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| Q&A from March 21, 2024 Building Electrification webinar |
| What is considered a “medium income” home? **ANS:** see Table A- top header on right side, which is based upon assumption the NJState IRA will use "Fannie Mae" census tract data <https://ami-lookup-tool.fanniemae.com/amilookuptool/> ALSO- see later answer: perhaps HUD database would be used (but may be based on same census tract data) |
| I had 200 amp service & a heat pump installed in late ‘23. I only received $600. Rebate from PSE&G. **ANS:** consistent with table A- in the PSEG rebate column |
| Would a consumer be eligible for both the NJ and the federal (IRA) rebates? **ANS:** In 2025, the NJ Utility rebates controlled by BPU) and the IRA (federal rebates, controlled by BPU) are "stackable" per BTU, but $ are yet TBD , |
| In Mass the rebate for heat pumps is $10,000 to $16,000 **ANS:** we in NJ are drooling over MA rebates |
| Reacted to "In Mass the rebate f..." with 😮 |
| I recently had solar installed. I indicated as such on my federal tax filings for 2023, and it seems that I am somewhat restricted…the tax credit was rolled over to 2025…because my tax amount paid was too low? I am low income and paid a lot for a new roof and solar as I just moved to a new home (with money from previous home sale). Expected %30 credit…. **ANS:** thanks for the heads-up on your experience with tax credit carry-over |
| The town of Kearny has rebates and money for homeowners that need to update electric, roofs, insulation etc up to $25,000 saw paperwork on Town of Kearny Parks and Recreation building. I will check with thestor if these forms are being placed in other locations and should be in schools and high schools so parents can see it. Check with mayor to see if town displaying in more locations. **ANS:** sounds like one of several special programs for very low income families. Learn more by entering a low family income while residing in PSEG territory: https://homeenergy.pseg.com/assessments |
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| What is PAH? **ANS:** answered verbally during last several minutes of webinar |
| Is it possible newer federal rebates will be retroactive? (**ANS:** Probably not. However, the IRS relies on date COMPLETED/ IN SERVICE /OR? INSPECTED?- Depending on timing, this could help you!) I did receive tax credit for 200amp panel. Unfortunately, heat pump & heat water heater are grouped together so I’m waiting to switch my gas hot water to have that expense be included in next tax return. Can you suggest best strategies to get maximum rebates & credits? **ANS:** SEE B  |
| I understand this is addressing existing homes. What is being done or is there rebates/incentive for new construction? I'm seeing new homes going up in Jackson and Howell NJ which are not all electric **ANS:** SEE C for table of New Construction Rebates (in 2025?) |
| Federal tax credits and utility rebates are "stackable" meaning you can get both. ALso, the forthcoming IRA rebates are supposed to also be "stackable" |
| As you are speaking I had a thought. When I went to HVAC school I think we probably spent about 2 or 3 months just covering the International Fuel Gas Code for safety. What I don't recall is ever covering anything on the Heat Pump Code. What is the Heat Pump Code for safety? **ANS:** Give the link to Steve Miller, who would like to read it and publicize!!! This summer, we may have a webinar on DO IT YOURSELF heat pumps using Mr Cool and the like. |
| please discuss air to water heat pumps. **ANS:** Discussed verbally by Steve near end of webinar |
| I’m spreading out my electrification over a few years to spread out my fed tax credits **ANS:**: Way to go See on-line "Planning" service B |
| Upgrading electrical systems in older town homes /condo may not be able to upgrade because of the amount of amp coming into the unit Most are 125 amps **ANS:** There is hope! See REF D |
| New Construction in NJ will have $incentives, IF they comply with high efficiency requirements LEED, ENERGY STAR, PASSIVE HOUSE,...per a table in a NJ Clean Energy Program press release https://www.njcleanenergy.com/RNC |
| Reacted to "I’m spreading out my..." with 👍 |
| Transfer switches are not UL labeled for existing electrical panels. **ANS:** thanks for the advice. HOWEVER there are ways around this. see REFD for UL Approved ways to share individual circuits. |
| I’ve found that HVAC contractors in NJ are not very familiar with heat pumps. **ANS:** We agree! Please join us in telling the BPU to focus on 1. Workforce training and 2. creating a referral data base of HVAC vendors experience with installing COLD CLIMATE HEAT PUMPS!! |
| How do you find contractors that are knowledgeable about cold weather heat pumps and heat pump water heaters? **ANS:** See my advice E |
| heat pump hot water heaters need a minimum square feet of 8ft2 .Louvered doors dont have enought sq inches to meet ventilation requirements. **ANS:** The heat pump installation manual gives minimum requirements. my daughter's heat pump water heater is doing well with a small furnace closet ~30 inch deep by ~6feet width, with two ~30 in by 7 feet louvered doors (~ 4 feet by 6foot total louvered area). I have been monitoring; I probably could achieve higher efficiency by attaching a n 8 in dia flexible pipe which blows cold heat pump exhaust downward and through the louvered slots (alternatively: directed directly into the hallway by cutting a new overhead vent ). |
| Net metering will make the installation of solar less expensive. Helps support the grid on hot days. **ANS:** the grid benefits. However, the incentives are designed to incentivize solar: Solar owners receive 1. SRECs for generating renewable energy AND 2. receive "net metering". Together, these are fabulous benefits/stimulants. HOWEVER, in CA (were solar panels are well-established) the electric utilities are starting to cut back on solar incentives. |
| Went through NJ Natural Gas for duct sealing to improve my air delivery system. They only duct seal new homes and not existing**ANS thanks for the heads-up** |
| PSE&G installed my cold-climate heat pump. The technician was excellent! As this time they only install Fujitsu. I have not needed supplemental heat & heater is in a closet with louvered doors. It comes up to temperature more rapidly than my former gas heater. **ANS:** You may be using the heating rod fast recovery. To use only 1/3 the energy, set the heat pump water heater fo always us "heat pump" |
| Question: If the administration changes in the presidential election do you think these incentives will still be available? **ANS:** Your vote counts. Vote the way you want the world to change. The world is rapidly heating and causing numerous changes that are detrimental to life. Vote for whomever intends to stop Green House Gas as quickly as possible (Our collective goal should be 0 GHG by 2050) |
| We had an energy audit and weatherized about 11 years ago, but now it feels drafty again. Does weatherization have to be re-done regularly? **ANS:**: discussed verbally. My first suggestion: voutld be leaky weather stripping which might get worn or out of place around doors/windows. Second: look for external vents stuck open (should clean or replace) like dryers or kitchen or fireplaces flues. Others suggested replenishing attic insulation to recommended minimums, which would help overall heat loss (especially if insulation was moved in attic- there would be cold spots in your ceiling), but less likely for you to perceive a "drafty" feeling.  |
| The HEERHA/HOMES IRA rebates start in 2025 in NJ. Toward the end of 2024 you should receive all the access information |
| Can you amplify info on heat pumps to replace boilers. **ANS:** discussed near end of webinar |
| Heat pump: can integrate with existing ducts? **ANS:** yes, providing ducts are large diameter and not leaky. Discussed verbally |
| The HUD Guidelines for income are different in every county. Counties in southern NJ have lower incomes **ANS:** I have been using the "Fannie Mae" census tract data https://ami-lookup-tool.fanniemae.com/amilookuptool/ . Another possibilitu” HUD dataset for "qualified Census Tracts and Difficult Development Areas" https://www.huduser.gov/portal/datasets/qct.html has its own datasets of "Qualified Census Tracts and Difficult Development Areas" These are based upon Area Median Gross income (AMGI)- Is this the same as the census-derived data used by Fannie Mae?. |
| What do you mean by stacked? **ANS:** Usually this means you receive BOTH when they are "stacked" |
| I’m very happy with my heat pump furnace but the thermostat is older technology. I had a Nest (Smart thermostat) for my gas furnace which was very convenient. Do you know if newer heat pumps will be designed to utilize Smart thermostats? **ANS:** typically the new heat pumps (& new central air conditioners) have proprietary controls; all pieces must be supplied by the same company. I see signs of more options to integrate with others. However, this may be a VERY SLOW process of compatibility. I personally had my RHEEM heat pump installer connect to use my existing NEST (pro-version) to turn on my old gas furnace as an auxiliary device, when outside temps were below 20 degrees (this temperature setting is adjustable by me) |
| How much can these heat pump projects cost without rebates? **ANS:** see end of Q&A for example prices. Can the cost be financed? **ANS:** YES- apply thru your electric utility- they offer low cost loans. (The vendor may offer to apply through your utility |
| Propane is a VERY LOW GWP (Global Warming Potential) **ANS:** propane is a low GWP refrigerant which would be ideal EXCEPT it is flammable. It is highly valued in Europe, but banned in the US. Flammability of propane might make it safely used (by U.S. standards) within outside units only, in air to water or water to water heat pumps. AL2 is described in https://www.c3controls.com/white-paper/preparing-for-a2l-refrigerants/ (also discussed verbally at end of webinar)Most brands are going to use R-32 in place of R-410a/ The A2L class of refrigerant is to be phased in starting 2025. |
| I had AC installed and that refrigerant you just mentioned was already outlawed for new AC. This was 1.5 years ago.**ANS:** many types of old refrigerant is outlawed beginning 1/1/2025 During servicing/repair in 2024, the older refrigerants MUST be reclaimed and recycled, and used to top off the same old refrigerants used in existing A/C and Heat Pumps during annual servicing. Beginning 1/1/2025, new sales MUST use low GWP (Global Warming Potential) those with ideal A2L properties of lower toxicity and lower flammability are preferred). |
| This is an AMAZING example of what is possible with Air to Water Heat Pump. The refrigerant is High Pressure CO2. Hotel Marcel | Mitsubishi Electric HVAC (mitsubishicomfort.com) |
| Very reasonable Heat pumps are the brands ACIQ (made by Midea) and Mr Cool Universal (made by Gree) or Tosot (made by Gree). **ANS** Mr. Cool designs for Do-It-Yourself (DIY). We may have a DIY webinar in summer. |
| Do you recommend getting a home energy audit before doing a heat pump ? **ANS** YES! Plan ahead. A fully weatherized tight house will have minimum heat loss, and require a smaller (lowest cost) heat pump. Your furnace might fail at any time. You should be prepared to install the highest efficiency heater (cold climate heat pump - which has a COP - coefficient of Performance) of 3 or above during most of the temperatures your house will experience through summer and winter. A gas furnace- most efficient possible has a coefficient of performance of 98% - or 0.98  |
| FYI very few Manufacturers are currently making cold climate heat pumps. Mitsubishi is number one in my book. |
| Blown in Cellulose always settles one to two inches that is why we always blow 3-4 inches over manufactures specifications so we can compensate for settling. |
| I had to step away for a minute, do you not recommend ductless heat pumps? **ANS;** "YES!!! |
| I have to sign off now. Great presentation, I just wish you had answered my question. **ANS: see next 2 price quotes** |
| cost for ductless system two outside units and 9 wall packs $30,000 in MA getting $16,000 state rebate |
| Cost for Mitsubishi 1 ton mini-split $7400 after $500 special promotion and $240 PSEG rebate; includes 240v wiring; Eligible for additional $2K tax credit); MUZ-FS512NAH; inside wall unit MSZ-FS12NA; Princeton Air, Princeton,NJ |
| **TABLE A**: https://bit.ly/TaxCreditsandNJRebates summary of all rebates and tax credits. To the person asking about moderate income limits- see the top description on the right hand columns for IRA  |
| **B:** there is an on-line tool by homes.rewiringamerica.org/calculator on top right of the page is "Make A Plan" button- for maximizing rebates/credits over time. See https://homes.rewiringamerica.org/personal-electrification-planner |
| **C:** New construction rebates are planned for using EnergyStar, LEED, and other high efficiency standards. See https://www.njcleanenergy.com/RNC |
| **D**: BEFORE changing your electrical panel, check ways to save money: Electrification of Homes Without an Electrical Service Upgrade": appliance swapping; load-sharing devices; "Watt Diet" <https://www.redwoodenergy.net/research/electrification-of-homes-without-an-electrical-service-upgrade>. Also see Watt Diet Calculator (calculate electrical panel remaining capacity; share circuits; calculate house heat loss) See table of contents of https://www.redwoodenergy.net/research/a-pocket-guide-to-all-electric-retrofits-of-single-family-homes |
| **E:** Recommendations to select heat pump contractors for HVAC and other electric appliances: https://climate.smiller.org/50x30/building-electrification/vendor-recommendations.html |
| THIS IS STEVE’S INDEX TO ~600 DOCUMENTS ON BULDING ELECTRIFICATION AND DECARBONIZATION, ORGANIZED IN ABOUT 60 TOPICS https://climate.smiller.org/REF/ |
| THIS IS STEVE’S INDEX TO BUILDING ELECTRIFICATION RECORDINGS AND SLIDES (Q&A where valuable) FOR ALL PREVIOUS WEBINARS https://climate.smiller.org/50x30/building-electrification/All-heat-pump-webinars.html |