

# Imagination

# Breakthrough

**JEFFREY R. IMMELT** calls for a new green technology revolution and describes why it makes sense for business to lead it

It is disappointing that our nation, the United States—which has always seized new opportunities, created new markets and developed new technologies—is failing to push the envelope on cleaner power and environmental technology. Disappointing, too, is our failure to develop a coherent energy policy, which has meant that, nationally, we have not realized our full potential.

It is time for the private sector to assume its rightful place as a major catalyst for environmental change. For far too long people in it have viewed protecting the environment as a no-win business. We believe that the growing market for environmental technology can get us where we need to be.

But industry cannot get there alone. We need to work in concert with the government and environmental groups to promote and reward leadership. We believe that the government can provide leadership by clarifying policy, committing to “market mechanisms,” and promoting diverse energy sources.

## Lasting value

This starts with clarity and certainty in energy and environmental policy. Even with the technology at hand, breakthroughs of truly lasting value will only come if government, industry and advocates create certainty on the way forward and commit the intellectual and financial capital needed to find solutions.

There is no time to wait – because tomorrow is now. We are living in a carbon-constrained world where the amount of carbon dioxide we emit must be reduced. We can address that reality head-on, driven by innovation, or by getting pulled into it through regulation.

Industry’s responsibility is to lead, and we must set aggressive and meaningful targets, which raises the stakes and brings forth our best. We must have a proactive business policy or we will get a reactive government policy.

We believe in the power of market mechanisms to address the needs of the environment. However, we think that goals, supported by market incentives, drive result

We must drive fuel diversity. Just as no one single fuel source or technology can achieve reliable supply and stable pricing, no single fuel can provide the “silver bullet” on greenhouse gas emissions or ensure energy security. U.S. policy should recognise the necessity for proven technologies in the near-term, and establish incentives for development of new ones in the long run.

Nuclear energy is a proven asset. GE has been in this business for 40 years—and we don’t stick with the theoretical for



decades at a time. We have seen successful technology evolve and we believe firmly in its future. Nuclear is emissions-free. It strengthens our resource diversity and – by strengthening our energy security – bolsters our national security.

By combining the innovative spirit of its entrepreneurs with a focused and forward-looking policy approach, America can lead in the energy sector. We are optimistic about America’s ability to emerge ahead of the pack. But we must act now.

## Scarce resources

GE is making a new commitment to our customers around the world to define the cutting edge in cleaner power and environmental technology. We have taken a long look around and this is what we see: diminishing domestic oil and natural gas reserves...our continued dependence on foreign sources of energy...increasingly scarce resources like water in an ever more populated world...and the signs of global climate change. This convergence of forces demands nothing less than a revolution in technology.

We plan to lead this revolution and help open the door to a new age. That requires a new “imagination breakthrough.” We call it ecomagination.

Ecomagination is a new, concrete commitment by GE to develop and drive the technologies of the future that will protect and clean our environment—innovation to promote energy efficiency, lower emissions, reduce our use of fossil fuels and increase the supply of useable water. Ecomagination is a growth strategy, driven by our belief that applying technology to solving problems is good business. And ecomagination is a commitment to invest billions over the next decade in creating cleaner power and water technology and to improve our own environmental performance as a company.

These are daring goals, but we believe we can help improve the ►



Mark Edwards / Still Pictures

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environment and make money doing it. We see that green is profitable.

With *ecomagination*, we make five commitments.

First, we commit to double our technical investment in energy efficient and environmentally friendly products to \$1.5 billion by 2010. This will lead to a constant stream of new products flowing into this growing field. Our broad portfolio of *ecomagination* products includes wind turbines that harness enough wind to generate power for millions of people, a locomotive that saves nearly 200,000 gallons of fuel throughout its lifetime, and an aircraft engine that is 15 per cent more energy efficient.

### **Low emissions**

Our second commitment is to make our customers true partners in the *ecomagination* programme. We will target technologies that significantly improve operating and environmental performance, while demonstrating their value in hard economic terms, and providing financing that supports the development and application of new technologies.

Clean coal technology is a great example. This idea has been around for decades, but has been too expensive. Our approach is to work with our customers and bring a system to market that creates value, uses coal with low emissions, and is economically competitive.

Third, we commit to improve our own environmental performance. We are going to invest every year between now and 2012 in order to improve the energy efficiency of our operations by

30 per cent and reduce our worldwide greenhouse gas emissions by one per cent. We believe that 70 per cent of this investment will be in our own technology.

A one per cent reduction may not sound like much. But GE is a growth company, and if it were to continue to grow as we project, our emissions would go up more than 40 per cent by 2012.

Fourth, we commit to increase our sales and profits based on this initiative. We are investing in environmentally cleaner technology because we believe it will increase our revenue, our value and our profits. We are launching *ecomagination* not because it is trendy or moral, but because it's good for business.

Today our revenue from *ecomagination* products is \$10 billion. This will rise to \$20 billion by 2010, generating organic growth of 15 per cent. Our revenue growth will take place across the company – in energy, transportation, water, consumer products and materials.

### **Clear goals**

Fifth, and finally, we pledge to inform the public of our progress. As part of our overall corporate effort to improve transparency, we pledge to issue an annual citizenship report on how we are meeting our own environmental goals.

Imagine a future where cleaner, quieter aircraft engines carry us farther and faster. Where tiny fuel cells power an entire neighbourhood or industrial park. Where mercury free lamps illuminate our highways and streets. And where new technology brings clean drinking water to millions who have never known it.

Some will call these ideas impossible and our commitments ambitious. But at GE we believe that ambition is the key to innovation. As our founder, Thomas Edison, said, "I find out what the world needs, then I proceed to invent it." Today the world needs the thousands of scientists, engineers and dreamers who are his heirs.

No one knows what the future will hold. But we know today that there is a vast new profitable market in cleaner technology. We know that protecting our environment and building our economy go hand in hand. We know that green is profitable.

We also know that there is a global need for increased innovation. Europe has been a leader in renewable energy. They have set clear goals, including a plan to double the share of renewable energies in gross domestic energy consumption from the present 6 per cent to 12 per cent by 2010. China offers immense business opportunities. It has 16 of the 20 most polluted cities in the world, and its government has set aside \$85 billion for environmental spending. This will require substantial commitments in new power generating technology and desalination. GE investors will be rewarded by our leadership in *ecomagination*.

*Ecomagination* is about what we can do right now – and what we will be able to do in the future. We are working to imagine the world of tomorrow. We are confident that we will succeed. GE's corporate focus is "Imagination at Work." We believe our ability to imagine is as limitless as our potential to achieve ■

*Jeffrey R. Immelt is Chairman and Chief Executive Officer of General Electric.*