



the Joule

A biannual newsletter from the MIT Energy Club, a student-run energy technology, policy and business community at MIT

Volume 1 – Issue 1 – Fall 2007

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A newsletter from the student-run energy technology, policy and business community at MIT.

FALL 2007



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For those unfamiliar with the origins of the MIT Energy Club, it began in the summer of 2004 as a continuation of the discussions started in Jeff Tester et al.'s Sustainable Energy course. Once a week, a small group of students huddled in the Muddy Charles Pub to dissect the key trends in important energy issues. These weekly gatherings were the genesis of what is now a vibrant 600 member energy community here at MIT.

Energy is inherently multi-disciplinary. But in a place as big as MIT, people with the same interests can be entirely unaware of each other. And with the importance of energy in our day-to-day lives, discussions about energy issues can be polarizing and emotion-driven. To this end, the MIT Energy Club's primary aim is to bring together the energy technology, policy, and business communities at MIT for fact-based education and analysis.

This spirit of community-building and co-education flows through all our events, from regular discussions, lectures, and socials, to our keystone MIT Energy Night and MIT Energy Conference. Driven by student interest and enthusiasm, these events are open to all students, faculty, alumni, and energy-interested folks from the surrounding community. If you are interested in contributing to the energy discussion at MIT, please visit one of our events and introduce yourself!

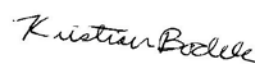
We developed the idea for this club newsletter as a way to stay connected with our members and alumni. This edition features highlights from recent club events and a look forward to some of the club's activities for the coming year.

We hope you find this newsletter to be a fun way to stay connected and we look forward to welcoming you all at Energy Club events very soon.

Best,



Daniel Enderton and James Schwartz
Co-Presidents, MIT Energy Club



Kristian Bodek
Vice-President, MIT Energy Club

WELCOME

Looking Ahead to 07 / 08

Welcome to the first edition of *the Joule*, the MIT Energy Club's newsletter to both local and global Club members.

There's an atmosphere of excitement in the Club over the upcoming 2007/2008 year. Over last couple of years, the Club launched several signature events, which were incredibly well received within the local energy community. In only a short time, the third annual **Energy Night** (p.3) will be happening at the MIT Museum (Oct 12th). Planning is also underway on the third **MIT Energy Conference** (p.4), to be held on April 11th and 12th, 2008.

As Alumni Chair, I'm personally looking forward to building relationships with those who have gone on to energy-related careers in the real world. The **Mentorship Program** (p.6) is a great way for alumni—from Massachusetts and around the world—to lend their skills and experience to the Club. It's also an opportunity to interact with student leaders here in the MIT energy community.

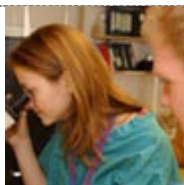
Of course, our two core activities, the **Discussion** and **Lecture** (p.5) series, will continue to be mainstays of the Club, under the accomplished oversight of Justin Anderson and Eerik Hantsoo. Lectures this fall will feature a talk by Cambridge Energy Research Associates (CERA) on the Clean Energy Industry (Oct 4), and Beth Lowery, VP of Energy and Environment at GM (Nov 27)—just to name two. We'll also hear discussions on battery technology, nuclear power, and coal.

The Club's goal for the upcoming year is to build upon the success of last year's events, and to continue to engage and educate members of the MIT community on energy issues. We invite all of our alumni and members from the broader energy community to join us in this endeavor!

Sincere regards,



Chris Evans
Alumni Chair, MIT Energy Club



Energy Club alumni are invited by the MIT Alumni Association to sponsor an **Energy Externship** (see p. 7), a short-term work opportunity for MIT students over Jan. 2008. For the first time, alumni can offer opportunities specifically under an "energy" category. Contact Katie Casey kcasey@mit.edu, 617-452-3372.

Applications are due **Oct 1st, 2007**. For more information, visit:
<http://alum.mit.edu/gv/volunteer/become/externships/index.html>



Daniel Enderton,
Co-Pres.



James Schwartz,
Co-Pres.



Kristian Bodek,
Vice-Pres.



Jason Roeder,
CFO



Ron Urwongse,
CIO



Eerik Hantsoo,
Lecture Series



Justin Anderson,
Discussion Series



Laura Pierpoint,
Social



Justin Ashton
Industry/Career



Chris Evans,
Alumni



Matt Albrecht,
Energy Night



Fergus Hurley,
Energy Night



Steve Peters,
Campus Energy



Curt Fischer,
Entrepreneurship



Meghan
McGuinness
Global Energy
Leaders Series



Ed Carlevale,
Web Design



Dave Danielson,
Founder

FEATURE ARTICLE

A Look Back on 06 / 07

In its first newsletter to the local and global MIT energy community, the Club looks back on highlights of the last year. Energy Night, the MIT Energy Conference, the Lecture Series, and the Mentorship Program were all activities modeled on the philosophy of fact-based, interdisciplinary engagement. Read more about the lasting impact that these events have had on the local energy community.

ENERGY NIGHT

A Night of Energy at the MIT Museum



Kismet, the loveable humanoid robot, isn't the only attraction worth taking in at the MIT Museum. Last October, Energy Night—the Club's premiere community building event—commanded the museum for an evening, connecting more than 30 MIT-affiliated presenters with 600 attendees in the building's cozy confines. It was a great success for the club, spanning the academic / business divide to connect disparate members of the local energy community.



Alongside graduate student and faculty researchers, MIT groups such as the Plasma Science & Fusion Center, and the Laboratory for Energy and the Environment (LFEE) participated. They were joined by a number of companies including Evergreen Solar, American Superconductor, and A123 Systems—all businesses started from ideas sprung at MIT.



Mingling amidst the presenters were students, entrepreneurs, professionals, and academics alike. Appetizers and jazz set the scene for the exchange of ideas and information. The goal of Energy Night is to showcase the most exciting energy research, education and entrepreneurship at MIT. By this measure, the event exceeded expectations—at least one well-known new MIT business startup found their CEO in the MIT crowd this year. "MBA students and entrepreneurs take note: it pays to show up!" laughs last year's Energy Night organizer, Alissa Jones.



This year's organizers, Fergus Hurley and Matt Albrecht are equally excited about Energy Night 2007, which will be held at the MIT Museum on Friday, October 12th, from 5:30 to 8pm. They have set the bar high. "This year's event will feature even more presenters, and showcase the museum's new exhibition wing—it will be an exciting event not to be missed", promises Matt.

For her part, Alissa is already convinced: "the greatest attribute of Energy Night is its ability to bring students together with faculty and business leaders in a fantastic space like the MIT Museum. Who wouldn't want to come?"

Contact Fergus Hurley (fgurley@mit.edu) or Matt Albrecht (mitewind@mit.edu).

PHOTOS: JOOST BONSON

MIT ENERGY CONFERENCE

Generating a Buzz Within the Energy Community

On March 9th 2007, the student-organized MIT Energy Conference kicked off with a bang with GE Chairman & CEO Jeff Immelt delivering his take on how GE is using innovation to exploit unique opportunities in today's energy markets. In only two years, the conference has grown into a major event on the New England energy calendar with over 500 attendees and an all-star caliber roster of speakers and panelists.



Building on the conference's founding vision, the program is focused around the intersection of energy technology, policy, and entrepreneurship. By bringing together leaders in industry, finance, and academia, the conference aims to come up with new solutions that will eventually change the way the world produces and consumes energy.



The conference continued to build on the positive momentum from Mr. Immelt's speech throughout the day as interdisciplinary panels of experts discussed the most pressing issues related to topics ranging from biofuels, solar energy, and wind power to climate change and energy investing. During lunch, conference attendees were treated to an address by CERA Chairman and Pulitzer Prize-winning author Daniel Yergin describing what he sees as the current "great bubbling" of innovation that is unprecedented in the history of energy technology development.



A major highlight of the 2007 conference was the MIT-New England Energy Showcase held on the Friday night preceding the conference. Over 1000 people crammed the Marriott ballroom to meet and interact with more than 60 presenting groups ranging from leading cleantech companies in the New England area to the latest energy research from labs at MIT, Harvard, and other regional institutions. The level of excitement generated by this open-to-the-public event created a buzz that carried well beyond the conference weekend and stimulated new avenues for collaboration across campus and within the greater energy community.



This year's Executive Director, James Schwartz, is already planning for the 2008 MIT Energy Conference, which will be held on April 11th & 12th at the Cambridge Marriott. The focus of this year's conference will be on solutions that can scale to meet the energy challenges of the future, and is sure to build on the success of the previous conferences to become one of the premier venues for thought provoking discussion on the most relevant energy issues.



PHOTOS: KEITH NORDSTROM

Please contact James Schwartz at jschwartz@sloan.mit.edu for more information.

ENERGY LECTURE SERIES

*Ideas From Across the Hall
and Around the World*

Discussions within the Club can only take the debate on energy issues so far. Early on, members recognized a need to inject fresh ideas into their knowledge base. Since its inception, the Lecture Series has become one of the Club's signature events, and remains the key activity for channeling information to the membership and building links with local and international energy experts.



The format of the Lecture Series is straightforward. Speakers are invited to deliver presentations in a traditional forty-minute format, and in the spirit of the Club's fact-based approach, twenty-minutes of interactive Q&A time are moderated following each presentation. According to Energy Club Vice President, Kristian Bodek, "this Q&A time provides some of the most thought-provoking ideas".



Despite doubling seating over the last year, lectures are at times standing room only, with participants that bridge academic and professional fields. A well attended session by Steve Taub, Senior Vice-President for Renewable Energy at GE Energy Financial Services, attracted both interested students from the Technology and Policy Program—where Steve originally graduated—and former colleagues from Cambridge Energy Research Associates (CERA), a local-area energy think tank.



To a large extent, this success is a result of the Club's opportunities to access energy experts from around the world. The Club recently welcomed Dr. Rashid Kahn from Saudi Aramco's Intellectual Assets and Technology Management division to speak on the business opportunities from concerns over carbon emissions. Rolf Wuensche, a chemical engineer in a Canadian tar sands project, spoke on a process of gasifying asphaltenes as a substitute for natural gas.

The idea-rich content of the lectures isn't the only draw for most energy-savvy attendees, however. Interactions following lectures can be particularly rewarding. Kristian recalls the policy discussion that was elicited after consultant Michael Bradley's lecture on a "recipe" for moving climate legislation forward: "a fellow club member, Anup Bandivadekar, ended up going out afterwards with Michael and others, where they debated the carbon tax versus cap & trade policy question."

This year's Lecture Series Chair, Eerik Hantsoo promises a great lineup. The kickoff lecture featured Melanie Kenderdine, Associate Director of the MIT Energy Initiative, speaking on U.S. energy security policy. Information on this year's lecture series and old presentations are available on the MIT Energy Club website.

PHOTOS: ED CARLEVALE

Contact Eerik Hantsoo at ehantsoo@mit.edu for more information.

MENTORSHIP PROGRAM

Tapping the Renewable Energy of Student and Alumni Leaders

Standing on the shoulders of giants is often easier if you can borrow a step-ladder. By connecting up-and-coming MIT energy student leaders with alums who are leading in the energy field, the MIT Energy Club's Mentorship Program seeks to facilitate the rise of the next generation of energy rockstars.

Founded in 2006, the mentorship program connected over 66 MIT students and alumni engaged in energy-related careers this past year. "I enjoyed sharing an experienced dose of energy technology commercialization insights and reality", says alumnus David Pelly—currently working in energy at Matrix Partners, a Boston area venture capital firm—"I forgot just how knowledgeable, driven, and capable MIT students can be—it was a thrill to be reminded".

Last year's alumni came from all corners of the energy industry: startups such as EnerNOC, Greenfuel Technologies, A123 Systems, and GeO2 Technologies; established companies such as GE, Shell, CERA, Wood Mackenzie, and Evergreen Solar; well-respected venture capital firms such as General Catalyst Partners, Flagship Ventures, and Matrix Partners, as well as the Massachusetts government.

The Program intelligently pairs local and global MIT Energy alumni with current students either involved in energy-related research, or keen to develop the next generation of game-changing solutions to challenges in the field. Matchmaking students and alumni isn't easy, but it's a rewarding process. "A lot of effort is given to intelligently linking Club members with alumni. We want the participants to get as much out of the interaction as possible", says Energy Club founder Dave Danielson.

Once matches have been made, participants are free to interact how they see fit. The frequency of interaction is entirely up to the shared desires of the student and alumni. When both are in the Boston area, students and their mentors often meet over a drink to engage in discussions ranging from the technical details of energy technologies, to outcomes of U.S. and international energy policy decisions.

The only firm commitment for both students and mentors is attendance at the annual "MIT Energy Mentorship Reception", offering an opportunity for students and mentors to connect with each other amid swanky cocktails and hors d'oeuvres. "We just want people to relax and have a good time", grins Danielson. Above all, the Mentorship Program hopes to exploit a unique source of renewable energy: the ideas and enthusiasm of students who are keen to tackle the tough, perplexing challenges in society.

Contact Chris Evans at cevans@mit.edu for more information.



PHOTOS: JOOST BONSON

FALL EVENTS—

Lecture - Tim Woodward
 "Nth Power: Venture
 Investing in CleanTech"
 Oct 3, 12-1p
 E51-395

Discussion - Dave Bradwell
 "A Battery Revolution?"
 Oct 3, 6-7p
 W1 Thirsty Ear Pub

Lecture - Cambridge Energy
 Research Associates
 "Clean Energy Industry"
 Oct 4, 5:30-6:30p
 Location TBA

Event - Energy Night
 Oct 12, 5:30-8p
 MIT Museum

Lecture - Michael
 Rocheleau, FPL Energy
 "The Seabrook
 Nuclear Plant"
 Oct 17, 6-7p
 E51-149

Discussion - Lara Pierpoint
 "Understanding Nuclear"
 Oct 24, 6-7p
 W1 Thirsty Ear Pub

Lecture - Mark McVay,
 PowerAdvocate
 Nov 1, 6-7p
 E51-149

Discussion - Jim McFarland
 "A Peak Under the Hood:
 Energy Infrastructure"
 Nov 7, 6-7p
 W1 Thirsty Ear Pub

Lecture - Beth Lowery,
 VP of Energy and
 Environment, GM
 Nov 27, 12-1p
 E51-335

CALLING ALL ALUMNI!

Navigate Your Club Involvement

We are the student-run energy, technology, policy and business community at MIT. With energy being such a broad topic, finding a way to effectively engage with energy issues can be overwhelming. Whether you are around the corner, or around the world, consider the following in your continued involvement:

1) Mentor an Energy Club student member.

Learn about student interests in energy at MIT. Volunteering as a Mentor will pair you and an MIT student to meet, discuss and support the professional development of an up-and-coming energy leader. For more information, contact Alumni Chair, Chris Evans at cevans@mit.edu.

2) Collaborate on an Energy Externship.

Connect with MIT students this January by offering an energy externship. The MIT Externship Program pairs students with alumni in their workplace during MIT's Independent Activities Period from January 7 to February 1, 2008.

For the first time, alumni can offer an opportunity specifically under an "Energy" category. Externships range from one month to one week. Sign up by October 1, 2007 at <http://alum.mit.edu/externships>. For more info, contact Katie Casey at kcasey@mit.edu, 617-452-3372.

3) Come out to Energy Night from 5:30 until 8:00 p.m. on October 12th.

Take in the Club's premiere event showcasing energy work at MIT. Come to the MIT Museum (265 Massachusetts Ave, Cambridge) for food and drink, and to mingle with the campus and local energy community. Contact Matt Albrecht (mitewind@mit.edu) or Fergus Hurley (fgurley@mit.edu) for info.

4) Participate in an Energy Club Lecture or Discussion.

Fill your head with information and ideas at a lecture or discussion session. Topics this semester include Nuclear Energy, Energy Infrastructure, and Coal. See the side-bar for our Fall events or find our calendar at: http://web.mit.edu/mit_energy/.

continued...

Navigating Your Club Involvement (continued)...

5) Read our Energy Club blogs.

The MIT Energy Club is online! Check out our energy blog at <http://mitenergyclub.blogspot.com/>, including topics on biofuels, solar, nuclear, and energy start-ups, storage, and policy.

FALL EVENTS (CONTINUED)—

Lecture – Chris Poirier
CEO, CoalTek
Nov 28, 6-7p
Location TBA

Discussion - Rory Monaghan
"Coal: The Most Abundant
and Dirty Fossil Fuel"
Dec 12, 6-7p
W1 Thirsty Ear Pub

ACKNOWLEDGEMENTS

Many thanks to Alissa Jones, James Schwartz, Kristian Bodek, for contributing to this issue; to Daniel Enderton, David Danielson, Matt Albrecht and Fergus Hurley for edits, and to Ron Urwongse and Ed Carlevale for internet support.

ON THE WEB

For more information on the MIT Energy Club, please visit our website. You'll also find our event calendar with up-to-date information on lectures, discussions and other events:

http://web.mit.edu/mit_energy/

Access Energy Club fact sheets, energy classes at MIT, links to MIT energy resources, information links, sister energy clubs, and news coverage:

http://web.mit.edu/mit_energy/resources/index.html

If you're looking to kick-start or continue a career in the energy industry, visit our jobs and internships page for recent opportunities:

http://web.mit.edu/mit_energy/resources/jobs/jobs.html

CONTACT US

Alumni interested in more information are encouraged to contact Chris Evans, Alumni Chair at cevans@mit.edu.

If possible, please direct communications to the appropriate member of our Executive Board, which can be found at:

http://web.mit.edu/mit_energy/about/committee.html.

For general enquiries, contact co-presidents Daniel Enderton (enderton@mit.edu) or James Schwartz (jschwartz@sloan.mit.edu).

The Last word:

Look for MIT Energy Club's next issue, Spring 2008, to be released soon on an internet web-site near you! Up-coming topics will include:

MIT Energy Conference, 2008

Introducing MIT Energy's Clubs Executive Committee for 2008-2009

DOE visits MIT Energy Club

Alumni News and Events!

MIT Energy Club visit to Saudi Arabia, Jan 2008

Update on MITEI

Cool new Club Initiatives such as Energy 101 and the new Oil & Gas Subcommittee

Any comments or suggestions, please email: Katherine Dykes, dykesk@mit.edu