

Solar for Developers and General Contractors

What You Need to Know

Procurement & Contracting

Solar companies typically provide turnkey solar **Engineering, Procurement and Construction (EPC)** services. Selecting a single company to provide design/engineering as well as system installation is the most efficient method, but some solar companies will also provide design/engineering services separately for a fee.

When **selecting a solar contractor**, one should consider the company's experience with similar projects, the design and equipment proposed, the contractor's workmanship warranty, and pricing. Always solicit multiple bids (Requests for Proposals are common), consider bundling multiple projects to lower costs, and avoid the temptation to let price be the only factor.

SOLAR INSTALLER SCOPE

- **Contract and Screening**
 - Site Visit
 - Contract Creation & Signing
- **Final Design and Application Submission**
 - System Design & Engineering
 - ConEd, NYSERDA, FDNY, LPC submissions
- **Permit Submission**
 - NYC DOB and Electrical Permit submissions
 - Construction and Electrical Permit Approvals
- **System Installation**
 - Equipment Procurement
 - Installation & ConEd Interconnection Approval
- **Final Project Inspection and Sign-Off**

How to Select a Solar Installer

Qualifications	Proposal Quality	Pricing, Interview, Etc.
<ul style="list-style-type: none"> ▶ Insurance, Licensure, NYSERDA-Approval ▶ Corporate Track Record/Longevity ▶ NYC Project Experience ▶ Multifamily Affordable Housing Experience ▶ Operational Capacity <ul style="list-style-type: none"> • Size of team • Elements done in-house vs subcontracted 	<ul style="list-style-type: none"> ▶ Solar Design <ul style="list-style-type: none"> • Thoughtful use of space ▶ Equipment Quality <ul style="list-style-type: none"> • High production factor at Year 25 ▶ Warranties <ul style="list-style-type: none"> • 25 Year Manufacturer • 12 Year Inverter • 5+ Year Workmanship ▶ Implementation Plan <ul style="list-style-type: none"> • Thorough, fits with other work being done • Roofing Coordination accounted for 	<ul style="list-style-type: none"> ▶ Pricing <ul style="list-style-type: none"> • Compare \$/Watt Pricing ▶ Interview and Communications ▶ References

Note: Solar One can assist with procurement in a variety of ways, from running a full RFP process and soliciting bids from NYSERDA-qualified installers, to consulting on an existing procurement process.

Tips for Solar Contracts

Solar contracts, like all construction contracts, can vary. However, at a minimum, all solar contracts should include:

- ▶ System size and type of solar panels
- ▶ Type of inverters and monitoring system
- ▶ Interconnection method (behind the meter or new meter installed)
- ▶ Contracted cost (post-NYSERDA rebate) and total amount paid to installer including NYSEDA rebate for reference

Solar Installation Timeline

For most solar projects the majority of the timeline is devoted to engineering, permitting, and interconnection – the actual **installation usually takes just 1-4 weeks**, depending on size. For buildings with new roofs being installed, make sure there is coordination between the roofer and solar contractor.

		Timeline after Commitment																																												
Project Phase	months	1				2				3				4				5				6				7				8				9				10								
	weeks	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40				
CONTRACT & SCREENING		[shaded]																																												
DESIGN & ENGINEERING																																														
PERMIT SUBMISSION																																														
INSTALLATION																																														
FINAL PROJECT INSPECTION AND SIGN-OFF																																														

Notes on the NYSERDA Incentive:

The NYSERDA (NY-SUN) incentive is typically paid directly to installer upon completion of the solar system, and must be passed on to the owner to reduce upfront costs. *In some cases, the incentive can instead be paid to the owner to take advantage of a larger federal tax credit.*



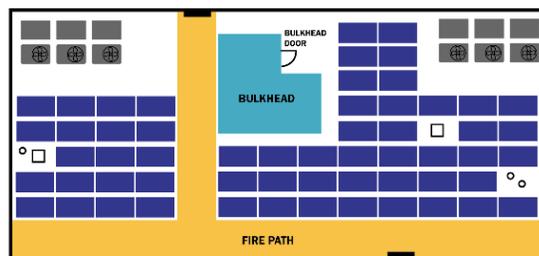
Depending on the project, the NYSERDA incentive covers 30-60% of the total cost of the solar installation. Because a majority of the project cost is paid after final completion, many installers may front-load milestone payments to compensate, which is normal and reasonable.

Please note that incentive levels change over time. The contract must be signed and interconnection application submitted to lock in incentives.

Solar-Ready Buildings

There are a few key steps design and development teams can take to ensure that new buildings are ready for a cost-effective solar PV system early on in the project's development.

Often items that are easy to implement during the construction of a building can contribute significantly to the cost of a solar system if installed later on.



- Dedicated conduit run from roof to electrical room for solar wiring
- PLP service panel oversized to accommodate solar output
- Mechanical equipment consolidated and clustered in the northern side of the building or in the shaded area north of bulkheads
- Bulkheads placed on northern side of building
- Existing buildings: remove decommissioned vents and chimneys
- Maximize continuous space on roof
- If planning for Trellis-style canopy, the steel trellis should be installed by the GC and designed in collaboration with the solar installer
- Ensure roofer coordinates with Solar installer to validate design and maintains roof warranty after solar installation is complete.