UN thematic consultation on energy
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"Providing sustainable energy for all could be the biggest opportunity of the 21st century. Sustainable energy is the golden thread that connects economic growth, social equity, and a climate and environment that enables the world to thrive."
UN Secretary General Ban Ki-Moon, 24th September 2011

"Without question a radical transformation of the present energy system will be required over the coming decades. Although […] substantial, it is not without precedent. Last century between the 1920's and the 1970's oil replaced coal as the dominant energy source despite the immense available coal reserves. This occurred due to oil, as a liquid, being superior to coal in many respects, particularly for transportation. Similarly energy efficiency and renewables can be an easier way to solve energy security than producing fossil energy at higher costs that usually exacerbate environmental problems."
IIASA Global Energy Assessment 2012[1]

1. Introduction

This paper is a response by the international civil society, represented by CAN-International and Beyond2015, to the thematic consultation on Energy launched by the UN, in relation to the work of the UN High Level Panel of Eminent Persons.

Climate Action Network International (CAN) is the world's largest network of civil society organizations working together to promote government action to address the climate crisis, with more than 700 members in over 90 countries.

Beyond 2015 is a global civil society campaign, pushing for a strong and legitimate successor framework to the Millennium Development Goals. The campaign brings together more than 570 organisations from over 95 countries. Whilst participating organisations have a range of views regarding the content of a post-2015 framework, the campaign unites behind one vision:

- *That a global overarching cross-thematic framework succeeds the Millennium Development Goals, reflecting Beyond 2015's policy positions.*
- *That the process of developing this framework is participatory, inclusive and responsive to voices of those directly affected by poverty and injustice.*

[1] IIASA. 2012. *The Global Energy Assessment: Toward a Sustainable Future. Key findings; Summary for Policy Makers; Technical Summary*. Vienna: IIASA

2. Centrality of energy to development

Energy is a key driver of human and economic development. It powers communities, homes, businesses and industries, schools, hospitals, and transportation. Businesses across sub-Saharan Africa see the lack of access to reliable and affordable electricity as the biggest obstacle to operations.[2] Access to energy is key to eradicating poverty, and levels of access closely correlate to rankings on the human development index and other measures of development progress.[3] Energy's status as an enabler – catalysing access to clean water, education, public health, and sanitation – has led it to be widely described as the 'missing' Millennium Development Goal.

However, our current energy system is unsustainable and inequitable, and threatens human wellbeing. It is driving dangerous climate change through a reliance on previously cheap and abundant fossil fuels, with energy production responsible for approximately 75 per cent of all greenhouse gas emissions. The energy system is also failing the 1.3 billion people without access to electricity and 40 per cent of the world population who still rely on traditional biomass such as charcoal, firewood, and dung to cook and heat their homes.[4] According to the World Health Organisation, there are more deaths every year from smoke inhalation than HIV/AIDS, malaria or tuberculosis, predominantly affecting women and children.[5]

Over-consumption of energy by the wealthy and middle classes (in rich countries and increasing numbers in middle income countries) is driving environmental degradation. The wealthiest 11 per cent of people account for 50 per cent of global GHGs, and based on current trends, this imbalance will only intensify.[6] This over-consumption by the few has contributed to a 'grab' of the commons, including land, water, clean air, atmospheric space, and other energy-related resources from poor and already marginalised people and communities that lack the rights over the resources their livelihoods, health and wellbeing depend on.[7] Our over-reliance on fossil fuels and their destructive lifecycles has exacerbated inequality, reduced life expectancy, and contributed to numerous environmental issues beyond climate change, such as ecosystem degradation.

The post-2015 development framework must therefore provide sufficient energy to enable the world's population to lead dignified lives while not undermining the human and natural systems on which they rely. Transforming our energy system from fossil fuels towards one built on low-carbon, renewable, sustainable technologies and practices can deliver the UN Task Team's (UNTT) vision of sustainable development, thus meeting the needs of this and future generations.[8] Such a "just transition" can create dignified green jobs, a healthy climate and environment, and engaged and prosperous communities.

Climate, energy and poverty
Universal access to energy

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[2] African Development Bank. 2012. *African Economic Outlook 2012: Promoting Youth Employment*. OECD Publishing

[3] The IIASA *Global Energy Assessment* shows the clear correlation between energy consumption and per capita GDP, the Human Development Index and other measures of development progress. IIASA. 2012. *The Global Energy Assessment: Toward a Sustainable Future. Key findings; Summary for Policy Makers; Technical Summary*. Vienna: IIASA

[4] The International Energy Agency predicts that by 2030, there will still be 1 billion people without access to electricity and 2.6 billion people lacking access to clean cooking in part due to growing populations. IEA. 2012. *World Energy Outlook 2012: Measuring progress towards energy for all*. Paris: OECD

[5] There are 2 million preventable deaths every year, predominantly among women and young children World Health Organisation. 2011. *Media Centre - Indoor air pollution and health*, available at http://www.who.int/mediacentre/factsheets/fs292/en/index.html

[6] J. Rockström et al. 2009b. 'A safe operating space for humanity'. *Nature*. 461. 23 September

[7] Christian Aid. 2012. The rich, the poor and the future of the earth: Equity in a constrained world. London: Christian Aid

[8] UN Task Team. 2012. *Realizing the Future We Want for All: Report to the Secretary-General*. New York: UNDP

In order for the post-2015 agenda to contribute to meeting the goals of promoting human development and tackling inequality it must embrace the centrality of universal access to clean, safe, reliable and affordable energy. More than 95 per cent of the energy poor live either in sub-Saharan Africa or developing Asia and 84 per cent of these growing populations live in rural areas.[9] Centralised, fossil fuel-based systems are unlikely to deliver access to energy services for these communities, including energy for the home, for productive uses and for public facilities. In order to eradicate poverty and deliver sustainable development, the world must prioritise access to clean, safe, affordable and reliable energy, especially for those living in acute poverty.[10]

Delivering energy services to the poorest

Access to energy is a basic right and an essential input for sustainable and dignified livelihoods. Delivering clean, safe, affordable, and reliable energy services to people living in poverty means reversing the current supply-side driven process of energy provision and instead focusing on the genuine needs of people living in poverty through a demand-side approach. This means matching the needs of people to available energy resources and taking into account socio-cultural issues and environmental sustainability. Public and private investment must prioritise the kinds of energy delivery models that best fit the needs of those living in energy poverty.

A vital part of this approach is correctly measuring energy access, i.e. measuring access in terms of what matters to those living in energy poverty (the energy services that are possible and development outcomes that result) rather than just focusing on provision.[11] An approach that defines access simply in terms of per capita kilowatt hours (kWh) added to the grid, or number of homes electrified, can mask important social and gender equity issues such as whether the electricity delivered is affordable for poor communities or whether it reduces, rather than exacerbates, gendered work burdens such as women's and girls' reproductive labour. It must also involve looking beyond basic household electricity provision to addressing the total energy needs of communities, including clean cooking and mechanical and heat energy, for households, productive uses and energy to power important community services, as outlined by the concept of *Total Energy Access.*[12]

Decentralised energy solutions

In urban and peri-urban areas, reliable grid electricity is extremely important. However, extending grid electricity to rural areas becomes more expensive and inefficient the further consumers are from the source of power generation. According to the International Energy Agency (IEA), to reach the goal of universal access, at least 55 per cent of all new electricity generating capacity will have to come from decentralised sources such as mini-grids or isolated units.[13] The World Bank's Independent Evaluation Group, among others, has also found mini-grids to often be the least-cost and most effective way to deliver energy access.[14]

Renewable energy sources such as wind, solar, biogas, and micro-hydro can play a major role in extending energy access to the poor, while promoting environmental protection and

[9] IEA, 2011. *World Energy Outlook 2011.* Paris: OECD

[10] Most people in acute poverty live in middle-income countries with a lesser but substantial number in low-income countries. This is true both by multidimensional acute poverty measures (see: http://www.ophi.org.uk/wp-content/uploads/OPHI-MPI-Brief-2011.pdf?cda6c1) and by dollar per day poverty lines (see: http://www.ids.ac.uk/idsproject/the-new-bottom-billion).

[11] IIASA. 2012. *The Global Energy Assessment: Toward a Sustainable Future. Key findings; Summary for Policy Makers; Technical Summary*. Vienna: IIASA

[12] Practical Action. 2012. *Poor People's Energy Outlook*. Rugby: Practical Action Publishing

[13] IEA, 2010. *World Energy Outlook.* Paris: OECD

[14] IEG. 2008. *The Welfare Impact of Rural Electrification: A Reassessment of the Costs and Benefits*. Washington D.C.: World Bank

protecting energy users from price hikes associated with fossil fuels. Moreover, these smaller, decentralised systems can be the most cost-effective means of reaching people in rural areas. Decentralised approaches can also promote local, democratic ownership of an energy system and contribute to local development by building skills and providing employment opportunities – both directly and indirectly – through increasing the provision of reliable and affordable energy for productive uses.

Promoting energy access for the poorest requires holistic and integrated development planning, including financing, capacity building, and a framework of enabling policies. Financing and technical support are needed from developed countries while political leadership is needed from developing countries to ensure the integration and prioritisation of sustainable energy access for the poorest into core development planning.

Climate and poverty

Climate change is possibly the greatest threat to poverty eradication and is also symptomatic of a fundamental developmental crisis. It is a 'threat multiplier', amplifying existing social, political, and resource stresses, potentially rendering them unmanageable through changing climatic patterns; increased intensity and greater frequency of weather events such as droughts and floods; and further marginalisation of communities already in fragile, vulnerable and/or deeply impoverished situations.

The World Bank report, *Turn Down the Heat: Why a 4°C Warmer World Must be Avoided*, predicts more than 3°C of global warming by the end of this century on current global policy trajectories.[15] Those facing the brunt of current climate extremes and variability, and most vulnerable to projected climate impacts, are the people who have contributed the least to this global problem.

To tackle poverty, the post-2015 development framework must work towards energy outcomes which are both low-carbon and climate resilient. This will mean a new way of thinking about and planning energy systems. It will be essential that any eventual energy goal under the development framework adhere to two criteria:

1. That all resulting energy developments are resilient to the changing climate.
2. That any activity must contribute to a low-carbon global economy.

Building long-term resilience to climate and other environmental threats into our energy system must be a central pillar of development investment going forward. The impacts of climate change and crossing other 'planetary boundaries' hit the people living in poverty first and hardest, as they often depend directly on natural resources for their livelihoods[16] and are least able to adapt. International development is occurring within this context and actions taken today will determine living conditions and options for future generations.

Resilient Development

The world in 2030 will be very different to the world we live in today. We need resilient development, i.e. that enables us all to live well despite environmental degradation. We also need to be planning for the possibility of life with more than 3°C of warming and the subsequent catastrophic climate impacts on the natural systems we rely upon. A future energy system must underpin efforts towards poverty eradication and environmental

[15] Potsdam Institute for Climate Impact Research and Climate Analytics. 2012. Turn Down the Heat: Why a 4°C Warmer World Must be Avoided, a Report for the World Bank by the Potsdam Institute for Climate Impact Research and Climate Analytics. New York: World Bank. p. 23

[16] Oxfam. 2012. *A safe and just space for humanity*. Oxford: Oxfam

sustainability in a world with a growing population, scarcer natural resources and increasing impacts of a warmer climate. Impacts will be particularly acute in parts of the tropics and the African continent where warming will be more than the global average.

A sustainable energy system also has a role to play in building resilience. For example, access to clean, safe, affordable, and reliable energy can enhance the adaptive capacities of communities rendered vulnerable by reducing their reliance on natural resources such as fuelwood, or providing the energy to operate technologies such as water pumps that can mitigate against the impacts of climate change.[17] Increasing resilience requires designing and implementing energy systems around the needs of energy users while not undermining the long-term sustainability of natural resources, the surrounding natural environment and ecosystems and taking into account the predicted impacts of climate change.

Sustainable energy and economic development

Low-carbon development pathways

The low-carbon test should not force carbon targets on poorer countries, but rather encourage developing countries to prioritise 'win-win' opportunities for a low-carbon economy. From a climate justice perspective, greenhouse gas emissions savings should not be the standard by which access to energy services for the poorest is defined, given they have the least responsibility for causing dangerous climate change and are the hardest hit by its impacts.[18] [19]

However, if the intention of delivering universal energy access through the post-2015 framework is to spur sustainable development, then it must plan for beyond the basic provision of energy. It must lay the foundations for an energy system that can lead to higher and more equitable levels of income, improve standards of living, and enhance levels of democratic participation. This will entail increasing energy usage. According to the Stockholm Environment Institute, this 'enhanced' delivery beyond basic energy services will need to be part of a low-carbon transition in the global North and South if the global temperature is to stay within 2°C limits and not undermine development[20] – let alone 1.5°C being called for by the Climate Action Network and over 100 developing countries. Future *sustainable* economic growth in the global South will depend on providing modern and reliable power and transportation services for citizens and industry. A policy of sufficiency, efficiency and expanding supply of low-carbon energy in the North and South could drive economy-wide shifts towards clean, sustainable energy, leap-frogging the dirty development pathways of the global North.

Decarbonising industrialised economies

Delivering development while avoiding dangerous climate change also requires action from Northern countries. It requires a decarbonisation of energy systems, achieved through

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[17] Johnson and Lambe, 2009. *Energy Access, Climate and Development*, Commission on Climate Change and Development. Stockholm: Stockholm Environment Institute

[18] Researchers at Brown University's climate and development lab have estimated climate-related disasters such as droughts, extreme temperatures, floods, and hurricanes causing around 1.3 million deaths since 1980. Two-thirds of these deaths (over 909,000) occurred in the least developed countries (LDCs) which account for less than 1% of the emissions responsible for climate change. Cited in: "An open letter to Obama from the world's poorest countries", Letter from Pa Ousman Jarju, Chair of the Least Developed Countries group at the UNFCCC to President Obama, 8 November 2012. See: http://www.guardian.co.uk/environment/blog/2012/nov/08/obama-climate-change-poorest-countries; IEG. 2008. *The Welfare Impact of Rural Electrification: A Reassessment of the Costs and Benefits*. Washington D.C.: World Bank, p. 469.

[19] In addition, the IEA projects that achieving universal access by 2030 would increase CO_2 emissions by between 0.7 per cent and 2 per cent. In the worst case scenario – using fossil fuels for 100 per cent of electrification and 100 per cent of cooking for the poor – the total increase in emissions would be around 2 per cent of world emissions. Sanchez, T., 2010. *The hidden energy crisis: how policies are failing the world's poor.* Rugby: Practical Action Publishing

[20] Nilsson, M. et al. 2012. *Energy for a Shared Development Agenda: Global Scenarios and Governance Implications*. Stockholm: Stockholm Environment Institute

greater levels of electrification in areas of the economy directly consuming fossil fuels, a move towards a 100 per cent renewable future and steep demand reduction, including energy efficiency.[21] Reducing demand decreases the amount of renewable energy generation needed, particularly important with increased electrification. However, behaviour change will be necessary to sustain demand reduction. Reducing demand relies on lifestyle changes on behalf of the individual and the public and private sectors, including areas such as product design, urban planning, and a reduction in private transportation. Without a focus on behaviour, energy efficiencies can stimulate further demand, undoing many of the potential energy savings made.[22]

Decarbonising the economies of rich, industrialised countries and reducing demand will allow for more equitable consumption as well as leaving what little remaining atmospheric space there is to countries that have historically done the least to cause anthropogenic climate change. Northern countries must also fulfil their legal and moral obligations to provide the finance and technology to poorer countries to allow them to pursue a low-carbon development pathway.

Just transition towards a low-carbon future

Meeting the energy needs of all countries while staying within environmental limits requires goals and indicators that adhere to the climate science. With 75 per cent of all GHG emissions coming from energy-related activities, the post-2015 development framework must catalyse major emissions reductions through energy demand reduction (efficiency and behaviour change) and increasing renewable energy generation. Research by WWF and Ecofys has shown that combining the two can achieve 95 per cent of global energy demand being met by renewable sources by 2050 while adhering to what the climate science says is necessary to keep emissions within safe levels.[23] The development framework to get us there will also require adequate short- and medium-term goals to ensure we act in good time.

In 2011, renewable sources covered about 20 per cent of global electricity demand. If the world's governments are to meet their promise to limit the temperature rise to 2°C, research conducted by Greenpeace shows that renewable energy must grow to 65 per cent of global electricity production by 2035. It also shows that it is feasible for 94 per cent of the world's electricity to come from renewable energy sources by 2050.[24] Under such a scenario, nuclear energy could be phased out and the number of fossil fuel power plants, especially coal plants, could be drastically reduced.

To build widespread multi-stakeholder support, any future development framework needs to take into account the diverse interests at stake. Any transition needs to be fair and just, centred on the social, environmental, and economic pillars of sustainable development, and especially protecting those rendered vulnerable and marginalised, including women and girls, from negative impacts. It must also ensure their equitable participation/representation in decision-making, while simultaneously guaranteeing that benefits are shared equally. Examples include retraining workers currently within brown industries; ensuring that energy specifically to reduce women's and girls' reproductive work burden (e.g. child rearing, housework, cleaning and cooking) is prioritised and affordable; and evaluating the social,

[21] Greenpeace International. 2010. *Energy [R]evolution*. Amsterdam: Greenpeace International
[22] Heinrich Böll Stiftung and Wuppertal Institute. 2012. *Green Growth Unravelled: How rebound effects baffle sustainability targets when the economy keeps growing*. Berlin: Heinrich Böll Foundation
[23] WWF and Ecofys. 2011. *The Energy Report: 100% renewable energy by 2050*. Gland: World Wide Fund for Nature
[24] Greenpeace International. 2010. *Energy [R]evolution*. Amsterdam: Greenpeace International

environmental and economic impact of technologies across their entire life-cycle, encompassing the production supply chain.

The demand-side principle of energy conservation and of sufficiency – the idea of 'enough' – should be incorporated into the development framework, while supply-side goals or indicators should question for whom and for what is the energy being produced, and what impact will this have on other post-2015 developmental goals.

A "just transition" requires more than switching the fuel source; it requires addressing the underlying power structures controlling the current supply-driven energy system. Governments and international financial institutions will need to reassess the support the fossil fuel industry received both directly via the subsidies regime and indirectly. Action must be accompanied by increased accountability and transparency in how governments and multilateral institutions act on behalf on the industry in the name of public and national interest. Such a shift will depend on mobilising bottom-up, people-driven movements to hold our governments accountable in the face of corporate interests, calling for a demand-driven, democratically owned and operated energy system that adheres to environmental and social standards. This is something the members of Climate Action Network are engaged in, but can be greatly catalysed through being enshrined in the post-2015 UN development framework. Therefore any framework will be required to counter the current power of the fossil fuel industry and its resistance to change, which could see attempts to weaken goals, indicators, and definitions, as well as the promotion of false solutions that lack environmental integrity.

Achieving genuine solutions that uphold environmental integrity will require strict definitions on what constitutes sustainable energy, something that the UN Secretary-General's Sustainable Energy for All initiative has so far failed to do. Technology choices should be locally appropriate and adhere to clear social and environmental criteria that protect people, ecosystems, and the climate from negative impacts throughout the production supply chain. This means excluding, in particular, industrial bioenergy, large scale hydroelectric dams, and fossil- and nuclear-fuelled power plants from the definition.

Market-based solutions alone are insufficient to achieve the required transformation. A step-change is needed on behalf of both public and private actors, with a mobilisation of resources, R&D, innovation, and investment. The global community has done this historically in the name of *unsustainable* activities – e.g. during wartime – but the world needs to harness this creativity, resourcefulness, and determination for *sustainable* development. The public sector in particular can take on this role, while also creating the right enabling environment through regulation and incentives for the private sector and civil society. It can also be a leader through pioneering public procurement and spending programmes.

As a first step, direct and indirect support for the fossil fuel industry needs to be redirected towards the renewables industry in a way that protects the poor and does not undermine development. Rich, industrialised, countries must take the lead by redirecting subsidies for fossil fuel producers, while supporting poorer countries to make their own transition away from dirty energy.[25] Not shifting towards low-carbon infrastructure threatens current public and private investments as assets in the pipeline become 'stranded'.

[25] Nigeria suffers acutely from over-reliance on imported fossil fuels, to the extent it stymies economic growth. Despite its abundance of hydrocarbon natural resources (crude oil and gas), the country still imports over 90% of its petrol to meet domestic consumption needs, providing massive direct ($8 billion/year) and indirect subsidies. Yet petroleum only contributes to about 10% of total domestic energy consumption, with more than 80% coming from traditional biomass. See Heinrich Böll. 2012. *Green Deal Nigeria*. Washington: Heinrich Böll Foundation North America.

All policies that can deliver a "just transition" under the post-2015 framework should be examined, allowing governments and international agencies to choose the most appropriate path, but the goals and indicators should incentivise policy choices based on appropriateness rather than cost-effectiveness. Policies such as development-focused renewable energy feed-in tariffs should receive international support, having led to the largest deployment of renewable technology across the globe and currently being deployed in Africa for energy access.[26]

Civil society has played an important role to date in design, development, and delivery of energy policy and programmes, which the post-2015 framework should recognise and further utilise.

UNFCCC

The UNFCCC will be instrumental in driving the low-carbon transition, while also providing a framework for the transfer of technology and finance. The ongoing negotiations will determine how equitable and ambitious any deal is. The post-2015 framework should not conflict with but work alongside the UNFCCC process in its development of a climate deal. In fact, a strong low-carbon and climate resilient development framework will support a strong and effective 2015 global climate deal to be in force by 2020.

Learning from experience

Sustainable Energy for All: a more inclusive process

UN Secretary General Ban Ki-moon's *Sustainable Energy for All Initiative* (or SE4All)[27] has tried to create goals and indicators to achieve its three 2030 objectives: ensuring universal energy access; doubling the share of renewables in the global energy mix; and doubling energy efficiency globally. However, the initiative has been widely criticised by civil society for its corporate- rather than people-driven approach and its insufficient ambition in the face of climate change. This offers valuable lessons for any post-2015 framework. If SE4All is to achieve the wholesale energy transformation needed to deliver sustainable development in a carbon-constrained world, it must address current weaknesses and gaps in its approach by:

- Developing a definition of universal energy access, which focuses on delivery of energy services to poor men and women, employing demand-side indicators that focus on energy poverty alleviation, and the ability to access energy.
- Not remaining technology-neutral. Clean, i.e. low-carbon, efficient technologies must be privileged, especially for large-scale plans for generating grid electricity. Conversely, socially and environmentally-harmful technologies like coal, nuclear, large-scale hydro and industrial biofuels cannot qualify as 'sustainable' energy sources.
- Including civil society as one of the three pillars of SE4All along with government and private sector. SE4All must ensure the energy poor and civil society can participate fully in design and delivery of national action plans and in SE4All's international governance.

[26] Friends of the Earth, Heinrich Boll Ethiopia, World Future Council. 2012. *Powering Africa through Feed-in Tariffs: Advancing renewable energy to meet the continent's electricity needs*. Forthcoming, see advanced summary here: www.foe.co.uk/resource/reports/powering_africa_summary.pdf

[27] See: http://www.sustainableenergyforall.org/

- Ensuring that delivery models focus on linking the poorest to energy products and service markets are be prioritized.[28] This requires the substantial involvement of governments, donor agencies, NGOs and social enterprises.

3. Lessons from the MDGs and the shape of a future development framework

The UN Task Team report "Realising the Future We Want for All"[29] provides a good assessment of the strengths and weaknesses of the Millennium Development Goals (MDGs) and the lessons for the post-2015 UN development agenda. For example, tackling climate change and achieving sustainable development are seen as areas that were not adequately reflected in the MDG framework but should be featured prominently in the post-2015 development agenda. The UN Task Team also saw the fact that the MDGs did not provide guidance on how to address the root causes of poverty as a "*lost opportunity*". The MDGs have also neglected to address adequately the inequality within and between countries (MDG3, MDG8). Moreover, actions undertaken to address these MDGs have often failed to reach those in most need. In some cases women and girls, the very poor and those living far from cities have remained worse off than the rest, despite an improvement in national averages.

The MDGs are further criticised for being too focused on aid flowing from the developed to the developing world and failing to address the root causes of poverty adequately, for example, unsustainable and unjust resource consumption and production patterns. Meanwhile, other issues have been largely neglected because they did not feature in the MDGs at all, for example, universal access to energy or the promotion of human rights.

The new development framework can and should better integrate sustainable and equitable development objectives.

4. Our vision for the world we want

In the world we want, energy poverty has been eradicated and a "just transition" to a low-carbon world has stopped catastrophic climate change while creating sustainable economies and livelihoods that deliver development. Underpinning this is the fair and democratic control and ownership of our energy system, with equitable production and consumption of energy for socially useful purposes.

Meeting the energy needs for development in a way that does not drive catastrophic climate change demands a radically different vision of growth and development in the post-2015 period: one that is socially and economically inclusive and environmentally sustainable. The central challenge is breaking away from the current entrenched fossil fuel-based energy system and overturning the powers that control it, while ensuring the rewards of a sustainable energy system are shared by all equally.

This will require a fundamental shift leading to a major transformation to economic and development trajectories. The post-2015 framework needs to be one of the drivers to achieve that transformation in how economies and development work; it must have sustainable development at its heart. The challenge is to simultaneously tackle the inequality of access to and use of energy within and between countries, while ensuring the way it is delivered does not compromise the global commons, i.e. the atmosphere, clean air,

[28] International Institute for Environment and Development. 2012. *Linking Worlds*, London: IIED
[29] UN Task Team. 2012. *Realizing the Future We Want for All: Report to the Secretary-General*. New York: UNDP

fresh water and other shared natural resources. The main purpose of the post-2015 framework is to meaningfully integrate poverty and environmental sustainability concerns into a comprehensive development framework, an ambition that is impossible without universal energy access and the decarbonisation of energy systems.

5. Key principles underpinning the post-2015 framework

Integration – one process leading to one set of goals for sustainable development. The essence of sustainable development is to bring social, economic and environment spheres together. Therefore the processes to develop 'SDGs' should be wholly merged with those to agree 'development goals' after September 2013.

Universality – all countries need to take action: In order to address the global challenges we face, all countries need to have obligations, ownership and responsibilities through the new framework. Global action aimed at people most affected by poverty and injustice is required to achieve sustainable and equitable development. Inspired by the principle of common but differentiated responsibility and respective capability, contextualized national targets are needed to reflect the context of different countries.

Cross-cutting – mainstreaming environmental sustainability throughout the framework environmental sustainability should be a core element cutting across the post-2015 framework. The MDGs dealt with issues in 'silos', which undermined the ability to address environmental sustainability and energy in an integrated way. The new framework needs to embed environmental sustainability, climate change and social equality measures across the new set of goals to address energy.

Equality within and between countries – equal rights and equitable growth: economies need to acknowledge equal rights as the basis for sustainable development, move towards greater equity in access to natural resources and foster an inclusive, equitable and sustainable 'green economy'.

6. Questions for phase two of the consultation

- How does the post-2015 framework ensure that a goal for universal energy access really targets the reduction of energy poverty for poor women and men?
- How does the post-2015 framework encourage developing countries to leapfrog damaging energy technologies and to take a more sustainable energy pathway? What national level indicators would drive this?
- At a national level, how can energy access be integrated into the low-carbon development plans required by the UNFCCC?
- What global and national level indicators will drive an expansion of renewable energy and energy efficiency measures which are commensurate with an adequate climate goal of staying below 1.5^{o}C of global warming?
- What is the role of behaviour change in energy consumption, conservation and production so as to ensure energy delivers development needs without impacting further on climate change or environmental degradation?
- As well as driving good behaviour, how can we ensure that the post-2015 framework puts an end to unsustainable practice such as ineffective fossil fuel subsidies?
- What is the relationship between the post-2015 framework and SE4ALL, and how can we learn the lessons from SE4ALL such as the need to increase multi-stakeholder engagement at all levels of planning and implementation?