Solar NOVA SCOTIA

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SOLAR INTERCONNECTION 101

Solar Nova Scotia's guide to getting your solar electricity project connected to the Nova Scotia Power grid.

2019

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SOLAR INTERCONNECTION 101

Thinking of installing a solar photovoltaic (PV) system to generate electricity on the grid through Nova Scotia Power's Enhanced Net Metering Program?

Here is your step-by-step guide to getting your solar PV project connected.

IMPORTANT NOTE: *This is general guidance for your information only. This guide only applies to projects connected to the Nova Scotia Power distribution system, not for off-grid installations and not for customers of other electric utilities. Procedures may change, so consider this a rough guide only. Nova Scotia Power, the Province of Nova Scotia, the Chief Electrical Inspector, and the Canadian Electrical Code are the legal authorities on this topic.*

INTRODUCTION

Installing a solar photovoltaic (PV) electricity generator at your building is one way you can invest to reduce your energy bills and take part in the transition to green energy in Nova Scotia. PV systems are available at more affordable prices now than ever before, and several financing options may be available. If you want to go ahead with a PV project ay your building, your best first step is to contact one of the experienced PV installers listed on Solar Nova Scotia's Atlantic Canada Solar Business Directory. (http://www.solarns.ca/Atlantic-Canada-Solar-Directory)

Connecting PV to the grid is not a do-it-yourself project. A licensed electrician is required to obtain an electrical wiring permit, and to complete specific portions of the electrical work. Unless you are a licensed electrician, you will need to hire an electrician, or a full-service solar installation contractor.

You can expect a solar installation contractor to work with their electrician to handle the steps involved in connecting your PV project to the grid, including the necessary permits, applications, arranging inspections, and approvals. It is possible to make the application yourself, but it requires specialized knowledge of electrical equipment ratings. If your solar contractor is taking care of it, they will still need your input, so you may want to know what's involved.

When you have chosen an installer to work with, together you will need to make some key decisions on the size, type, and location of your PV project (see Step 2). As the Nova Scotia Power account holder, you will need to sign an interconnection agreement with Nova Scotia Power. This agreement sets out the conditions for you to operate your PV generator on the Nova Scotia Power system.

Once you have the agreement signed, and your solar PV array is installed, and has passed inspection, you can start producing your own solar power for your building, and trading power with the grid.

THE NOVA SCOTIA POWER ENHANCED NET METERING PROGRAM

If you have Nova Scotia Power (NSPI) electrical service, you can apply for net metering for your solar power array. The Enhanced Net Metering Program allows you, as a customer of NSPI, to install a solar (or other) renewable electricity generating system, connect it with the NSPI electricity distribution system, and receive credit for surplus electricity generation at the same value per kilowatt-hour (kWh) as you pay for electricity. The basic requirements are:

Your project must be 100 kilowatts (kW) or less in nameplate power capacity. This is the power capacity of the alternating current (AC) output from your inverters.

The maximum electrical current from your solar PV system must be safely handled by your electrical service. Usually, a 100-amp service is enough to handle a significant PV array, but you need to have your solar installer or electrician check how much PV current is allowed for your service. If needed, you can install a service upgrade, at extra cost, to accept more current from a larger PV array.

The electricity you will generate will be credited against the electricity consumption of your NSPI account. Usually you will net meter against the account for the house, barn, or other building on or near which you plan to install the PV array. You are allowed to design your solar power system to produce, on average, up to the amount of electricity you use on your NSPI account per year.

You can also credit your PV electricity against other nearby buildings, facilities, and electric loads you own that have the same NSPI customer name. These additional facilities must be located in the same distribution zone, which is the area served by one distribution substation on the electricity network. If you can follow the power line continuously along the roads from one of your properties to another, without passing through a power substation, the properties are usually in the same distribution zone and can be combined.

You must apply for an Interconnection Agreement with NSPI. Your solar installation contractor can, and usually does, make this application on your behalf, because it requires technical information that the contractor is more likely to know and be able to complete. The Interconnection Agreement defines how your PV generator can operate, safety considerations, and the conditions under which the agreement can be terminated. The agreement continues indefinitely, with no end date, unless either party terminates the agreement for the reasons outlined therein, such as failure to maintain safe conditions, cancellation of electricity service, etc.

Nova Scotia legislation ensures that the net metering credit value for surplus electricity in effect at the time of connection for your project is valid for 25 years.

The current version of this agreement can change with time, so check with NSPI or your solar contractor for the most recent version.

STEP 1 - CHECK OUT THE NOVA SCOTIA POWER INSTRUCTIONS

NSPI has a description of Enhanced Net Metering and instructions on how to apply on their website, so start there. This guide is to help clarify some of the details.

https://nspower.ca/netmetering

STEP 2 - DESIGN THE PV SYSTEM

You and your solar installation contractor need to talk about PV system design and come to an agreement on the answers to some basic questions:

(a) Where will it be installed?

Examples: Roof-mounted on the house, garage, carport, or shed, or on a stand on the ground?

(b) Is your proposed location suitable?

Orientation: In Nova Scotia, a suitable location has the array of PV modules (solar panels) facing nearly south (between west-south-west and east-south-east). Any direction within 30 degrees of south is usually fine. A west-facing or east-facing PV array will work, but with significantly reduced daily output, and therefore will need more solar panels to produce the same amount of electricity as a south-facing array would produce. North-facing should be completely avoided for solar panels in Nova Scotia.

Pitch: To maximize year-round production in Nova Scotia, the angle, or pitch that the solar panels face should be between 25 degrees and 50 degrees up from the horizontal.

Sun Access: An ideal site would have no other tall objects, such as buildings or trees to the south, southwest, or southeast of the PV array that would cast a shadow on the array. Any shadows on the array during productive hours in the middle of the day will reduce its output substantially. In many situations, some shadows are unavoidable. Your solar project may still be viable with partial shading, especially if the shading is early in the morning (before 10 am) or late in the afternoon (after 4 pm), times of day when your solar production would be small anyway. If there are some small shading issues, ask

your solar contractor to estimate how much electricity you can produce per year, considering the shading. Then you can decide whether the project is worthwhile or needs to be relocated. Your solar contractor may have a tool, like a Solar Pathfinder™, to estimate the shading.

(c) What size of system?

The site you have, such as a roof or a space in your yard, may put physical limits on the number of solar panels you can fit in the available space. If you have more than enough space, then there are two other limits:

One Hundred Kilowatts: In Nova Scotia, to be eligible for Enhanced Net Metering, your project must be no more than 100 kilowatts (kW) of "nameplate capacity". This is the nominal power capacity your PV system is designed to generate, in power units of kW measured on the alternating current (AC) side, which is the output from the inverters to the grid. Most homes don't need 100 kW of power, so for a home you would not likely need to go anywhere near this limit. A farm or a commercial or community building may use easily that much and more, but can only connect up to 100 kW at one site in the net metering program.

Your Electricity Consumption: Your PV system can be designed to produce up to as much electricity as your building(s) use per year, not more. Your solar installer should estimate your annual solar production based on the orientation of your proposed array, shading, size and capacity of proposed equipment, and other factors specific to your site. If you are figuring out a rough number to start, it may help to know that the average production of solar PV in Nova Scotia is about 1,100 kilowatt-hours (kWh) per installed kilowatt (kW) of PV panels. Note that, unlike for the 100 kW limit above, this figure refers to the kilowatts of rated output of direct current (DC) of the array of PV panels.

In a PV system, the DC rated power of the array of solar panels is often designed to be up to 20% larger than the nameplate capacity (AC) power of the inverters that send your solar power to the grid. For example, if your nameplate capacity (AC at the inverters) is 100 kW, it is common to have 120 kW of solar panels supplying DC power to the inverter. This helps maximize annual electricity production for a given AC limit.

EXAMPLE CALCULATION OF MAXIMUM SIZE BASED ON ELECTRICITY CONSUMPTION:

If you can fit 10 kW (DC) of solar panels on your chosen site (for example the roof of your garage), and that roof is well suited for solar, in terms of orientation, pitch, and solar access with no shading issues, then you should expect to produce about:

10 kW x 1,100 kWh/kW = 11,000 kWh of electricity per year.

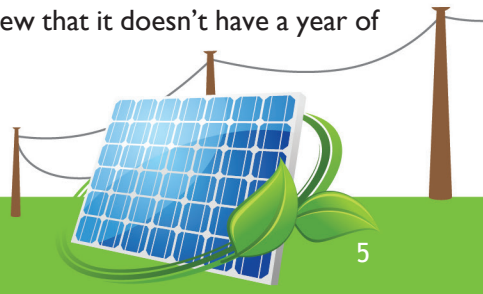
If your home uses at least 11,000 kWh of electricity, based on electricity bills from the last year or two, then you can get approval to go ahead and install 10 kW of solar panels. But if your electricity consumption is less, you would have to scale back your project to a lower capacity. For example, if you use 9,000 kWh / year:

(9,000 kWh) / (1,100 kWh/kW) = 8.18 kW

So instead of 10 kW, you could install up to 8.18 kW.

NOTE: *Solar PV panels are readily available in sizes between 250W (0.250kW) and 400W (0.400kW). So 10 kW takes between 25 and 40 panels, depending what size panels you use.*

If the building you want to power with solar is not yet constructed, or is so new that it doesn't have a year of



electricity bills, Nova Scotia Power will estimate how much electricity it will use, and base your maximum solar array size on the estimate. In that case, you and your solar contractor will also have to make a rough estimate of future consumption of the building, to be able to propose a system size and complete the Application for Interconnection (Step 3).

STEP 3 - APPLY FOR AN INTERCONNECTION AGREEMENT

The application process is described on the NSPI website, including a flow chart. The most important step, which you or your solar contractor should do early, is to complete and send in your Interconnection Request. Your solar contractor can fill in the application. It needs your signature. You should check with your contractor that all the details are correct. An example of the current version (V2.0 November 2017) of the request form is included here in Appendix A. Download it directly from the NSPI website.

As the NSPI customer, you are the Applicant. Your solar contractor is the Technical Designer. The Electrical Contractor needs to be named too, because they will obtain the permit for electrical wiring, which is separate from this Interconnection Request. Some solar installers are also licensed electrical contractors, or have a preferred electrical contractor with whom they usually work.

The sample version of the Request (Appendix A) shows that you need to provide some particular pieces of information that might take a little digging, such as:

Section 1.0 - Property Identification Number (P.I.D.):
An identifier of your property, which you can find in real estate maps such as (Viewpoint.ca).

Section 2.0 - Energy Reconciliation Anniversary Month

This is the month when any surplus you have generated will be reconciled once per year. If there is a surplus you get a payment for it and start at zero again. Which month you pick doesn't significantly change your total long-term benefits, but it does change when and how you receive the benefits each year, because your system will produce far more in summer than in winter. If you pick a month in spring, like May, you are more likely to have low power bills year round (but no cheque), because any summer surplus you generated will be used up the following winter, resulting in close to a zero balance by spring. If you choose an autumn month, like October, you may get a cheque for your summer surplus, but then your electric bills will be high in winter because your summer surplus was already paid to you. Choose a month based on your preference.

Section 2.0 - Expected In-Service Date:
The date by which you expect to have the PV system operating. The process of design, permitting, construction, inspection, and final meter installation can take several months. You and your solar contractor can choose what you think is a realistic in-service date. If you are ready earlier or later than this by a few weeks or even a couple of months, there is no consequence.

Section 3.0 - Existing NSPI Electric Service: You can get this information from your bills and from looking at your power meter and breaker panel. Your contractor will need your account number, or preferably a copy of an electric bill so they can also know your annual electricity consumption history. If you have other accounts for buildings nearby, you can apply to net meter your solar electricity against those accounts too. For net metering against additional account numbers or meters to be useful, you need to install a large enough PV array to generate more than at least your primary account uses on an annual basis, so you'll generate some extra solar electricity to offset the other accounts.

Section 4.0 – Proposed Interconnection Details: Your solar contractor can complete this, but you may be interested to know how much they have estimated for your annual kilowatt-hours (kWh) of solar electricity production. That amount is approximately what you can expect to save on your electricity bills on an annual basis. Typical values for systems with good orientation are around 1,100 kWh of electricity per year, per kilowatt of solar panels.

Sections 5 and 6 - Information about the solar equipment:
Your solar contractor should complete all the sections related to the generating equipment. If you are an electrical engineer or electrician, or otherwise knowledgeable about the details of the system you will install, you may be able to complete this part.

Section 7.0 – Required documentation: These attachments should be provided by your solar contractor. The site plan shows the physical arrangement of the site. Two other key parts are the Electrical One-Line Diagram, and the Equipment Labelling (see Schedule B and Appendix C).

The Interconnection Request needs your signature, as the NSPI Customer and Generator of Power. You'll need to check it over, and ask any questions you may have. Once signed, you can scan it and send it by email to netmetering@nspower.ca, or mail it with Canada Post.

Processing Time: It's a good idea to make this request early, because it can take several weeks for a response. Then, if there are corrections or changes needed, it can go back and forth and need some additional time.

STEP 4 - APPLY FOR A BUILDING PERMIT (IF NEEDED)

Some municipalities in Nova Scotia require a building permit to install solar panels. For example, Halifax Regional Municipality (HRM) has a permit process in place that is specifically for solar equipment installations, including solar air heaters, solar water heaters, and solar PV systems. There is an application fee, and a municipal building inspector may visit the site if there are questions related to the structural engineering aspects of the installation.

Check with your local municipal planning department for details on how to obtain any needed building permits.

STEP 5 - BEGIN INSTALLATION

With the permits in hand, your solar contractor can begin construction of your PV array. The starting construction steps include installing the racks that will hold the panels, mounting inverter(s) and optimizers (if any) in their physical locations, and laying in wiring and disconnect switches. Installation of the PV panels themselves is one of the last steps, and should not be completed until Step 6 – Rough-in Inspection has been completed, because the electrical inspector will want to see the wiring under the array, as well as examples of the solar panels, inverter(s) and any optimizers. This equipment is often difficult to inspect once it is installed, especially on a high roof where it is out of sight under the solar panels.

STEP 6 - GET A ROUGH-IN ELECTRICAL INSPECTION

The licensed electrical contractor hired by you or by your solar installer is responsible for obtaining the electrical wiring permit, completing the wiring correctly, and arranging electrical inspections. There are typically two, sometimes three inspections. The first inspection is usually the "rough-in inspection", which happens after the cables, wires, and disconnect

switches are in place, but before the solar panels have been installed, so this wiring is still visible. There can also be an inspection earlier than that, if the solar panels are on a stand that is separate from the building, and you have to bury wires in a trench from the solar array to the electric meter. The trench itself is subject to an inspection, which must occur after any conduit and wires are in the trench, but before the trench is back-filled. If timing is good, this could happen at the same time as the rough-in inspection, but if you need that trench filled in earlier so you can access your yard, you might have to get the trench inspected earlier.

An important thing to recognize is that each time an inspection is required, the date of inspection will be according to the inspector's schedule. The inspectors have many projects to inspect, so you and your solar contractor might have to wait for the inspection to be scheduled.

Someone needs to be on-site when the inspection happens. Typically, the electrical contractor should be there, and it can be helpful if you and/or the solar contractor can be there. Some of the inspections will require access to the service panel inside the house, so you or a friend may need to be there to let people in. Coordinating everyone's schedules can be a challenge. For an extra fee, the electrical contractor can request a certain date and time for the inspection.

STEP 7 - COMPLETE THE INSTALLATION

After the rough-in inspection, the solar contractor can install the *piece de résistance* – your solar PV panels. This is an exciting part of the process, as you can see the solar panels going up after all the preparatory work. They are connected together and wired to the inverter(s). There will be a solar disconnect switch near your electric meter, that should be disconnected until the final inspection is completed and the bi-directional meter installed.

STEP 8 - SIGN THE INTERCONNECTION AGREEMENT

Sometime between the approval of your interconnection request, and the completion of the installation, you should receive a copy of an Interconnection Agreement from Nova Scotia Power, via your solar contractor. You need to read this over and sign it before NSPI will agree to connect your system.

There is a lot of detail in the agreement, but the key points are:

The agreement to interconnect continues indefinitely, unless you or NSPI terminates the agreement for various reasons, such as:

- Unsafe conditions;
- Cancellation of electric service;
- Technical deficiencies or non-approved equipment.

The power utility (NSPI) can shut off your PV array when doing needed maintenance or repairs to the grid.

It is worth noting that, in the history of net metering up to this point in Nova Scotia, to the best of our knowledge NSPI has never disconnected a net-metered solar PV array without a safety or code-related reason. The electric utility has shown every willingness to treat these agreements fairly.

Also, you may note that the arrangement for credit and payment for any surplus electricity is not covered in the agreement. This is because the conditions covering those surpluses and credits are written in the renewable electricity regulations of the Province of Nova Scotia. The Interconnection Agreement is about the electrical connection, independent of how credits are calculated.

Under the current regulations in 2019, the utility is required to give you credit for your surplus solar electricity against your bills, at the rate that you pay for electricity. This includes time-of-day rates, if you are on the time-of-day rate plan.

If you have surplus solar electricity remaining at the end of 12 months, the utility is required to pay you money for the surplus, which then brings your surplus balance to zero energy as you start the next 12 months. This arrangement is guaranteed in the Nova Scotia regulations for 25 years from the date you sign your interconnection agreement.

STEP 9 - GET THE FINAL ELECTRICAL INSPECTION AND BI-DIRECTIONAL METER

Like the rough-in inspection from Step 6, a final electrical inspection is required. This can take some time to get an inspection scheduled, and again a person – the electrical contractor and/or yourself – is needed to be there to give access to the electrical breaker panel and discuss any issues.

For example, the final inspection considers the warning labels (see Appendix C) that must be securely fastened to the disconnect switches and at the breaker panel, to warn people that this circuit is also solar-powered. Your breaker panel now has two sources of power, which is unusual for most buildings, and so requires warnings to any who may be working on the power system in your house in the future.

The inverters in any CSA-approved solar PV system will automatically shut down when the grid power goes down, to avoid electrocuting anyone who may be working on the lines. The labels therefore add an extra level of awareness.

Upon approval of the final inspection, NSPI will order, deliver, and install a new bi-directional electric meter for your home – a "net meter". This is a digital meter that measures both the energy imported into he building from the grid, and exported from your solar power system to the grid. Note that it can take a couple of weeks for the new meter to arrive.

STEP 10 - TURN IT ON AND CELEBRATE!

When the bi-directional meter is installed, it is time to turn on your solar array and start making your own solar power! Ask your solar contractor or electrician to explain to you how to turn the solar array on and off. For most arrays, this can be fairly simple – with the flip of the appropriate breaker in the breaker panel, and then turning on the disconnect switch that is near your electrical meter.

APPENDIX A: EXAMPLE OF AN NSPI INTERCONNECTION APPLICATION FORM

Interconnection Request and Equipment Information Form
(All items shall be completed where applicable)

100 kW or Less

Section 1.0 : Customer Information (To be filled out with information regarding the interconnecting customer)	
Customer-Generator (Applicant) and/or Company Name:	
Address (Location of Generator):	Applicant Mailing Address:
Property Identification Number (P.I.D.):	
Is the generator located on property owned by the applicant? ☐ If the generator is not located on the land owned by the applicant the applicant must provide a copy of the document authorizing the generator to be installed on the property that has been registered on the title of the property.	Applicant Telephone:
	Applicant Email Address:

Section 1.1 : Technical Designer Information (To be filled out with information regarding the company, and person responsible for the technical design of the installation)	
Technical Design or Consulting Company:	Telephone:
Technical Contact:	Mailing Address:
Email Address:	

Section 1.2 : Electrical Contractor Information (To be filled out with information regarding the company who will obtain the electrical wiring permit and the site contact person responsible for the electrical installation)	
Name of Electrical Contracting Company:	Company Telephone:
Certificate Number:	Email Address:
Site Contact:	Contact Phone:
Wiring Permit Number:	

Section 2.0 : Energy Reconciliation	
Anniversary Month: (Please circle month for annual energy reconciliation)	JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
Expected In-Service Date:	

Section 3.0 : Customer-Generator's Existing NSPI Supply				
Existing NSPI Electric Service Type: ☐ Single Phase ☐ Three Phase				
Primary NSPI Account:	Meter Number:	Amps:	Volts:	HST Number (If Applicable):

NSPI ICR v2.0 - 112017

Account Number:	Meter Number:	Amps:	Volts:	HST Number (If Applicable):
2				
3				

If you intend to supply generation to more than 3 accounts, please capture account details on a separate piece of paper and include with your application form.

Section 4.0 : Proposed Interconnection Details		
Indicate the appropriate NSPI system interconnection voltage:	☐ Single Phase	☐ Three Phase
	☐ 120V ☐ 240V ☐ Other _____	☐ 120/208V ☐ 347/600V ☐ Other _____
Indicate the total generation capacity (kW) and estimated annual energy (kWh)		
Total kW Output:	Estimated Annual kWh:	

Section 5.0 : Generating Equipment Information (See Section 5.2 for Solar Installations)		
Generation Source: ☐ Solar ☐ Wind ☐ Micro-Hydro ☐ Other:		
Generator Type: ☐ Synchronous ☐ Induction		Manufacturer:
Nameplate Rating kVA: kW:		Model Number:
Number of Units:	Watts per Unit:	Product Certification Information:
Rated Voltage:	Rated Power Factor:	
Frequency:	☐ Single Phase ☐ Three Phase	
Three Phase Connection: ☐ Delta ☐ Wye ☐ Ground Wye		

Section 5.1 : Synchronizer Information (For Synchronous Generators)	
Synchronizer: ☐ Automatic ☐ Manual	Manufacturer:
Manufacturer's Reference Number:	

Section 5.2 : Solar Modules (Where Applicable)	
Module Nameplate Rating (kW):	Manufacturer:
Number of Units:	Model Number:
Dc Output Voltage (each):	Rated Efficiency:
Max. Dc String Voltage (at Inverter):	Product Certification Information:

Manufacturer specification sheets and certification compliance reports shall be provided with all for all solar modules in addition to the interconnection request form. Equipment that does not have a recognized factory certification marking shall be subject to Field Evaluation under the SPE-1000 Model Code.

Section 5.3 : Inverter Information (Where Applicable)		
Inverter Type: ☐ String ☐ Micro		Manufacturer:
Nameplate Rating kVA: kW:		Model Number:
Number of Units:		Product Certification Information:
Max. Continuous Inverter Output Rating kW:		
Max. Dc Input Voltage:		
AC Output Voltage:		
Rated Power Factor:		
Frequency:	☐ Single Phase ☐ Three Phase	
Manufacturer specification sheets and certification compliance reports shall be provided with all for all inverter based installations in addition to the interconnection request form. Equipment that does not have a recognized factory certification marking shall be subject to Field Evaluation under the SPE-1000 Model Code.		

Section 5.4 : Rapid Shutdown Equipment (Where Applicable)	
Manufacturer:	
Number of Units:	Model Number:
Manufacturer specification sheets and certification compliance reports shall be provided with all for all rapid shutdown equipment in addition to the interconnection request form. Equipment that does not have a recognized factory certification marking shall be subject to Field Evaluation under the SPE-1000 Model Code.	

Section 6.0: Interconnection Transformer and Fuse Information (Where Applicable)			
Nameplate Rating kVA:		Manufacturer:	
Number of Units:		Model Number:	
Primary Volts:	Secondary Volts:	Primary Fuse Data	Type:
Connection: ☐ Single Phase ☐ Three Phase			Size:
Three Phase Connection: ☐ Delta ☐ Wye ☐ Ground Wye			Speed:

Section 6.1: Interconnection Circuit Breaker Information (Where Applicable)		
OC Rating:	Interrupting Rating:	Manufacturer:
Trip Speed:	Cycles.	Type Number:

Section 6.2: Protective Equipment (Complete all applicable items. Where requested a separate sheet shall be provided with the manufacturer's product information)	
6.2 (a) Provide manufacturers information for the protection package or devices	Provide manufacturers documentation for protective functions: • Under/Over Voltage • Anti-Islanding • Under/Over Frequency • Over-current
6.2 (b) Range of available settings for each protective function	Provide list of protection functions with available ranges of protection setting for tripping and shutdown, along with time delays.
6.2 (c) Proposed settings (Set point and times)	Provide list of protection functions with settings for tripping or shutdown, along with time delays. Example: High Voltage Trip 127V, Time Delay 0.1 Sec

Section 7.0: Required Documentation (Three copies of each required)	
• Information below to be submitted for all projects • All diagrams are to be neatly drawn (11" x 17" size preferred) • Free hand drawn and illegible diagrams will not be accepted by NSPI	
7.0 (a) Electrical One-Line Diagram	A single-line diagram showing the electrical relationship and descriptions of the significant electrical components such as the generator, inverters, cables and wiring, switches, meters, transformers, circuit breakers, with operation voltages and ratings
7.0 (b) Manufacturers Information and Approvals	Provide manufacturer information sheets and certification compliance reports for equipment such as, inverters, generators, solar modules, rapid shutdown devices, combiner boxes, DC disconnect switches, and DC optimizers.
7.0 (c) Equipment Labelling	Provide a detailed list of all permanently installed labels indicating, label designation, label dimensions, label background color, label letter color, label letter height, and label verbiage.
7.0 (d) Site Plan	Provide a site plan showing the physical arrangement of the major equipment, including generating equipment, transformers, switches, control panels, the customer's existing metered service and the interconnection with NSPI's distribution system, Include the civic address, references, etc. Provide Property Identification Number (PID)
7.0 (e) Protective Device Data	For all protective devices used to protect and control the interconnection, please provide proposed protective device settings, circuit breaker and fuse data and coordination curves, and a description of how the protection scheme is intended to function.
7.0 (f) Point of contact	If the interconnection and start-up process is to be coordinated through a party or individual other than the customer, provide the name, company, address, and phone number of that individual or party with whom the utility is to coordinate the interconnection

I hereby certify that I have reviewed and agree to adhere to the Interconnection Guidelines located at www.nspower.ca/netmetering and to the best of my knowledge, all the information provided in this Interconnection Request and Equipment Information Form is true and correct

Print: _____ (Customer-Generator)

Signature: _____ (Customer-Generator)

Date: _____

Send completed form to:

netmetering@nspower.ca

Nova Scotia Power
P.O. Box 910, Halifax, NS B3J 2W5
Attn: Net Metering Program Lead

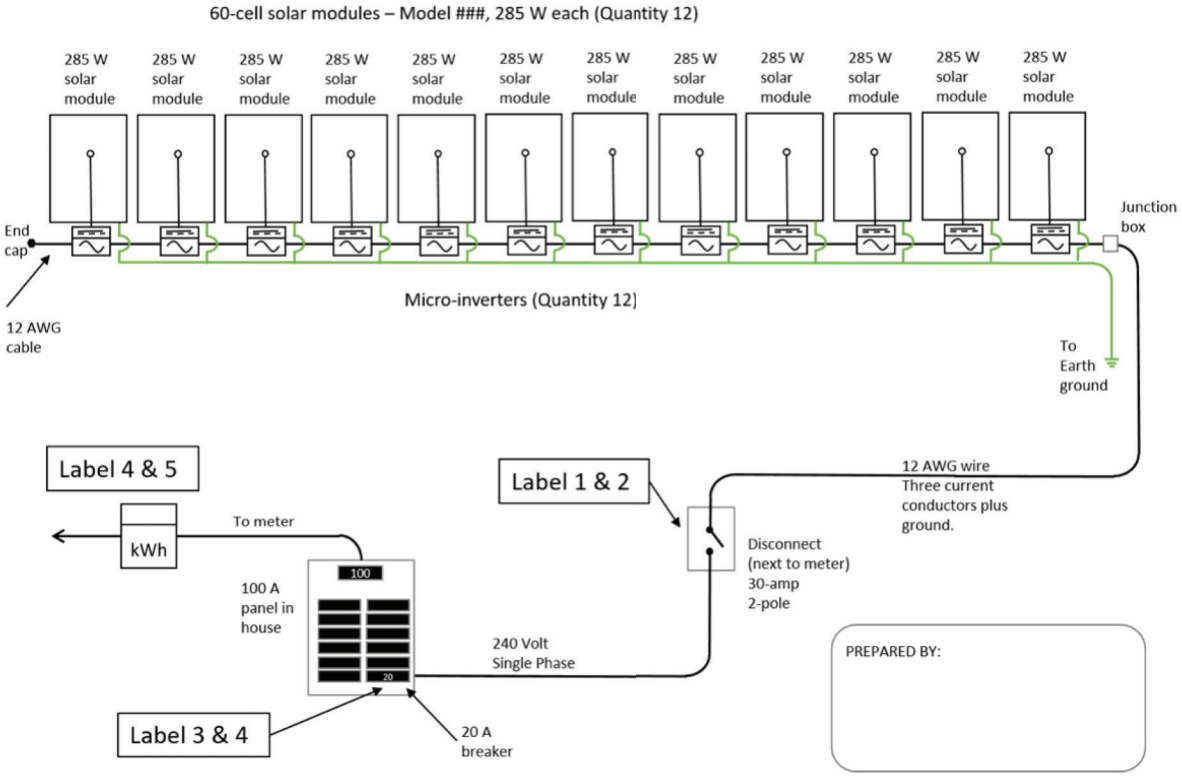
SCHEDULE "A" SITE PLAN

This schedule will include your contractor's drawing of the site, showing the locations of buildings, the solar array, and the disconnect switch(es).

SCHEDULE "B" LINE DIAGRAM

Here is an example of a line diagram for a micro-inverter system with 12 PV panels.

Example One Line Diagram – Solar photovoltaic array with micro-inverters
FOR INFORMATION ONLY – your one line diagram must describe your particular system

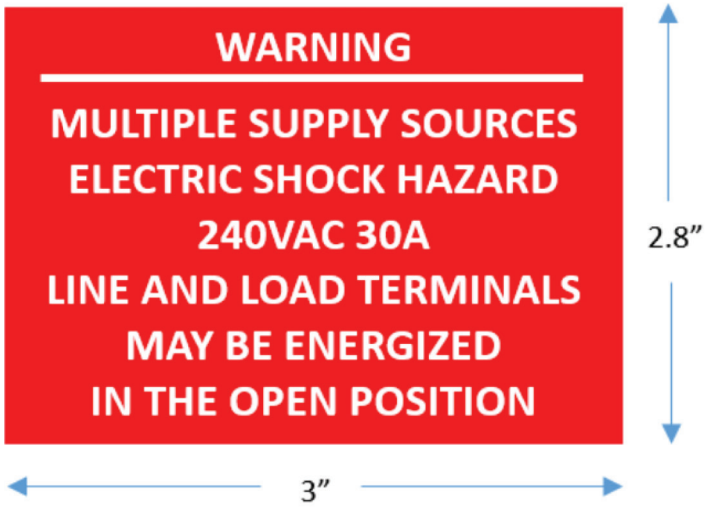


APPENDIX B: REQUIRED LABELLING

These are examples of the labels required to be installed on your PV system. These are to be installed on the Disconnect switch (Labels 1 & 2), next to the solar PV breaker in your breaker panel (Labels 3, 4, and 5), and at the meter (Labels 4 & 5). Label 5 is a simplified version of the one-line diagram for your PV system. Typically these labels are laser-engraved on lamacoid plastic and glued and riveted to the equipment. Trophy engraving companies have the equipment to make these labels.

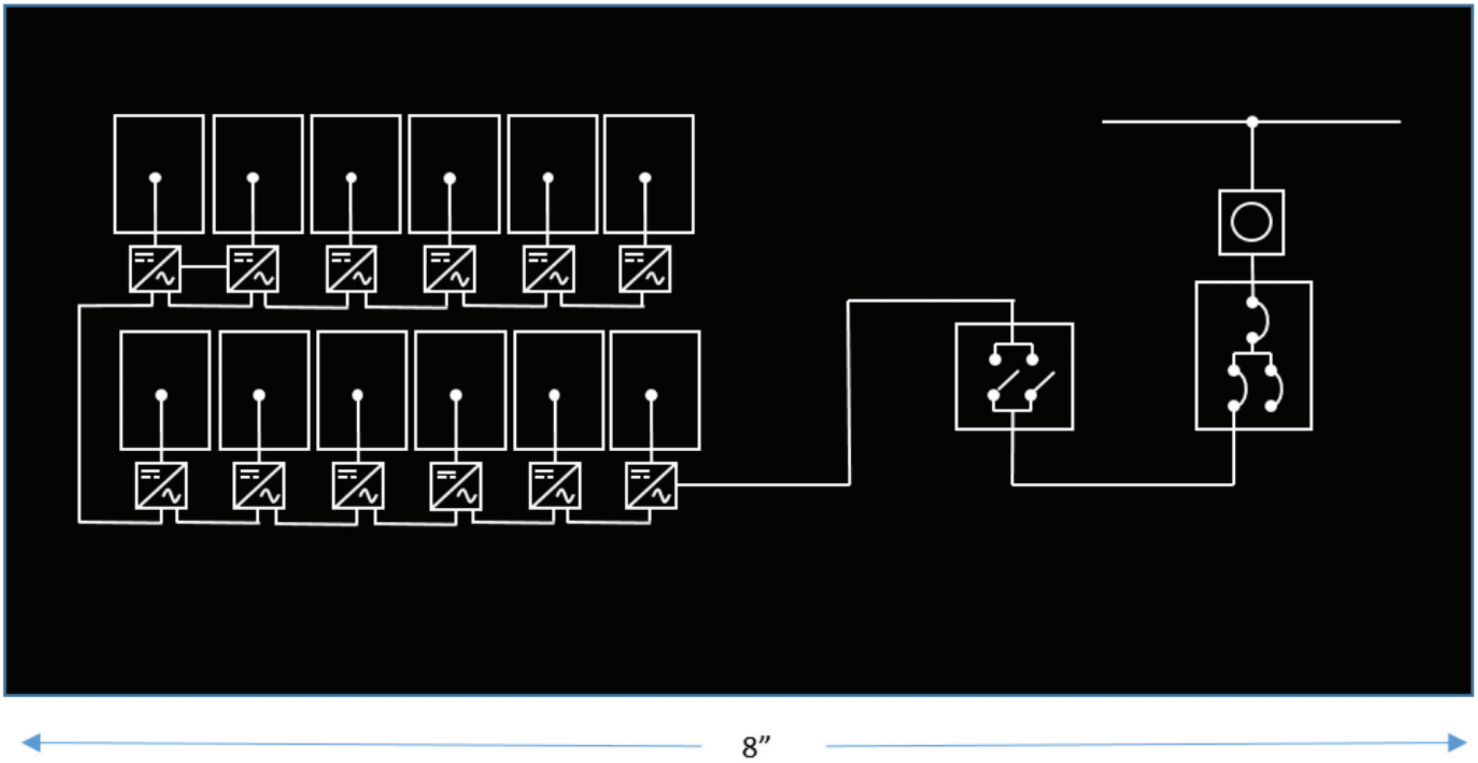
Label 1
White on black

Label 2
White on red



Label 3
White on black

Label 4 (used twice)
White on red

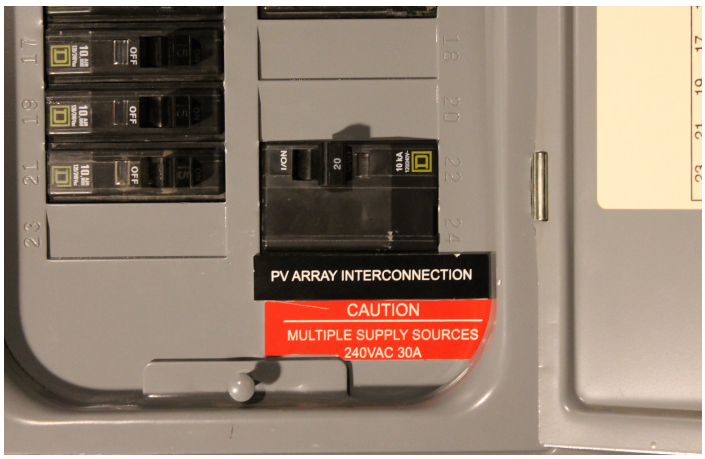


Label 5 – Line diagram (used twice) – White on black

APPENDIX C: PHOTOS

Solar PV array on a shed roof

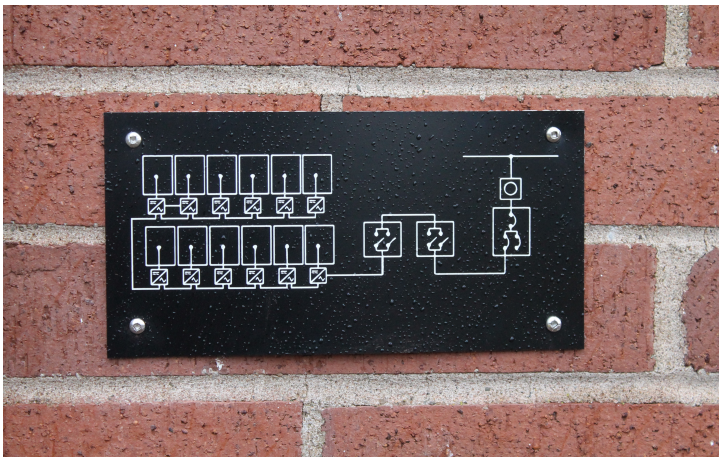
Solar PV array on a house roof



Example PV warning labels on a breaker panel in house

Example PV warning label on an electric meter

Example PV warning labels on PV disconnect switch



Example PV line diagram on exterior, near electric meter

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