

THE CHARTER FOR SCIENCE AND ENGINEERING

ARTICLE 1 PEOPLE

The most important factor in the success of the United Kingdom is its people.

- * Highly trained *people* are the key to the economy of the future and the Nation's skills base is our most valuable resource. The next Government and the next Parliament need to foster an environment of high level training and lifelong learning and to ensure that there are enough fully trained people in all areas.
- * We need policies that promote equal opportunities for all people to maximise their scientific and engineering potential.
- * The next Parliament and the next Government must address important issues such as the career paths of scientists and engineers since there is much still to be done to ensure that the UK continues to attract and retain the most highly qualified scientists and engineers.
- * We need a well informed population that can participate in future debates about science and engineering issues. Science and engineering issues are too important to be left to scientists and engineers alone.
- * The science and engineering community is strongly committed to improving the quality of life of all people in the United Kingdom.

ARTICLE 2 ECONOMY AND WEALTH CREATION

The contribution of science and engineering to the economy of the United Kingdom is immense.

- * We need policies that enable the UK to compete successfully in the global market place and to benefit from the skills of highly trained people attracted to work in the UK.
- * We need the Government to continue to promote a climate that fosters innovation and technology transfer and encourages entrepreneurs, and those that finance them, who are prepared to take risks.

ARTICLE 3 INVESTMENT

Investment in UK science and engineering is vital to preserve and enhance the Nation's capacity to create wealth.

- * The science and engineering community recognises the improvements that have been made in the public funding of science and engineering in the lifetime of the current Parliament.
- * This welcome improvement must be both sustained and strengthened over the lifetime of the next Parliament.
- * The next Government will need to create the climate which will enable industry to invest in science and engineering to create wealth.

ARTICLE 4 CULTURE

Science and engineering are integral to the culture of our national life.

- * The next Parliament and the next Government should promote science and engineering as part of the Nation's culture.
- * The science and engineering community recognises that it must do more to understand the public's concerns and engage in a constructive dialogue.

ARTICLE 5 EDUCATION

The future of science and engineering in the United Kingdom depends crucially on the supply of highly trained people and a well informed population.

- * The next Government and the next Parliament must urgently tackle the supply and training of specialist science teachers in schools.
- * They will need to improve the extent and quality of statistical data and information about the state of the teaching profession including science teachers.
- * They will need policies to tackle the decline in the number of specialist science teachers and be aware that this issue is getting more and not less urgent with the ageing profile of the current generation of teachers.
- * They will need to address the provision of careers advice which must be of the highest standard possible.
- * The next Government will need to increase the rewards of teaching as a career both in schools and in further and higher education.

ARTICLE 6 HEALTH AND THE QUALITY OF LIFE

The contribution of science and engineering to human health is absolutely vital.

- * The 20thC led to greatly improved health and increased life expectancy - and this now presents the 21stC with one of its greatest health challenges: the ageing of the population and all its consequences; and improving the quality of life.
- * Science and engineering will also be needed to re-fight vital battles against disease and infection that were once optimistically thought to be over.
- * The development of our understanding of the Human Genome – and the research now dramatically increasing our knowledge of the post-Genomic world – will have profound consequences that must be publicly debated.
- * The next Parliament and the next Government will have to tackle new opportunities and new challenges – scientific, ethical, and political – and the science and engineering community is ready to assist this process in any way it can.

ARTICLE 7 ENERGY AND ENVIRONMENT

The supply of energy will become a much bigger issue during the lifetime of the next Parliament than it already is now.

- * Environmental issues will increasingly dominate the national and international agenda – including everything from *sustainability* and *climate change* to *water supply* and *energy policy* - and science and engineering will continue to be an essential part of the solution to the problems that the World faces.
- * The UK needs policies and principles that will develop its role in putting sustainability into practice and increasing its potential for sharing clean and low emission technologies with other countries around the world or exporting them.
- * The next Government will need to preserve, protect and defend *Biodiversity* and develop policies that sustain it.

ARTICLE 8 GLOBALISATION

Science is truly international and knows no boundaries. Science was global long before the term 'globalisation' was coined.

- * International co-operation is essential – whether this is achieved through the UK's role within the European Union, the United Nations, or by collaboration between scientists and engineers worldwide – and will continue to grow.
- * The next Parliament and the next Government will need to support policies that actively promote this internationalism including the international mobility of scientists and engineers and bringing international science facilities to the UK.
- * Scientists and engineers can complement the actions of the Government and they can use their international networks to foster global co-operation in ways which Governments cannot and by helping to end world poverty.
- * The challenges that we face are global – and so are the solutions.

ARTICLE 9 PARLIAMENT

The next Parliament will need to devote more time to examining and debating issues involving science and engineering. The science and engineering community is committed to providing assistance to Parliament.

- * The House of Commons should reintroduce an identifiably separate place for Science on the Oral Questions rota so that MPs can be guaranteed time to raise science and engineering issues once in each Questions cycle.
- * The two Select Committees on Science and Technology – one in each House of Parliament – are doing an excellent job and we will continue to assist them and the other select committees in every way we can.
- * Parliament should insist on its right to debate all Science & Technology Select Committee reports (and those of other committees) so science and engineering issues can be properly considered in the light of the Government's response.
- * We strongly support, and will continue to co-operate with, the valuable work of the *Parliamentary Office of Science and Technology*, the *Parliamentary and Scientific Committee* and the *Associate Parliamentary Engineering Group*.

ARTICLE 10 GOVERNMENT

Governments need access to the best possible advice and the science and engineering community stands ready to help by offering independent expertise.

- * The science and engineering community is committed to serving the public interest by continuing to provide independent assistance and advice to the next Government over the course of the next Parliament.
- * We welcome the Cabinet Office Guidelines on consultation – which we hope the next Government will uphold - and we will follow them when we provide the Government with scientific advice.

This Charter represents a broad consensus of opinion among many organisations but cannot by definition be the exact opinion of any one organisation. It was prepared for the "Science and the General Election" event at the House of Commons.