

THE NEW CLIMATE ECONOMY

The Global Commission on the Economy and Climate

BETTER GROWTH, BETTER CLIMATE

The New Climate Economy Report

EXECUTIVE SUMMARY

The Global Commission on the Economy and Climate was set up to examine whether it is possible to achieve lasting economic growth while also tackling the risks of climate change.

Its report seeks to inform economic decision-makers in both public and private sectors, many of whom recognise the serious risks caused by climate change, but also need to tackle more immediate concerns such as jobs, competitiveness and poverty. The report brings together evidence and analysis, learning from the practical experience of countries, cities and businesses across the world.

The report's conclusion is that countries at all levels of income now have the opportunity to build lasting economic growth at the same time as reducing the immense risks of climate change. This is made possible by structural and technological changes unfolding in the global economy and opportunities for greater economic efficiency. The capital for the necessary investments is available, and the potential for innovation is vast. What is needed is strong political leadership and credible, consistent policies.

The next 15 years will be critical, as the global economy undergoes a deep structural transformation. It will not be "business as usual". The global economy will grow by more than half, a billion more people will come to live in cities, and rapid technological advance will continue to change businesses and lives. Around US\$90 trillion is likely to be invested in infrastructure in the world's urban, land use

and energy systems. How these changes are managed will shape future patterns of growth, productivity and living standards.

The next 15 years of investment will also determine the future of the world's climate system. Climate change caused by past greenhouse gas emissions is already having serious economic consequences, especially in more exposed areas of the world. Without stronger action in the next 10-15 years, which leads global emissions to peak and then fall, it is near certain that global average warming will exceed 2°C, the level the international community has agreed not to cross. On current trends, warming could exceed 4°C by the end of the century, with extreme and potentially irreversible impacts. By building up greenhouse gas concentrations and locking in the stock of high-carbon assets, delay in reducing emissions makes it progressively more expensive to shift towards a low-carbon economy.

Future economic growth does not have to copy the high-carbon, unevenly distributed model of the past. There is now huge potential to invest in greater efficiency, structural transformation and technological change in three key systems of the economy:

- **Cities** are engines of economic growth. They generate around 80% of global economic output, and around 70% of global energy use and energy-related GHG emissions. How the world's largest and fastest-growing cities develop will be critical to the future path of the global economy and climate. But much

urban growth today is unplanned and unstructured, with significant economic, social and environmental costs. As pioneering cities across the world are demonstrating, more compact and connected urban development, built around mass public transport, can create cities that are economically dynamic and healthier, and that have lower emissions. Such an approach to urbanisation could reduce urban infrastructure capital requirements by more than US\$3 trillion over the next 15 years.

- **Land use** productivity will determine whether the world can feed a population projected to grow to over eight billion by 2030, while sustaining natural environments. Food production can be increased, forests protected and land use emissions cut by raising crop and livestock productivity, using new technologies and comprehensive approaches to soil and water management. Restoring just 12% of the world's degraded agricultural land could feed 200 million people by 2030, while also strengthening climate resilience and reducing emissions. Slowing down and ultimately halting deforestation can be achieved if strong international support is combined with strong domestic commitment to forest protection and rural income development.
- **Energy** systems power growth in all economies. We are on the cusp of a clean energy future. Coal is riskier and more expensive than it used to be, with growing import dependence and rising air pollution. Rapidly falling costs, particularly of wind and solar power, could lead renewable and other low-carbon energy sources to account for more than half of all new electricity generation over the next 15 years. Greater investment in energy efficiency – in businesses, buildings and transport – has huge potential to

cut and manage demand. In developing countries, decentralised renewables can help provide electricity for the more than one billion people without access.

Across all these systems, three “drivers of change” need to be harnessed to overcome market, policy and institutional barriers to low-carbon growth:

- **Raising resource efficiency** is at the heart of both growth and emissions reduction. In many economies, both market and policy failures distort the efficient allocation of resources while simultaneously increasing emissions. While subsidies for clean energy amount to around US\$100 billion, subsidies to polluting fossil fuels are now estimated at around US\$600 billion per year. Phasing out fossil fuel subsidies can improve growth and release resources that can be reallocated to benefit people on low incomes. A strong and predictable price on carbon will drive higher energy productivity and provide new fiscal revenues, which can be used to cut other taxes. Well-designed regulations, such as higher performance standards for appliances and vehicles, are also needed.
- **Investment in infrastructure** underpins modern economic growth. Low-carbon forms of infrastructure are essential to reduce current emissions trajectories. Yet many economies today are failing to mobilise sufficient finance to meet their infrastructure needs. This is not due to a shortage of capital in the global economy. It results, in many countries, from a lack of public financing capacity and the market perception that investments are high-risk. Financial innovations, including green bonds, risk-sharing instruments and products which align the risk profile of low-carbon



assets with the needs of investors, can reduce financing costs, potentially by up to 20% for low-carbon electricity. National and international development banks should be strengthened and expanded.

- **Stimulating innovation** in technologies, business models and social practices can drive both growth and emissions reduction. Advances in digitisation, new materials, life sciences and production processes have the potential to transform markets and dramatically cut resource consumption. But technology will not automatically advance in a low-carbon direction. It requires clear policy signals, including the reduction of market and regulatory barriers to new technologies and business models, and well-targeted public expenditure. To help create the next wave of resource-efficient, low-carbon technologies, public research and development (R&D) investment in the energy sector should triple to well over US\$100 billion a year by the mid-2020s.

Well-designed policies in these fields can make growth and climate objectives mutually reinforcing in both the short- and medium-term. In the long term, if climate change is not tackled, growth itself will be at risk.

Consistent, credible, long-term policy signals are crucial.

By shaping market expectations, such policy encourages greater investment, lowering the costs of the transition to a low-carbon economy. By contrast, policy uncertainty in many countries has raised the cost of capital, damaging investment, jobs and growth. In the long run, there is a significant risk that high-carbon investments may get devalued or “stranded” as action to reduce greenhouse gas emissions is strengthened.

The quality of growth matters, as well as its rate.

Many low-carbon policies deliver multiple other benefits, including greater energy security, less traffic congestion, improved quality of life, stronger resilience to climate change and environmental protection. Many can help reduce poverty. In the 15 countries with the highest greenhouse gas emissions, the damage to health from poor air quality, largely associated with the burning of fossil fuels, is valued at an average of over 4% of GDP. Many countries are now recognising the costs of a high-carbon model of development.

Managed well, the additional investments in infrastructure needed to make the transition to a low-carbon economy will be modest.

The infrastructure requirements for a high-carbon economy, across transport, energy, water systems and cities, are estimated at around US\$90 trillion, or an average of US\$6 trillion per year over the next 15 years. By combining renewable energy with reduced fossil fuel investment, more compact cities, and more efficiently managed energy demand, low-carbon infrastructure will increase investment requirements by only an estimated US\$270 billion a year. These higher capital costs could potentially be fully offset by lower operating costs, for example from reduced expenditure on fuel. Investing in a low-carbon economy is a cost-effective form of insurance against climate risk.

The report proposes a 10-point Global Action Plan of key recommendations. This asks decision-makers to:

1. **Accelerate low-carbon transformation by integrating climate into core economic decision-making processes.** This is needed at all levels of government and business, through systematic changes to policy and project assessment tools,



performance indicators, risk models and reporting requirements.

2. **Enter into a strong, lasting and equitable international climate agreement**, to increase the confidence needed for domestic policy reform, provide the support needed by developing countries, and send a strong market signal to investors.
3. **Phase out subsidies for fossil fuels and agricultural inputs, and incentives for urban sprawl**, to drive more efficient use of resources and release public funds for other uses, including programmes to benefit those on low incomes.
4. **Introduce strong, predictable carbon prices** as part of good fiscal reform and good business practice, sending strong signals across the economy.
5. **Substantially reduce capital costs for low-carbon infrastructure investments**, expanding access to institutional capital and lowering its costs for low-carbon assets.
6. **Scale up innovation in key low-carbon and climate-resilient technologies**, tripling public investment in clean energy R&D and removing barriers to entrepreneurship and creativity.
7. **Make connected and compact cities the preferred form of urban development**, by encouraging better-managed urban growth and prioritising investments in efficient and safe mass transit systems.
8. **Stop deforestation of natural forests by 2030**, by strengthening the incentives for long-term investment and forest protection, and increasing international funding to around US\$5 billion per year, progressively linked to performance.
9. **Restore at least 500 million hectares of lost or degraded forests and agricultural lands by 2030**, strengthening rural incomes and food security.
10. **Accelerate the shift away from polluting coal-fired power generation**, phasing out new unabated coal plants in developed economies immediately and in middle-income countries by 2025.

The first six recommendations provide the conditions necessary for a strong and credible framework to foster low-carbon and climate-resilient investment and growth. The last four point to vital opportunities for change which can drive future growth and lower climate risk in cities, land use and energy systems.

Implementation of the policies and investments proposed in this report could deliver at least half of the reductions in emissions needed by 2030 to lower the risk of dangerous climate change. With strong and broad implementation, rapid learning and sharing of best practice, this number could potentially rise to 90%. All the measures would deliver multiple economic and social benefits, even before considering their benefits to climate. Further action will also be required. Some of this, such as the development of carbon capture, use and storage technologies, will have net costs to be borne solely for the purpose of reducing climate risk. Beyond 2030 net global emissions will need to fall further towards near zero or below in the second half of the century. But the costs will be much lower and the opportunities for growth much greater if the foundations of a low-carbon economy are laid now.

A strong and equitable international agreement is essential to support ambitious domestic action.

Developed countries will need to show leadership through their own strong emissions reductions, and by mobilising financial and technological support for developing countries. At the same time, developing countries already account for around two-thirds of annual greenhouse gas emissions. Global reductions on the scale required will therefore not be possible unless all countries play their part.

The shift towards a low-carbon, climate-resilient path of growth and development will not be easy, and governments will need to commit to a just transition.

Not all climate policies are win-win, and some trade-offs are inevitable, particularly in the short term. Although many jobs will be created, and there will be larger markets and profits for many businesses, some jobs will also be lost, particularly in high-carbon sectors. The human and economic costs of the transition should be managed through support for displaced workers, affected communities and low-income households. Strong political leadership and the active participation of civil society will be needed, along with far-sighted, enlightened business decisions.

The wealth of evidence presented by the report shows that there is now huge scope for action which can both enhance growth and reduce climate risk. Leading businesses, cities and countries are showing how this can be done. The world's economic leaders face a remarkable opportunity to set the world on the path to sustainable prosperity. The prize is immense, and the moment of decision is now. We can achieve both better growth and a better climate.

The Global Commission on the Economy and Climate, and its flagship project The New Climate Economy, were set up to help governments, businesses and society make better-informed decisions on how to achieve economic prosperity and development while also addressing climate change. To read the full *Better Growth, Better Climate* report visit www.newclimateeconomy.report. For media and other inquiries, please email info@newclimateeconomy.net.