



2008 Economic Summit: Energy and Development in Upstate New York

Congresswoman Kirsten Gillibrand
Honorary Summit Chair

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SUMMARY

The potential for the alternative energy sector, and the government and businesses programs needed to grow that sector was the main point of discussion at the 2008 Economic Summit on Development and Energy, held in Saratoga Springs, NY on September 5, 2008. In her opening remarks, Honorary Summit Chair Congresswoman Kirsten Gillibrand noted the need for such a forum in the midst of 16 months of job losses and a one percent increase in unemployment. The summit brought together representatives from the private and public sectors in an attempt to solve this economic crisis and discuss new developments in alternative fuels and green technology, how those fields could combat both the energy and climate crisis, and how local and federal government could aid in that process.

The summit featured three working groups, each with a different theme. One group discussed the newest developments in the green technology fields in the capital region, as well as how the companies behind those developments could work with local government to create jobs and keep profits local. A second working group centered on the ability of such companies to access capital and the barriers to such access. The third working group discussed the interaction between government and the private sector across the country and how such practices could set a model for New York and the capital region.

RECOMMENDATIONS

An electronic forum was held at the end of the summit to assess what participants felt was the best way for emerging companies in the green technology field to access capital and increase growth in the local sector. Participants favored enacting long term extensions to government incentive programs, including the Federal Renewable Energy Production Credit (PTC) and Investment Tax Credit (ITC), as the highest priority in making more capital accessible. They also selected supporting such tax credits as the number one priority for government in order to aid the sector in growing.

OPENING REMARKS

Congresswoman Kirsten Gillibrand
Honorary Summit Chair

Thank you. It is wonderful to be here with you today.

First, I want to welcome everyone to the Second Annual Economic Summit. It is my goal to host an Economic Summit for our region every year, because my job in Congress is to help community leaders attract businesses to the Capital Region and to promote policies that develop the environment business owners need in order to be create more jobs. Over the past two years, one of my main goals has been to make our region fertile for new job growth and put Upstate New York on the map as a market leader for emerging industries. This annual Economic Summit is an extension of the work and advocacy that I do everyday to push forward our region's economic development initiatives and goals.

However, before I go on, I would like to thank the Public Forum Institute for working with my office to put together today's program. I also want to thank all the presenters from around New York, and I appreciate Peter Wohl, Bob Callender, and Howard Marks for being our panel moderators.

Since the last Economic Summit a year ago, the economy has experienced a downturn, and creating jobs and expanding business activity has become more difficult. The American economy has recorded seven straight months of jobs losses, and unfortunately, New York has not escaped this pattern. Our State is experiencing higher unemployment rates, with the Albany metropolitan area recording a one percent increase over the past year. Currently, over half a million New Yorkers are looking for a job, but are unable to find one in this difficult economic environment.

Month after month of job losses is not the only thing that is wrong with the current economy. As business leaders, you have experienced first-hand the serious ramifications of how \$100 a barrel oil impacts every aspect of your business. You have struggled to buy the raw materials your business needs as our country experiences record high inflation increases each month. You struggle to afford to pay the annual double-digit increases in health care premiums, which is making health care unaffordable for over half of the small businesses in America. Furthermore, the current

credit crunch and decrease in consumer spending has compounded the effects of the current economic downturn for the businesses in this region.

I was recently talking with my neighbor who owns a bakery in Hudson, and he was telling me the difficulty he is having every week staying out of the red. Everything for him – except his profits - has gone up. Electricity, the cost of flour, transportation costs, health care costs. I know that each of you have similar stories, and our national and local economies will only begin to fully recover once the economy works for small businesses and working families again.

The challenging goal that we are discussing today is how to create the good, high-paying jobs that will put the half a million Upstate New Yorkers looking for a job into one. This conference will explore the questions of what policies are needed on the federal and state level to sustain job growth. What is the best way for all of us to coordinate our efforts to create jobs in our region? And how can we create enough permanent jobs that will signal to the thousands of young people graduating from our excellent local colleges every year that they will be able to find a good job and raise their family right here in the Capital Region?

Currently, Upstate New York is in the midst of an economic transition. Since 1995, New York has lost over a quarter million manufacturing jobs; however, these jobs are being replaced by high-tech jobs and new manufacturing jobs that develop and manufacture cutting-edge technologies. While our Region is making strides in attracting new businesses, the progress could easily be reversed if we – as a community – do not continue to nurture our growing businesses and advocate for policies that will promote economic development. Now is not the time to sit idly by and hope for a strong national tide that will lift Upstate New York; rather, we need to begin to inform the rest of the country that Upstate New York has a skilled and hardworking workforce available and ready to solve our country's most pressing challenges.

For this Summit, the one area that I wanted to focus on is the huge, potential growth that our region's economy could experience through the development of alternative energies and conservation technologies. We all know the concrete benefits that energy independence offers. America will be safer because we will not be relying on foreign countries that do not share America's values – like Saudi Arabia and Venezuela – for our energy. Your energy supply and your business' bottom line should

not be dependent on the impulses of foreign dictators. We also know that energy independence will begin to reverse the effects of global warming and improve the quality of our air and water.

But today, I want to talk about the fact that making America energy independent will result in the creation of millions of good, high-paying jobs. I believe that in our global economy, American job growth and new energy development will be strongly tied together.

First things first. Congress needs to pass an historic, comprehensive energy package that has a strong commitment and deadline for eliminating America's dependence on foreign oil. I think we can accomplish this within a decade, but only if we truly put the resources behind this goal and we get everyone – all Americans and the private sector – involved and on-board with the mission. Some people may think this goal is unattainable, but I disagree. Americans and business owners can achieve any goal that is asked of them, because Americans have an entrepreneurial spirit and optimistic attitude that can solve any problem. When John F. Kennedy decided that Americans will walk on the moon, he said. "We choose to go to the moon in this decade and do the other things, not because they are easy, but because they are hard, because that goal will serve to organize and measure the best of our energies and skills, because that challenge is one that we are willing to accept, one we are unwilling to postpone, and one which we intend to win." His leadership and his vision not only steered our country towards winning the Space Race against the Soviets, but it also inspired Americans to reach higher and work together to achieve a common national goal. I have faith that the next Administration will make energy independence a top domestic priority, as both candidates have strongly stated their belief that we need to reduce our dependence on foreign oil.

Once the rest of the politicians in Washington wake up and realize the tremendous positive impact that energy independence will have on our economy, I believe that Upstate New York can be the market leader in creating, developing and manufacturing these new energies and technologies.

Currently, the solar, wind and biomass energy industries are expanding by 30% or more a year; however, the amount of energy that Americans receive from renewable

sources is still very small. Only about 9.5% of total U.S. electricity supply and 1.6% of automobile fuel comes from renewable energies. These numbers could – and should – be much higher. Other countries have begun to eliminate their dependence on fossil fuels. Israel has launched a major initiative to make all their vehicles plug-in electric cars. Sweden has made a national commitment to become an oil-free economy in the next fifteen years. In Brazil, nearly 50% of their energy comes from renewable sources. It is time for the United States to use our workers, our businesses and our can-do spirit to accomplish a similar goal.

Analysts have predicted that if the federal government makes energy independence a priority, then an estimated 3 to 5 million more “green jobs” will be created in the next 10 years.

The good news is that Upstate New York has the farmland, the skilled workforce and the work ethic to nab these new jobs and take advantage of these new markets. Our farmers can grow the biomass products needed for non-food based biofuels; we have the workers who can build or remodel buildings to make them energy efficient; we have world class college institutions that have the research capabilities to perfect current and develop new alternative energies and conservation technologies; and we have the manufacturing base to produce these new technologies and implement them on a wide-scale. But perhaps the best news is that the difference between these “green-collar jobs” and the traditional manufacturing jobs that Upstate New York’s economy was originally built on is that these new jobs cannot be outsourced to our global competitors, like China and India.

Our region is already being noticed amongst national experts for our potential for job growth in the alternative energy fields. The Renewable Energy Policy Project has completed a study of job growth potential relating to renewable energy, and the study indicated that Washington, Albany, Schenectady, and Dutchess Counties rank among the Top 20 Counties in New York for development of “Green Jobs”. Our local universities and colleges are already creating the next generation of scientists, inventors and developers who will lead America forward in this economic journey.

From 2001 to 2006, there was a 243 percent increase in green technology venture capital investments. After the biotech and computer software industries, “clean” or “green” technology is the fastest growing venture capital sector in America. I

strongly support encouraging public-private partnerships in this area. The federal government cannot make America energy independent on its own – they need the help of the private sector and of business owners.

Our region is blessed with not just the natural resources that can create energy through solar, wind, hydroelectric, and geothermal power, but we also have the creativity and innovation to lead the region in the development of non-food based biofuels, fuel cell technology and energy efficient building and product manufacturing. I just want to quickly go over the new energy market possibilities that I believe New York businesses and workers can take advantage of:

Wind energy has the greatest potential in New York State. Component manufacturing for making the turbines is expected to create more than 18,500 jobs. Currently, New York State ranks 11th in wind energy with 0.6% of the state's energy coming from wind energy. States like Minnesota and Iowa have made major investments in the deployment of wind turbines, which has created a stabilizing force for ever-volatile oil and natural gas prices. All around Upstate New York, communities are deciding to invest in wind energy, which saves residents money on their electric bill. Conservative estimates from 2004 showed the potential for creating more than \$2 billion dollars in capital from New York wind manufacturing. Current wind energy production powers on average 4.5 million American homes, and wind energy ranks just behind natural gas for new electrical capacity in the nation over the last 3 years. I think wind energy is a positive development, assuming that the community is involved in the decision making process.

One county over, RPI is doing cutting-edge research on photovoltaics; creating building materials that utilize new designs of solar panels into the facades of building. According to the Blue-Green Job Alliance, which is a partnership between the United Steelworkers and Sierra Club, New York State has considerable potential in solar manufacturing. Their study estimates that solar manufacturing will create nearly 15,000 jobs in New York State.

Another area that Upstate New York could be a leader on is producing and developing fuel cells. New York State's Tech Valley has numerous companies – Plug

Power, United Technologies, MTI MicroFuel Cells, Inc. to name a few - that are already on the forefront of fuel cell research and its practical applications.

I also see our region being a leader in nanotechnology, which can be used in many renewable energy products such as solar panels, fuel cells, battery systems and the computer systems that control the entire energy grid. AMD is planning to build a large facility in Saratoga in the next few years and IBM recently signed a deal to create 1000 new R&D jobs in the renewable energy field. Saratoga has dedicated an entire technology park to the development of renewable energy technologies through the Saratoga Technology + Energy Park (STEP). It will be the nation's first park dedicated to clean-energy and environmental technologies. My district also includes the Luther Forest Technology Campus, which is specifically targeting nanotechnology manufacturing.

Finally, before I close, I wanted to say a few words on an important issue to every family and small business owner in this region. We need to lower taxes for small businesses and working-class families in the region. Every April 15th, Upstate New Yorkers feel the pain of paying the highest taxes in the country. You cannot create jobs, and workers will not stay in New York, if we do not lower property taxes. This is essential for future economic development, because the year-after-year of sharp increases in property taxes has made planning a long-term budget very difficult for a business owner. In Congress, I am working to eliminate the AMT, make it easier for working families to send their kids to day care and college, and I have been working for tax cuts for businesses. Earlier this year, we passed an Economic Stimulus Package. In addition to the checks that most people received in the mail, there were two tax cuts contained in the bill, which I sponsored and pushed to have included in the bill. One tax cut allows small businesses to immediately write off their taxes for capital investments made in 2008 from \$125,000 to \$250,000, for purchases of new equipment. The second tax relief provision allows all businesses to invest in new plants and equipment by speeding up depreciation provisions, so that firms can write off an additional 50 percent for investments purchased in 2008. I have also been strongly pushing for legislation that will make the R&D tax credit permanent. I will continue to stand strong against tax increases and support tax cuts for you and your business.

New York made history in 1881, when falling water was used to power electric street lamps in Niagara Falls. Over 125 years later, Upstate New York can make history again through our commitment to creating the alternative energies of the future. The development of alternative energies and conservation technologies to make America independent of foreign oil provides our region and our country with an incredible market opportunity, and I look forward to guiding our local businesses through the changing economy and continuing to promote our region on the national level as Congress debates future energy legislation.

Before we begin today's panels, I want thank you for taking time out of your busy schedules to participate in today's discussion on our regional economy. As business leaders, you are a vital part of our community, and I hope you are able to come away from this Summit with new ideas on how to grow your business. It is now time for our first session, titled "Opportunities in the Capital Region." This will be a showcase of some new technologies being developed in the area. Thank you again for coming, and please do not hesitate to contact my office if you need assistance with anything.

WORKING GROUP RECOMMENDATIONS

Opportunities in the Capital Region

Priority Action Items

1. Explore green and clean energy options to replace petroleum based technologies
 2. Develop new green products and ways to distribute those products
 3. Create green jobs—jobs created for the creation or implementation of alternative energy products
 4. Create a level playing field for tax credits and other incentives to invest in alternative energy
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Summary

This section was a showcase of companies from the Capital Region that are already working in the alternative energy sector. The panel discussed broader opportunities for growth in the green technology sector in and around the region. The steps taken by both governmental and industrial actors were discussed as was the way they had and could interact to spur growth in the sector.

One of the central topics of the discussion was the need to counteract the energy crisis by continuing to develop new products that could offset the use of petroleum. Panelists Peter Wohl, Matthew Fronk and Eben Bayer all discussed the growth of green technology, especially in the Capital Region, in response to the growing demand for green products and clean energy. Many of the panelists also discussed the need to work with each other and other companies in the region to produce more efficient products.

The discussion then moved to the history of the alternative energy sector in the region. Kelly Fletcher discussed GE's heritage of innovation and their ties to the region for over

Working Group Chair:

- Peter Wohl, Regional Director, Empire State Development Agency

Working Group Members:

- Eben Bayer, CEO, Ecovative Design LLC
- Warren Brower, Product Marketing Manager, Plug Power
- Jim Devine, President, Advanced Energy Panels
- Kelly Fletcher, Sustainable Energy Program Leader, GE
- Matthew Fronk, Fuel Cell Lab Director, GM
- Steve Groseclose, Director, Environmental Health and Safety, Advanced Micro Devices, Inc.
- David Torrey, Chief Technology Officer, Advanced Energy Conversion

100 years, including their 500 acre campus in Niskayuna, New York. Steve Groseclose, of AMD, mentioned his company's factory in Saratoga and its attempt to reduce the footprint left in the development of new technology. General Motors representative, Matthew Fronk, brought up Project Driveway, an initiative in which 100 fuel cell cars had been sent out to New York, California and Washington, DC so that the company could receive feedback from drivers on how the vehicles functioned.

Last, before the panel opened up for questions and answers the panelists stressed the need for corporations to work with the local government to enable more efficient and less costly development of products. Congresswoman Gillibrand's efforts in that arena were praised by many of the panelists. The panelists also stressed the need to create more green technology jobs in the area to fight the recent economic downturn.

Access to Capital

Priority Action Items

1. Remove all governmental barriers to growth in the clean technology field
 2. Create a network of companies in order to support the growing field
 3. Create mentor programs for grant writing and technical assistance
 4. Use alternative resources, including SBAs and "Angel Investors," to gain capital
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Summary

The discussion during this breakout group centered on what the government could do to aide businesses in creating new jobs and developing new products in the green technology field. The panel also discussed the use of market incentives and environmental consciousness in growing the field. Different approaches were discussed and possible specific actions were put forth.

Working Group Chair:

- Bob Callender, Vice President, NYSERDA

Working Group Members:

- Patrick MacKrell, President & CEO, New York Business Development Corporation
- Peter Pritchard, Program Director for Venture Programs, Center for Economic Growth
- Edward Reinfurt, Executive Director, New York State Foundation for Science, Technology, and Innovation
- Michael J. Tentnowski, Director, Incubator Programs, Rensselaer Polytechnic Institute

On the topic of government action, there were two main points were raised; first, the national government, including the next President, has to develop an energy plan which stresses the use of alternative technologies. Second, local government has to encourage more creative development through tax credits and investment programs.

The discussion then moved to the role of venture capital funds and other investors and other avenues for accessing capital. Other avenues proposed included Small Business Association Loans and angel investors. The panel also proposed establishing a network of companies in the field in order to create a mentoring program for grant writing and technical assistance. The business incubator at Rensselaer Polytechnic Institute was also discussed as an avenue for mentoring and aiding small businesses and start-ups in the field.

Best Practices Across the Country

Priority Action Items

1. Work with state and local government to increase investment in alternative energy
 2. Invest in both the agricultural and manufacturing base at the same time
 3. Remove barriers to the deployment of alternative energy products
 4. Federal leadership must drive investment in alternative energy; waiting on market forces will not allow the field to grow
 5. Government should offer tax incentives and initiatives
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Summary

This panel looked at the interaction between government and business across the nation and attempted to draw up a model for use in the Capital Region and throughout New York. Topics discussed included specific laws, government programs, problems with existing infrastructure, government incentives and tax credits, and the economics of the field.

Working Group Chair

- Howard Marks, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy

Working Group Members:

- Chet Lyons, Director, Marketing and Sales, Beacon Power Corporation
- Barry K. Worthington, Executive Director, United States Energy Association
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The first topic of discussion was the Energy Independence and Security Act. The act was a bipartisan call to increase the use of renewable and clean power technologies while decreasing the use of petroleum and natural gas. The act sets a goal of increasing the use of green technologies by 20 percent in ten years.

Other nationwide programs and initiatives included the SAVE Energy initiative. This program allows companies to measure their footprint and energy usage at no cost. The companies are then able to implement changes to their usage should they so choose. Also, the Department of Energy's loan program was discussed as an avenue to grow clean technology firms from start-ups into larger companies.

One issue the panel discussed was the interaction between government and businesses on the national energy grid. The panelists noted that the grid was coded for old technology. This made it harder for new technology to be implemented and recognized by the grid.

In the New York region, the panelists discussed the need to expand NYSERDA and NYISO. They also felt that both organizations should be given more funds to increase

and ease the integration of new technologies. The panelists also stressed the need for more government incentives in the coming years.

Finally, the panelists discussed implementing demand-side-management. This means opening up new technologies to consumers and allowing them to choose which type of energy they utilize. This would provide a reference point on which technologies to focus on and what the end customer is willing to use.

eFORUM RESULTS

Access to Capital

IMPACT (10 pt. scale)

- | | |
|---|-----|
| 1. Enact long-term extensions to the Federal Renewable Energy Production Credit (PTC) and Investment Tax Credit (ITC) which will send predictable price signals to financial markets thereby enabling greater clean energy industry growth and product development. | 8.9 |
| 2. Upgrade the existing electric grid infrastructure into a “Smart Grid” that accelerates clean energy growth by increasing access and expanding capacity to efficiently transmit and store energy from its generation source to the end users. | 8.2 |
| 3. Identify, inventory and better leverage New York’s many strengths in the clean energy sectors, and then develop a dedicated funding mechanism (probably a combined private/public effort) to support energy-related innovation | 6.7 |
| 4. Establish a NYS Energy Loan Guaranty Program to induce lenders to make capital accessible to energy projects. | 6.5 |
| 5. Promote more robust connections between early-stage innovation companies and larger energy companies (both within the state and globally) | 6.2 |

Best Practices

IMPACT (10 pt. scale)

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| 1. Support extension--for at least one year--of renewable energy production tax credits for wind, for electricity produced from wind power, geothermal power, biomass, landfill gas, small irrigation power, and trash combustion facilities. Extend the current law to provide a similar one-year tax credit extension for new properties that produce geothermal power or make use of solar energy | 8.4 |
| 2. Implement utility driven demand side management | 8.3 |
| 3. Provide incentives, eliminate disincentives, via state tax policy | 8.1 |
| 4. Enable cross-agency coordination and support DOE, FERC, NERC, PUC, Renewable Energy Task Force | 7.9 |
| 5. Consider public/private/union partnerships for job training/workforce development | 7.8 |
| 6. Recognize social/economic impacts of rising prices/costs | 7.7 |
| 7. Reduce municipal/county/state consumption | 7.7 |
| 8. Remove Barriers to deployment of combined heat & power systems | 7.3 |
| 9. Advanced energy technologies should be listed (RGGI) if they cause CO2 reduction | 6.9 |
| 10. Expand NYSERDA | 6.9 |
| 11. Consolidate the existing renewable energy production tax credit and other clean energy incentives into a single, expanded program with the following features: the incentives should be carbon weighted; technology-neutral; long lasting and should take into account our Nation’s energy security. | 6.9 |
| 12. Ensure that NYISO has the resources it needs | 5.8 |