



IMAGINING TOMORROW: ALTERNATE ENERGY FUTURES

In Partnership With



The Northeast Sustainable Energy Society

Presents the Second Annual
Massachusetts

IMAGINING TOMORROW Awards Reception

May 11, 2007
Genzyme Center
Kendall Square
Cambridge, MA

Awards Reception Made Possible Through the Generosity of
Genzyme Corporation



The *IMAGINING TOMORROW* program in Massachusetts is
supported in part by MTC



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“Imagination is more important than knowledge. For knowledge is limited to all we now know and understand, while imagination embraces the entire world.”

Albert Einstein

Awards Reception Schedule of Events

*10:00 – Gallery: Browse Through the Entries
and Meet the Finalists*

10:45 – Remarks and Presentations:

*Welcome, Mr. Rick Mattila, Director of Environmental
Affairs, Genzyme Corporation*

*Mr. Greg Watson, Massachusetts Assistant Secretary
for Clean Energy Technology*

*State Senator Marc R. Pacheco, Chair, Special Senate
Committee on Climate Change*

*Ms. Beth Daley, Environmental Reporter,
The Boston Globe*

The gallery will reopen following the presentations

About Our Speakers

Greg Watson is Assistant Secretary for Clean Energy Technology within the Executive Office of Energy and Environmental Affairs, a newly combined department headed by Ian Bowles. Mr. Watson also serves as the Vice President for Sustainable Development with the Massachusetts Technology Collaborative (MTC). He is the point of contact for the new administration with the clean-energy entrepreneurial community, a rapidly growing sector of our economy.

Mr. Watson has a long history of service in the clean energy and environmental community, both in the public sector and in non-profit organizations.

He joined MTC in 1999 when he was appointed the first program director for the Massachusetts Energy Trust. Prior to that he was Executive Director of the Dudley Street Neighborhood Initiative, Director of Educational Programs for Second Nature, and also served as an Executive Director of The New Alchemy Institute.

His public service is equally impressive: from 1990 to 1993, he was Commissioner of the Massachusetts Department of Food and Agriculture; from 1983 to 1989, he was Assistant Secretary for Science and Technology within the Executive Office of Environmental Affairs; and he served for three years as Deputy Director of the Massachusetts Centers of Excellence Corporation.

Mr. Watson graduated from Tufts University, with a major in civil engineering. He was the Science Department Head at the Charles River Academy and taught environmental science at the Thompson Island Education Center.

He serves on the boards of The Buckminster Fuller Institute and Ocean Arks International, and was a founding member of "*Clean Air-Cool Planet*".

State Senator Marc R. Pacheco has served in the Massachusetts State Senate since 1993, representing the first Plymouth and Bristol District.

In February of this year, Senator Pacheco was named chair of the newly created Senate committee charged with studying the impact of climate change on the Commonwealth and formulating public policy to help reduce greenhouse gases.

In addition to chairing the Special Senate Committee on Climate Change, Senator Pacheco is on the Senate committees for Post Audit and Oversight (Chair); Ways and Means; Environment, Natural Resources, and Agriculture (Vice-Chair), and Telecommunication, Utilities, and Energy.

Senator Pacheco is a member of many civic and benevolent organizations. He has an associates degree in agronomy from the University of Massachusetts, Stockbridge; a bachelor's degree in human services from New Hampshire College; and a master's degree in public administration from Suffolk University.

Beth Daley joined The Boston Globe staff in 1995 and has been covering the environment since August 2000. She focuses on marine issues, forestry, and a wide range of environmental policies in New England and throughout the country. After 9/11, she covered Ground Zero in New York City, the anthrax cases in Florida, and the war in Pakistan and Afghanistan. She returned to the environment beat in early 2002.

Born in New York, she attended Northeastern University, graduating in 1989. She worked for three years as a reporter at the Daily News in Newburyport, and then spent a year teaching English and traveling throughout Southeast Asia and Sri Lanka.

Daley also covers space science, and won the 2005 Ocean Science Journalism Award from the Woods Hole Oceanographic Institution for excellence in communicating ocean science to the public.

About the Contest:

The *IMAGINING TOMORROW* contest encourages students to learn about clean energy and global climate, and then express what they have learned in near-future fiction creative writing, or in video.

All entries have to have energy issues, policies, or technologies for the basis of their work. All students are required to include an afterward that explains their starting point for their idea and what they learned in the course of the project. The finalists were selected by a panel of judges, giving equal rating to the creative work itself and to the educational experience described by the student.

~ Finalists ~

Creative Writing, Near-Future Fiction:

Emily Allen, Arlington High School, "Broken Man"

Amanda J. Bennett, Deerfield Academy, "Ethanol with a Side of Trouble, Please"

Amanda Cain-Mailly, Marlborough High School, "Going Backwards"

Julie Cain-Mailly, Marlborough High School, for "The Diary of Jane"

Alison M. Crandall, Lee High School, "Summer Rain"

Katherine B. Kinkel, Wellesley High School, for "The Sovereignty of the Faithful"

Colleen M. Ottomano, Hopkinton High School, "Tennis Matches and Space Bugs"

Megan M. Roy, Shrewsbury High School, "The Panic of 2020"

Video Shorts (3-5 minutes): Listed alphabetically by team leader, who is the first person listed; the rest of the team members are in alphabetical order.

*Tom Klenkotka, John Lyons, Northampton High School,
"Winds: Tomorrow's Clean Power"*

*Bryan Magdelensky, Tom Belavance-Grace, Jake Ruyffelaert,
Northampton High School, "Grease Cars"*

*Luke McMahon, Jesse Barton, Angrea Gingra, Chole Sernet,
Landmark School in Prides Crossing, "Heat"*

*Matt Motamed, Lauren Garlock, Chris Nagle, Northampton
High School, "Wood Chip Burner at Cooley Dickenson
Hospital"*

*Matt Motamed, Lauren Garlock, Chris Nagle, Northampton
High School, "Solar Panels at JKF School"*

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Video PSAs (1 minute or less): Listed alphabetically by team leader, who is the first person listed; the rest of the team members are in alphabetical order.

*Erin K. Bates, Kristy Hamilton, Bridgette Tattersall, Autumn
Wolf, (Purple Armadillos), Mt. Greylock High School,
"Wobal Glarming".*

*Anthony Belman, Jordan Adames, Sam Garavaltis, (SAJ), Mt.
Greylock High School, "Make a Difference".*

*Britany R. Calderwood, Trevor Rathbun, (Einstein
Productions), Mt. Greylock High School, "Global Warming".*

Danny Chhuon, Andy LeBarron, Don Maffucio, Jim Nichols, (Hooves Productions), Mt. Greylock High School, "Global Warming PSA"

Mike Helly, Northampton High School, "Global Warming Opinions"

Katie-Rose De Candia, Michael J. Leja, Dylan Sikelianos, (Hooves Productions), Mt. Greylock High School, "Earth in Twenty Years"

Lindsay A. Maynard, Brigid Flynn, Ty-Kia Hay, Hayden Kuhn, TJ McCarthy, Brier Turner, (All Stars), Mt. Greylock High School, "Global Warming PSA"

Charlene E. Michon, (Charbar Inc), Mt. Greylock High School, "Days of Summer?"

Ryan G. O'Conner, (Revo-lution), Mt. Greylock High School, "Saving Energy"

Sean Peitier, Dominic Boschetti, Nick DelNegro, Caleb Pudvar, Mary Shanley, (Rubber Ducks), Mt. Greylock High School, "Where'd That Snow Go?"

Colin Sullivan, Northampton High School, "Red Pill, Blue Pill"

Gina Riggins, Jessica Lemieux, Kelsie Leon, Cameron P. Szymanski, (CGJK), Mt. Greylock High School, "Global Warming"

Credits:

Mt Greylock students were under the direction of Mr. Michael J. Powers, M. Ed., Instructional Technology Specialist.

Northampton students worked with Ms. Jane Madden and Mr. Michael Jacobson-Hardy, both members of the Technology and Business Faculty.

The Landmark School in Prides Crossing was an independent entry.

Science Fair Award Winners

This year, with funding from MTC, *IMAGINING TOMORROW* and NESEA, presented “Clean Energy Awards” at each of the Regional Massachusetts State Science and Technology Fairs.

These awards went to the best project related to any aspect of clean energy. This included clean-energy technologies, efficiency analyses, and understanding global climate, including projects on system dynamics and nonlinear behavior.

There was an impressive range of topics, some focusing on specific questions and some with a completely holistic view of a problem. We are very proud of the curiosity, creativity, and scientific standards of these award winners.

High-School Clean Energy Award Winners:

Region I (Western MA): *Ian Boyd, Mohawk Trail HS*, Buckland, MA, “The Use of Closed Carbon Cycle Biomass Materials for Metallurgical Heating”

Region II (Central MA): *Anna Chase, Wachusett Regional High School*, Holden, MA, “The Alternative to Alternative Energy Solutions”

Region III (Southwest MA): *Elizabeth A. Gringas, Bishop Feehan High School*, Attleboro, MA, “Wind Turbines”

Region IV (Northeastern MA): *Catherine Chan-Tse and Sarah Sterman, Lexington High School*, Lexington, MA, for “*Better to Light One LED: Human-Powered Electric Generation*”

Region V (Southeastern MA): *Janoah Bailin, Falmouth Academy*, Falmouth, MA, “Mimicking Lake Nyos: The Solubility of Carbon Dioxide in Water”

Region VI (Boston): *Taufique Chowdhury & Jason Lu, Urban Science Academy*, West Roxbury, MA, “Solar Energy”

Middle-School Clean Energy Award Winners:

Region I (tie):

Christopher Bergeron, Michael E. Smith Middle School,
South Hadley, MA, "The Wonder of Water"

Michah Botkin-Levy and Dylan Kay, Amherst Regional
Middle School, "The Effect of Temperature on a
Sediment Battery"

Region II (tie):

Paul Johnson, Bancroft School, Worcester, MA "Hydropower
Highlights"

Geode Sibbick, Melican Middle School, Northborough, MA,
"Force, Wind, and Power"

Region III: ***Julia A. Aparicio, Taunton Catholic Middle School,***
Taunton, MA, "Non-Newtonian Fluids"

Region IV (tie):

Sarah Jones and Lindsey Puglisi, St. Michael School, North
Andover, MA, "Biokleen vs. Tide"

Timothy Plouffe, Fruit of the Spirit School, "Which Battery
Lasts the Longest?"

Region V (tie):

Tommy Andrews, Millis Middle School, Millis, MA, "What
Materials Are Best for a Solar Heater"

Anna Cocuzzo, Pollard Middle School, Needham, MA, "From
a Glacier to an Ice Cube"

Erica Jobse, Newton Country Day School, Newton, MA,
"Twist and Dry"

Region VI: ***Celixia Slayton, Jackson Mann,*** Allston, MA, "Global
Warming Effects"

*Note: All Clean Energy Award winners will be listed with biographical
information, photos, and abstracts of their projects online.*

What You Can Do



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Fortunately, you have more power than you think.

By 2008, more than half of today's high-school students will be able to vote.

What you do can have a great effect, not just in your individual life, but in changing

general attitudes toward energy use, the environment and in government policy.

Remember: It Is *Your* Future

Here are some ideas for you:

Note: The complete version of this list is available at "What You Can Do", www.itomorrow.theforesightproject.org.

1. **Make Your Voice Heard:** Write to your state and federal representatives.
2. **Better Yet: Invite Them to Your School.** Most representatives love to talk to students. Be prepared and ask intelligent questions; you will surprise them.
3. **Pay Attention to New Construction:** What about buildings in your town: are they net zero? Who are the LEEDS certified builders and architects were you live?
4. **Look for the Labels:** Most companies are now truly working hard to decrease their carbon footprint; pay attention when you buy, and if it isn't obvious, ask!

5. *Pay Attention to Your Investments (and to your parent's investments).* Are you supporting bad business choices?
6. *Write to Companies:* Ask companies and financial institutions about their policies; they pay attention to public demand and concerns when they make choices.
7. *Fight Misconceptions Wherever They Occur:* You may not change one person's mind, but you may affect others.
8. *Buy a Sweater:* Americans often cool to 68 degrees in the summer and heat to 72+ degrees in the winter. Complain if it is too cold (in summer) or too hot (in winter).
9. *Pay Attention to Your Own Footprint:* Try to follow some of the ideas for lowering your own carbon footprint. Start a contest in your class or your school to see how low you can go. And, if you are not using something, TURN IT OFF!
10. *Get Involved with Organizations in Your Area* -- see our online listing of partner organizations and resource partners for possibilities.

Of all the actions one can take, the most cost effective [is] ... letting your Congress person know that you really care about stopping climate change."

Bill McKibbin, Environmental Author

To obtain information on your state representatives, go to the Massachusetts government site, www.mass.gov/legis.

The League of Women Voters of Massachusetts has:

- Information on your government and federal officials
- Information on voter registration
- Background on legislation under discussion.

Their website: www.lwvma.org/government.shtml.

About Genzyme Center

Genzyme Center, the corporate headquarters for Genzyme Corporation, received the highest rating issued by the U.S. Green Building Council, a Platinum certification under the Council's LEED® (Leadership in Energy and Environmental Design) Green Building Rating System™.

Genzyme Center combines innovative design and cutting-edge technology to achieve two goals: creating an exciting new workplace for more than 900 Genzyme employees, and setting a new standard in environmentally responsible architecture.

Designed by the award-winning German architectural firm Behnisch, Behnisch and Partner, the new building stands as a reflection of Genzyme's commitment to innovation, transparency, collaboration, and the entrepreneurial spirit.

For a virtual tour: www.genzyme.com/genzctr/genzctr_home.asp.

Environmental Construction

A New Paradigm

Genzyme Center is designed to be one of the most environmentally responsible office buildings ever built in the United States. Genzyme has a proud history of environmental responsibility and values its relationship with the local community. Genzyme worked with Behnisch from the earliest stages of the design process to ensure that the building reflected these commitments.

It is Genzyme's hope that Genzyme Center will stand as an example that it is possible to construct an exciting, beautiful, and employee-friendly building that makes both economic and environmental sense.

Examples of its environmental benefits include:

- 34 percent water savings
- 42 percent electricity cost savings
- Over half of all materials used in construction contain recycled content
- More than 90 percent of construction waste was recycled
- Less than two blocks from public transportation
- Built on a remediated "brownfield" site

About Us

The Northeast Sustainable Energy Association (NESEA), www.nsea.org, is the Northeast's leading organization of professionals and concerned citizens working in sustainable energy and whole systems thinking. NESEA facilitates the widespread adoption and use of sustainable energy by providing support to industry professionals and by educating and motivating consumers to learn about, ask for, and adopt sustainable energy and green building practices.

NESEA accomplishes this through its Building Energy conference and trade show, K-12 resources, an advocacy network, high profile public events such as the Tour de Sol and the Green Building Open House, its chapters and members, and its Sustainable Green Pages.

The Foresight Project, www.theforesightproject.org, was formed to develop and implement educational initiatives that connect students in a meaningful way with the critical issues of their own future world.

Our initial program, *IMAGINING TOMORROW: ALTERNATE ENERGY FUTURES™*, was piloted in the Spring of 2006 in partnership with the Northeast Sustainable Energy Association, and continued in 2007, again in partnership with NESEA in Massachusetts and nationally as an independent program.

"In this way the first men were made, and soon they filled the far reaches of the earth. But for a long time they did not know what to do with their noble limbs or the divine spirit which had been breathed into them. They saw, yet they did not see; they heard, yet they did not hear. . . . Then Prometheus [Forethought] came to their aid."

*Gustav Schwab, Die Sagen des Klassischen Altertums,
translated by Marx and Morwitz; Pantheon Books*

Thank you to our many sponsors and supporters:

Sponsors:

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Andy Perkins-High

SunEthanol, www.sunethanol.com, a cellulosic ethanol company in Amherst, MA

Mary Valladeres

Dori and Jeff Wolfe

As well as an Anonymous Gift

Supporters: A Thank You goes as well to the many people who have helped this year, including:

Jonathon Williams, Jackie Normand, Keith Turner, Susan Tarrant, Bess Haire, Meg Bagdonas, and Sandy Leffkovits.

Our Directors: Professor Renee Hobbs and Marion Kelly Greenup.

Also thank you to the many people who have helped with the BASEA programs this year:

Professor Bill Moomaw, Dr. Linda Plano, Hilary Flynn, Karina Funk, Paul Angelico of Twin Rivers Technologies in Quincy, Quincy Vale of PowerHouse in Lawrence, Mark Buckley of Staples, Steven Strong of Solar Design Associates in Harvard, and John Rogers of The Union of Concerned Scientists

As well, of course, thank you to all of the teachers, students and parents who participated in the program

The video portion of the *IMAGINING TOMORROW: ALTERNATE ENERGY FUTURES* program was supported by a grant from the Massachusetts Technology Collaborative (MTC).

The awards reception is made possible in part by a grant from the Genzyme Corporation.

Funding for the creative writing program is from The Foresight Project, a 501c3 corporation based in Massachusetts, which in turn, is supported by donations from individuals and corporate sponsorships.

For more information on supporting *IMAGINING TOMORROW*, contact info@theforesightproject.org.