

An American Renewal

GE's commitment to American innovation

As prepared by Jeff Immelt, Chairman and CEO, GE
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imagination at work

Thank you all very much. I come to the Economic Club because of your kind invitation and come to Michigan because of its proud heritage and its promising future.

I believe that Michigan can partner with GE to create the next wave of economic progress. That's why earlier today, I stood with your governor and U.S. senators to announce a major new investment in your state.

General Electric's Manufacturing Technology and Software Center will be built right here and bring over 1,100 new jobs to Michigan. The engineers in our Van Buren Township facility will be developing technologies that can change people's lives – clean energy, better transportation, affordable healthcare. Workers who might have made cars in the past will be bringing GE technology to life rebuilding our economy.

The people of this great state have been told that the decline of their manufacturing base was inevitable. I reject that pessimistic view. I believe that good jobs can again return to Michigan and in manufacturing centers across America.

Change can come, but it requires a new way of thinking. It requires a clear and determined plan of action. It requires a stiff dose of candor about the troubles we face, many of which we brought on ourselves. It requires leaders throughout the economy to take command of events.

The world has been reset. Now we must lead an aggressive American renewal to win in the future.

I am proud to work at GE, a great American company since the 1800s. Since I joined the company in 1982, GE has earned \$230 billion – more than any enterprise in the world. We have paid \$130 billion in dividends to our investors – again, more than any company in any country. Today, we have over 300,000 global employees with about half here in the United States.

We are the oldest remaining company in the Dow Jones Industrial Average. This is not because we are a perfect company; it is because we adapt. Through the years, we have remained productive and competitive. We have globalized the company, while investing massive amounts in technology, products and services. We know we must change again.

When the current economic unraveling began, many hoped it was merely a harsher version of past cycles. But now it's clear that a serious and difficult transformation is at hand, not just another turning of the wheel.

Think about it: For the first time since 1940, the economic output of all nations combined will actually shrink. Many scholars are at work on an extended analysis of the financial

crisis. Yet it's not too soon to draw some conclusions about what went wrong, and what leaders can do to set things right.

Throughout my career, America has seen so much economic growth that it was easy to take it as a given. We prospered from the productivity of the information age. But, we started to forget the fundamentals and lost sight of the core competencies of a successful modern economy. Many bought into the idea that America could go from a technology-based, export-oriented powerhouse to a services-led, consumption-based economy – and somehow still expect to prosper.

That idea was flat wrong. And what did we get in the bargain? We've seen a great vanishing of wealth. Our competitive edge has slipped away, and this has hit the middle class hard.

As a nation, we've been consuming more than we earn, saved too little and taken on far too much debt. Growth in research and development has slowed. Our country has made too little progress on some of the defining challenges of our time – like clean energy and affordable health care. Our budget and trade deficits have reached levels that are clearly not sustainable.

While some of America's competitors were throttling up on manufacturing and R&D, we de-emphasized technology. Our economy tilted instead toward the quicker profits of financial services. While our financial services business has performed well, I can't tell you that we were entirely free of these errors. We weren't.

What has been the impact? Unemployment is at the highest point in 26 years. And, as a percentage of S&P 500 earnings, financial services expanded from 10 to 45 percent over a quarter-century.

Compensation systems have fallen out of balance. You know something is wrong when a mortgage broker is pulling down \$5 million a year while a Ph.D. chemist is earning \$100,000. Average real weekly wages have declined since 1980, meaning that we have been unable to provide a rising standard of living for the majority.

Leaders missed many opportunities to add to the capabilities of America. In 2000, the U.S. had a positive trade balance of high-tech products. By 2007, our trade deficit of the same products reached \$50 billion. We have already lost our leadership in many growth industries, and other new opportunities are at risk. Trust in business is badly shaken, and it is going to take awhile to get it back.

This is unacceptable. Our country was built on great undertakings that brought out the best in government and business alike. But that kind of vision, that kind of focus on essential national goals, has been missing.

So let's work on a new strategy for this economy. We should clear away any arrogance, false assumptions, or a sense that things will be "O.K." just because we are America. Rather, we should dedicate ourselves to be the most competitive country in the world.

GE believes in the benefits of free markets. Some of our greatest prospects are found in places like China and Brazil. More than half of our revenue is outside the U.S. But despite our global aspirations, GE shares a vital responsibility for the long-term competitiveness of this country.

Recently my colleague Peter Loescher, the CEO of Siemens, extolled the importance of Germany as an exporting country. In my career, I have never heard an American CEO say that the United States should be leading in exports. Well, I am saying it today: This country ought to be, and we can be, not just the world's leading market but a leading exporter as well.

GE plans to lead this effort. We have restructured during the downturn, adjusting to the market realities. At the same time, we are increasing our investments. We plan to launch more new products during this downturn than at any time in our history. We will sell these products in every corner of the world. We are creating a better company coming out of this reset.

Similarly, America needs a dramatic industrial renewal. We have to move forward on five fronts.

FIRST: We need to significantly increase investment in research and development from an all-time low of two percent of the GDP. The only way to sustain a real competitive advantage is to invest in the needs of tomorrow.

GE has never forgotten the importance of R&D. Each year, we put six percent of our industrial revenue back into technology – so much that more than half of the products we sell today didn't even exist a decade ago. As a consequence, we are a huge exporter.

The federal government has always been an important contributor to innovation. But federally supported R&D, as a percentage of GDP, has been declining since 1985. In the stimulus bill, we have increased basic research funding for the first time in recent memory. This trend should continue. But we need other improvements as well.

Engineering has been underemphasized in this country for a generation. Our high schools fall far short of the mark in science and math. This helps explain why only four percent of American college students have chosen engineering as a profession. If we're going to be serious about innovation in this country, then we've got to do a much better job training the next generation of innovators. At GE, we've dedicated 40 percent of our philanthropic giving – about \$150 million over the past five years – to improving math and science capabilities in targeted city schools.

At the same time, American companies must reinvigorate their technical efforts. GE is a big funder of basic and applied research. We have filed more than 20,000 patents this decade. In addition, we have partnered with dozens of start-ups, adding to our technical capability.

Technology is what makes people and countries feel wealthy. Technology is also the source of competitive advantage. In the past 25 years, GE has invested \$20 billion in building better aircraft engines. We have created high-paying jobs and are a major exporter. Just last week, we received the largest order in our history from Etihad Airways, based in Abu Dhabi. The world demands this technology, and we're filling the need.

An American renewal will be built on technology. GE's R&D budget has not been cut. And that's a course of action I'd recommend to every company that wants to get through the economic crisis even stronger than before.

SECOND: America should get busy addressing the two biggest global challenges – clean energy and affordable health care. In the future, we can have far greater energy diversity and security, while reducing global warming. In the future, we can also reduce health care inflation. All of this is within our reach.

For decades now, the most vital of commodities has been largely left to the control of others. The price for these commodities will rise due to increased consumption in emerging markets. We're in for terrible risks if we follow this path of increased dependency. At the same time, the science of climate change has become more certain. It's essential that we create a position of affordable, clean and secure energy for America.

In 2005, we launched an initiative we call Ecomagination. We've made a business decision to focus all the innovative powers of GE to solving the problems of energy use and environmental stewardship.

We've brought to market 75 new products to help our customers benefit from renewable technology through serious reductions in the cost and use of energy. We've dramatically reduced our own carbon footprint. In only four years' time, our revenues from environmentally friendly technology have nearly quadrupled to \$17 billion.

We have focused our engineers on innovation in renewable energy, biofuels and battery technology. We are a leader in Smart Grid technology, which will empower consumers to save on their energy bills.

We believe that technology will help us make better use of old energy sources. In Indiana, GE and Duke Energy are building the largest-scale coal gasification plant in the world. We are also making a substantial investment in nuclear power. To provide clean, low-cost energy in a growing economy, I believe that nuclear and coal power will be absolutely essential.

Solving the clean energy challenge will create broad economic opportunity in this country. Our ecomagination initiative has created tens of thousands of jobs at GE and in our supply chain. If the U.S. would drive a renewable energy standard of 12 percent by 2012 ... up from five percent today ... we would create 250,000 green jobs in the economy.

In health care, we're looking at an industry challenged by rising costs, poor access, and persistent quality issues. If we're not

ready for the immense challenges coming our way on health care, the economic consequences would be devastating.

In large part it's a challenge of cost, and one sure way to attack that problem is with steady, focused investment to bring forth innovation. This year, my company launched an initiative called healthymagination. We've committed to investing \$6 billion in health care advances that will lower our customers' costs, broaden access to care, and increase the quality of outcomes.

We will launch 100 products at lower price points, such as a handheld ultrasound which will someday replace the stethoscope. And we are moving our capability into the underserved population in areas like infant care and mammography.

Aligning the American renewal with the challenges of energy and health care will keep our country on the leading edge. There is no question whether there will be breakthroughs in these areas – just by who and when. The leader in these fields will dominate the global economy in the decades that come.

THIRD: We must make a serious commitment to manufacturing and exports. This is a national imperative. We all know that the American consumer cannot lead our recovery. This economy must be driven by business investment and exports.

We should set a national goal to create high-value-added jobs and have manufacturing jobs be no less than 20 percent of total employment, about twice what it is today. And we should commit ourselves to compete and win with American exports.

I've had people explain to me the Darwinian nature of markets. They tell me that America has seen a natural evolution from farming to manufacturing to services. After all, they say, this has happened in other mature economies. But there is nothing predestined or inevitable about the industrial decline of the U.S., if we as a people are prepared to reverse it.

We would do much better to observe the example of China. They've been growing fast because they invest in technology and they make things. They have no intention of letting up in manufacturing in order to evolve into a service economy. They know where the money is and they aim to get there first.

America has to get back in that game. As I said earlier, it starts with a strong core of innovation. But we also need a financial system that is built around helping industrial

companies to succeed. GE is an important part of this financial services approach. We plan to focus GE Capital on financing small- and medium-sized customers in industries that we know the best.

America is in great need of an updated manufacturing infrastructure. This means better roads and airports; pervasive broad-band capability; and a bigger and smarter electricity grid. Old factories can become more productive with upgraded infrastructure.

The other secret to manufacturing competitiveness is a well-trained team. Annually, we invest \$1 billion in training. All of our training has some impact on the factory floor. It used to take us 100 days to make a locomotive; now we can do it in 20. Through the use of lean manufacturing techniques, our 100-year-old Erie factory can export to Mexico and Brazil. Operational capability is a core part of GE's strategy.

In some areas, we have outsourced too much. We plan to "insource" capabilities like aviation component manufacturing and software development. These are the things we will be working on in Michigan. This will make us faster and more competitive over the long term.

We recently made the decision to build new capability in our appliances plant in Louisville, adding 420 new jobs. These workers will build an innovative, hybrid water heater that uses 50 percent less energy. We could have made this product in China. But our Louisville team has committed to quality and productivity standards that make them competitive. We can serve our customers with speed and quality. We can make the same profit by manufacturing in the U.S., and our team deserves their chance to compete.

It is time, as well, for a new era of labor-management relations. The last generation has been tougher on workers. They have been poorly served by union leadership and management alike, and this must change.

We've been avoiding some hard truths. We pretend that high-cost systems work in a global economy; they don't. We believe that American consumers care where things are made; they don't. We believe that managers can move work wherever we want without consequence; that is foolish. In the fight between unions and management, the worker has suffered.

One of GE's most productive manufacturing plants is in South Carolina, where we make gas and wind turbines. We are one of the state's biggest employers. We have invested billions in long-term product leadership. Engineers and production

workers are on the same team. A production worker earns a great salary because they are winning around the world. Their biggest customer is Saudi Electric Corporation.

In any industry, workers and management share a fundamental interest in the success of the enterprise. And to advance that common interest, we have to be more honest and flexible about what it takes to compete.

The renewal of American industry will require us to be globally competitive exporter. Business should reinvest in new American jobs which will create leadership in the future. That is why we are here today.

FOURTH: We should welcome the government as a catalyst for leadership and change.

I'm a free-market guy – I believe in the endless possibilities of individual choice and private initiative. But this isn't the first time that business and government have had to work together for national ends. We should work together again today, setting goals for productivity, job creation and exports.

There's a long history in this country of government spending that prepares the way for new industries that thrive for generations. Think of the NIH or NASA, and all the new innovations that came out of these programs – from computing to communications to health care.

America has that kind of chance with unprecedented levels of new government investment. Congress and the administration have decided to invest in job creation, and the amounts of money involved can make a big difference – not just by putting people to work, but also by aligning with basic national purpose.

The key is making sure those hundreds of billions of dollars fall on the fertile ground of innovation, and not bureaucracy. We need to see this new spending for what it is: an opportunity to turn financial adversity into national advantage – to launch innovations of lasting value to our country.

It has always been a certainty that information technology could improve quality and lower cost in health care. To date, the applications have been poorly implemented, and the hospitals that need investment the most have been unable to afford newer systems.

The stimulus has set aside \$20 billion for new health care systems. This reinvestment, along with the quality standards that accompany it, will transform health care.

The stimulus is a real opportunity to accelerate investment during the downturn to create long-term growth. This is all upside.

At the same time, we are going to get more regulation. And this could be dangerous. The administration has proposed financial regulation, tax reform and health care reform. Quite honestly, some of the policies I have seen concern me about the long-term impact on economic growth.

But business must engage, because status quo is not an option. The country has massive problems and social unrest. Fighting to protect the past is just wrong.

I recently joined President Obama's economic recovery advisory board. He can count on my openness and honesty. More importantly, he can count on GE's support to drive competitiveness and innovation that will improve the economy.

The challenges we face won't be solved by the free market alone. But through a real public-private partnership, we can dramatically improve America's competitiveness. Today, people in this country want to see business and government work together.

An American renewal will be shaped by the public and private sectors, and – more than ever – by a willingness to act boldly for the good of the country.

FIFTH: It is possible for a global business leader to also be a good citizen.

The primary job of business leaders is to build competitive companies that win over the long term in every corner of the world. To do that, business must shake off the short-term mindset that brought on so many problems. We can't blame Wall Street. We must have the courage to invest and we must do it now.

We must set compensation policies that reward long-term growth in earnings and cash generation. More important, compensation should reflect company success. At GE, the company always comes first. I want GE people to "keep score" based on creating value through our innovation. Our success is institutional and transcends individual gain.

We must partner in our communities. Big business should work with smaller companies in our supply chain to help them compete globally. And we should partner with local governments to fix our education system.

In the end, business leaders are accountable for the competitiveness of their own country. We must say so publicly. This will not hurt our ability to globalize. Rather, I

think it will make other countries admire our business leaders more. We must end the impression that American CEOs are short-term speculators.

Protectionist sentiment is growing in the U.S. But protectionism is not the answer. If other countries follow this trend – and many have started to react, including China – opportunities will vanish. Business leaders can help the country be competitive again. And out of this competitiveness will come a more self-confident society.

I want GE to be a great company. A great company keeps its eye on problems that need solving. A great company builds alignment from factory floor to the boardroom. A great company recognizes that an American strategy is part of a global strategy. A great company invests in the future. Great companies must be a part of the American renewal. There's room for any enterprise that aligns itself with needs that are basic, and needs that are vast. This is our vision for GE.

On a personal note, I would hate to think that the lasting impression of American business is the one that exists today. We can do better. We have made our companies globally competitive; now we must do the same for our country. We can help to solve some of these difficult problems and create an optimistic future.

I am excited about our future together. I embrace the promise of this investment in Michigan. I am also energized by the challenges that face GE. Not because the economy is good, but because the challenges we face will inspire the type of new thinking that is required in the future.

Over the last generation, America's "service strategy" was too weak and our goals were too low. This approach must be abandoned. In its place, we should create an American Industrial Renewal by moving on five fronts: invest in new technology; win where it counts in clean energy and affordable health care; become a country that is good at manufacturing and exports; embrace public-private partnerships; and promote leaders who are also good citizens.

From economic chaos we will create new opportunities for the people of this city and this country. We will once again be prosperous, but more importantly, we will be proud.

It is time to think big again. We must hold ourselves to a higher standard and we must renew America's economy to embrace the same kind of dream that transformed this city and this world not so long ago.

Let's commit ourselves to begin that work today. Thank you.



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