Savings, Health & Comfort



Learn how to take advantage of Federal, New York State and utility incentives

The Climate Reality Project

NEW YORK STATE COALITION

Why are you here?



- A. I want to save money when replacing aging equipment in my house.
- B. I want to save money on my high & unpredictable energy costs.
- c. I'm interested in replacing my car with an electric vehicle.
- D. I want to make my home more comfortable.
- E. I'm worried about the health effects of burning fossil fuels in my home.
- I want to fight climate change.
- G. I want to learn more about what kind of incentives are available.
- н. Other



Goals of this presentation

- Show how to leverage the Federal, New York State & utility incentives to save money.
- Give you simple guidance on how to plan and prioritize your electrification journey.
- Help you take the first step.

Notes:

- We will be presenting more information than anyone can remember, but don't despair ...
- You will get copies of these slides with clickable links to additional information at the end of the presentation.

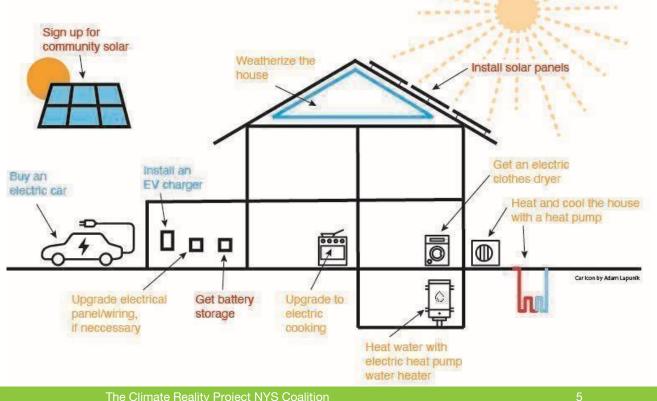
We need to act urgently. Climate change causes:

- Extreme weather (heat waves, hurricanes, extreme rainfall, droughts & wildfires)
- Increased cost of climate related disasters (which total \$148B/yr per NOAA)
- Sea-level rise
- Premature deaths from pollution & heat
- Water and food insecurity
- Species extinction
- Ocean acidification and land degradation
- Environmental displacement & migration
- Resource driven conflict and wars
- Disproportionate impact on poor, women & children



11 ways to be more efficient and less wasteful

	The Efficient Eleven				
1	Community Solar				
2	Weatherize				
3	Electric panel & wiring				
4	Space Heating				
5	Water Heating				
6	Clothes Drying				
7	Cooking				
8	Electric Vehicle				
9	EV Charging				
10	Residential Solar				
11	Battery Storage				



Electrification is NOT about sacrifice – it's about health and comfort

- Weatherization saves money & turns cold, drafty homes into comfortable spaces to live.
- Heat pump space and water heating are super efficient, saving on your energy bills. You also won't run out of oil in the winter and won't miss the smell.
- Heat pump clothes dryers are more efficient and cost less to run. They can be cheaper than regular dryers as they run on 120V and don't require outdoor ventilation.
- Induction cooking is better than gas: it boils faster, is more precise, doesn't burn you, and doesn't give your kids asthma.
- EVs are faster, smoother, cleaner, more powerful and require less maintenance than gas cars.
- Home EV chargers let you charge conveniently and can facilitate charging at off-peak rates.
- Community solar allows everyone to get solar electricity at a 5-10% discount.
- Residential solar provides free electricity after the investment is paid back (8.7 years on average in the US, and less in New York where we have large state incentives).
- Electric batteries provide resilient backup power in the event of an emergency.
- Best of all, Federal, New York State and utility incentives make this all more affordable.

Electrification is also about saving money

Most electric machines are more efficient & cheaper to run than their fossil fuel counterparts:

- EVs are ~40% less expensive to maintain and ~60% less expensive to fuel.
- HP water heaters last longer & save you around \$5,600 over their lifetime in electric bills (family of 4).
- Heat pump dryers reduce energy use by at least 28% compared to standard dryers.
- Induction cooktops are 85% efficient vs 32% for gas and 75-80% for electric resistance.

HP space heating is generally cheaper than other heating forms depending on the fuel type and cost. You can estimate your costs using this <u>calculator</u>.

As the average cost of residential solar is \$0.08 - \$0.10 per kWh, all your electric equipment will be even less expensive to run than fossil fuel counterparts.

	Federal & New York Incentives			US		New York			
			Upfront Rebate - LI	Upfront Rebate - MI		_		10	
- 1	F14-1-14-	Clean electricity	<80% AMI§	80-150% AMI§	Tax Credit	Program	Rebate	Tax Credit ****	
1	Electricity	Clean electricity				Community Solar (5-10%)			
			100% upto \$1,600	50% up to \$1,600	30% up to \$1,200 per year (25C)				
2	Home	Weatherization	Whole House R (ebate Program up to \$8,000 -	rules not issued	REAP Assessment Comfort Home Assisted Home Perf. NY EmPower ConEd Weatherization			
3		Electrical wiring (pre-wire outlets early!)	100% upto \$2,500	50% up to \$2,500					
3		Electrical panel (if under 100-amps)	100% up to \$4,000	50% up to \$4,000	30% up to \$600 (25 C) or 30% uncapped (25D) *				
4	Home	Air S <i>o</i> urce Heat pump	100% upto \$8,000	50% up to \$8,000	30% up to \$2,000 per year (25C)		Clean Heat (by utility) Significant \$ per BTU		
4 5	Home	Geothermal heat pump			30% uncapped (25D)		Clean Heat (by utility) Significant \$ per BTU	25% up to \$5,000	
5		Heat pump water heater		50% up to \$1,750	30% up to \$2,000 (25C)		Clean Heat (by utility) \$700 - \$1,000		
6	Home	Electric/induction stove	100% up to \$840	50% up to \$840					
7	Home	Heat pump clothes dryer	100% up to \$840	50% up to \$840					
	Home	Other				Utility TOU Utility Demand Response Utility Marketplaces NYS Financing Sealed			
	T	New EV			\$7,500 (30D) **			Clean Drive: \$500 - \$2,000	
8	Tra nsport	Used EV			30% up to \$4,000 (25E) **				
9	Tra nsport	EV Charger			30% up to \$1,000 in rural & LI Communities (30C)	Utility EV Charging			
10	Electricity	Residential solar			30% uncapped (25D)		NYSERDA NY-Sun	25% up to \$5,000	
11	Electricity	Battery Storage			30% uncapped (25D)			, , ,	
		5414 - Area Madian Incom				1	1		

lotes: §AMI = Area Median Income

^{* 25}C provides households a 30% tax credit for an electrical panel upgrade, capped at \$600, if it's upgraded in conjunction with another upgrade covered by 25C (like a heat pump or heat pump water heater). 25D

^{**} In 2023, the electric vehicle incentives will be accessible as tax credits. Starting in 2024, these incentives will be transferable to dealerships in exchange for upfront discounts.

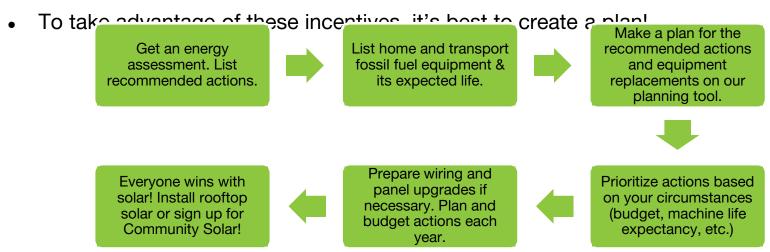
^{***} Not every household will be eligible for every incentive: product standards, income limits, and other eligibility requirements apply. For more information on the incentives, check out our calculator.

^{****} Capital projects can avoid sales tax in New York State under certain circumstances

^{*****} NYS Weatherization Assisted Home Performance and NY EmPower are income tested

Planning helps you tackle this multi-step project

- Over the next decade most of us will need to replace some of our heating and cooling equipment, appliances or a vehicle.
- The IRA, NY State & utilities offer significant financial incentives to replace such items with more efficient electrified ones that are usually cheaper up front and cheaper to run.



Individual planning worksheet

							^	-				
_	1. Community	Home energy	2.	3. Electric Panel	4. Heat pump	5. Heat pump	6. Electric (induction)	7. Electric (heat pump) clothes	8.	9.	10. Residential	11. Battery
Factors to consider	solar	audit	Weatherization	& Wiring	space heating	water heating	cooking	drying	Electric Vehicle	EV Charger	Solar	Storage
Do I have control over this as a renter/homeowner/co -op or condo owner?												
Benefits of making this change												
Electrical Upgrade Required? *					At Install	Maybe	Yes (non-portable units)	Maybe		Yes	At Install	
Usual life in years *				20-25	15-20	10-15	13-15	10-13	20-25	10-15	20-30	5-15
Is the appliance or system near the end of its life?												
Federal incentives available to me												
State incentives available to me												
Utility incentives available to me												
Cost compared to fossil fuel alternative												
Anticipated Date to begin making this change												

*Source: Rewiring America Electrification Planning Chart

Some notes on federal tax credits and rebates

Federal Tax credits:

- Are in effect from this tax year through 2032.
- There are annual limits on credits for many categories, but the credits "reset" every year.
- So, you can split projects over more than one year to maximize the credits.
- There are no limits on total federal income tax credits given.
- Consult a tax advisor before making decisions involving tax credits as the rules are complex.

Federal Rebates:

- Administered by the state based on the Feds' published rules and will be available later this year or next year.
- Ensure that rebates are included in your invoice before you commit to a project.
- Funds for rebates are limited and could be used up quickly if not replenished.

Disclaimer: This deck provides an overview of certain IRA tax provisions for general informational purposes only and is not itself tax guidance. We strongly recommend consulting a tax professional to review your personal situation before making decisions related to the material presented here.

Electric service, panel & wiring

Do I need more service?

General rules:

- >150A: usually OK
- 100-150A: plan carefully
- < 100A: may need additional service
- May need to replace panel if it is degraded or unsafe.

Process:

- 1. List planned projects
- 2. Determine panel size
- 3. Can you do the planned projects?
- 4. If yes, plan (using the tips)
- 5. If no, call electricians

Tips

- HP space heat: inverter driven w/minimal resistance backup.
- HP water heater: 240V/15A & 120V options
- Clothes dryer: 120V options
- Stove: use 240V/40A or battery enabled 120V
- EV charger: 120V, 240V/16A or 240V/24A
- Power sharing device which lets 1 of 2 devices work at a time
- Sub panel may be a solution

Pre-wire?

- You may want to do the panel upgrade and / or wiring in advance.
- This will make sure that you are ready when a fossil fuel appliance breaks.
- The water heater is the priority as you don't want to be without hot showers while you can plan a new stove, EV or clothes dryer.
- More <u>here</u>.

Federal incentives for weatherization & electrics

Rebates

- Low Income (LI): <80% of Area Median Income (AMI)
- Middle Income (MI): 80-150% of AMI
- Rules for all US rebate programs in this deck are expected this Summer

	LI	MI
Electrical Panel Upgrades	\$4,000	\$2,000
Rewiring	\$2,500	\$1,250
Basic Weatherization	\$1,600	\$800

Tax Credits

- 30% tax credit up to caps
- Total 25C credit capped at \$3,200/yr (\$2,000 for Air Source Heat Pumps, \$1,200 for items in table↓)
- Resets annually

	caps
Insulation	\$1,200
Electrical Panel (w/ 25C upgrade)	\$600
Windows	\$600
Doors	\$500
Energy Audit	\$150

Whole House

- Whole House Rebate
 Program will be based on
 the total amount of energy
 saved
- Maximum rebates will be \$8K for LI households and \$4K for all other households
- Multifamily dwellings will also be eligible
- Rules for this program, which will be complex, are expected this Summer.



New York State weatherization and efficiency programs

- There are numerous programs in NYS for weatherization, paying for new equipment & billing / payment assistance. Check out NY Energy Advisor to find out which programs are for you.
- NYS offers a robust set of home efficiency programs.
 To determine which of these programs are available to you, check here.
 - Residential Energy Assessment Program (REAP)
 - Comfort Home
 - Assisted Home Performance (income-based)
 - EmPower New York (income-based)
 - Clean Heat

New York residential energy assessment program (REAP)

- Starts with a free home energy assessment conducted by participating residential auditors.
- You will learn:
 - The cause of drafts, inconsistent temperatures, HVAC system failures & other problems.
 - Which equipment is using the most energy.
 - Unknown issues that make your home less efficient and comfortable.
 - Health and Safety hazards.
- You will receive a customized report documenting your home's energy performance and the actions you can take to make your home more energy efficient, comfortable & healthy.



Comfort Home

- Seal and Insulate program to improve home comfort & energy efficiency.
- Starts with a free consultation with a Comfort Home contractor
- Incentives go directly to contractor with reduction on your bill
- These measures can offset the cost of new HVAC systems by making it possible to heat & cool your home with smaller, less expensive equipment
- Complete a <u>survey</u> to determine eligibility

Good

- Seal & insulate attic and rim joists
- \$1,000 incentive

Better

- Good +
- Insulate walls & floors
- \$2,500 incentive

Best

- Better +
- Retrofit windows
- \$4,000 incentive

Assisted Home Performance

- Provides **income-eligible** residents with a 50% discount covering eligible energy efficiency improvements up to \$5,000 per project for single-family homes.
- Two- to four-unit residential homes with income-eligible residents may qualify for a discount of up to \$10,000.
- Available for both renters and landlords.
- Starts with a NYS REAP assessment.
- Get started here.

EmPower NY

Household	MAGI
1	\$34,224
2	\$44,760
3	\$55,296
4	\$65,820
5	\$76,356
6	\$86,892

Benefits

EmPower NY provides free energy efficiency solutions to **income-eligible** NYers whether you own or rent, including:

- Home energy assessment
- Tips on how to save energy
- Installation of high-efficiency lighting
- Attic and wall insulation
- Installation of heat pumps
- Replacement of refrigerators-freezers
- Water-saving showerheads
- Join community solar to save \$5-15/month

Eligibility

You may be eligible if you can answer "yes" to these statements:

- I live in a building with 100 units or fewer.
- I am an electricity customer of CenHud, ConEd, National Grid, NYSEG, ORU, RG&E and pay Systems Benefit Charge or I heat with oil, propane, or kerosene.
- My household income is below 60% of the state median income (same eligibility as regular HEAP benefits) OR I am located in a geographically eligible territory OR I participate in a utility payment assistance program.
- Current Income requirements <u>here</u>.

Specific Con Edison & PSEG LI information

Con Ed

Con Ed has a <u>program</u> where a contractor visits your home & recommends energy-saving upgrades such as insulation, air sealing and smart thermostats. The contractor performs the work and subtracts up to \$5,000 from your final invoice.

To be eligible, you must:

- Live in or own a single-family home AND
- Use Con Edison gas for heating OR
- Use a delivered fuel (like oil, propane, or wood) for heating and have central air conditioning for cooling.

PSEG LI

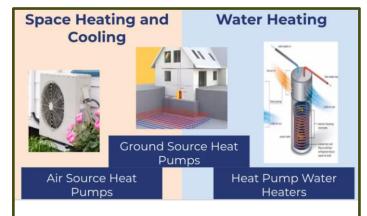
PSEG LI - Long Island residents should apply for the REAP program separately here.

- Customers may qualify to have energysaving appliances and devices installed in their homes for free.
- To qualify, income must be below 80% of State Median Income.

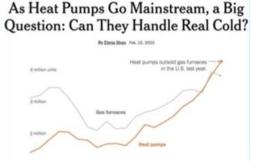
Other **PSEG LI** home efficiency resources:

- PSE&G Home Performance with ENERGY STAR
- PSE&G Home Comfort Program

Heat pump fact sheet



- HPs move heat as opposed to creating heat. Thus, they are more efficient AND can act as ACs.
- They are used for space and water heating (also clothes drying!)
- Geothermal HPs are more efficient but cost more up front than ASHPs



Modern cold climate air source heat pumps work well in Northern climates.

- Heat pumps outsold gas furnaces in the U.S. last year!
- One out of six homes in Maine now use heat pumps.
- Heat pumps are the primary heating source in Norway.

Don't be misled by:

- Fossil fuel propaganda that they don't work in our climate.
- Contractors not up to date on heat pump technology.

Geothermal space and water heating



Federal

- 30% uncapped tax credit (IRC 25D).
- Retroactive to 2022.
- Unused credits may be able to be carried forward to future years.
- Details <u>here</u>, <u>here</u> & here.

NYS

- 25% NY income tax credit capped at \$5,000.
- Credit can be carried forward 5 years.
- Details <u>here</u>.
- Exempted from NY sales taxes as capital improvement to real property. Details here.

Clean Heat

Central Hudson

Up to \$2K per 10K BTU

Consolidated Edison

Up to \$35K (for 300K

BTU)

National Grid:

\$1.5K per 10K BTU

<u>NYSEG</u>: \$1.5K

Orange & Rockland

Yes - through contractor

<u>PSEG LI</u> No

RG&E: \$1.5K

Air source heat pump space heating



Federal Tax Credits

- 30% tax credit capped at \$2,000. (IRC 25C).
- Available from 2023.
- 25C credits capped at \$3,200/yr Reset annually
- Max \$2,000 for heat pumps and \$1,200 for other items
- Unused credits may not be carried forward.
- Details <u>here</u> and <u>here</u>.

Federal Rebates

- 100% rebate for Low Income households up to \$8,000 (<80% of AMI).
- 50% rebate for Medium Income households up to \$4,000 (80-150% of AMI).
- Rules not issued.

NYs

 Exempted from NY sales taxes as capital improvement to real property. Details <u>here</u>.

Clean Heat

Central Hudson Up to \$1,000 per 10K BTU Consolidated Edison Up to \$8,000 per building National Grid: Up to \$1,000 per 10K BTU NYSEG Up to \$1,000 per 10K BTU Orange & Rockland Yes - through contractor PSEG LI Up to \$1,000 per 12K BTU (double if income eligible) Rochester G&E Up to \$1,400 per 10K BTU

Air source heat pump water heating



Federal Tax Credits

- 30% tax credit capped at \$2,000. (IRC 25C).
- Available in 2023.
- 25C credits capped at \$3,200/yr reset annually.
- Max \$2,000 for heat pumps and \$1,200 for other items.
- Unused credits may not be carried forward.
- Details <u>here</u> and <u>here</u>.

Federal Rebates

- 100% rebate for Low Income households up to \$1,750 (<80% of AMI).
- 50% rebate for Medium Income households up to \$875 (80-150% of AMI).
- Rules not issued.

NYS

 Exempted from NY sales taxes as capital improvement to real property. Details <u>here</u>.

Clean Heat

Central Hudson

\$1,000 In store or via rebate

Consolidated Edison

\$1,000 through distributor

National Grid:

\$700 via Rebate

NYSEG

\$700 via Rebate

Orange & Rockland

Yes - through contractor

PSEG LI

\$1,000 via HC Partner

Rochester G&E

\$700 via Rebate

Appliances

Heat Pump Clothes Dryers

- Clothes drying uses a lot of energy.
- Hanging clothes to dry is the cheapest option – and better for your clothes.
- Retail pricing for ASHP clothes dryers is higher, but the all-in cost is often cheaper because installation requires no outdoor venting & it uses 120V power.
- 100% rebate up to \$840 for low-income households; 50% rebate up to \$420 for medium-income households. Rules to be issued.
- Conventional electric dryers are also a good option comparison slide available

Electric Stoves



- Induction cooktops use less energy, are easier to clean, cook more evenly & boil water faster than gas stoves.
- Gas stoves emit benzene & NOX which increase the incidence of asthma and complications from respiratory illnesses.
- 100% rebate up to \$840 for LI households;
 50% rebate up to \$420 for MI households.
 Rules to be issued.
- Radiant electric cooktops are also a good option as they are less expensive and don't require magnetic cookware. Comparison slide available

Other Programs

Financing: NYSERDA offers a suite of loans to help NYS residents finance energy efficiency improvements, and renewable energy systems. Details <u>here</u>.

Demand Response Programs:

- Central Hudson Peak Perks
- Con Ed Smart Usage
- NYSEG Smart Savings Rewards
- Orange & Rockland Bring Your Own Thermostat Program
- RGE Smart Savings Rewards

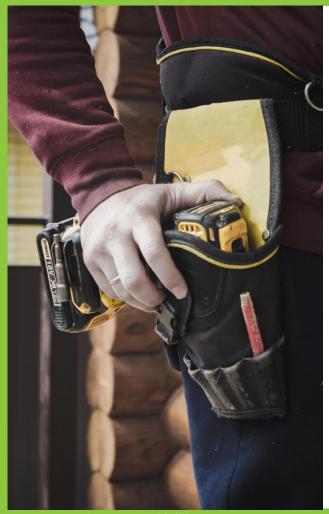
Utility Marketplaces:

- Central Hudson
- Con Edison
- National Grid
- NYSEG
- Orange & Rockland
- PSEG LI
- RGE

NY utility partnership with Sealed

- NY utilities highlight their cooperation with a company called Sealed.
- Sealed makes your home more comfortable and energy efficient by installing insulation, air sealing and /or heat pump HVAC.
- Their business model is to cover the upfront cost while customers pay back monthly based on their energy cost reductions.
- This may be a good option for those who want someone else to do the work, take the
 risk and finance the project. The downside is that you will not get the energy savings
 yourself just the health and comfort benefits.





Get the right contractors

- Some contractors want to keep doing things the old way and / or are unaware of the incentives available.
- It is critical to work with a contractor experienced at installing current technology.
- NYSERDA certifies Clean Heat program contractors.
 You can find the list here.
- Other advice in choosing a contractor is to
 - Get three quotes on all major projects and tell them that you are getting three quotes
 - The quotes will give you options on how to proceed and useful insight into the contractors
 - Ensure that equipment meets efficiency standards
 - Ensure that all rebates are included

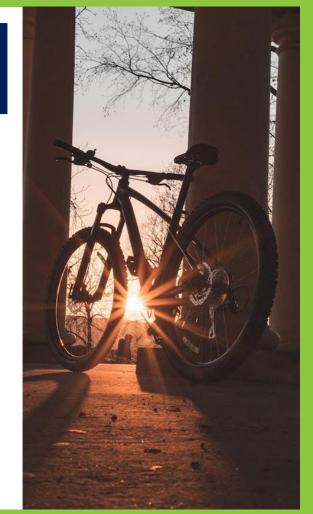
Transport overview

Replacing your gas car with an electric vehicle (EV) saves money & reduces pollution, but there are even better options!

- Walking
- Bicycling
- Public Transport
- E-bikes & scooters

If you do need an EV, they are better than gasoline vehicles:

- Perform better.
- Cost less to buy (with incentives), to fuel and to maintain.
- Less pollution that keeps reducing as we green the grid.
- Reduced trips to the gas station (offset by longer charging sessions on long trips)
 The Climate Reality Project NYS Coalition



Federal EV incentives



New

- Up to \$7,500 credit.
- Income limits \$300K for household & \$150K for individual.
- In 2023 it is a tax credit.
- From 2024 available as rebate.
- The current list of cars that meet new purchase requirements is <u>here</u>.
- Dealers who purchase EVs for leasing may claim the full credit for vehicles that don't fully meet new rules and pass savings on if you lease.

Used

- Tax credit of 30% up to \$4,000.
- Income limits \$150K for household, \$125K for HoH & \$75K for individual; Claimable once every three years.
- Car model year must be 2 years prior to purchase year, cost <\$25K, sold by a dealer & available once per vehicle.
- In 2023 it is a tax credit.
- From 2024 available as rebate.

EV Chargers

 Tax credit of 30% up to \$1,000 for rural and LI communities.

New York State EV incentives



NYSERDA Drive Clean Rebate Program

- Rebates on invoice at dealership.
- Amount depends on the range & MSRP (\$500-\$2,000).
- Eligible models and rebates <u>here</u>.
- It is a myth that they are for the rich (if you qualify for incentives):

Chevy Bolt Base Price	\$26,500			
Federal Incentive	\$ 7,500			
State Incentive	\$ 2,000			
Full Cost	\$17,000			

Utility TOU & EV charging programs

Time of Use and EV Charging programs can reduce fueling cost dramatically.:

- Central Hudson TOU Rate
- Con Edison Smart Charge
- Con Edison TOU Rate
- National Grid EV Charge Smart Plan
- National Grid Voluntary TOU Rate
- PSEG LI TOU Rates

Plus EVs get 10% off EZ Pass!

Residential solar

- Solar is heavily subsidized in New York:
 - <u>Federal tax credit</u> of 30% is uncapped and includes batteries.
 - NYS tax credit of 25% is capped at \$5K.
 - NYSERDA NY-Sun on invoice rebate can be substantial.
- To use tax credits, you need tax liability; some tax credits can be used over several years.
- To get competitive quotes, try <u>Energy Sage</u>.
- Average payback of residential solar is <u>under 9</u> <u>years</u> while solar systems last 25-30 years.
- Given high electricity cost & extra incentives in NY, your payback could be quicker.





Community solar

- Everyone can save on solar!
- If you can't install residential solar, you can get real solar through Community Solar:
 - Companies create solar projects that provide electricity to your utility.
 - You get solar electricity credits on your bill for your share of the solar farm's electricity production.
 - In return, you pay for those credits, **usually with** a 5-10% discount.
- Find info on community solar <u>here</u> and search for community solar companies in your utility area <u>here</u>.
- Many communities offer 100% renewable energy via a Community Choice Aggregator which may or may not be less than the regular energy cost.

Renters

Renters can access all transport and solar incentives highlighted in this presentation. Most home weatherization and electrification incentives are also available, check here.

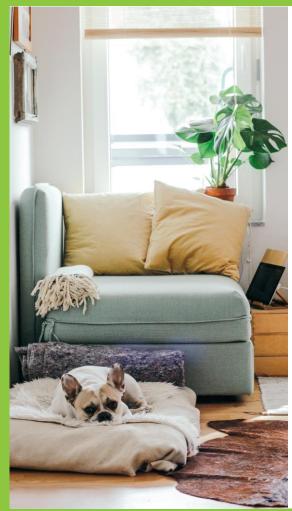
Consider working with your landlord

- Do the analysis on where you think they can save the most money
- Talk to your landlord and ask them to make the changes.
- If they won't, sometimes they will agree to you making the changes & take the cost off your rent. In this case, make sure that you get any agreement in writing!

Portable Equipment Options

You can purchase portable equipment:

- Inexpensive portable induction cooktops are available for under \$100.
- Inverter window ACs use 1/3 to 1/2 the electricity of regular units.
- If your heating is not provided by the landlord to the whole building, efficient portable heat pump window units are also available at local big box stores.



Condos & Co-ops

- Condo & Co-op owners can access all the incentives in the Transport & Solar Electricity sections and many of the home electrification incentives...
- Your building may qualify for various incentives and programs, so ask your Board to act!
- Consider joining the Board to drive the change.
- In some co-ops and condos, you can make changes in your unit like installing an electric or induction stove and heat pump clothes dryer.
- Also consider portable options mentioned in the renter's section.

Conclusion

- Buying electric appliances and vehicles can cost less than their fossil fuel alternatives when Federal, New York State & utility incentives are included.
- Electric appliances and vehicles are better, cleaner, safer and cost less to run.
- Sourcing renewable electricity has a great financial return whether you are buying residential solar or signing up for community solar.
- The only question is where to start?

Any questions on your worksheets?



Where do you plan to start?



Resources

Resources:

- RA's "IRA Savings Calculator": https://www.rewiringamerica.org/app/ira-calculator
- RA's "Guide to the Inflation Reduction Act": https://www.rewiringamerica.org/IRAguide
- RA's "Electrifying Everything in Your Home": https://www.rewiringamerica.org/electrify-home-guide
- All NYSERDA Programs: https://www.nyserda.ny.gov/All-Programs
- NY guide to IRA savings: https://www.nyserda.ny.gov/Featured-Stories/NYS-Guide-to-Inflation-Reduction-Act-Savings
- Energy Star Appliances: https://www.energystar.gov/products/most_efficient
- DOE Energy Saver Guide: https://www.energy.gov/sites/default/files/2022-08/energy-saver-guide-2022.pdf
- Area Median Income: https://www.huduser.gov/portal/datasets/il/il2023/2023summary.odn

Support Organizations:

- NYSERDA Regional Clean Energy Hubs: https://www.nyserda.ny.gov/All-Programs/Regional-Clean-Energy-Hubs
- Free NYCP Energy Coaches: https://nyforcleanpower.org/cleanenergycoaching/
- NYC Accelerator: https://accelerator.nyc

Join The Climate Reality Project!

- The Climate Reality Project was founded in 2006 by former VP Al Gore to teach people how to educate about the climate crisis and to organize to take action.
- There are about 50,000 trained leaders around the world and about 2,000 in New York.



Ways to get involved:

- · Join a chapter here.
- Join the next training <u>here</u>.
- Want to help spread the word on electrification? Join Our Climate moment here.

BACKUP

Optional Slides

Water Heating Electric Alternatives

Ordinary Resistance Water Heater	Heat-Pump Water Heater
Cheaper	More expensive
Less efficient (higher electricity usage)	Uses about a third of electricity
Fewer constraints on installation location	Would emit some compressor noise
Fewer constraints on installation space	Cannot be installed in a closet; needs air circulation
No ambient impacts	Would cool and dehumidify space around it

Clothes Drying Electric Alternatives

Ordinary Resistance Dryer	Heat-Pump Dryer
Cheaper	More expensive
Less efficient (higher electricity usage)	Uses about a quarter of the electricity
Economical models need venting	No vent needed; can share drain with the washer
Most (not all) would require a 240 V outlet	Several 120 V models available

Cooking Electric Alternatives

Radiant cooktop	Induction cooktop				
Slightly cheaper	More expensive				
Can use any flat-bottom utensils	Must use utensils with magnetic base				
Can use only flat-bottom utensils	Induction woks are available				
Less energy efficient	More energy efficient				
Not as fast (but at least one "burner" is faster than gas)	Very fast to heat and cool down				
Less precise temperature control	Very precise temperature control				
Access to direct heat	No access to direct heat				
No magnetic field	Small risk of magnetic field interference with pacemakers or other electronic medical implants. Check with your cardiologist				

New clean vehicle federal tax credits deeper dive

- To qualify for the full \$7,500 or partial \$3,750 tax credit, purchased vehicles must meet other requirements, including place of manufacture or final assembly and foreign materials limits.
- New rules effective April 18, 2023 substantially reduced the number of models qualifying.
- As more manufacturers meet the new materials and assembly requirement the list of vehicles qualified for the purchase credits will grow steadily.
- A loophole allows car rental agencies and dealers who purchase vehicles to be leased to claim the full credit for many electrified vehicles that otherwise do not meet new requirements.
- Dealers can offer to "give you the credit" by reducing lease costs to reflect their savings.
- Income for eligibility is Modified Adjusted Gross Income as defined by IRS.

New clean vehicle federal tax credits even deeper dive

New Clean Vehicle Credit Amounts Split in Two Parts

\$3,750 credit for vehicles meeting critical minerals requirement.

 The vehicle must contain a threshold percentage of critical minerals extracted or processed in the United States or in a country with which the United States has a free trade agreement or recycled in North America.

Additional \$3,750 credit for vehicles meeting the requirement that a threshold percentage of battery components be manufactured or assembled in North America.

- Starting in 2024, qualifying vehicles cannot have battery components manufactured or assembled by a foreign entity of concern. (Currently China, Russia, North Korea, Iran)
- Starting in 2025, qualifying vehicles cannot contain critical minerals extracted, processed, or recycled by a foreign entity of concern.

Direct (AKA Elective Pay) Pay

- <u>Direct pay</u> enables tax-exempt and governmental entities to receive the amount equivalent to the tax credits as direct payment.
- Answers to frequently asked questions can be found <u>here</u>.
- The following entities are eligible for direct pay:



State, local & territorial governments



Tribal and native entities



Rural energy cooperatives



Other tax exempt entities

What is covered by Direct Pay

Direct pay covers basically everything that a commercial taxpayer is eligible for and includ to individual taxpayers.

Income Tax Credit (ITC) for geothermal (both heating & electricity generation), solar, wind

- 30% base credit if < 1 MW or meets prevailing wage & apprenticeship (PWA) requirent
- +10% bonus credit for meeting domestic content requirement.
- +10% bonus if located in <u>energy community</u> (map <u>here</u>). Includes areas around Syrac Binghamton, Buffalo, Niagara & Dunkirk.
- 10-20% low-income bonus (solar & wind only) third party ownership by commercial/individual rooftop solar taxpayers.

Production Tax Credit (PTC) for renewable energy generation, including solar:

- 0.55 c/kWh, goes up to 2.75 c/kWh with PWA.
- Developer must choose between ITC & PTC.

Qualified commercial clean vehicles: \$7,500 for <14,000 lbs and up to \$40,000 for moderate-heavy duty vehicles.

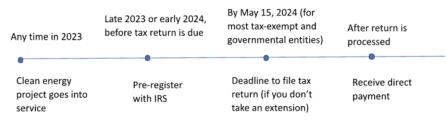
Alternative fuel vehicle refueling (EV charging) facility: 6% basic up to 30% with PWA.

Does Anshul have other updates pursuant to https://igshpa.org/wpcontent/uploads/GeoE xchange-IRA-Summary-9.6.22.pdf

How to Receive Direct Pay

- Step 1: Identify the project and the credit you want to pursue.
- Step 2: Complete your project, place it into service & determine the corresponding tax year.
- Step 3: Determine when your tax return will be due.
- Step 4: Complete pre-filing registration with the IRS before your tax return is due.
- Step 5: Once you receive a valid registration number, file your tax return by the due date, including extensions.
- Step 6: Receive your direct payment.

Details here.



Direct pay is available in future years beyond 2023. This is an example timeline for projects coming online in 2023.

IRA benefits available to landlords (1/3)

- Both renters and landlords would be interested in learning what's available to landlords for improving building efficiency and saving money.
- The IRA can help multifamily residences and landlords make upgrades to energy efficiency, modernize appliances, and create more comfortable homes — both the renter and the landlord have options. Many incentives apply to both.
- If you lease a portion of your primary residence the basic IRA income tax credits and rebates apply to you.
- If 50 percent or more of the building is occupied by LMI households, building owners can utilize the rebates up to \$14,000 per eligible unit
- Additional benefits are available to landlords under other laws.

IRA benefits available to landlords (2/3)

New Energy Efficiency Rebates

- A portion of HOMES Rebates funds will be available for owners of multifamily properties to retrofit their units or buildings.
- A property may be eligible for \$2,000 per unit if the project achieves at least 20% modeled energy savings up to \$200,000 and \$4,000 per unit if the project achieves at least 35% modeled energy savings up to \$400,000.
- For low- and moderate-income buildings, these figures jump to \$4,000 and \$8,000 per unit, respectively. States may instead use measured energy savings and a payment rate per kilowatt hour saved or equivalent measurement to offer \$2,000 per unit for a 20% reduction in energy use or 50% of the project costs.
- This payment standard increases for low- and moderate-income buildings to \$4,000 per unit or 80% of the project cost and would apply to any multifamily property or portfolio of properties which achieve at least 15% in energy savings.

IRA benefits available to landlords (3/3)

Energy Efficient Home Credit (IRC Sec. 45L)

- If property owners rehabilitate a single- or multi-family home that they lease to make it more energy efficient, they may be eligible for up to a \$5,000 credit.
- To qualify for the maximum credit, it requires you to pay a prevailing wage.
- The Environmental Protection Agency's program outlines the requirements, which can change by state or region.
- Be sure to consult a tax expert. It requires understanding various details and some complex calculations.

Green and Resilient Retrofit Program

 The IRA provided HUD with \$837.5 million in grant funding and \$4 billion in loan commitment authority to pay for owners of low-income housing to install rooftop solar panels, heat pumps and other climate-friendly upgrades.

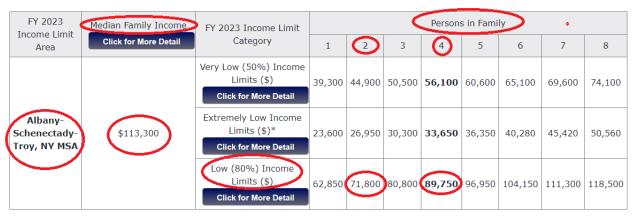


FY 2023 Income Limits Documentation System

HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Albany-Schenectady-Troy MSA

FY 2023 Income Limits Summary



The **Albany-Schenectady-Troy, NY MSA** contains the following areas: Albany County, NY; Rensselaer County, NY; Saratoga County, NY; Schenectady County, NY; and Schoharie County, NY.

^{*} The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as <u>established by the Department of Health and Human Services (HHS)</u>, provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may equal the very low (50%) income limits.



HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Binghamton MSA

FY 2023 Income Limits Summary

FY 2023 Income Limit	Median Family Income	FY 2023 Income Limit	mit Persons in Family							
Area	Click for More Detail	Category	1	2	3	4	5	6	7	8
		Very Low (50%) Income Limits (\$) Click for More Detail	28,450	32,500	36,550	40,600	43,850	47,100	50,350	53,600
Binghamton, NY MSA	\$85,300	Extremely Low Income Limits (\$)* Click for More Detail	17,050	19,720	24,860	30,000	35,140	40,280	45,420	50,560
	•	Low (80%) Income Limits (\$) Click for More Detail	45,500	52,000	58,500	64,950	70,150	75,350	80,550	85,750

The Binghamton, NY MSA contains the following areas: Broome County, NY; and Tioga County, NY.

^{*} The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as <u>established by the Department of Health and Human Services (HHS)</u>, provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may equal the very low (50%) income limits.



HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Buffalo-Cheektowaga-Niagara Falls MSA

FY 2023 Income Limits Summary

FY 2023 Income Limit	Median Family Income	FY 2023 Income Limit	t Persons in Family							
Area	Click for more Detail	Category	1	2	3	4	5	6	7	8
	•	Very Low (50%) Income Limits (\$) Click for More Detail	32,500	37,150	41,800	46,400	50,150	53,850	57,550	61,250
Buffalo- Cheektowaga- Niagara Falls, NY MSA	\$93,900	Extremely Low Income Limits (\$)* Click for More Detail	19,500	22,300	25,100	30,000	35,140	40,280	45,420	50,560
		Low (80%) Income Limits (\$)	52,000	59,400	66,850	74,250	80,200	86,150	92,100	98,050

The Buffalo-Cheektowaga-Niagara Falls, NY MSA contains the following areas: Erie County, NY; and Niagara County, NY.

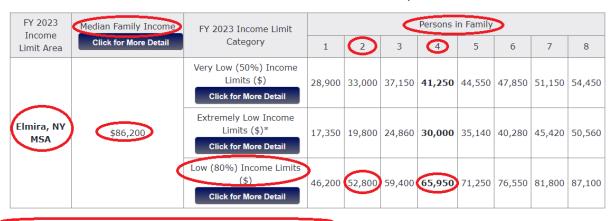
^{*} The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as <u>established by the Department of Health and Human Services (HHS)</u>, provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may equal the very low (50%) income limits.



HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Elmira MSA

FY 2023 Income Limits Summary



The Elmira, NY MSA contains the following areas: Chemung County, NY;

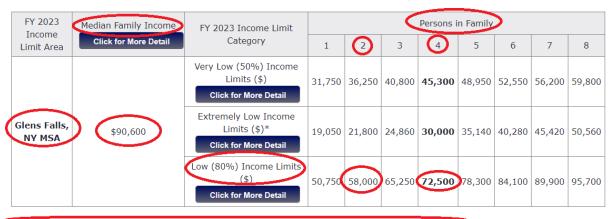
^{*} The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as <u>established by the Department of Health and Human Services (HHS)</u>, provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may equal the very low (50%) income limits.



HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Glens Falls MSA

FY 2023 Income Limits Summary



The Glens Falls, NY MSA contains the following areas: Warren County, NY; and Washington County, NY.

^{*} The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as <u>established by the Department of Health and Human Services (HHS)</u>, provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may equal the very low (50%) income limits.



HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Ithaca MSA

FY 2023 Income Limits Summary

FY 2023 Income	Median Family Income	FY 2023 Income Limit	Persons in Family							
Limit Area	Click for More Detail	Category	1	2	3	4	5	6	7	8
		Very Low (50%) Income Limits (\$) Click for More Detail	37,150	42,450	47,750	53,050	57,300	61,550	65,800	70,050
Ithaca, NY MSA	\$112,000	Extremely Low Income Limits (\$)* Click for More Detail	22,300	25,500	28,700	31,850	35,140	40,280	45,420	50,560
		Low (80%) Income Limits (\$) Click for More Detail	1	67,900	76,400	84,850	91,650	98,450	105,250	112,050

The Ithaca, NY MSA contains the following areas: Tompkins County, NY;

^{*} The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as <u>established by the Department of Health and Human Services (HHS)</u>, provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may equal the very low (50%) income limits.



HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Kingston MSA

FY 2023 Income Limits Summary

FY 2023 Income	Median Family Income	FY 2023 Income Limit	Persons in Family							
Limit Area	Click for More Detail	Category	1	2	3	4	5	6	7	8
	· II (\$117.400 I	Very Low (50%) Income Limits (\$) Click for More Detail	35,600	40,650	45,750	50,800	54,900	58,950	63,000	67,100
Kingston, NY MSA		Extremely Low Income Limits (\$)* Click for More Detail	21,350	24,400	27,450	30,500	35,140	40,280	45,420	50,560
		Low (80%) Income Limits (\$) Click for More Detail	56,950	65,050	73,200	81,300	87,850	94,350	100,850	107,350

The Kingston, NY MSA contains the following areas: Ulster County, NY;

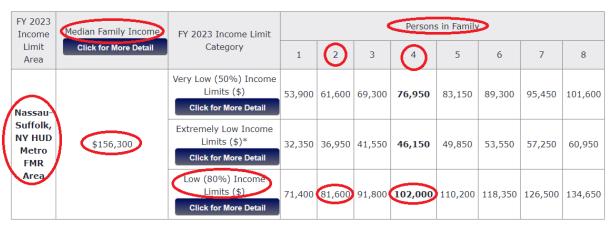
^{*} The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as <u>established by the Department of Health and Human Services (HHS)</u>, provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may equal the very low (50%) income limits.



HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Nassau-Suffolk HUD Metro FMR Area

FY 2023 Income Limits Summary



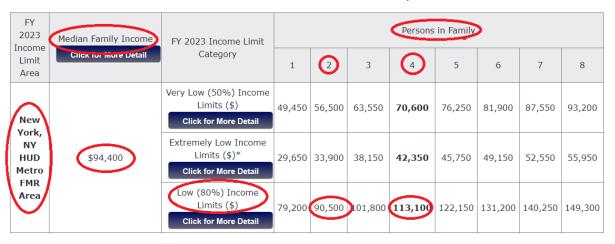
NOTE: HUD generally uses the Office of Management and Budget (OMB) area definitions in the calculation of income limit program parameters. However, to ensure that program parameters do not vary significantly due to area definition changes, HUD has used custom geographic definitions for the **Nassau-Suffolk, NY HUD Metro FMR Area**.

The Nassau-Suffolk, NY HUD Metro FMR Area contains the following areas: Nassau County, NY; and Suffolk County, NY.

^{*} The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as <u>established by the Department of Health and Human Services (HHS)</u>, provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may

New York City HUD Metro FMR Area

FY 2023 Income Limits Summary



NOTE: HUD generally uses the Office of Management and Budget (OMB) area definitions in the calculation of income limit program parameters. However, to ensure that program parameters do not vary significantly due to area definition changes, HUD has used custom geographic definitions for the **New York, NY HUD Metro FMR Area**.

The New York, NY HUD Metro FMR Area contains the following areas:

The New York, NY HUD Metro FMR Area is comprised of the following counties: Bronx County, New York; Kings County, New York; New York County, New York; Putnam County, New York; Queens County, New York; Richmond County, New York; Rockland County**, New York; and Westchester County**. New York.

^{**}Although Rockland and Westchester Counties are provided separate estimates of Median Family Income by statute, the data for Rockland and Westchester Counties are used in computing the estimate of MFI of the New York, NY HUD Metro FMR Areas and the New York, NY PMSA as is also required by statute.



HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Rochester HUD Metro FMR Area

FY 2023 Income Limits Summary

FY 2023 Income Limit	Median Family Income	ian Family Income FY 2023 Income Limit Persons in Family								
Area	Click for More Detail	Category	1	2	3	4	5	6	7	8
	NY HUD \$97,600	Very Low (50%) Income Limits (\$) Click for More Detail	33,250	38,000	42,750	47,500	51,300	55,100	58,900	62,700
Metro FMR		Extremely Low Income Limits (\$)* Click for More Detail	19,950	22,800	25,650	30,000	35,140	40,280	45,420	50,560
		Low (80%) Income Limits (\$)	53,200	60,800	68,400	75,950	82,050	88,150	94,200	100,300

NOTE: HUD generally uses the Office of Management and Budget (OMB) area definitions in the calculation of income limit program parameters. However, to ensure that program parameters do not vary significantly due to area definition changes, HUD has used custom geographic definitions for the **Rochester**, **NY HUD Metro FMR Area**.

The **Rochester, NY HUD Metro FMR Area** contains the following areas: Livingston County, NY; Monroe County, NY; Ontario County, NY; Orleans County, NY; and Wayne County, NY.

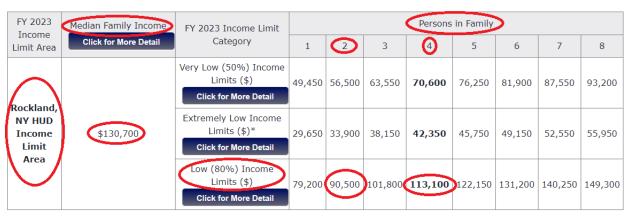
^{*} The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as <u>established by the Department of Health and Human Services (HHS)</u>, provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may



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Rockland HUD Income Limit Area

FY 2023 Income Limits Summary



NOTE: HUD generally uses the Office of Management and Budget (OMB) area definitions in the calculation of income limit program parameters. However, to ensure that program parameters do not vary significantly due to area definition changes, HUD has used custom geographic definitions for the **Rockland, NY HUD Income Limit Area**.

The Rockland, NY HUD Income Limit Area contains the following areas: Rockland County, NY;

^{*} The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as <u>established by the Department of Health and Human Services (HHS)</u>, provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may equal the very low (50%) income limits.



HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Syracuse MSA

FY 2023 Income Limits Summary

FY 2023 Income Limit	Median Family Income	FY 2023 Income Limit	Persons in Family							
Area	Click for More Detail	Category	1	2	3	4	5	6	7	8
		Very Low (50%) Income Limits (\$) Click for More Detail	32,700	37,350	42,000	46,650	50,400	54,150	57,850	61,600
Syracuse, NY MSA	\$93,300	Extremely Low Income Limits (\$)* Click for More Detail	19,600	22,400	25,200	30,000	35,140	40,280	45,420	50,560
		Low (80%) Income Limits (\$) Click for More Detail	52,300	59,750	57,200	74,650	80,650	86,600	92,600	98,550

The Syracuse, NY MSA contains the following areas: Madison County, NY; Onondaga County, NY; and Oswego County, NY.

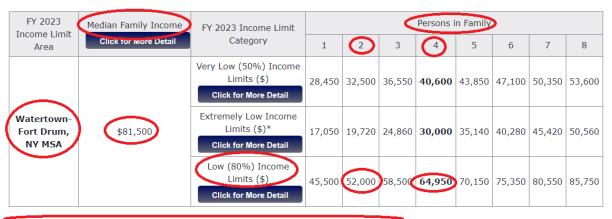
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HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Watertown-Fort Drum MSA

FY 2023 Income Limits Summary



The Watertown-Fort Drum, NY MSA contains the following areas: Jefferson County, NY;

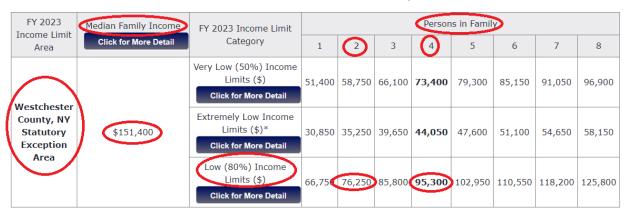
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HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Westchester County Statutory Exception Area

FY 2023 Income Limits Summary



NOTE: HUD generally uses the Office of Management and Budget (OMB) area definitions in the calculation of income limit program parameters. However, to ensure that program parameters do not vary significantly due to area definition changes, HUD has used custom geographic definitions for the **Westchester County, NY Statutory Exception Area**.

The Westchester County, NY Statutory Exception Area contains the following areas: Westchester County, NY

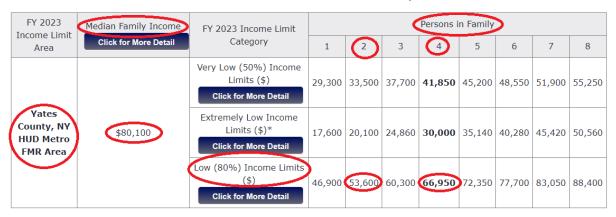
^{*} The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as <u>established by the Department of Health and Human Services (HHS)</u>, provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may equal the very low (50%) income limits.



HUD.gov HUD User Home Data Sets Fair Market Rents Section 8 Income Limits MTSP Income Limits HUD LIHTC Database

Yates County HUD Metro FMR Area

FY 2023 Income Limits Summary



NOTE: HUD generally uses the Office of Management and Budget (OMB) area definitions in the calculation of income limit program parameters. However, to ensure that program parameters do not vary significantly due to area definition changes, HUD has used custom geographic definitions for the **Yates County, NY HUD Metro FMR Area**.

The Yates County, NY HUD Metro FMR Area contains the following areas: Yates County, NY;

^{*} The FY 2014 Consolidated Appropriations Act changed the definition of extremely low-income to be the greater of 30/50ths (60 percent) of the Section 8 very low-income limit or the poverty guideline as <u>established by the Department of Health and Human Services (HHS)</u>, provided that this amount is not greater than the Section 8 50% very low-income limit. Consequently, the extremely low income limits may equal the very low (50%) income limits.



My Electrifying Resolution!

l will			by
		(action)	*
			<u> </u>
	(time)		

Electrify My House!	Prepare My House!	Electrify My Transport!			
Replace FF heat with heat pump HVAC Replace FF water heater with heat pump water heater Replace FF stove with electric (ideally induction) Reduce FF stove use with an induction hot plate	 Weatherize my home: Upgrade my electric service Replace my electric panel Wire for heat pump HVAC or water heater 	 Sell car & use public transport Replace car with an electric bike or scooter Replace ICE car w/ an EV Install an EV Charger 			
Replace FF dryer with electric (ideally heat pump)	Clean M	ly Grid!			
Install a smart thermostat Replace all light bulbs with LED	□ Sign up for Community Solar□ Install Solar□ Install Battery Backup				

^{*} Implementation intentions are effective in achieving commitments. A study in Great Britain showed an increase of commitment achievement from 35-38% to 91% when implementation intentions were used. James Clear, *Atomic Habits pp 69-70.*