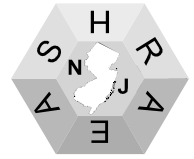




# THERMOGRAM



The New Jersey Chapter of ASHRAE Newsletter

WWW.NJASHRAE.COM

MARCH 2008

REPLY@NJASHRAE.COM

## CHAPTER OFFICERS

### PRESIDENT

PETER FRANGISKOU P.E.  
201-945-9999

### PRESIDENT - ELECT

MARK RICHTER P.E.  
212-354-5656

### VICE-PRESIDENT

JANET SHIPTON  
732-839-4916

### TREASURER

JANET SHIPTON  
732-839-4916

### SECRETARY

CHRIS PHELAN  
973-777-6700

## BD. OF GOVERNORS

LINDA CAROLAN  
908-663-2180

JORI FAHRENFELD  
609-520-1600

ROBERT DALY P.E.  
212-566-5764

HANK VITALE  
908-753-1777

RUSS GRAHAM  
908-663-2180

ROGER SHULTZ  
973-396-4152

## COMMITTEES

### MEMBERSHIP

RUSS GRAHAM  
908-663-2180

### RESEARCH PROMOTION

CHRIS PHELAN  
973-777-6700

### STUDENT ACTIVITIES

PETER FRANGISKOU P.E.  
201-945-9999

### REFRIGERATION

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### ROSTER/DIRECTORY

OPEN

## April 10th, 2008 STUDENT NIGHT

### Woodbridge Sheraton

Route 1, Gill Lane, Iselin, NJ

**Cost:** \$50.00 Members  
\$55.00 Guests  
\$ 5.00 Student

**RSVP:** [REPLY@NJASHRAE.COM](mailto:REPLY@NJASHRAE.COM)  
NO LATER THAN April 9th, 2008

**SCHEDULE:** 4:30 Board of Governors Meeting  
5:00 Tech Session  
5:30 Guest Registration /Cocktail Hour  
6:30 Chapter Announcements  
7:15 Dinner and Presentation

**TECH SESSION:** "The Enclosed Swimming Pool Environment—How to keep safe, Healthy, Attractive, Fun and Economical"

PRESENTED BY: Mr. Tom Tollinger, P.E.  
Regional Sales Manager Dectron Inc.

*Tech. session will cover humidity control, outdoor air requirements, indoor air quality, pool chemistry, air distribution, duct design, condensation prevention, and control.*

**DINNER SESSION:** "Fabric Air Duct Applications"

PRESENTED BY: Mr. Richard Fisher  
Fabric Air, Inc.

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(CONTINUED)**

**CTTC – TEGA**  
MARK RICHTER P.E.  
212-354-5656

**NEWSLETTER ADS**  
OPEN

**NEWSLETTER EDITOR**  
MARK RICHTER P.E.  
212-354-5656

**NOMINATING**  
JORI FAHRENFELD  
609-520-1600

**PROGRAM**  
MARK RICHTER P.E.  
212-354-5656

**SEMINARS**  
MARK RICHTER P.E.  
212-354-5656

**TECHNICAL SESSIONS**  
MARK RICHTER P.E.  
212-354-5656

**SCHOLARSHIP**  
RUSS GRAHAM  
908-663-2189

**SPECIAL EVENTS/GOLF OUTING**  
CHRIS PHELAN  
973-777-6700

**AUDIT**  
RUSS GRAHAM  
908-663-2189

**BUDGET**  
JANET SHIPTON  
732-839-4916

**HISTORIAN**  
BOB DALY  
212-566-5764

**ATTENDANCE/RECEPTION**  
CHRIS PHELAN  
973-777-6700

**HONORS & AWARDS**  
JEFFREY GRANT  
908-272-6755

**WEB PAGE DESIGN**  
LINDA CAROLAN  
908-663-2189

**CHAPTER BYLAWS**  
LINDA CAROLAN  
908-663-2180

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**APRIL WEBCAST**

On April 16, 2008, ASHRAE’s Chapter Technology Transfer Committee (CTTC) will present a satellite broadcast and simultaneous webcast on “Integrated Building Design: Bringing the Pieces Together to Unleash the Power of Teamwork.”

Online registration for site coordinators and webcast viewers begins March 1 at [www.ashrae.org/idbbroadcast](http://www.ashrae.org/idbbroadcast). Registration for satellite viewers begins March 15. Information about the program and speakers is available at [www.ashrae.org/idbbroadcast](http://www.ashrae.org/idbbroadcast).

Three PDH credits will be granted to those who view the program and then complete the Participant Reaction Form on our webpage following the broadcast.

An added benefit of a \$50 discount will be taken off a one-year membership to anyone who joins ASHRAE as a new member in conjunction with the broadcast. Check out our website for more details.

Please see the enclosed brochure and share this information with your chapter members. Also be sure to keep watch for more information, as updates are sure to follow.

If you have questions, call (678) 539-1139 or email [ashrae-SatelliteBroadcast@ashrae.org](mailto:ashrae-SatelliteBroadcast@ashrae.org).

## Calendar of Upcoming Events

**May 1st**

***N.J. ASHRAE DINNER MEETING***

*Scholarship Award Night / Installation of Officers*

***WOODBRIIDGE SHERATON***

**“MECHANICAL DESIGN FOR GREEN BUILDING AND STANDARD 189”**

Tom Lawrence, Ph.D., P.E., LEED<sup>ap</sup> / **UNIVERSITY OF GEORGIA**

ASHRAE DISTINGUISHED LECTURER

**June 5th**

***N.J. ASHRAE DINNER MEETING***

*Spouses Night*

*Location To Be Determined*



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Sustainability

### 2007-2008 PRESIDENTIAL AWARD OF EXCELLENCE (PAOE) SUMMARY

Chapter #	Chapter Name	Chapter Members/ students	Member Promotion	Student Activities	Research Promotion	CTTC	History	Chapter Operations	Chapter PAOE Totals
007	N.J.	762	200	1115	470	770	175	555	3285

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## HELP WANTED

CUH2A ([www.cuh2a.com](http://www.cuh2a.com)) is a leader in the Science & Technology arena. We are currently seeking a **Sr. Instrumentation & Controls Engineer** for our Princeton office.

### Requirements:

10 or more yrs experience in the design, documentation and specification of commercial/light industrial automatic control systems related to HVAC systems, including boilers and chilled water plants. Competency in the design of control systems associated with cGXP areas, clean rooms and sterile suites, as well as BSL-2 and BSL-3 laboratories. Experience in pharmaceutical, research facilities, government, institutional research, academic, corporate and/or emerging technology. B.S. degree in related field, P.E. license, strong communication skills. (LEED accreditation preferred). Selected candidate will perform inter-discipline coordination, estimate project budgets, construct instrumentation & control diagrams, and also run projects independently. CUH2A employees enjoy competitive salaries, comprehensive benefits, stimulating projects & a great work environment with high employee retention. To apply, pls. send your resume to [recruiting@cuh2a.com](mailto:recruiting@cuh2a.com) with "NJ-ASHRAE Ad" on subject line.

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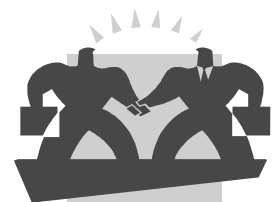
### **MECHANICAL ENGINEER**

Design projects for educational, municipal, industrial, pharmaceutical and commercial facilities. Minimum 5 years mechanical design experience, including HVAC design, required. AutoCad experience preferred. BSME required. EIT preferred.

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EEO/AA Employer



## SOCIETY NEWS.....

### Renewable Energy Continues Rapid Global Growth in 2007

The global use of renewable energy sources continued its rapid growth in 2007, with 40 gigawatts of new renewable energy capacity added throughout the world, according to a new report. That capacity growth, which includes large hydropower, brings the world's renewable energy generating capacity to more than a thousand gigawatts. Excluding large hydropower, renewable generating capacity grew by 33 gigawatts to a total of 240 gigawatts, a 16% annual growth rate. At 95 gigawatts, wind power is the largest of the newer renewable energy sources, while grid-connected solar photovoltaic systems increased by 53%, reaching 7.8 gigawatts.

Among other renewable energy sources, ethanol production reached 12 billion gallons, biodiesel production exceeded 2 billion gallons, and there are now enough solar hot water systems to produce 128 gigawatts of thermal energy. The United States now leads the world in new wind capacity added each year and in annual ethanol production, and it also features the largest installed capacities for geothermal and biomass energy power plants. See the press release (<http://www.ren21.net/globalstatusreport/>) and report ([http://www.ren21.net/pdf/RE2007\\_Global\\_Status\\_Report.pdf](http://www.ren21.net/pdf/RE2007_Global_Status_Report.pdf)) from the Renewable Energy Policy Network for the 21st Century, or REN21.

While the REN21 report estimates last year's investments in renewable energy at \$71 billion, analysts at New Energy Finance have increased their estimate to \$148.4 billion, more than double the REN21 estimate and a significant increase from New Energy Finance's previous estimate of \$117.2 billion, which was released in January. The new figure includes transactions made near the end of the year but not disclosed until more recently, and it reflects a 60% increase over investments in 2006, according to New Energy Finance.

### Funding Available for State Energy Programs

DOE's State Energy Program (SEP) provides grants to the states to design and carry out their renewable energy and energy efficiency programs in a way that makes the most sense for their resources and economies. For more information, see the SEP Web site and the SEP Strategic Plan at [http://www.eere.energy.gov/state\\_energy\\_program/pdfs/strategic\\_plan\\_0207.pdf](http://www.eere.energy.gov/state_energy_program/pdfs/strategic_plan_0207.pdf). DOE is seeking applications that support multi-state or regional advancements in the use of energy efficiency and renewable energy (EE/RE) technologies. SEP funds will accelerate market transformation for EE/RE technologies through such activities as the identification and dissemination of best practices, peer exchange, strategic planning, and technology specific training and evaluation. States may submit state specific applications for innovative projects that may be replicated by other states.

Partnering with other governmental and non-governmental organizations within the state is highly encouraged. The specific objectives are to: 1. Provide training and decision tools related to the use of EE/RE technologies, practices or policies through peer exchanges, workshops, or sponsorships/financing. 2. Develop multi-state or regional strategic plans for collaborative goals, policies and/or activities to increase the use of EE/RE technologies. 3. Develop and implement multi-state or regional activities that transform energy markets to accelerate the deployment of EE/RE technologies, products, and practices. 4. Increase stakeholder awareness and communication relating to best practices in market transformation policies and programs for EE/RE technologies, and technology specific deployment. Market transformation policies and programs include, but are not limited to: renewable portfolio standards, energy efficiency portfolio standards, renewable fuels standards, advanced energy efficiency codes and standards for buildings, appliances and equipment, tax incentives and performance contracting. 5. Develop training tools or systems for state officials and/or others on the evaluation and verification of state energy savings and carbon reductions using the best available models.

## SOCIETY NEWS.....

### Washington State Approves Bill Cutting Greenhouse Emissions

Washington Governor Chris Gregoire approved a climate change bill that will reduce the state's greenhouse gas emissions to half of its 1990 emission levels by 2050. The bill also includes interim limits of returning to 1990 emission levels by 2020 and reducing emissions to 25% below 1990 levels by 2035. The bill, House Bill 2815, leaves most of the details to the state's Department of Ecology, which has until December 1 to create a greenhouse gas reduction plan that achieves the bill's emissions targets. The department also has to develop a system for monitoring and reporting greenhouse gas emissions.

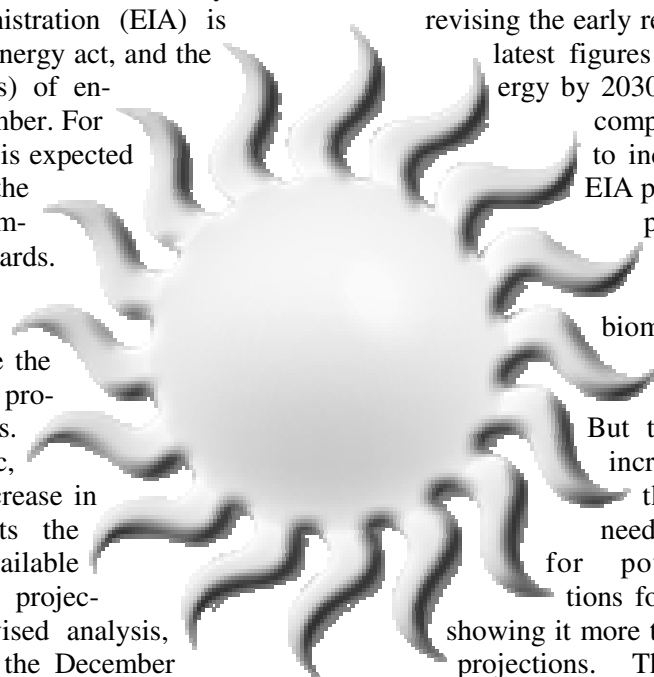
The bill acknowledges Washington's current commitment to the Western Climate Initiative, which has set a regional goal of reducing greenhouse gas emissions to 15% below 2005 levels by 2020, and the bill aims to take advantage of that initiative through participation in its regional market-based mechanism to reduce emissions. The initiative is currently planning to create a market-based mechanism, such as a cap-and-trade system, by August.

The bill acknowledges an important benefit of reducing greenhouse gas emissions: the likelihood of creating new "green" jobs in fields such as energy efficiency and renewable energy. The state estimates that it had 8,400 such "green economy" jobs in 2004, and the bill encourages the growth in that sector through a new green economy jobs growth initiative. The new initiative aims to expand the green economy sector to 25,000 jobs by 2020 through targeted financial incentives and comprehensive strategies to attract and expand industries and small businesses serving this sector. It will also include such measures as job training and curriculum development. The state has estimated that several of the recommended strategies for responding to climate change will have a net benefit to the state's economy of nearly \$1 billion by 2020. See the governor's press release (<http://www.governor.wa.gov/news/news-view.asp?pressRelease=817&newsType=1>) and the full text of the bill (<http://apps.leg.wa.gov/billinfo/summary.aspx?bill=2815>).

### EIA: New Energy Act to Yield More Renewable Energy by 2020

The U.S. outlook for the growth in renewable energy use by 2020 has improved considerably in just three months, thanks to the Energy Independence and Security Act of 2007, which President Bush signed into law in December. DOE's Energy Information Administration (EIA) is revising the early release of its Annual Energy Outlook to reflect the impact of the energy act, and the latest figures show renewable energy providing 13.7 quadrillion Btu (quads) of energy by 2030, up 12% from the 12.2 quads that EIA projected back in December. For comparison, the total U.S. energy use was 99.5 quads in 2006 and is expected to increase to 118 quads by 2030. That number is 5% lower than the EIA projected in December (123.8 quads), reflecting the impact of improved fuel economy standards and new product efficiency standards.

The new projections show biomass energy use increasing to 8.12 quads by 2030, nearly triple the biomass use in 2006 and a 47% increase over the December projections, reflecting significant growth in renewable fuels. But the projections for biomass power production are less optimistic, increasing by a factor of 7.5 by 2030, compared to a nine-fold increase in the December projections. The difference probably reflects the need to direct biomass towards fuel production, making less available for power production. Perhaps in compensation for that, the projections for geothermal power production are more optimistic in the revised analysis, showing it more than doubling by 2030, compared to only an 88.4% increase in the December projections. The other renewable electricity projections remain essentially the same. See the Tables A1, A16, and A17 from the EIA report (<http://www.eia.doe.gov/oiaf/aeo/pdf/appa.pdf>).



## SOCIETY NEWS.....

### International Code Council Takes Action on ASHRAE Proposals

ATLANTA – International building codes may soon incorporate requirements from a new load calculation standard from ASHRAE and ACCA under several recent proposals now under consideration.

ASHRAE made 15 proposals to the International Code Council (ICC), which develops model codes that may be adopted by code jurisdictions in the United States or internationally. After a public comment period of the committee recommendations of proposals, final hearings for the code change proposals will take place in September 2008. If the proposals are accepted, they would be included in the 2009 code.

Under a proposal to both the International Mechanical Code (IMC) and the International Energy Conservation Code (IECC), references to load calculation guidance in the ASHRAE Handbook, *Fundamentals*, would be replaced with requirements from a new ASHRAE standard developed with the Air Conditioning Contractors of America (ACCA), ANSI/ASHRAE/ACCA Standard 183-2007, *Peak Cooling and Heating Load Calculations in Buildings Except Low-Rise Residential Buildings*. The standard establishes minimum requirements for building loads that are inclusive of as many procedural methods as possible while identifying core elements that impact heat loss and gains.

“The guidance in the ASHRAE Handbook was never intended to serve as a reference document to codes,” said Steve Ferguson, ASHRAE assistant manager of standards – codes. “Standard 183 provides an appropriate consensus reference standard that is appropriate for adoption in the ICC codes.”

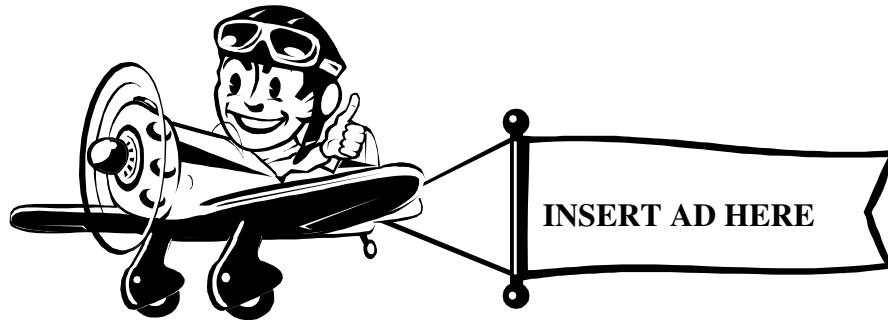
Also approved were proposed changes regarding lighting stringency based on requirements in ANSI/ASHRAE/IESNA Standard 90.1-2007, *Energy Standard for Buildings Except Low-Rise Residential Buildings*. These changes include:

- Adding exceptions for typical lighting requirements, which would eliminate conflicts with the code and accepted lighting design practice that are commonly applied.
- Allowing calculation of track lighting wattage, which provides an important practical application. Without this provision, users may be forced to claim more wattage than it is possible to put into the application.
- Modifying lighting power allowances, which would eliminate issues in the allowance section through appropriate and practical application of these additional allowances. While simplifying the application, it also will increase energy savings, according to Ferguson.

Also related to 90.1 was a proposal to modify chiller requirements. The proposal calls for, effective Jan. 1, 2010, an additional path of compliance for water-cooled chillers and consolidation of, and new requirements, for some of the existing categories.

Also approved was a proposal from ASHRAE to add new refrigerant classifications to the IMC from ANSI/ASHRAE Standard 34-2007, *Designation and Safety Classification of Refrigerants*.

## ADVERTISEMENTS.....



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