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Davis Auditorium, Schapiro Center



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HARNESSING THE ENERGY

Today's society is faced with one of the biggest challenges we have ever had to overcome. We must urgently reduce our carbon emissions while at the same time keeping the lights on and ensuring quality of life. And we must do this within the context of a changing energy sector and a fast expanding population that will see demand for resources continue to increase. Compounding the issue is the urgency with which this must be achieved. A quarter of our electricity generating capacity is coming offline in the next decade and must be replaced by low carbon alternatives, many of which rely on technologies that are still in infancy. There is no two ways about it, our future, and the future of the planet, depends on securing access to clean, affordable and reliable sources of power. Meeting our carbon emissions target will be the greatest peacetime mobilisation of society in our time.

For any nation the role of the civil engineer will be as crucial to succeeding in this task as it was to industrialisation in the 19th century. I believe it is a three-pronged challenge that faces civil engineering today - to develop a strong, world-class skills base; to work with Government to achieve the right investment and regulatory environment; and to meet carbon reduction goals that require a massive overhaul of our infrastructure networks, most notably the decarbonisation of the energy sector. It is about harnessing energy, at all levels. We must harness new sources of sustainable energy from our natural resources but we must also harness the skills and talent of our engineers and future engineers to maximise the potential of the resources available to us. Finally we must harness the energy of our partnerships with industry and Government so that the frameworks are in place to achieve a prosperous, sustainable future. To do this we need innovation and we need better understanding - particularly of the interdependencies between infrastructures. We cannot think only about decarbonising the energy sector, we must consider for example how energy is linked with other resources that are essential to life, such as water, and how both of these are inextricably linked with other fundamental needs such as food.

What I hope this is illustrating is that civil engineering can create a better world but we have to be aware of these interdependencies and the importance of joined-up, long term planning. This presents challenges to civil engineers, but to Government and to the wider industry as well. The challenge to industry is to speak with 'one voice', being united in driving forward the priorities on which there is consensus - harnessing energy, sustainable growth and resilience. The challenge to the profession is to nurture and retain the talent that we will need in coming years. It is vital that we emphasise the ability of our profession to change the world. We need to inspire young people to look at engineering as the 'career of choice' and excite them to continue learning throughout their careers. The challenge to Government is to take action.

Historically, the United Kingdom has suffered from a short term approach to infrastructure which has been "timid, uncoordinated, incremental and wasteful in supporting sustainable growth in the economy". These are not my words; they are from the foreword of the Treasury's National Infrastructure Plan (NIP). Significant steps forward have been made - the publication of the first ever NIP being a crucial one, and equally important, the acknowledgement of infrastructure as a key strand in the Plan for Growth. However Government must now deliver on its promises, ensuring a successful move from 'the rhetoric' into action.

I may only have one year in my role of President but I like to see this as another form of harnessing energy - the joint energy of previous presidents, of our profession and of our members, to achieve a better world.