



Process Improvements

Step 2, PR 2-B

Standardize Permit Fees: Calculator for Commercial Permits

Adopt the PV Permit Fee Calculator for commercial rooftop systems

The PV Permit Fee Calculator developed by the Sierra Club Loma Prieta chapter allows anyone to determine a reasonable permit fee that enables cost recovery based on specific review tasks, time assessments for each task and billable hourly rates for a particular jurisdiction. These specific factors are most relevant to cost recovery and within the control of individual jurisdictions.

Certain factors beyond a jurisdiction's control can inflate a city's processing costs, and therefore its fees, for a particular permit:

- The building that will support the photovoltaic (PV) system might require structural modifications. In such cases, jurisdictions are justified in calculating the extra fee amount based on the cost of those modifications. This is reasonable, as reviewing and inspecting structural modifications requires more staff hours.
- For jurisdictions that cover a large geographic area, it could take inspectors longer to drive to the PV installation site. This directly increases the staff time, and therefore cost, to inspect a system.
- Solar permit applicants sometimes submit incomplete or inaccurate applications. Failed reviews cost more time and money for jurisdictions' staff. Having a professional engineer or licensed design professional stamp and sign the PV plans can expedite the permitting process.
- Installations that fail inspections cost more time and money. The jurisdiction may consider charging additional re-inspection fees for failed inspections to help recover costs without penalizing PV installers who perform better quality work.
- Several factors can make a PV system more complex: inadequate structural support of the building to hold the solar panels, ground mounting, high wind conditions, battery storage and so on. It is reasonable to assess extra fee amounts for such complications because they require jurisdiction staff to expend more resources on review and inspection.

Examples

City of La Mesa, California

Permit fees are based on the estimated staff time for permit processing, plan review and inspections. This enables cost recovery for a 131kW commercial project in that town with a fee of \$1,669.

www.solarpermitfees.org/PVFeesCaliforniaCommercial.pdf

City of San Diego, California Solar Photovoltaic Systems Information Bulletin

The information bulletin is published to guide contractors through the permit process for renewable energy projects, particularly solar photovoltaic systems. It also provides information about submittal requirements, plan reviews, project inspections and required fees.

www.sandiego.gov/development-services/pdf/industry/infobulletin/ib301.pdf

National Solar Permitting Database

Clean Energy Finance has developed a national solar permitting database, which uses crowd-sourcing to catalogue and document permitting fees and requirements across the United States. The goal of the website is to use the data to identify inefficiencies and shift to a more standardized process for permitting fees.

<http://solarpermit.org/>

Related Resources

Sierra Club, Loma Prieta Chapter: Reducing Local Barriers to the Installation of Solar Power Systems in California. This is a series of documents and reports supporting the creation of a PV Permit Calculator.

<http://www.solarpermitfees.org/solarbarriersflyer.pdf>

Appendix 11: PV Permit Fee Calculator for Commercial Rooftop Systems

PV Permit Fee Calculator Excel Spreadsheet

Available online: www.solarpermitfees.org/PVFeeCalcCommercial.xls

Instructions for Use of this PV Permit Fee Calculator for Commercial Rooftop Systems
by Scott Troyer & Kurt Newick, 4/19/12 version 3.1

This spreadsheet estimates the permit fee for commercial rooftop solar photovoltaic (PV) systems on the basis of cost recovery. One can customize the calculation for a jurisdiction by entering the number of hours the permitting staff professionals spend on each task during the permit approval process for plan reviews and inspections, as well as the billable hourly rates and permit issuance fee. Descriptive pop-up help windows are activated when one clicks on the cells.

Instructions for Use:

Follow these steps to customize the values used to compute the PV permit fee for a jurisdiction. It is required that one enters a PV Project Size since the computed fee is based on this. Blue cells are open for input, all other cells are display-only.

Go to the PV Permit Fee Calculator worksheet (second tab at bottom), then enter the following items in the blue cells:

- Jurisdiction Name (optional)
- Project Name (optional)
- PV Project Size (used in computing the "Total Calculated PV Permit Fee")
- Select the True/False boxes for the required plan reviews and inspection tasks
- 2nd Cycle Review %
- Inspection Turn Down %
- Permit Issuance Fee
- The jurisdiction's Billable Hourly Rates for each job function
- Adjust the review staff hours for the 10 kW and 100 kW PV systems in columns C & D for each task.*

The Total Calculated PV Permit Fee for the PV Project Size entered is displayed at the bottom right corner (using this formula)

$((E12+E13+E18)*B30)+((E14+E24)*B34)+(E15*B32)+(E16*B33)+((E21+E22+E23+E26)*B31)+B29$

NOTE: A reset button on the bottom right corner of the "PV Permit Fee Calculator" worksheet restores the default values that come with this Excel file for the "Reviews Required" and "Review Hours" columns. In order for this reset button to work, this Excel file must be opened with macros enabled.

* The default review hours in the "PV Permit Fee Calculator" worksheet (columns C and D) approximate the amount of time necessary for a permitting professional to perform each task for both a 10 kW and a 100 kW PV system size. In the opinion of the authors of this tool, these default values are reasonable for the permitting tasks performed for a commercial PV system (these defaults can be restored via the reset button). It is OK to change the number of hours for each task, but such changes should be carefully considered, as the difference in review hours between the 10 kW and 100 kW PV system sizes are used (via a logarithmic base 10 formula) to compute the PV permit fee amount for the PV Project Size you enter.

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PV Permit Fee Calculator for Commercial Rooftop Systems

by Scott Troyer & Kurt Newick, 11/18/12 Version 3.4

Jurisdiction Name:	PV Permit Fee Study, Sierra Club, Loma Prieta Chapter	
Project Name:	Reasonable Computed Fee to Enable Cost Recovery	
PV Project Size (kW DC):	149	

Clicking on the field labels in these Rows & Columns reveals a pop up box with an explanation of task	Select Separate Reviews Required	Input Average Review Hours		Hours Computed for PV Project Size 149 kW
		10 kW	100 kW	
PV Plan Reviews	<input checked="" type="checkbox"/>			
Electrical Plan Review (1st cycle)	<input checked="" type="checkbox"/> TRUE	0.5	1.5	1.7
Structural Plan Review (1st cycle)	<input type="checkbox"/> TRUE	0.5	1.5	1.7
Fire Review (1st cycle)	<input checked="" type="checkbox"/> FALSE	0.5	1.0	0.0
Planning Review (1st cycle)	<input checked="" type="checkbox"/> TRUE	0.5	0.7	0.7
Clerical Time for 1st cycle	TRUE	0.4	0.5	0.5
Subtotal, Plan Review (1st cycle)		2.4	5.2	4.6
2nd Cycle Review %	20%	0.2	0.5	0.5
Total, Plan Review (nearest 1/2 hr.)		<u>2.6</u>	<u>5.7</u>	<u>5.0</u>
PV Inspections	<input checked="" type="checkbox"/>			
Bldg Attachment Inspection	<input type="checkbox"/> TRUE	0.5	1.0	1.1
Bldg Racking Inspection	<input checked="" type="checkbox"/> FALSE	0.5	1.0	0.0
Electrical Inspection	<input type="checkbox"/> TRUE	0.5	2.0	2.3
Fire Inspection	FALSE	0.5	1.0	0.0
Subtotal, Inspection (1st cycle)		2.0	5.0	3.3
Inspection Turn Down Rate %	20%	0.3	0.8	0.5
Total, Inspection (round to 1/2 hr.)		<u>2.3</u>	<u>5.8</u>	<u>4.0</u>
Jurisdiction's Billable Rates		-	-	
Permit Issuance Fee:	\$45.00	-	-	
Plan Reviewer Billable Hourly Rate	\$145.00	-	-	
Inspector Billable Hourly Rate	\$125.00	-	-	
Planning Dept. Billable Hourly Rate	\$125.00	-	-	
Clerical Billable Hourly Rate	\$85.00	-	-	
Fire Dept. Billable Hourly Rate	\$125.00	-	-	
Total Hours (Plan Review & Inspection), nearest 1/2 hr.		<u>5.0</u>	<u>11.5</u>	<u>9.0</u>
Total Calculated PV Permit Fee				\$1,214