

IEA STATEMENT ON SUSTAINABLE DEVELOPMENT

Energy and Sustainability: Key Features

1. Energy has deep and broad relationships with each of the three pillars of sustainable development – the economy, the environment and social welfare. It remains a strategic commodity: social and economic development can be attained only so long as a secure, reliable and affordable supply of energy is ensured. Energy services help to fulfil basic needs such as food and shelter. They contribute to social development by improving education and public health and, overall, help alleviate poverty. Access to modern energy services can be environmentally beneficial, for example, by reducing deforestation and decreasing pollution through more efficient energy use.

2. These different dimensions are intrinsically linked. Sustainable development is dependent upon balancing the interplay of policies and their effective implementation to achieve economic, environmental and social needs. Economic growth requires a secure and reliable energy supply, but is sustainable only if it does not threaten the environment or social welfare. Environmental quality is more readily protected if basic economic needs are also met, and social development needs both economic growth and a healthy environment. Sometimes the policies are mutually reinforcing and sometimes they are in conflict, and trade-offs will often need to be made. Lower fuel prices widen access to energy, but also encourage inefficient utilisation of energy resources and accelerated resource depletion. Conversely, if energy prices are raised too quickly in an effort to combat environmental concerns, energy may become too costly and thus placed beyond the reach of those who need it most.

3. The path to a more sustainable energy future is not static. It must be continuously redefined and rebalanced with revised forecasts, reassessment of progress, identification of new problems and the development of new technical solutions and technologies. All countries – developed and developing – will need to design their own policy mix; it is clear that national circumstances will affect the scope for action and the appropriate policy choices in and between countries. The policy makers' task is to assess the risks to, and from, today's energy systems. They must determine what changes would advance economic, social and environmental objectives. Policymakers must look to the long term, taking action today to avoid longer-term social, economic or environmental disruptions, while retaining flexibility to alter course when the existing path proves to be unsustainable.

Are we on a sustainable energy path? Not unless we make considerable changes.

4. Projecting the current energy situation and energy policies into the future suggests growing pressures on the global economy and the environment. Governments need to develop policies to address the projected 57% increase in the predominantly fossil-fuel based global energy demand over the next 20 years. Governments also need to take action to modify longer-term trends in greenhouse gas emissions within the framework of the United Nations Framework Convention on Climate Change. Policies will need to take into account that the energy demand of non-OECD countries will soon surpass that of OECD countries, and that developed countries' already high levels of energy demand will continue their upward trend.

Policies will also need to address potential decline in energy security as the sources of oil and gas production become more concentrated in regions of geopolitical uncertainty. Capital markets and governments will need to seek ways to mobilise the enormous resources to meet growing energy needs.

5. Sustainability demands that we seek to change present trends. The challenge is to fuel world-wide economic growth with a secure and reliable energy supply, without despoiling our environment. It is possible. Energy supply needs to be further de-carbonised, diversified and the energy intensity of economic growth reduced. Global energy security can be enhanced through collective efforts and efficient but well-regulated markets can make energy affordable.

Towards a Solution

6. The transition to a sustainable energy future will be complex and will take time. We need to change not only the structure of the energy sector, but also behaviour in our societies and economies.

7. Consistent with the Shared Goals of the International Energy Agency which call for policies that balance energy security, economic growth and environmental protection, Member Governments of the IEA seek to create the conditions in which the energy sectors of their economies can make the fullest possible contribution to sustainable development. These include:

- *Safeguarding energy supplies* through diversification and through co-ordination of the use of flexible response mechanisms in the event of supply disruptions.
- *Promoting further improvements in energy efficiency*, along with further development and diffusion of non-fossil fuel technologies, including renewable energies.
- *Ensuring that energy markets operate in a competitive and transparent manner with minimum distortions*. As prices shape behaviour and technology, price signals reflecting full costs should reach consumers. This will entail the gradual elimination of environmentally harmful subsidies and internalisation of externalities (such as environmental costs and benefits), ideally through the use of market based instruments. Reduction of trade and tariff barriers will help markets operate openly and competitively and improve confidence in the marketplace.
- *Creating a stable framework for decision-making, one that includes clear signals to the market*. Incentives, regulatory measures and standards will be needed to stimulate sustainable choices in a marketplace that is still economically imperfect.

- *Continuing to liberalise energy markets with frameworks to protect the environment and enhance social welfare.* These frameworks should be stable and predictable, and promote open and competitive energy infrastructure.
- *Encouraging the systematic introduction of the best technological solutions where energy investments are made.* Capital stock turnover and new additions to the capital stock offer important opportunities for increasing the use of cleaner, more efficient technology.
- *Participating in a global effort to provide electricity for those currently without access,* through the development and diffusion of technologies and the development of stable legal, fiscal and energy policy frameworks, particularly in developing countries, that stimulate the flow of private capital.
- *Ensuring high safety standards* in the operation and maintenance of energy equipment, plants and infrastructures, and putting in place appropriate mechanisms to respond to potential accident or failure.
- *Sponsoring energy research and development, information exchange (including data and statistics) and dissemination* with a view to encouraging commercial applications and changes in consumer behaviour. Transparent decision making processes are required with broad policy-maker participation -- for example, from transport, industry, trade, environment and finance -- as well as wider stakeholder involvement.