**Let’s Save the Earth.**

Are future generations entitled to the same environmental stability and biodiversity that has been afforded our generation and hundreds of generations before us? Recently, a group of twenty-two eminent scientists from seven different nations addressed this question. They concluded that, to avoid severe and persistent impacts from long-term climate change, there is a need for policies that lead to a complete decarbonization of the world's energy system. What is clear is that decisions being made today will have profound and permanent consequences for future generations as well as for the planet; yet future generations are not part of today's decision making, and today's decision makers do not have to live with the consequences of their decisions. Discount rates may describe the economic view of how much we are willing to pay, but they do not answer the deeper moral and ethical questions of how much we should pay.

Science can never be used to answer a question concerning the importance of intergenerational equality, morality or ethics, nor can it ever be used to prescribe a particular policy; these are value judgements. In The end, the formulation of policy requires engaging a broad range of stakeholders -- the citizens of our planet, representing an incredible diversity of religious, political, cultural, economic, and ethical viewpoints. It also requires dealing with ethical, political, legal, financial and social issues, including reasonable application of the precautionary principle. A second important implication emerging from their results is that to avoid severe impacts, there is a need for policies that lead to a new global energy system that has net-zero or net-negative CO2 emission, and not simply for policies aimed at near-term emissions reductions.

A net-zero emissions energy system, however it develops, will look completely different from our current energy system. A complete transformation is required in what some have termed the fourth industrial revolution. The first two revolutions involved mechanization and electrification. The third revolution, the advent of the computer, transformed our ability to transmit and process enormous volumes of data, and now affects almost every aspect of our lives. The fourth revolution must lead to decarbonization of current energy systems. Transformation to net-zero emissions will require that resources must be managed in a completely different and sustainable way, entailing profound changes not only in energy generation, but also in land use and agriculture. The term fourth industrial revolution not only indicates the scale, scope, and long-term character of the task but also carries an optimistic message. The previous three industrial revolutions created new jobs, new wealth and shifted power structures. There is no reason why the fourth industrial revolution should not yield similar opportunities for growth and positive change.