

## Holiday Luncheon

Mark your calendars for the Section Holiday Luncheon. We will introduce the 2014 slate of volunteer officers, and these officers will be elected by acclamation. We will also have plenty of time for conversation.

**Thursday**, December 12, 2013, 12:00 noon  
Niskayuna Reformed Church  
3041 Troy-Schenectady Rd (Rt. 7), Niskayuna, NY

Please contact Lou Tomaino at [schdyieee@yahoo.com](mailto:schdyieee@yahoo.com) by **Monday, December 9**, at 9:00 AM to reserve and specify this event. This event is free for IEEE members, \$10.00 for non-members to help cover the cost of the room and food.

## Message from the Chair:

I have a small child. Now most of you won't really care about that, but knowing that will help understand why I call this time of the year the "I want" season. Nearly every day, my daughter finds something else that she "wants", complete with begging, pleading, and her best attempt at cuteness. If she got everything she wanted, she would need a full size trailer to house all her new toys, or maybe an entire new house. She not only has the wants of an entire toy catalog, but she has the memory of an elephant. She will know what she asked for. As parents, it becomes our fault that she will be disappointed (this year she wants a real live lion). No matter what we do, we will not be able to meet her expectations.

Parenting theory aside, the "I want" season and the tearful aftermath reminds me of my responsibilities as an engineer. Lots of people "want". If they have a right to have those wants, we call them stakeholders. Stakeholders, unlike small children, don't confine their wanting to one season of the year. We have all had that experience. And as we face the time of year for renewing our membership in the IEEE, we can find ourselves on the other side of the "I want" season. We are the stakeholders for this professional society; we have expectations and desires for what the IEEE should do for us. And when even one of those expectations isn't met, it sometimes can grate on us like a pebble in our shoe (or the lion that Santa absolutely is not going to bring). Like many of our stakeholders for engineering projects, we have a financial

## What is a PDH Coordinator?

In order to better support our members who need continuing education credits, the Section Executive Committee would like to appoint a **Professional Development Hours (PDH) Coordinator**. We have many events that could be considered for credit if we had someone to fill out the paperwork! If you have an interest in continuing education credits, we encourage you to contact us!

Chandra Reis [creis@ieee.org](mailto:creis@ieee.org)  
Rebecca Nold [r.nold@ieee.org](mailto:r.nold@ieee.org)

**Please see page 3 for the 2014  
Officer nominations.**

stake in this game. And when the time comes to spend money, it makes that little pebble feel like a giant boulder.

What can we do about this? My daughter stomps her feet and says "I won't be your kid anymore". She doesn't have that option, but we do. We can leave, walk away and never look back. But what if we try harder to make this the society we want? There are options open for volunteers at the local level, you can see the openings in the list below. But volunteering isn't for everyone. In the face of the tantrum, my husband is very good at sitting down with our little girl and getting her to realize all the good that comes with being part of our family. It is so easy to not see the things that are working well, because the best working elements are seamless and self-supporting. And unlike a family, where the activities and material items are relatively easy to see, the IEEE is a huge organization and it is very hard to see beyond the areas where we typically interact. Over the course of the next year, we will be trying to highlight some of the areas that IEEE and IEEE-USA are working in so that you as the stakeholder start to get the information you need. In this issue, we have started with an article about the IEEE efforts with the H1B visas. If there are other areas that you think the membership (which means you) would be interested in, please let us know.

## Chandra Reis

Newsletter Editor: Becky Nold [r.nold@ieee.org](mailto:r.nold@ieee.org)  
Article ideas are welcome!

## CAPITAL DISTRICT HAS LONG BEEN ON THE CUTTING EDGE

The Mechanicville Hydroelectric Station is located on the Hudson River, just south of the city of Mechanicville. Construction of the plant began in 1897 and it began generating electricity in 1898. Soon after this plant was built it was connected to Spier Falls Hydro, making it the world's first electric grid, where they learned about voltage and frequency coordination.

The plant contains 7 hydroelectric generators producing 12,000 volt, 40 hertz power. The power is fed into two motor-generator converters to change to power to 60 hertz.

In the 1930's, the General Electric Co. installed an experimental high voltage dc electrical power transmission system between the subject hydroelectric plant and its factory in Schenectady. This system electronically rectified the 12,000 volt, 40 hertz generator power to direct current at approximately 20,000 volts. The direct current power was transmitted to Schenectady where it was then electronically inverted to 60 hertz power for use by the GE factory. This high voltage dc transmission system used mercury arc valves, the then state of the art devices, for the rectification and inversion processes.

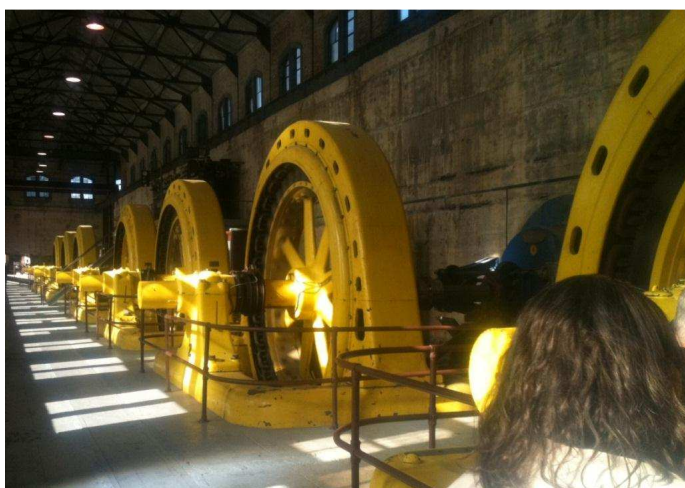
This experimental system was the predecessor of today's many large high voltage dc power transmission systems.

The Niagara Mohawk Corporation eventually obtained the plant in 1950, and it continued to run for the following four decades, requiring costly maintenance and renovation along the way. The facility was entered in the National Register of Historic Places in 1989, as the oldest continuously operating hydroelectric plant in the United States.

In 1997 Niagara Mohawk shut the plant down. Deregulation of the power industry meant Niagara Mohawk was no longer in the business of generating electricity. Poor economics made it difficult to find a new owner.

While the generators stood silent under tarps for several years, engineers and historians had not forgotten the plant. The Hudson River Power Corporation acquired this site in July 2003 and is currently undertaking a comprehensive rehabilitation and restoration program to return this facility to safe and reliable operation. The site is back in commercial operation.

*This information was extracted from a tour information packet on the Mechanicville Hydroelectric Station. Story idea and pictures were provided by David Stuebner.*



Generator Line at the Mechanicville Hydroelectric Station, 2013.



Motor-Generator Frequency Converter at the Mechanicville Hydroelectric Station, 2013.

## Member-Get-a-Member, Get a Gift and Bonus!

In conjunction with IEEE-USA, Membership and Geographic Activities (MGM) is excited to announce a special offer for US members.

Refer a colleague to IEEE. If they join before 31 December, they'll get a \$25 discount off their first year membership, and you'll get a gift of IEEE merchandise.

Refer your colleague via the online form, they will receive an email with a link, and they will need to provide your member number as they join. The online form is here: <http://ieee.fluidsurveys.com/s/ieee-usa/>

Please help spread the word and share your IEEE experience! Your referrals must join as professional members (not student or associate) and complete payment prior to 31 December 2013.

## 2014 Nominations for Elected Officers

<b>Executive Committee</b>		<b>Electron Device Society</b>	
Chair	Chandra Reis, creis@ieee.org	Chair	Stanley Kocsis kocsis@ieee.org
Vice Chair, Membership	<i>Be in line for prestigious Chapter Chair in 2016!!</i>	Vice Chair	Yun Zou zou.yun.us@ieee.org
Vice Chair, Treasurer	James Barrett, jbarrett@nyiso.com	Vice Chair	Anuj Bhatia anuj.bhatia@ieee.org
Vice Chair, Secretary	Peter Sutherland peter.sutherland@ieee.org	<b>Eng'g in Medicine and Biology Society</b>	
<b>Computational Intelligence Society</b>		Chair	Yun Zou zou.yun.us@ieee.org
Chair	<i>Plan technical speaker(s), we help plan the event.</i>	Vice Chair	Judy Kilday jkday@ieee.org
Vice Chair		<b>Industry Applications Society</b>	
<b>Computer Society</b>		Chair	Aboozar Ghavami aboozar_ghavami@yahoo.com
Chair	<i>Plan technical speaker(s), we help plan the event.</i>	Vice Chair	Robert Smith robertsmith@ieee.org
Vice Chair	Howard Halstead halstead@ieee.org	Vice Chair	Maja Harfman Todorovic maja.harfman@ge.com
<b>Dielectrics and Electrical Insulation Society</b>		<b>Power and Energy Society</b>	
Chair	Karim Younsi karim.younsi@ge.com	Chair	Vince Forte vforte@nycap.rr.com
Vice Chair	Qin Cheng cheng@ge.com	Vice Chair	Ali Mohammadpour mohama3@rpi.edu
<b>Education Society</b>		Vice Chair	Bo Gong gongbo76@yahoo.com
Chair		<b>Signal Processing Society</b>	
		Chair	<i>Plan technical speaker(s), we help plan the event.</i>

## 2014 Appointed Officers

<b>Newsletter Editor</b>	<i>We have a template! These are just emailed!</i>
Steinmetz Committee Chair	Frank Wicks wicksf@union.edu
Past Section Chair	Vacant
Membership Meeting Coordinator	Lou Tomaino l.tomaino@ieee.org
PACE Chair	Sina Afshari afshas@rpi.edu
<b>Student Activities Chair</b>	<i>Liaison to university chapters, support Future City comp.</i>
GOLD Chair	Ali Shervin Shahsavari, shahsavari.shervin@gmail.com
GOLD Vice Chair	Masoud Abbaszadeh, abbaszadeh@ge.com
Section Liaison to Prof. Eng. Soc.	Louie Powell louie.powell@ieee.org
Awards Chair	Karim Younsi karim.younsi@ge.com
Web master	Rebecca A. Nold r.nold@ieee.org
Nominating Committee Chair	Saber Azizi azizisa2003@yahoo.com
Section Historian	Neal Taylor ntaylor@cgpowersolutions.com
Women in Engineering Affinity Group	Le Hui huile@ieee.org

***Is your local society (above) staffed? If not we need you! A society with no events/talks/meetings for 3 years will be dissolved by IEEE.***

### E-Week Seminars Needed!

We are still looking for seminars for E-Week 2014. We now have three new electrical seminars scheduled. Ideally we would have at least one full day of electrical presentations (five seminars). Remember – everyone has a story to tell.

To propose a seminar, complete the attached form and send it along with a brief biography and a draft of the presentation to Jen Miller at [jamiller@nysspe.org](mailto:jamiller@nysspe.org). Submitted by Louie Powell, Section Liaison to the Professional Engineering Society.

## IEEE-USA Legislative Update: H-1B Increase on Congress' Agenda

Legislation has passed the U.S. Senate and is pending in the U.S. House of Representatives that would roughly double the size of the H-1b temporary visa program. If an immigration reform bill passes this year, the H-1b increase will almost certainly be part of the bill unless legislators hear from their voters soon.

IEEE-USA opposes any attempt to raise the H-1b visa cap, and supports efforts to protect American and foreign workers from the unintended consequences of this visa program. At the same time, IEEE-USA recognizes that there are many highly skilled and innovative people around the world who were not born in the United States. It is in our country's interest to let some of these people live and work here – but they must be allowed to live and work here as American citizens, not merely temporary workers.

Problems with the H-1b program have been well documented. Outsourcing companies received around 55% of the visas last year. These companies employ tens of thousands in the United States, almost none of whom are Americans.

The Senate bill (S. 744), which is a comprehensive immigration bill, also includes a number of useful reforms to the H-1b program. While these don't undo the damage done by a cap increase, they will help by limiting the use of H-1B's for outsourcing and keep H-1B salaries closer to American workers. The House bill (H.R. 2131) includes none of these protections. The Senate bill includes a large expansion of the EB green card program, which IEEE-USA supports.

The IEEE-USA web site offers timely summaries of legislation that concerns you! Check IEEE-USA's Legislative Action Center ([www.ieeeusa.org/policy](http://www.ieeeusa.org/policy); look in the upper right).