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

**Canadian Study: Policies to Drive Ground-Source Heat Pump (GSHP) Adoption:**
This report was done by Dunsky Energy Consulting for the Heating, Refrigeration and Air Conditioning Institute of Canada (HRAI). It surveyed GSHP friendly policies in Germany, Austria, New York State and Sweden. Perhaps the key point raised is the misalignment between costs and benefits. GSHP installations provide superior greenhouse gas reductions and their consistent efficiency reduces peak electricity demand and avoids the cost of constructing new power plants. All ratepayers and citizens benefit from these benefits. In contrast, costs are solely absorbed by the building owner in the absence of effective policies. For those working in the policy area, it’s helpful to see a myriad of policies examined together and contrasted with each other. A couple nuggets from the report: “...we found that a reasonably ambitious adoption rate of GSHPs could save Canadians between $49 and $148 billion relative to electrification through air-source heat pumps (ASHPs) alone, which comes down to about $40,000 in savings per installed GSHP system.” And: “Today in Sweden, a long-time leader in adoption, 20 to 25% of its two million single-family homes are heated by GSHPs.” Thanks to Ontario’s Dave Hatherton for this tip.

To understand the relative importance of each policy, we mapped the results onto an impact and implementation matrix, which is presented in Figure 1. The most promising policies have the most impact on GSHP adoption while being the easiest to implement, aligning with the top right corner of the matrix.

*Figure 1 Impact and implementation scoring of each policy under consideration*
Pacific Gas & Electric Asks for Quicker Depreciation in Light of Declining Gas Projections – A tip from NY-GEO member Bob Wyman who has been very active in NY utility rate cases: “In its 2023 GRC (General Rate Case) California’s PG&E gas utility argues that they should be allowed to accelerate depreciation of their gas assets to compensate for shortened asset lives as a result of ‘reduced demand due to energy efficiency, building electrification resulting from fuel switching from natural gas appliances to electric, climate change, and an increase in greenhouse gas (GHG)-free resources. ... It is projected that this gas throughput decline will occur as core customers begin electriﬁying and eliminating gas usage in their homes and businesses. This will lead to a declining base of core customers to spread gas system costs to with rate increases needed to cover the gap.’ PG&E argues that: ‘The sooner the Commission begins to address the impacts of decarbonization, the more time that will remain to recover costs as equitably as possible and over a larger customer base. Delaying the recognition of these impacts will compress the time over which costs are recovered, result in a higher rate base, and may leave customers who remain with a disproportionate share of the costs of the Company’s gas system.’ The chart below projects PG&E’s expectations for gas sales declines given various decarbonization scenarios:”

**FIGURE 12A-1**
GAS DISTRIBUTION SYSTEM THROUGHPUT COMPARISON

Dandelion Co-Founder’s Five-Minute Ted Talk – Take a quick master class on the transition from fossil fuels to renewable heating and cooling. Dandelion Co-Founder Kathy Hannun gives a dynamic look at “what it takes to keep a room ‘room temperature’” in this high-quality, fast-moving but easy to grasp video. Thanks to NY-GEO member Irene Weiser for this tip.
NYSERDA Career Pathway Funding Opportunity – From a NYSERDA email: “As part of Governor Cuomo’s Workforce Development Initiative, NYSERDA is seeking proposals for hands-on, entry level training programs designed to help develop a talent pipeline of new workers (e.g., technicians, installers, technical sales) that are aligned with the basic, technical, and advanced skills needed by employers to work in high efficiency heating, ventilation, and air conditioning (HVAC) careers specializing in heat pump technologies including cold climate heat pump applications. New Proposals Due: October 6th 3:00 p.m. ET - For Additional Details and Associated Documents and How to Apply, visit here, or email Darina Mayfield or call (518) 862-1090, Ext. 3672.”
TreeHugger Article on Heat Pumps is Good, but Glaring Omission – From NY-GEO member John Ciovacco – “There’s a recent article from Tree Hugger correctly stating that air source heat pumps (ASHPs), when in cooling mode, are essentially the same as air conditioners. It also points out that depending on electric rates and natural gas prices, heat pumps don’t necessarily save on operating costs in the winter. Efficiency’ and ‘cost effectiveness’ are not a proxy for each other. The article comes to a lot of the right conclusions, including the risks of not paying attention to efficiency in our drive to ‘Electrify Everything’. In this article, ‘heat pumps’ are synonymous only with air source heat pumps and efficiency is only gained by building envelope improvements - like passive house standards. There’s no mention of ground source heat pumps as a much better solution, or even an option. Still a long way to go!” Interestingly, Ciovacco’s note comes on the same morning as this Seattle KHQ TV news segment “Heat pumps more energy efficient than air conditioners” that repeats the AC assertion the Tree Hugger article critiques.

Are you ready for a heat-pump clothes dryer? – by Jeanne Huber Washington Post - June 21, 2021 - “Heat-pump clothes dryers are more energy-efficient, and they offer other benefits, too. Long popular in Europe but relatively unknown in the United States, they work without heating the clothes or venting warm, humid exhaust air to the outdoors, as traditional dryers do. Instead, they use air-conditioner technology to extract water from clothes as they tumble at room-temperature air. There is no exhaust air, just extracted water, which can be plumbed to drain automatically into the same pipe where the washer drains. Using a refrigerant in condenser coils makes heat-pump dryers at least 28 percent more energy-efficient than standard dryers, according to the federal Energy Star program. See the full article here.
Article Critical of Corporate Ties on the NY Climate Action Council – The *American Prospect* and *NYFocus* have [co-published an article](https://www.americanprospect.org/2021/05/nys-special-interests-climate-action-council/) written by Lee Harris that is critical of corporate influence on the Climate Action Council (CAC). The CAC is the 22 person body appointed to develop a plan to meet NY’s legal mandate to reduce greenhouse gas emissions by 40% by 2030 and 85% by 2050. From the article: “A top energy executive, whose firm is designing pro-gas talking points, has a seat at the table charting the state’s path to decarbonization.” Regarding the article, in an exchange on Twitter, Haley Viccaro Deputy Communications Director, Energy and Environment at NYS Governor Andrew Cuomo notes: “As Marie (French of *Politico NY Energy*) pointed out, in no way is Climate Action Council "stacked" w/ industry reps - only a couple are. Also, of the Advisory Panel members, depending on who you count as industry reps - only ~7/128 are. So, either way, headline is inaccurate along w/ claims made in article.”

On climate policy, **Clean electrification is the entrée; everything else is a side.** – by [David Roberts of Volts](https://www.volts.com/2021/05/13/clean-electrification-is-the-entree-everything-else-is-a-side/)

“If you decarbonize electricity, transportation, and buildings, you’ve taken out the three biggest sources of emissions in virtually every country. The technologies and policies we need to do it exist today, ready to deploy.” …Clean electrification — done in a way that honors and protects frontline and vulnerable communities — needs to be the top item on every list of climate demands. It would be fatal for climate activists to take it for granted or assume it’s taking care of itself. It is not. [Click here](https://www.volts.com/2021/05/13/clean-electrification-is-the-entree-everything-else-is-a-side/) to read or listen to the article.

**NYSERDA Revises Underwriting Criteria** - The Green Jobs - Green New York (GJGNY) residential revolving loan fund has filled a gap in the market for residential energy efficiency and renewable technology for several years. Since the inception of NYSERDA's loan program, more than 31,500 On-Bill Recovery and Smart Energy loans totaling almost $377 million have been issued across all the NYSERDA residential programs. Below are updates to the GJGNY underwriting criteria which will go into effect for all applications received on or after **Friday, July 16, 2021**. Questions about these changes may be submitted to [residential.financing@nyserda.ny.gov](mailto:residential.financing@nyserda.ny.gov).

<table>
<thead>
<tr>
<th>UNDERWRITING CRITERIA</th>
<th>Tier 1 Loans</th>
<th>Tier 2 Loans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum FICO score</td>
<td>640</td>
<td>540</td>
</tr>
<tr>
<td>Max Debt-to-Income Ratio</td>
<td>50% for FICO 640-719</td>
<td>40% if FICO 540-599</td>
</tr>
<tr>
<td></td>
<td>No limit for FICO 720+</td>
<td>45% if FICO 600-649</td>
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<tr>
<td></td>
<td>50% if FICO 640-697</td>
<td>60% if FICO 680-719</td>
</tr>
<tr>
<td></td>
<td>No limit if FICO 720+</td>
<td>No limit if FICO 720+</td>
</tr>
<tr>
<td>Mortgage payment history</td>
<td>None</td>
<td>As reported on the credit report, current on all mortgage payments for the past 12 months. No mortgage payments more than 60 days late during the past 24 months.</td>
</tr>
<tr>
<td>Bankruptcy</td>
<td>No bankruptcy, foreclosure, or repossession within last 7 years</td>
<td>No bankruptcy, foreclosure, or repossession within last 2 years</td>
</tr>
<tr>
<td>Judgments</td>
<td>No combined outstanding collection, judgments, charge-offs, or tax liens &gt; $2,500</td>
<td></td>
</tr>
<tr>
<td>Prior GJGNY Loans</td>
<td>No customer will be eligible for a GJGNY Loan if the customer has a prior GJGNY Loan outstanding that is 30 days or more delinquent.</td>
<td></td>
</tr>
</tbody>
</table>
San Francisco - Analyst Makes Case for Building Electrification - By Laura Wenus
– As some California cities move toward building electrification to reduce greenhouse gas emissions, the Pacific Northwest endures a deadly heat wave, and after recent news in San Francisco that gas lines have been encased in concrete during seismic retrofits, we explore the hazardous tradeoffs of burning fossil fuels in buildings. Sasan Saadat, a research and policy analyst with Earthjustice, gave “Civic” an overview of the hazards associated with gas use in homes and explains some of the shortcomings of fossil gas alternatives. Article and audio interview are here - (From Sage Welch at the National Building Electrification Network and Sunstone Strategies)

“How Flooded Coal Mines Could Heat Homes” • A quarter of the UK’s homes sit above abandoned coal mines, long since flooded with water. Now, the mines are being put to a new, zero-carbon use. A heat pump can easily extract heat from the water, which comes up from the mine at 15°C (59°F), and deliver it to buildings that need it. [BBC] ” (from 2021 7 07 Green Energy Times)

Court ruling upholding gas ban transforms U.S. fight - David Iaconangelo, E&E News reporter - Published: Thursday, July 8, 2021 – “An attempt to undo the nation’s first ban on natural gas was defeated this week in federal court, blocking a challenge that could have threatened campaigns to restrict buildings’ use of the fuel across much of the country. The ban in Berkeley, Calif., enacted in 2019, made hookups for natural gas illegal in new buildings. It inspired copycat laws in dozens of California cities, and municipal legislation in Washington state, Massachusetts, Oregon, New York and elsewhere. The plan also triggered a national backlash from the gas industry and their allies in state legislatures. At least two dozen states have considered bills that prohibit
cities from targeting natural gas consumption, with the most recent measure passing into law in Ohio last week.” [Full article here.](#) Sierra Club’s take on the [Berkely ban here](#). 

Rewiring Communities: A Plan to Accelerate Climate Action and Environmental Justice By Investing in Household Electrification at the Local Level – From the [Rewiring America Website](#) - Rewiring Communities is a new, innovative proposal focused on delivering the climate, economic and health benefits of household electrification to low-to-moderate income (LMI) families by bringing together the capabilities of local communities and the financial resources and administrative flexibility of the proposed Clean Energy & Sustainability Accelerator (the “Accelerator”). [Download the report here](#).
“Renewable Energy To Spur Post-COVID Recovery, Create 43 Million Jobs By 2050: IRENA • The latest analysis report that was released by the International Renewable Energy Agency showcases that the Agency’s 1.5°C pathway foresees the creation of up to 122 million energy-related jobs in 2050, more than double today’s 58 million. [MEP Middle East]" (from 2021 07 04 Green Energy Times) Regarding meeting the international target of a 1.5 degree C limit to warming, the report projects: “The largest improvement, making up over 40% (0.7 pp per year), comes from electrification, such as electric vehicles in road transport and heat pumps for heating and cooling applications. In total, the combination of renewable energy and electrification makes up just under 60% of the improvement needed to achieve the scenario’s energy intensity goal.”

PES = Planned Energy Scenario based on governments’ current energy plans. 1.5 S is Scenario designed to limit warming to 1.5 degrees C.

California PUC opens 'mother of all proceedings' to prepare the grid for new wave of Distributed Energy Resources (DERs) - by Kavya Balaraman In Utility Dive 20201 07 06 - "The new wave of DERs, led by millions of new electric vehicles and all-electric
buildings, will pose new challenges for distribution planning and demand management, but also new opportunities for making customer load more flexible, addressing the duck curve, increasing customer resiliency and promoting equity," Full article from Utility Dive here.

**Heat Pump Congressional Historic Perspective** - NY-GEO member Bob Wyman has put together the chart below showing trends in how often “heat pump” has been mentioned in Congressional bills. Contact Bob at bob@wyman.us if you have any questions.

![House and Senate Bills that Mention "Heat Pump"
(94th thru 117th Congress)](image)

Fossil fuel companies lobby UK government for gas ‘compromise’ ahead of COP26 - Siobhan Kennedy Washington Correspondent – Channel 4 News UK – “Last year, representatives from ExxonMobil, Shell, Chevron, Equinor and BP met with the then UK trade minister for a private dinner in Texas where natural gas was championed as a “vital part of the solution” to tackling climate change, according to a freedom of information request obtained by Greenpeace UK’s investigations unit Unearthed and shared exclusively with this programme.” - (From Sage Welch at the National Building Electrification Network and Sunstone Strategies)
“BP: Wind, Solar Growth 50% Larger Than Any Time In History • Wind and solar energy capacity increased by 238 GW in 2020, 50% more than at any time in history, according to a report from BP. The 2021 ‘BP Statistical Review of World Energy’ said that wind, solar, and hydroelectric generation all grew last year, even though overall energy demand fell. [reNEWS] “ (from 2021 07 10 Green Energy Times)

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.

“Sixty Years Of Climate Change Warnings: The Signs That Were Missed (And Ignored)” • by Alice Bell - In August 1974, the CIA produced a study on ‘climatological research as it pertains to intelligence problems.’ ‘The climate change began in 1960,’ the report’s first page informs us, ‘but no one, including the climatologists, recognised it.’ [The Guardian] (from 2021 07 05 Green Energy Times)
This is a nice in-depth look at early climate science and is not limited to the CIA study. Full article here.
Climate calamities from CIA’s 1974 list

- Burma (March 1973)—little rice for export due to drought
- North Korea (March 1973)—record high grain import reflected poor 1972 harvest
- Costa Rica and Honduras (1973)—worst drought in 50 years
- United States (April 1973)—“flood of the century along the Great Lakes”
- Japan (1973)—cold spell seriously damaged crops
- Pakistan (March 1973)—Islam planned import of U.S. grain to offset crop failure due to drought
- Pakistan (August 1973)—worst flood in 20 years affected 2.8 million acres
- North Vietnam (September 1973)—important crop damaged by heavy rains
- Manila (March 1974)—millions in Asia face critical rice shortage
- Ecuador (April 1974)—shortage of rice reaching crisis proportion; political repercussions could threaten its stability

“Climate Change Is About Greed. It’s Time For Big Oil To Pay Us Back • Four interconnected pieces of climate change-related news from the past two weeks reveal America’s predicament. And they also show the way forward, which ultimately must include oil companies’ paying restitution for damage that they have done to the climate and humanity for decades. [CNN]” - (from 2021 06 23 Green Energy Times)

You’ve Got to Be Kidding…
I'm addicted to buying old Beatles records. Sounds like you need help.

No, I already have that one.