Please be sure to check out the Events and Career Opportunities section below and [here](#) on our website. Several interesting new webinars coming up!

**National Grid - Limited time 30% increased GSHP incentive** – “Our incentives on ground source heat pumps have saved participating customers an average of $7,000 on qualifying equipment. For a limited time you can save an additional 30% on this all-in-one, clean energy technology and even more with Federal Tax Credits. From September 1 through November 30, 2021, you can take advantage of increased incentives on qualifying Geothermal equipment to heat and cool your home efficiently for years to come. To apply for your rebate, contact a participating NYS Clean Heat contractor to complete the equipment installation and download an application form to complete and submit with your contractor by November 30, 2021. **Questions?** Please call our Heat Pump Hotline at **1-844-212-7823.**”

Get an additional 30% off incentive for your ground source heat pump.

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**Central Hudson Rate Case Settlement Reached** – “After months of negotiations with the Central Hudson Gas and Electric Corporation, public interest groups have achieved
commitments from the utility to reduce fracked gas sales, translate the company’s website and customer materials into Spanish, and cut the overall bill increases the company was seeking…These commitments are memorialized in a document called a Joint Proposal, which was negotiated between the utility, state regulators, businesses, local governments, and public interest organizations…Responding to climate concerns raised by the various parties, Central Hudson has agreed to become the first utility in New York that plans to reduce its overall gas sales through energy efficiency, renewable heating, and other methods. The company, which has about 309,000 electric and 84,000 gas customers, agreed to reduce gas sales by 2.5% from 2019 levels over the next four years and to remove claims that gas is more environmentally friendly than oil from its website. The company also agreed to achieve greater electricity efficiency savings.” NY-GEO and AGREE (Alliance for a Green Economy) were among the organizations that signed on to the Joint Proposal. See the press release from AGREE here. The Joint Proposal now goes before the Public Service Commission. Screen shot from the Joint Proposal:

The Plan will include Central Hudson’s positive environmental actions and their expected impact relative to 2019 baseline levels. Though new initiatives are expected to emerge, actions the Company is committing to take are:

- During the period 2021 through 2025, Central Hudson is targeting cumulative savings that equates to approximately 2.5% from 2019 gas sales. These savings will be driven by, and exceed, Central Hudson’s current Energy Efficiency and Heat Pump programs.

Microsoft Goes Geothermal – “On Microsoft’s campus in Redmond, Washington, old buildings have fallen and fresh steel has risen as the land takes shape for new, modern structures across 72 acres. Workers have carved and sculpted bare dirt into faint outlines for 3 million square feet of beautiful workspace and amenities. But in one corner of the project, construction workers are also doing something else: drilling hundreds of deep wells in a muddy pit that will eventually be covered by grass and trees. The hidden wells will be the foundation of a large system that heats and cools the new buildings with an untraditional clean energy source: the constant temperature below the earth’s surface. Tunneling 550 feet into the ground — almost the height of the Space Needle in nearby Seattle — the wells will compose one of the largest “geoexchange” fields in the United States to harness the earth’s thermal energy. Full article here. Thanks to Ny-GEO member Bob Wyman for this tip.
Geothermal Opportunity, Pelham, Westchester County – “We are Owner’s Reps for the Village of Pelham, NY assisting them with the design and construction of their new Municipal Center (containing Police Dept, Fire Dept and Village Hall). The Schematic Designs are complete and they are now in the Design Development Phase to determine Mechanical, Electrical and Plumbing equipment and services. For heating and cooling, they are considering Geo-thermal. Are you able to recommend people to speak with, watch a Zoom presentation, etc. that may be able to educate the Village on the pluses and minuses of a Geo-thermal system to determine if it is right for them? Also, on the behalf of the Village, and practicing architects, it would be great to also speak with some designers and facility people who manage a building where Geo-thermal was installed a few years ago. Peter F Gaito Jr. AIA, NCARB, Peter F. Gaito & Associates, Architects, Engineers and Planners. Call us: 914-682-3381 pgaitojr@pfga.net” Please let us know if you respond to this request at nygeoinfo@gmail.com.

Geothermal Excels at Energy Storage - “Potential of Utilizing Thermal Energy Storage Integrated Ground Source Heat Pump System to Reshape Electricity Demand in the United States.” ASME Journal of Engineering for Sustainable Buildings and Cities, August 4, 2021, - by Xiaobing Liu, Shi, Liang, Xiaobing Liu, Ming Qu, Guodong Liu, and Zhi Li.1–54. $25 fee for the full article. From the abstract: “A novel ground source heat pump (GSHP) system integrated with underground thermal energy storage (UTES) has been proposed to level the electric demand of buildings while still satisfying their thermal demands. … Overall, about 46 million single-family detached houses can be retrofitted into the proposed system without increasing the annual peak demand of the corresponding markets. By implementing the proposed system at its maximum penetration rate, the grid-level summer peak demand can be reduced by 9.1% to 18.2%.” Thanks to NYGEO member Bob Wyman for this tip.
GeoWhat?? – An email recently came in from Data for Progress, an organization describing itself as a “progressive platform for carbon removal”. We didn’t have time to delve into their website, but did find the graph below from their email to be of interest. This May 2021 survey found that 57% had heard “not much” or “nothing at all” about geothermal energy, a term that includes geothermal electricity generation. We’ve still got some work to do!

**Voters Have Heard the Most About Prevalent Renewables and Fossil Fuels, but Little About Carbon Removal**

How much have you heard about the following technologies and energy sources?

- **Solar energy**: 39% A lot, 40% Some, 13% Not much, 13% Nothing at all
- **Oil**: 38% A lot, 35% Some, 16% Not much, 11% Nothing at all
- **Wind energy**: 31% A lot, 43% Some, 15% Not much, 12% Nothing at all
- **Coal**: 31% A lot, 36% Some, 18% Not much, 14% Nothing at all
- **Nuclear energy**: 28% A lot, 38% Some, 20% Not much, 14% Nothing at all
- **Hydraulic fracturing (“fracking”)**: 22% A lot, 35% Some, 22% Not much, 22% Nothing at all
- **Offshore wind**: 17% A lot, 29% Some, 27% Not much, 27% Nothing at all
- **Geothermal energy**: 13% A lot, 30% Some, 30% Not much, 27% Nothing at all
- **Carbon removal technologies**: 11% A lot, 30% Some, 30% Not much, 29% Nothing at all

Exelon – Green Hydrogen from Oswego Nuclear Plant? – “The U.S. Department of Energy awarded Exelon Generation a grant to explore the potential benefits of on-site H2 production at the Nine Mile Point Nuclear Station in Oswego, New York. Exelon will partner with Nel Hydrogen, the Argonne and Idaho National Laboratories and the National Renewable Energy Laboratory to demonstrate integrated production, storage and usefulness of hydrogen at the two-unit, 3-GW station….Nine Mile Point Nuclear Generating Station Unit 1 was commissioned in the late 1960s. Unit 2 went online in the
Exelon’s Generation division will create a demonstration project for making carbon-free green hydrogen at one of its nuclear power plants.

Otter Tail Report Rejects Gas Industry Claims – The report - Methane Gas: Health, Safety, and Decarbonization, was released to the public and to elected and appointed officials in Oregon and Washington, including the Oregon Public Utility Commission and the Washington Utilities and Transportation Commission. The report is supported by 64 organizations from around the Pacific Northwest and counters information from NW Natural and other fossil fuel entities that has targeted elected officials and the public.
Scientists say the world urgently needs to cut methane emissions. The politics aren’t as simple. The Biden administration and some Democrats are shifting focus to methane, the greenhouse gas second-most responsible for heating the planet. From the article: “Mark Brownstein, senior vice president for energy at the Environmental Defense Fund,… noted…”Over a quarter of the warming we’re seeing right now is being driven by methane emissions from human activities,…We know that by controlling methane pollution from the oil and gas industry we can make a major difference in addressing the climate problem that’s affecting all of us today. That’s the key issue.’ But Republicans are preparing to fight Democrats’ efforts by saying it would increase costs to everyday Americans for things like home heating, electricity and groceries.
A fee on methane emissions would function as an implicit tax hike on Americans with less disposable income, making it ‘violative’ of Biden’s pledge to avoid raising taxes on people earning less than $400,000, said Mike McKenna, a Republican lobbyist who works with energy companies.” Thanks to Irene Weiser, Coordinator, Fossil Free Tompkins. for this tip.

Heat Waves and Low Income New Yorkers – “As heat waves happen more often because of global warming, the state should expand the Low-Income Home Energy Assistance Program to better protect the most vulnerable New Yorkers, especially low-income people of color, writes WE ACT for Environmental Justice’s Sonal Jessel and Columbia University’s Diana Hernández.” (from 2021 08 28 – City & State First Read). Although this article neglects to include geothermal heat pumps as a solution, it does provide valuable perspective and information on the Low-Income Home Energy Assistance Program and the impact of heat waves on low income New Yorkers.

Full map at LittleSis.org
Helpfully Hoping - AWESome EarthKind podcast: A lot of people are saying that they don't think we're going to make it. That their children don't believe they have a future. It's now very clear that woman and mankind - all EARTHKIND – are another Force of Nature. What are some examples of positive change that can inspire hope for the clean energy future we need to make the world safe for ourselves, our children, and all future generations? Listen to “Helpfully Hoping – Believing & Doing” via your favorite podcast playing app (Apple, Spotify, Google Podcast.) or visit the website at www.AWESomeEarthKind.com.

Heat Pumps in Mount Vernon and New Rochelle – “We are officially announcing the launch of the Adopt Clean Energy website, where you may sign up for heat pumps for your property in Mount Vernon and New Rochelle.” Contact Marvin Church for more information - 914.260.4649
Massachusetts should be converting 100,000 homes a year to electric heat. The actual number: 461 - Article By Sabrina Shankman – Boston Globe Staff – “When Massachusetts officials look into the not-so-distant future of 2030, they see 1 million homes across the state comfortably heated and cooled by sleek, efficient heat pumps, their old oil- and gas-burning systems — and the climate-warming emissions they spewed — relegated to the scrap heap. But they are woefully behind pace to reach that lofty goal, and the more time that passes without an urgent response, the further out of reach it gets. According to the state’s own plan, Massachusetts should be converting 100,000 homes a year from fossil fuels to electricity for heating and cooling. The reality is much different: Just 461 homes made the switch last year, according to data reviewed by the Globe.” Thanks to John Ciovacco of Aztech Geothermal for this tip.

UC Davis on Large Diameter, Shallow Bore Heat Exchangers for Ground-Source Heat Pumps – “In this webinar, researchers will describe the results from a project investigating a lower cost heat exchanger design for ground-source heat pumps. Researchers developed and validated modeling tools for simulating a ground heat exchanger (GHE) technology, and used those models to estimate the performance of these systems in multiple California climate zones. These modeling tools can be used to facilitate proper GHE sizing for a full range of applications and should streamline acceptance of this emerging technology. Video and slides available here. See also a presentation from Xiaobing Liu of the Oak Ridge National Laboratory on an approach that requires greater capital investment than the simpler systems studied at UC Davis. The efficiency potential of this model is much greater than that of the simpler systems. Thanks to NY-GEO member Bob Wyman for this tip.

Shallow Bore GSHP Technology

» Advantage
  Installed with readily available auger equipment
  ▪ 36” diameter, 30’ deep bore

» Market Barriers
  • Limited installations with slightly different GHE designs
    ▪ Villages at La Rue (mid-1990’s)
    ▪ Honda House
    ▪ Parkview Place
  • No sizing methods or performance models exist for shallow bore
“US Will Oppose Fossil Fuel Projects At Development Banks • The Biden administration released new guidance that will lead the US to oppose financing fossil fuel projects at the Multilateral Development Banks. Under the new guidance US will support financing fossil fuel projects by such international banks only under extremely rare circumstances. [NRDC] " (from 2021 08 21 Green Energy Times)

DEC: No on Astoria Gas Power Plant – Incompatible with NY’s Climate Law – “The state’s Department of Environmental Conservation said that a proposed power plant in Astoria – which has inspired hours of public comments this week, mostly in opposition – is not in line with the state’s landmark climate legislation, City Limits reports.” (from 2021 08 28 – City & State First Read)

A Road That Charges EVs - German Company Makes Concrete to Charge Electric Vehicles From Roads With 95% Efficiency and Low Cost – Article by Andy Corbey for Good News Network -“Indiana could be the first state in the Union to have a wireless charging road that tops up your electric vehicle as you drive along it. As the 21st century rolls on, we’ve all had those one or two moments where we see some new technology and the pace of innovation really comes home to roost in our heads, normally with some recollection of Star Wars or Star Trek. Maybe for some it would have been the self-driving feature of the Tesla, or smart home systems, but for
motorists in Indiana, that moment may come by way of a shiny new wireless road.” Thanks to Marvin Church of Comrie Enterprises for this tip

Gas or Electric Range: Which Is Better? - Each type of range has its strengths, and they’re not what you might assume - Consumer Reports article By Paul Hope “If you could determine how well a range could cook from its fuel source, my job would be pretty boring,” says Tara Casaregola, who oversees CR’s (Consumer Report’s) range, wall oven, and cooktop lab. “We see the greatest discrepancies between individual models, and you can find excellent choices in gas or electric. In most cases, electric ranges outperform their gas counterparts. But there are exceptions to almost every rule, and that’s certainly the case here.” Thanks to Mark Kresowik, Federal Policy Manager RMI, Carbon-Free Buildings Program for this tip.

Climate Updates

There are many reasons our customers prefer geothermal heat pumps – saving money, superior comfort, health and safety. Their impact in totally eliminating greenhouse gas emissions is also a key benefit for many customers, and a key reason New York State is providing incentives and attempting to rev up the heat pump market. Just In! provides a limited number of important climate updates most weeks to keep you in the know on this crucial topic that is important to so many New Yorkers.

“How Climate Change Amplifies Extreme Weather Like Tennessee’s Deadly Floods And NYC’s Record Rainfall • Record breaking rainfall amounts in New York and Tennessee exemplify the same scientific phenomenon: extreme rainfall events being supercharged by human-caused climate change. The science is well known and easily explained. [CNN]” (from 2021 08 24 Green Energy Times)
“Raging Wildfires In California Forced 42,000 To Evacuate And Drove Reno Residents Indoors Due To Historic Bad Air • Over 42,000 residents have been told to evacuate their homes as nine large wildfires burn in northern California. The Caldor Fire has burned 114,166 acres since sparking ten days ago and is only 9% contained, according to Cal Fire. [CNN]” (from 2021 08 24 Green Energy Times)
Climate & Kids - Here’s a comprehensive and depressing scorecard from UNICEF, which has released its first index of the risk to children from climate change.
Among other things:
● Two hundred and forty million children are highly exposed to coastal flooding.
● Three hundred and thirty million children are highly exposed to riverine flooding.
● Four hundred million children are highly exposed to cyclones.
● Six hundred million children are highly exposed to vector-borne diseases.
● Eight hundred and fifteen million children are highly exposed to lead pollution.
● Eight hundred and twenty million children are highly exposed to heat waves.
● Nine hundred and twenty million children are highly exposed to water scarcity.
● A billion children are highly exposed to exceedingly high levels of air pollution.
From Bill McKibben’s weekly New Yorker Climate Crisis Column. Not to mention that at the rate things are going they’ll grow up in a chaotic world where the climate is spinning out of control.

Carbon Dioxide Pipeline Linked To Mass Poisoning, The Gassing Of Satartia - Article from Huff Post by Dan Zegart – “A CO2 pipeline in Mississippi ruptured last year, sickening dozens of people. What does it forecast for the massive proposed buildout of pipelines across the U.S.?..the federal government is taking the first steps to vastly increase the size of the nation’s carbon dioxide pipeline network as a way of fighting climate change. Our investigation reveals that such pipelines pose threats that few are aware of and even fewer know how to handle. Thanks to Jonathan Tham, Program Manager, PSEG Long Island Home Comfort Program for this tip.

Photo by Rory Doyle for HuffPost
Frequent Sources for Just In!:

- Green Energy Times
- City & State First Read
- POLITICO Weekly NY & NJ Energy email
- Bill McKibben’s weekly New Yorker Climate Crisis Column
- Canary Media
- Sage Welch - National Building Electrification Network & Sunstone Strategies
- The Guardian