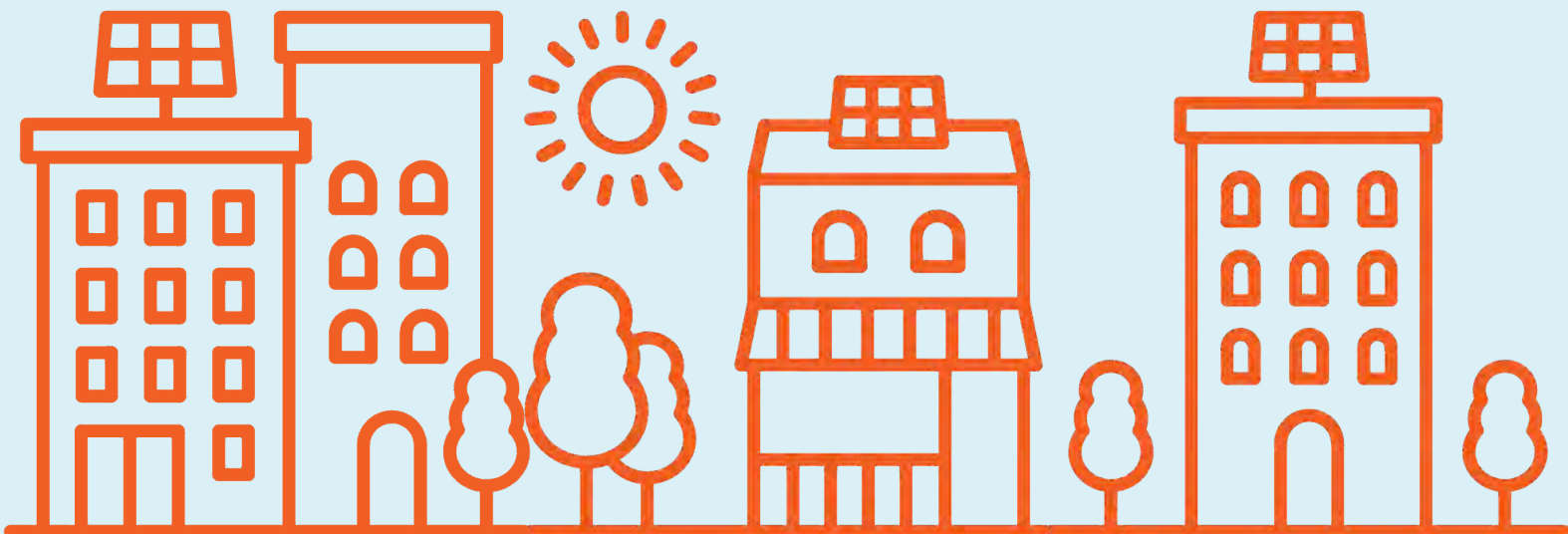




HERE COMES **SOLAR**
A PROJECT OF SOLAR ONE

What To Expect When You're Expecting A Solar Installation

A guide for HDFC co-ops by UHAB, Solar One, and solar HDFCs across the city



Congratulations!

Your HDFC co-op is one of the first in the city to go solar. You'll save money on electric bills while doing your part to fight climate change and make New York City a more sustainable place.

We've compiled this guide to the installation process based on our experience and the feedback of your fellow solar HDFCs. We're only an email or phone call away if you have questions about the process.

We'll also be in touch after the installation is complete to help you act as a leader in your community around renewable energy. There are a few different ways to stay involved with the campaign, from sharing your experience with other HDFCs interested in solar to hosting a tour at your building to speaking to your council member.



Thank you for all your hard work making solar a reality for your co-op. We hope you enjoy the fruits of your labor this year and for many years to come.

Keep the process moving

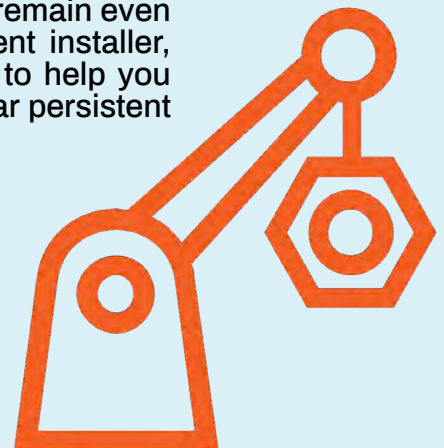
Construction in New York City can be infamously slow. A big part of the hold-up is that the many agencies involved with permitting, from FDNY to the Landmark Preservation Commission, tend to move slowly. Building violations, unexpected roofing issues, and financing considerations can all delay the day you start seeing savings from your solar panels.

The best way to keep the process moving is to act quickly on the parts of the process that you do have control over. The two biggest hurdles you have control over are reviewing and signing the contract; and clearing building violations so that the installer can file for permits.

Open building violations are one of the most common obstacles to receiving the necessary permits for construction. After signing the contract, filing for permits is the second major undertaking of installation, so open violations can put the whole process on hold.

The violations may be for something unrelated to solar, such as improperly marked fire exits. Violations usually take longer to clear than you think they will, so check for open violations as soon as possible on the Department of Building's website, and make a plan to clear them.

If the paperwork wasn't submitted to DOB correctly, a violation may remain even if you've done everything right and resolved the issue. Your current installer, or the installer you worked with to resolve the issue, may be able to help you troubleshoot. You also may want to hire an expeditor to help you clear persistent violations.



Going Solar Through an HPD loan?

Most owners who are addressing the rehabilitation needs of their building(s) through an HPD rehab loan include solar in their scope of work. Here's an overview of the process from application to construction.

- Request a free solar assessment from Here Comes Solar (HCS), a project of Solar One. Provide your building(s)' most recent Con-Edison or National Grid bills. Send these along with the building address(es) and BBL(s) to Here Comes Solar Senior Manager, Anika Wistar-Jones at anika@solar1.org.
- The assessment will include the estimated cost of installation for the panels, the recommended type of system, anticipated energy savings, payback period and answers to commonly asked questions. Upon receipt, review the assessment to ensure you understand all aspects of the system and installation process. For co-ops, HCS and HPD recommend that all board members and even shareholders are in understanding of this process. Schedule a call with Anika if needed to go over questions.
- Once you've agreed on a solar system for your building(s), you will schedule an on-site assessment with an HCS technician, also free to you.
- Execute a Participation Agreement with HCS. A copy can be sent to you upon request.
- HCS and HPD will issue a Request for Proposals (RFP) to HCS' list of prequalified installers. Depending on the size of your building(s), your project may be bid out together with other projects seeking HPD financing in order to attract more installers and achieve better pricing.
- Upon receipt, the bids will be reviewed by HCS and HPD. HPD will provide the owner with a recommendation for an installer. The owner must provide a written statement of support for the recommended installer, should they accept the bid, before proceeding further.
- The selected installer will be required to adhere to HPD's Integrity Review process, provide insurance and execute a construction contract. This is explained in the RFP.
- After you close on financing with HPD, a pre-construction kickoff meeting will be held with you, HPD, the general contractor, solar installer and any other relevant parties to discuss the construction timeline, scope of work and requisition process.
- Most HPD-funded projects include a larger scope of work beyond the solar installation. The installer will be required to coordinate their work with the general contractor's work, especially if a roof replacement is part of the scope. HCS will stay involved during construction to answer questions or address issues that may relate to requisitions, change orders or permitting.
- As an owner, you should work closely with the installer to ensure the installation is completed according to the specifications in the bid. Any change in system size or type of installation may result in a change order and/or a delay in the process. This is why you want to be certain you understand and are in agreement of what kind of system you're building is receiving early on in this process.



Paying for Solar through a Loan

Every lender has a unique application process and required documents. If you're getting a loan, you may need to provide materials including the following:

- Three years of audited financial statements
- List of the Board of Directors and the resume/CV of the President of the Board
- Articles of incorporation and bylaws
- Current budget and year-to-year financial statements including balance sheet and income/expense report

Similarly to permitting, loan applications can tend to drag on, so be sure to act quickly on the things you have control over. UHAB has loan packaging services available at an affordable rate.

Communication Among The Board, Shareholders, and Tenants

Let building residents know what's going on at every step of the process!

"Communication is vital. You can't just communicate unilaterally on the board, you have to make sure all the shareholders and tenants know exactly what's going to happen and when, and what they can expect."

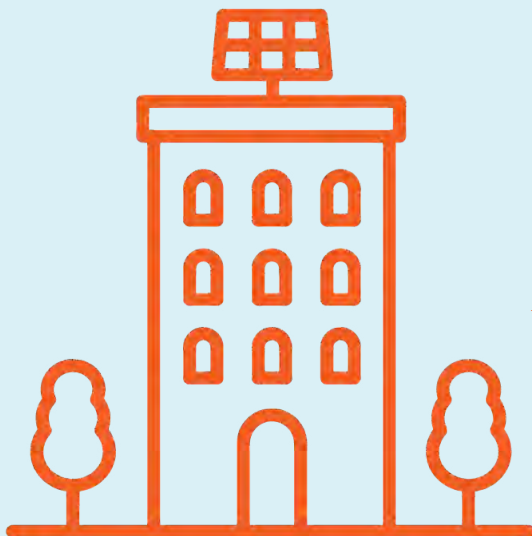
- Yoni, 660 St. Nicholas Ave HDFC

"We had a shareholder meeting about it, had the UHAB trainings, emailed the energy efficiency studies and proposal around to everybody, and posted at various points in the lobby and on the doors."

- Annabelle, 838 Park Place HDFC

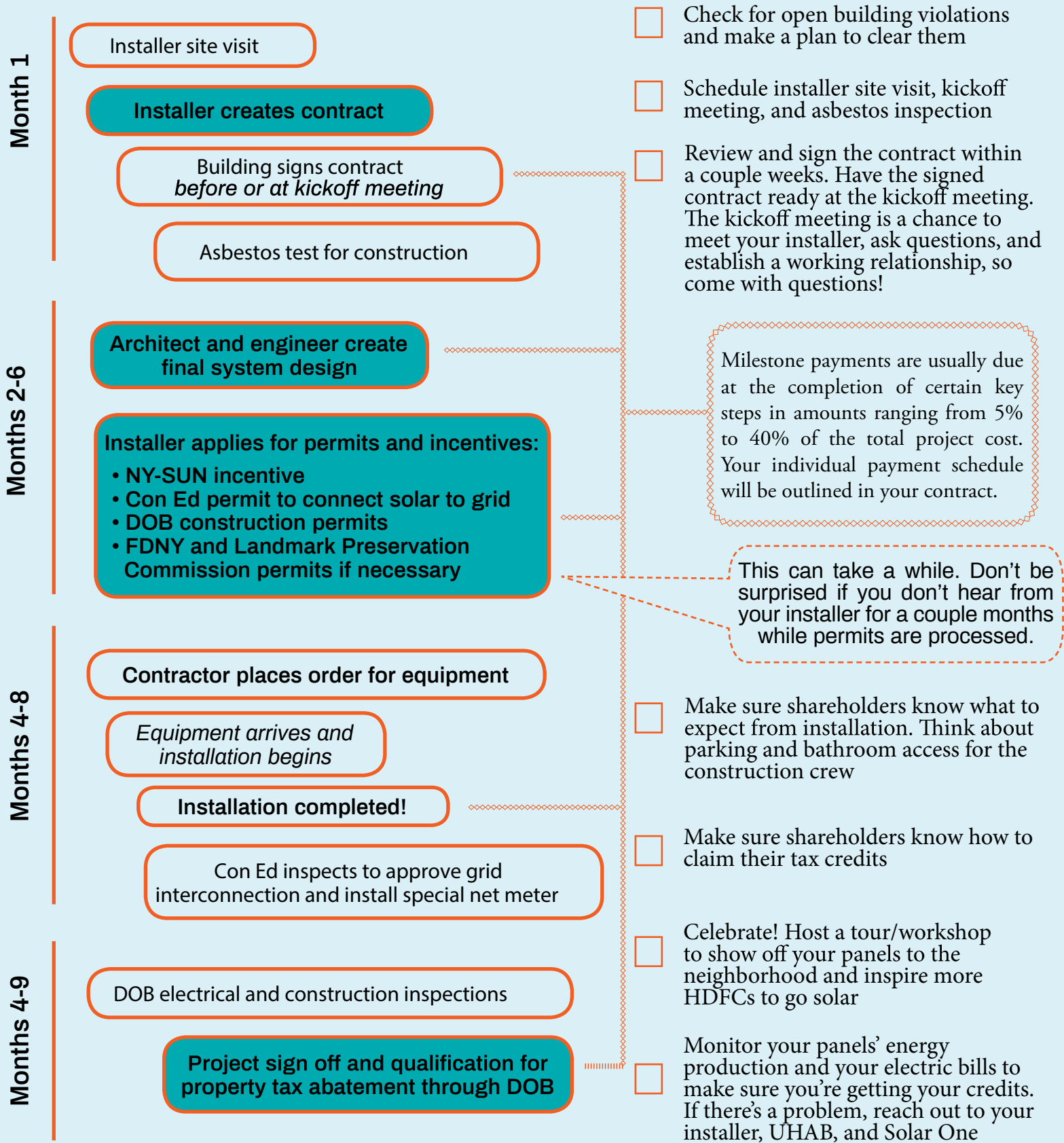
"Make sure one person wants to be project manager and has all the information. Then people can go to that person, and it's clear. It's bad if there are three people that are kind of involved and don't know anything."

- Dennis, Joseph Cardona Memorial HDFC



Installation Timeline and Checklist

UHAB and Solar One are checking in with your installer every week, so don't hesitate to reach out to us if you're not sure where you are in the process or what should happen next. **Steps that require a signature from the building are filled in;** steps that require a site visit to the building are in *italics*.



The Installation

HDFCs have had a variety of experiences with installation, ranging from totally hands-off to time consuming and demanding. Some shareholders, like Dennis, recommend designating one person from the building to act as project manager who will be on site and handle last-minute details.

The timeline for the construction will depend on your system and your installer, but in general ballasted systems take from a few days to two weeks; planar systems take one to two weeks; and canopy systems take up to a month.

“It was two days. It was very quick, very efficient, and very well done. I was there when they were running the lines and told them which wall to run them down. The building is going to have to make sure one of their people is there, and that person has keys, access numbers, whatever, so if something happens they can get on the phone and they can solve it. You need a building representative that’s going to be there all day long.

- Dennis, Joseph Cardona Memorial HDFC
Planar system

“Our canopy installation was completely easy. It took two days and there was zero disruption to shareholders.”

- Annabelle, 838 Park Place HDFC
Hybrid canopy and ballasted system

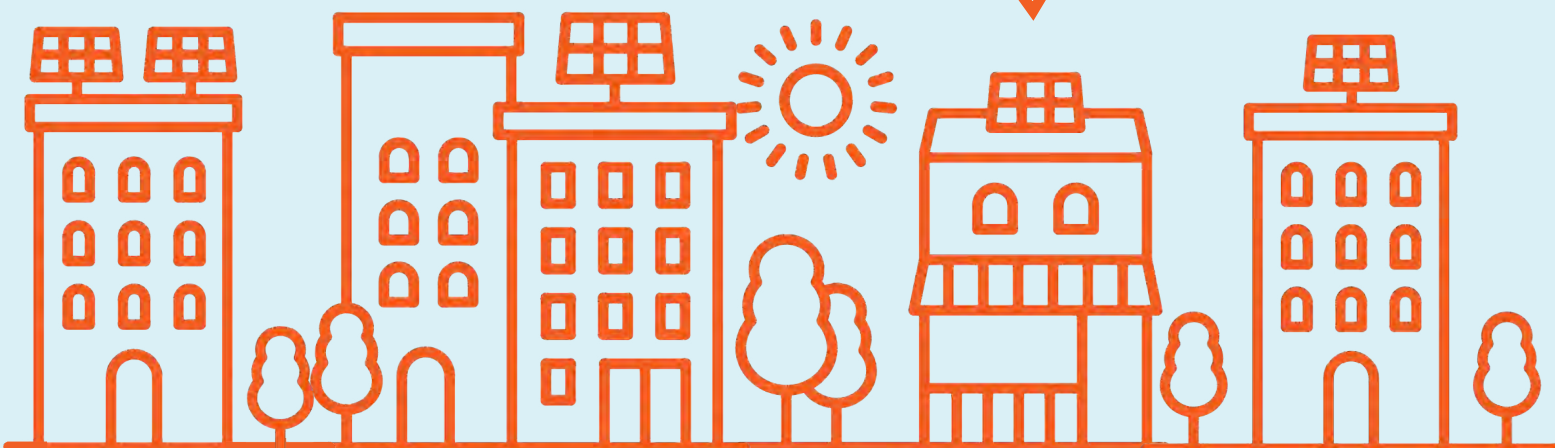
“I live on the top floor and I remember seeing a guy with this huge spool of cable and I asked what he was doing, and he said, ‘We’re putting on your solar panels,’ and it was really really quiet and fast.”

- Arlene, 128 W. 138 st
HDFC
Ballasted system

“It was hectic. We had to have a crane come for a few hours to lift the materials and get them on the roof, which freaked people out. The drilling was noisy and scared a lot of people, because the building shook a little bit. There was so much rain and they were constantly getting derailed, so instead of taking two to three weeks it took two months. It was a lot of coordinating, and it was stressful and time consuming.

I felt the contractors were overly optimistic with their timeline. Factors like the weather can delay the process. Co-ops should take timelines with a grain of salt.

- Yoni, 660 St. Nicholas Ave HDFC
Canopy system



Further Efficiency Measures

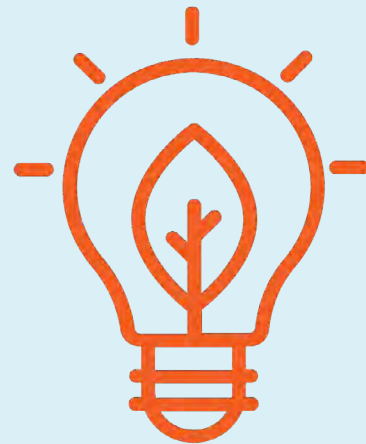
Lowering your Electric Load

Pairing your solar installation with other energy efficiency measures can make your payback period even better. If you lower your electrical load the panels will cover even more of your building's electric bills, so efficiency goes a long way, especially if your solar system is not designed to meet 100% of the building's electric needs.

Take future energy upgrades into account when choosing your system size. Your solar array should be sized to cover no more than 100% of your building's electrical usage; if you size your solar array to meet your current electrical load, but cut your energy usage by 10% in five years, you'll have paid for a 10% bigger system than you needed. If you don't have LED bulbs and other modern electrical fixtures now, you'll probably want to switch within the 25-year life of your panels. Take these upgrades into consideration before deciding on your final system design; if you think you'll make upgrades in the near future, you'll want to account for it with a slightly smaller system.

Switching to LED light bulbs is one easy way to lower your electrical load. Through Con Edison's Multifamily Energy Efficiency Program, any HDFC in the city can get free LED bulbs in residents' apartments as long as at least 60% of residents are willing to open their doors to installers. The same program can also provide a rebate to cover around 70% of the cost of switching to LED bulbs in common areas such as the hallway, lobby, and laundry room.

HDFCs will probably be mandated to switch to LED lights soon to meet the city's climate goals, so now is the time to take advantage of incentives. Contact Clara at weinstein@uhab.org or (212) 479-3337 for more information.



Major System Upgrades

Be sure to take upcoming major upgrades, like window replacements or facade work, into account when budgeting for solar. If you're paying for solar through a loan, it usually makes more sense to package upgrades together into the same loan than apply for multiple small loans, so check out the rest of your building systems and see if there's anything else that needs to be done. Communicate these needs to UHAB, Solar One, and your lender as soon as possible. You may want to consider getting an Integrated Physical Needs Assessment or an audit. If your boiler or elevator is on its last legs, it may make sense to do a more holistic renovation. You may be eligible for additional funding from state programs such as the Weatherization Assistance Program. Contact Clara at weinstein@uhab.org or (212) 479-3337 for more information.

A Note on Community Shared Solar

With Community Shared Solar, residents get discounts on individual electric bills. Because so many individual accounts are involved, this type of system requires a little more administration. Every time the name on the Con Edison account changes (such as with a marriage or death) the account must be re-registered with Con Edison, or the electricity credits will be lost.

Claiming Tax Credits

Shareholders can start claiming tax credits in the year the system starts producing energy. Board members should make sure everyone knows they can claim their credits. Solar One has provided a sample letter to slip under shareholders' doors laying out how to claim their credits. The letter is modeled off something a co-op treasurer created for their own building, and you can modify it for your own building as well. The Co-ops Go Solar team are not tax professionals, and this letter isn't guaranteed to be complete, sufficient, or 100% accurate. If you're confused, you should still consult with a professional!

All tax credits are claimed on the basis of the net cost of the solar project, equal to the cost to the co-op after the NY-Sun incentive. We advise you to consult your solar installer and ask for a final invoice to clearly see the cost laid out.

The Federal Tax Credit is 26% of the net system cost in 2020. In 2021 the credit will be 22%, and in 2022 the credit will be 10%. If the co-op has made significant income over the course of the year, and has sufficient federal tax liability, the co-op itself may be able to claim the federal tax credit. Otherwise, the tax credit is claimed by individual shareholders based on the number of shares they own in the co-op. The federal tax credit value can be spread over two years. Consult your accountant or tax professional to verify. [See instructions for Form 5695.](#)

The New York State Tax Credit is 25% of the net system cost. If your system is larger than 50 kW, you can only claim the tax credit for the cost of the first 50 kW. The credit must be claimed individually by shareholders based on the proportionate share of costs paid, and the residence must be the shareholder's principal residence. The state tax credit value can be spread over five years. [See instructions for Form IT-255.](#)

The New York City Property Tax Abatement is 20% of the net system cost, and must be claimed over four years at 5% per year. If your building current receives other tax abatements, please check with your tax professional to verify that you can claim the Abatement. If you're eligible, your solar installer will file for the Property Tax Abatement on your behalf. Verify the status of your project's PTA application with your installer. Please note that the PTA is applied in the following NYC Fiscal Year after the system is installed; the City's fiscal year starts in June. If the system is completed in March, it will start receiving the PTA that June.

Instructions and forms for the Federal and New York State tax credits can be found on [NYSERDA's tax forms website](#). Instructions for the NYC Property Tax Abatement can be found [here](#).

Are You Getting Your Property Tax Abatement?

If your HDFC pays property taxes, your solar array makes you eligible for an abatement. Your installer should file for the abatement and set everything up, but it never hurts to double check and make sure it's kicked in. Here's how to check:

- Go to: <http://a810-bisweb.nyc.gov/bisweb/bsqpm01.jsp> (or google DOB BIS)
- Click Building Information Search
- Search for the building using address or BBL
- Click Jobs/Filings (under DOB violations section)
- Find solar job (should be very recent) and click on it
- Click "Virtual Jobs Folder" link in the top center
- Search for "PTA4 Solar Tax Abatement Application - FINAL"

Note: There will be a "PTA4 Solar Tax Abatement Application (preliminary)", but there must also be the FINAL document, otherwise your building won't receive the abatement.

Sample Letter: How to Claim your Solar Tax Credits

Dear Shareholder,

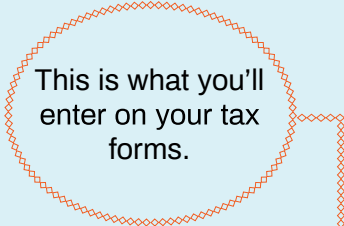
On December 15th, 2018, our cooperative's solar panel installation began producing power. This solar panel installation makes shareholders whose primary residence is [OUR HDFC] eligible to claim tax credits when filing their U.S. Federal and New York State income tax forms. The board is pleased to provide this informational resource to help you navigate the process of claiming your share of tax credits, however we are not tax professionals and encourage you to complete your taxes in consultation with a tax professional.

The U.S. Federal and New York State tax credits must be applied in 2020. This is a onetime filing for the 2019 tax year only. If the full credits are not used in 2020, the federal credit can be carried over for at least one year, and perhaps longer. The New York State credit can be carried over for four additional years.

You can use the following calculations for the form:

To determine your qualified expenditures for the purposes of applying a solar tax credit, first calculate the solar cost per share. Divide the amount that the co-op paid for the system by the total number of shares in the cooperative:

Solar Energy System Cost: \$ []
Total Number of Co-op Shares: []
 = \$ [] per share



Then, multiply the solar cost per share by number of shares:

Example Calculation of Qualified Expenditures:
Number of Shares You Own: 15
Solar Cost per Share: x \$10
Qualified Expenditures: \$150

Calculate Your Qualified Expenditures Here:
Number of Shares You Own: []
Solar Cost per Share: x \$ []
Qualified Expenditures: \$ []

To determine the total incentive value for a given incentive, multiply your qualified expenditures by the incentive rate:

Example Calculation of Incentive Value:
Qualified Expenditures: \$150
Incentive Rate: x 30%
Total Incentive Value: \$45

Calculate Your Incentive Value Here:
Qualified Expenditures: \$ []
Incentive Rate: x [] %
Total Incentive Value: \$ []

If you have a tax accountant or do an online/computer filing this is probably the only information you will need to complete your filing. Your tax filing software will automatically calculate your tax credit from the Qualified Expenditures number and apply it to your tax return. If you use pen and paper, see next page.

If you have any further questions this guide does not address, please ask a tax professional. Please consult your co-op's board for any information regarding the amount(s) you are entitled to claim, and a personal tax professional if you have questions about your eligibility and how to file for the tax credits. Here Comes Solar is not an accountant or tax professional, we are only providing helpful resource material.