100% renewable energy is on average $507 billion per year over the 15 year period. This is well below the estimates for tax revenue lost through tax havens globally, noted above.

SOME RECOMMENDATIONS FOR ENDING TAX HAVENS AND KICKSTARTING AN ENERGY SYSTEM THAT SERVES PEOPLE AND THE PLANET

Climate change is a symptom of our current dysfunctional system, especially the way we produce, distribute and consume energy. A system that fails to provide energy for billions of people; causes catastrophic climate change; and where the wealthiest individuals and corporates do not pay their fair share of tax is not good for people or planet.

Governments must regulate at national and international level to stop tax havens. A crucial measure is to make public the country-by-country reporting of multinationals' economic activity, profits declared and tax paid – so that the scale of avoidance by channelling profits into tax havens is laid bare for the public and for tax authorities all around the world. Public registers of the true owners of companies and other vehicles, along with international information exchange to end bank secrecy, are the central measures to end evasion through havens. The increased revenue flowing into government coffers once tax haven secrecy is ended gives an opportunity for increased spending on public services, including health and education. Friends of the Earth International believes that this increased revenue brings huge opportunity to massively increase spending on community and socially controlled renewable energy.

This report highlights that the *government revenue lost to tax havens over a 15-year period could power Africa, Latin America and much of Asia with 100% renewable energy*.

Here are some other, specific ways that we could also kickstart this transformation:

- End current fossil fuel subsidies and redirect funding to community and socially controlled renewable energy.
- End new dirty and harmful energy projects and plan a phase out of existing destructive energy sources and reduce energy dependence and consumption especially in developed countries.
- Transform transport and prioritise strong, diversified, local economies. Increase energy efficiency and regulate energy-intensive industries. Ensure just transition for affected workers and their families.
- Developed country governments must make the most drastic cuts in their carbon emissions. Developed country governments must repay their climate debt for using far more than their fair share of atmospheric space by providing money – without conditions – to drive the energy transformation in developing countries.
- Implement measures such as a tax on all financial transactions and other policies to finance and facilitate community and socially/democratically owned and controlled renewable energy in the global south.

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This report is the summary of research carried out by Pat Hearps for Friends of the Earth International.

The full report with details of how we made our calculations is available on our website at www.foei.org
with hard copies available by request.

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