

R-12
7-7-09



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06/30/2009 10:07 AM

To Nancy Muth/CC/CLB@CLB, Allison Bunma/CC/CLB@CLB

cc Larry Herrera

bcc

Subject Fw: Solar permit recommendations for City of Long Beach

Irma Heinrichs
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NOTE: My email address has changed. It is now Irma.Heinrichs@longbeach.gov. Please update your records.

----- Forwarded by Irma Heinrichs/CC/CLB on 06/30/2009 10:06 AM -----



Solar Permits
<solarpermitfees@gmail.com>
m>

06/30/2009 07:07 AM

To daniel.brezenoff@longbeach.gov

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Subject Solar permit recommendations for City of Long Beach

Dear City Leaders of Long Beach:

re: considerations for solar permit policies for Long Beach decision makers (city council, city manager building official, key city staff, et. all)

As I understand the Long Beach city council along with City Manager Pat West will be considering solar permitting policies at the July 7, 2009 city council meeting. Here are some ideas and information on this topic that I've put together for your review that I hope will be useful with your efforts with this.

I think a fixed permit fee for residential solar electric is appropriate for cities considering solar electric permit fees, since a fixed fee enables cost recovery and has the desired benefit of

encouraging people to install a larger solar energy system, since there is no extra cost for the permit to do so.

As PV permitting standards are rolled out and adopted it will tend to make the solar permitting process fast and accurate saving the city time and money and enabling PV permit fees to be at or below the recommended maximum of \$324 and still be at cost recovery.

I've attached lots of info on solar PV permits including (but not limited to):

- General PV permit submittal guidelines created by the International Code Council (northern Calif. chapters)
- an interactive PDF technical wiring diagram created by Bill Brooks that may soon become a national standard for PV permit submittal to complement what the ICC has done.
- a summary of recommendations of solar permit issues by the Sierra Club.
- A letter of intent authored by Assemblymember Lois Wolk, that was sent to all cities a few years ago to inform them of the legal requirement of minimum solar permit fees, as the state is trying to encourage more solar power.
- Ranking data for cities in both southern and northern California on what is being charged for PV permit fees for 3kW solar energy systems (note: the 131 jurisdictions in northern California have been working on solar permit policies over the past several years and as a group have reasonable permitting fees at this time, but you will note from the attached ranking chart that their fees were also unreasonably high and 77 of these cities significantly lowered their PV permit fees since we published our Sierra Club report for PV permit fees for Northern California in 2005. The 250 jurisdictions in southern California have recently been made aware of our new Sierra Club, Angeles chapter solar permit fee report we have published, see next item). Note the jurisdictions that charge fees based on the valuation of the project are likely to have permit fees proportionally higher than what is shown for a 3kW system for larger PV systems.
- Solar permit fee calculation policy created by the city of Cupertino
- A Staff report created by the City of Fremont on solar permit fees with a recommendations that were adopted a few years back.
- A detailed report with a definitive PV permit fee comparison of southern California jurisdictions with specific recommendations for solar permitting is at: <http://angeles.sierraclub.org/energy/pvfeereport.asp>

For your reference here is our Sierra Club northern California web sites that we have been working on for many years

1) Overview web site with commercial and residential PV permit fee survey data:

<http://lomaprietaglobalwarming.sierraclub.org/solar.php>

or

2) Specific web page with information on our Northern California PV permit fee campaign with an HTML version of the PV permit fee report for NorCal:

http://lomaprieta.sierraclub.org/global_warming/fee_study.htm

I'd like to make some important points about this issue:

- It takes 2 - 4 hours to review the permit and do the inspection no matter the size of PV system (for roof mounted PV).

- A fixed fee approach is consistent with cost recovery (value based permit for solar ARE not appropriate since the cost of the panels has nothing to do with the staff time to approve a permit)!

- Lois Wolk authored the Solar Rights Act that requires that cities enact minimum solar permit fee policies (letter attached).

- Cities in southern California as a group have extremely high PV permit fees compared to those that have looked into the issue in Northern California (fees avg \$214). Cities in LA county have especially high PV permit fees, as can be seen in the attached fee chart that shows the average fee for 10 SoCal counties (this average considers all jurisdictions within each of these counties).

- As more middle income people opt to install solar in the future a reasonable solar permit fee policy may make the difference between going solar or not (especially people with children that are barely making it financially).

- As more people install solar in Long Beach the property tax basis will tend to increase as these homes are sold and sell at a higher value, which increases property tax revenue. Current owners of solar energy systems are not assessed a higher basis for property values for tax purposes, according to state law, but as these solar homes are sold the basis for property taxes is set at the selling price.

- Here are some other reasons to encourage more local solar power (besides the important environmental one):

1) Sustainable energy: It is a requirement for our society to implement sustainable energy rapidly (this is not optional)! The current energy mix is heavily weighted towards unsustainable energy sources which will change and we may as well transition in a responsible way to avoid massive problems such as power shortages and pollution (both of which are extremely unpopular)!

2) Energy independence: solar power is free to operate, local in nature, efficient use of our main energy income (the SUN) and gives us control of our own destiny and prevents giving money to other countries that may have policies that are not constructive (terrorism is financed from oil profits for instance).

3) Job creation: Solar power creates more jobs per installed MW than any other power source (15 local installation jobs and 15 manufacturing jobs per Megawatt installed, according to Adam

Browning at Vote Solar). Helping the economy and getting people back to work is key at this time, as I am sure you understand.

4) Energy efficient: Locally produced solar power is very efficient and avoids transmission losses (which average about 7% as I recall).

5) Transmission lines: Local solar power reduces need to build expensive transmission lines.

I'd like to encourage you to consider solar permit fees for solar water heating and commercial PV systems at some point when the time seems right and perhaps as part of your current focused efforts on residential PV permit policies. NOTE: feel free to contact me to request raw survey data on what cities are charging for solar hot water (for SoCal) and non-residential solar permit fees (for NorCal),... at some point I plan to write a report, similar to what we have done for residential PV permits for southern and northern California, to document these related solar permit issues.

Please do not hesitate to contact me to go over and of the details on this important issue. Long Beach is one of the first cities that I am aware of that is addressing this issue of PV permit fees and procedures since we published our Sierra Club report for Southern California. I'd like to personally thank you from the bottom of my heart for taking the time to work on this issue!!

Warm regards,

Kurt Newick

Global Warming & Energy Committee Chair, Loma Prieta Chapter, Sierra Club
Team leader for SoCal PV permit survey

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[PVFeeRankSoCalCounties.pdf](#)



[PVFeeRankSoCal20090618.pdf](#)



[PVPermitRecommendations.pdf](#)



[PermitStandardsICC.pdf](#)



[Code Organizer PV wiring.pdf](#)



[PVFeesResidential20081212.pdf](#)



[PVFeeRankLACounty20090618.pdf](#)



[WolkPVFeeLetter.pdf](#)



[CupertinoPVFeeResolution2009.pdf](#)

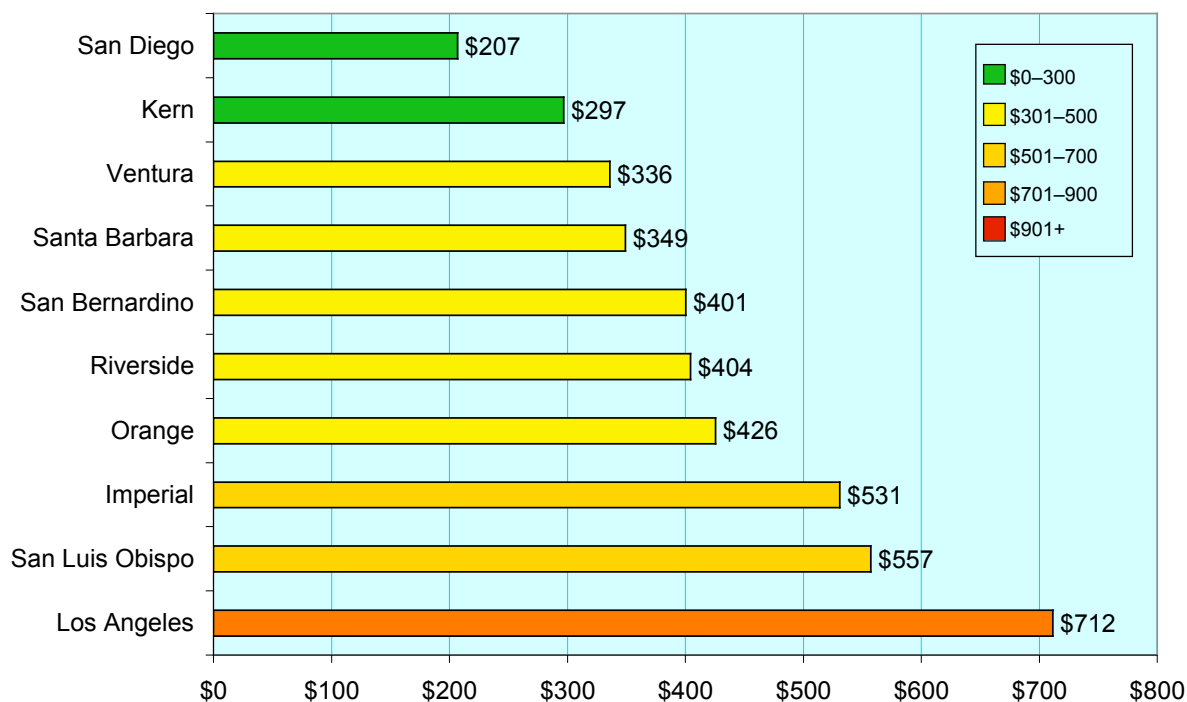


[Fremont101006CCAagenda.pdf](#)

Photovoltaic (PV) Permit Fees for 3kW Residential Systems

This PV permit fee ranking chart shows the average fee charged for all cities in each county in Southern California. These fees are for a permit to install a 3 kW roof mounted PV system with 20 solar modules and 1 inverter valued at \$27,000. Data compiled by Sierra Club volunteers via a survey done between 2/1/09 – 4/15/09.

Southern California Solar Permit Fees County Averages
as of 6/18/2009



The survey area's average PV permit of **\$493** is too high. A similar survey of 131 municipalities in Northern California¹ showed the average fee in that area is **\$214** as of December 12, 2008. Building departments with experienced staff (i.e. trained for rooftop solar installations) should be able to recover PV system review and inspection costs with a fee of no more than **\$324**.

Most municipalities in the survey area take one to two weeks to process a PV permit. Building departments with experienced staff should be able to process standard PV permit applications over-the-counter.

PV permit fees and processing delays can make a critical difference to some homeowners. Much of the costs and delays involved in processing permits reflect misunderstandings about PV systems rather than the realities of installing and inspecting them. Cities can reduce costs and delays for themselves, solar contractors and PV customers by:

- Streamlining processes (e.g. eliminating unnecessary reviews or requirements)
- Charging a fixed fee that covers actual review and inspection costs for solar permits rather than basing fees on project valuation
- Training permit department staff in PV-specific issues
- Standardizing permit requirements

We ask that all cities consider the recommendations in this report to encourage an energy solution that contributes so much to the wellbeing of our communities and the global environment. For more details view the report on this issue which can be downloaded at: <http://angeles.sierraclub.org/energy/pvfeereport.asp>



Photovoltaic (PV) Permit Fees in Southern California as of 6/18/2009 (For 3 kW Residential PV Systems)

This permit fee ranking chart shows what municipalities in Southern California charge for a permit to install a 3 kW roof mounted PV system with 20 solar modules and 1 inverter valued at \$27,000.
Data compiled by Sierra Club volunteers via a survey done between 2/1/09 – 4/15/09. Updated 6/18/09

Ranked by Fee	
Municipality	Fee
La Habra Heights	\$1,572
Rolling Hills	\$1,479
San Gabriel	\$1,479
Carson	\$1,473
Hawaiian Gardens	\$1,427
Westlake Village	\$1,389
Whittier	\$1,328
Pismo Beach	\$1,305
Lawndale	\$1,214
Azusa	\$1,197
Lomita	\$1,183
Rolling Hills Estates	\$1,168
Bell	\$1,166
Downey	\$1,164
Irwindale	\$1,156
Los Angeles County	\$1,144
Huntington Park	\$1,100
Paramount	\$1,082
Cerritos	\$1,078
West Hollywood	\$1,077
Inglewood	\$1,066
Agoura Hills	\$1,058
Artesia	\$1,030
Dana Point	\$1,020
El Monte	\$1,014
Torrance	\$1,009
La Mirada	\$1,008
San Dimas	\$1,000
Placentia	\$983
Needles	\$973
Industry	\$967
Duarte	\$965
Ontario	\$954
Coachella	\$954
Norwalk	\$945
Hawthorne	\$943
Los Alamitos	\$942
Bellflower	\$925

Ranked Alphabetically	
Municipality	Fee
Adelanto	\$180
Agoura Hills	\$1,058
Alhambra	\$213
Aliso Viejo	\$924
Anaheim	\$0
Apple Valley	\$316
Arcadia	\$283
Arroyo Grande	\$350
Artesia	\$1,030
Arvin	\$308
Atascadero	\$273
Avalon	\$792
Azusa	\$1,197
Bakersfield	\$136
Baldwin Park	\$432
Ballard	\$293
Banning	\$236
Barstow	\$250
Beaumont	\$416
Bell	\$1,166
Bell Gardens	\$450
Bellflower	\$925
Beverly Hills	\$350
Big Bear Lake	\$415
Blythe	\$54
Bradbury	\$306
Brawley	\$200
Brea	\$466
Buellton	\$293
Buena Park	\$242
Burbank	\$0
Calabasas	\$658
Calexico	\$709
California City	\$681
Calimesa	\$655
Camarillo	\$430
Canyon Lake	\$683
Carlsbad	\$120

Aliso Viejo	\$924
Compton	\$900
Oxnard	\$900
Newport Beach	\$900
Santa Fe Springs	\$895
San Marino	\$891
Montebello	\$852
South Gate	\$822
West Covina	\$815
South El Monte	\$814
Rancho Santa Margarita	\$807
Glendora	\$805
Lakewood	\$800
Maywood	\$798
Avalon	\$792
Fullerton	\$791
Pico Rivera	\$785
Lompoc	\$763
Malibu	\$761
Perris	\$754
Indio	\$738
Imperial County	\$737
Walnut	\$735
Lake Elsinore	\$735
Orange	\$717
Cudahy	\$717
Calexico	\$709
Santa Maria	\$706
Diamond Bar	\$704
Ridgecrest	\$702
Grover Beach	\$702
Laguna Niguel	\$700
Tustin	\$695
Gardena	\$692
Vernon	\$687
Canyon Lake	\$683
Colton	\$683
California City	\$681
Commerce	\$675
Morro Bay	\$675
Chino	\$665
Fountain Valley	\$663
Desert Hot Springs	\$660
Corona	\$660
Calabasas	\$658
Calimesa	\$655
Paso Robles	\$653
Hermosa Beach	\$650
Covina	\$645
Laguna Woods	\$633
Moorpark	\$628
Temple City	\$625
Cypress	\$625
Yorba Linda	\$614
Temecula	\$604
Long Beach	\$599
National City	\$595

Carpinteria	\$245
Carson	\$1,473
Casmalia	\$293
Cathedral City	\$211
Cerritos	\$1,078
Chino	\$665
Chino Hills	\$514
Chula Vista	\$45
Claremont	\$435
Coachella	\$954
Colton	\$683
Commerce	\$675
Compton	\$900
Corona	\$660
Coronado	\$268
Costa Mesa	\$0
Covina	\$645
Cudahy	\$717
Culver City	\$0
Cuyama	\$293
Cypress	\$625
Dana Point	\$1,020
Del Mar	\$190
Delano	\$65
Desert Hot Springs	\$660
Diamond Bar	\$704
Downey	\$1,164
Duarte	\$965
El Cajon	\$225
El Centro	\$478
El Monte	\$1,014
El Segundo	\$515
Encinitas	\$388
Escondido	\$102
Fillmore	\$155
Fontana	\$0
Fountain Valley	\$663
Fullerton	\$791
Garden Grove	\$160
Gardena	\$692
Glendale	\$0
Glendora	\$805
Goleta	\$174
Grand Terrace	\$452
Grover Beach	\$702
Guadalupe	\$415
Hawaiian Gardens	\$1,427
Hawthorne	\$943
Hemet	\$473
Hermosa Beach	\$650
Hesperia	\$296
Hidden Hills	\$225
Highland	\$472
Hope Ranch	\$293
Huntington Beach	\$0
Huntington Park	\$1,100
Imperial Beach	\$95

Rancho Cucamonga	\$591
San Fernando	\$582
Solvang	\$554
San Jacinto	\$530
McFarland	\$524
Monrovia	\$520
Sierra Madre	\$515
El Segundo	\$515
Chino Hills	\$514
Victorville	\$513
Pomona	\$510
El Centro	\$478
Hemet	\$473
Highland	\$472
Brea	\$466
San Luis Obispo County	\$462
Oceanside	\$455
Grand Terrace	\$452
Bell Gardens	\$450
Upland	\$450
Montclair	\$445
Yucaipa	\$441
Claremont	\$435
Baldwin Park	\$432
Camarillo	\$430
Santa Barbara	\$430
Signal Hill	\$419
Beaumont	\$416
Big Bear Lake	\$415
Guadalupe	\$415
Thousand Oaks	\$411
La Habra	\$410
Rancho Palos Verdes	\$402
Westminster	\$400
Stanton	\$398
Monterey Park	\$395
Yucca Valley	\$391
Encinitas	\$388
Norco	\$375
Palm Springs	\$375
Kern County wildland area	\$360
Seal Beach	\$359
La Canada Flintridge	\$356
Arroyo Grande	\$350
Beverly Hills	\$350
Lynwood	\$350
San Juan Capistrano	\$350
La Quinta	\$337
La Verne	\$331
Palmdale	\$330
Simi Valley	\$327
Ojai	\$325
Apple Valley	\$316
Arvin	\$308
Los Angeles	\$308
Bradbury	\$306
Santa Clarita	\$300

Imperial County	\$737
Indian Wells	\$0
Indio	\$738
Industry	\$967
Inglewood	\$1,066
Irvine	\$210
Irwindale	\$1,156
Isla Vista	\$293
Kern County	\$225
Kern County wildland area	\$360
La Canada Flintridge	\$356
La Habra	\$410
La Habra Heights	\$1,572
La Mesa	\$156
La Mirada	\$1,008
La Palma	\$211
La Puente	\$131
La Quinta	\$337
La Verne	\$331
Laguna Beach	\$0
Laguna Hills	\$183
Laguna Niguel	\$700
Laguna Woods	\$633
Lake Elsinore	\$735
Lake Forest	\$254
Lakewood	\$800
Lancaster	\$58
Lawndale	\$1,214
Lemon Grove	\$274
Loma Linda	\$0
Lomita	\$1,183
Lompoc	\$763
Long Beach	\$599
Los Alamitos	\$942
Los Alamos	\$293
Los Angeles	\$308
Los Angeles County	\$1,144
Los Olivos	\$293
Lynwood	\$350
Malibu	\$761
Manhattan Beach	\$0
Maywood	\$798
McFarland	\$524
Menifee	\$220
Mission Viejo	\$0
Monrovia	\$520
Montclair	\$445
Montebello	\$852
Montecito	\$293
Monterey Park	\$395
Moorpark	\$628
Moreno Valley	\$155
Morro Bay	\$675
Murrieta	\$257
National City	\$595
Needles	\$973
Newport Beach	\$900

Hesperia	\$296
Vista	\$295
Ballard	\$293
Buellton	\$293
Casmalia	\$293
Cuyama	\$293
Hope Ranch	\$293
Isla Vista	\$293
Los Alamos	\$293
Los Olivos	\$293
Montecito	\$293
Orcutt	\$293
Santa Barbara County	\$293
Santa Ynez	\$293
Summerland	\$293
Vandenberg Village	\$293
Ventucopa	\$293
Twentynine Palms	\$290
Arcadia	\$283
Lemon Grove	\$274
Atascadero	\$273
Santa Paula	\$270
Coronado	\$268
Murrieta	\$257
Lake Forest	\$254
Barstow	\$250
Carpinteria	\$245
Buena Park	\$242
Banning	\$236
El Cajon	\$225
Kern County	\$225
Villa Park	\$225
Hidden Hills	\$225
Menifee	\$220
Riverside County	\$215
Wildomar	\$215
Alhambra	\$213
Cathedral City	\$211
La Palma	\$211
Irvine	\$210
Riverside	\$210
Santee	\$206
Redondo Beach	\$202
Brawley	\$200
Pasadena	\$198
Rancho Mirage	\$194
Del Mar	\$190
Solana Beach	\$190
Laguna Hills	\$183
Adelanto	\$180
Goleta	\$174
Garden Grove	\$160
La Mesa	\$156
Fillmore	\$155
Moreno Valley	\$155
Ventura	\$150

Norco	\$375
Norwalk	\$945
Oceanside	\$455
Ojai	\$325
Ontario	\$954
Orange	\$717
Orange County	\$16
Orcutt	\$293
Oxnard	\$900
Palm Desert	\$0
Palm Springs	\$375
Palmdale	\$330
Palos Verdes Estates	\$85
Paramount	\$1,082
Pasadena	\$198
Paso Robles	\$653
Perris	\$754
Pico Rivera	\$785
Pismo Beach	\$1,305
Placentia	\$983
Pomona	\$510
Port Hueneme	\$100
Poway	\$131
Rancho Cucamonga	\$591
Rancho Mirage	\$194
Rancho Palos Verdes	\$402
Rancho Santa Margarita	\$807
Redlands	\$110
Redondo Beach	\$202
Rialto	\$0
Ridgecrest	\$702
Riverside	\$210
Riverside County	\$215
Rolling Hills	\$1,479
Rolling Hills Estates	\$1,168
Rosemead	\$122
San Bernardino County	\$0
San Bernardino (City)	\$0
San Clemente	\$0
San Diego	\$93
San Diego County	\$0
San Dimas	\$1,000
San Fernando	\$582
San Gabriel	\$1,479
San Jacinto	\$530
San Juan Capistrano	\$350
San Luis Obispo	\$40
San Luis Obispo County	\$462
San Marcos	\$100
San Marino	\$891
Santa Ana	\$0
Santa Barbara	\$430
Santa Barbara County	\$293
Santa Clarita	\$300
Santa Fe Springs	\$895
Santa Maria	\$706

Bakersfield	\$136
La Puente	\$131
Poway	\$131
Rosemead	\$122
Carlsbad	\$120
Wasco	\$112
Redlands	\$110
Escondido	\$102
Shafter	\$102
Port Hueneme	\$100
San Marcos	\$100
Imperial Beach	\$95
San Diego	\$93
South Pasadena	\$88
Palos Verdes Estates	\$85
Delano	\$65
Lancaster	\$58
Blythe	\$54
Tehachapi	\$53
Chula Vista	\$45
San Luis Obispo	\$40
Orange County	\$16
Anaheim	\$0
Burbank	\$0
Costa Mesa	\$0
Culver City	\$0
Fontana	\$0
Glendale	\$0
Huntington Beach	\$0
Indian Wells	\$0
Laguna Beach	\$0
Loma Linda	\$0
Manhattan Beach	\$0
Mission Viejo	\$0
Palm Desert	\$0
Rialto	\$0
San Bernardino (City)	\$0
San Bernardino County	\$0
San Clemente	\$0
San Diego County	\$0
Santa Ana	\$0
Santa Monica	\$0
Ventura County	\$0
Average	\$493

Santa Monica	\$0
Santa Paula	\$270
Santa Ynez	\$293
Santee	\$206
Seal Beach	\$359
Shafter	\$102
Sierra Madre	\$515
Signal Hill	\$419
Simi Valley	\$327
Solana Beach	\$190
Solvang	\$554
South El Monte	\$814
South Gate	\$822
South Pasadena	\$88
Stanton	\$398
Summerland	\$293
Tehachapi	\$53
Temecula	\$604
Temple City	\$625
Thousand Oaks	\$411
Torrance	\$1,009
Tustin	\$695
Twentynine Palms	\$290
Upland	\$450
Vandenberg Village	\$293
Ventucopa	\$293
Ventura	\$150
Ventura County	\$0
Vernon	\$687
Victorville	\$513
Villa Park	\$225
Vista	\$295
Walnut	\$735
Wasco	\$112
West Covina	\$815
West Hollywood	\$1,077
Westlake Village	\$1,389
Westminster	\$400
Whittier	\$1,328
Wildomar	\$215
Yorba Linda	\$614
Yucaipa	\$441
Yucca Valley	\$391
Average	\$493

View a comparative report of Solar Electric Permit Fees in Southern California at:
<http://angeles.sierraclub.org/energy/pvfeereport.asp>

Contacts: <mailto:SolarPermitFees@gmail.com>

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Tamara Comeán: (626) 836-1948



Recommendations for Solar Electric Permit Fees and Procedures

1. Make solar power permit fees a fixed \$324 or less for standard residential photovoltaic (PV) installations (i.e., do not base permit fee computation on PV system valuation).
 - A fixed total fee of \$324 or less is appropriate based upon extensive review of solar permitting costs in many jurisdictions with solar PV installation experience. Permitting and inspection of a typical residential PV system normally takes between 2 to 4 hours regardless of size, since the amount of work is essentially the same.
 - A fixed fee of \$324 or less brings your City into compliance with California's policy of encouraging solar as set forth in Government Code Section 65850.5 by minimizing all solar plan check and permit fees.
2. Consider fast-tracking applications for solar contractors who have reliable track records.
3. Standardize and streamline permit requirements to reduce time spent on the permit process by solar installers and City staff. For instance building department staff can be trained to do PV permit reviews and approval via cross training with planning department, public works and fire departments. A process that is quicker for solar installers is also cheaper for your city.
4. For rooftop residential PV systems of 15 kW or less, we recommend a permit issuance process that is over-the-counter (by appointment is OK if this works best for the permitting authority), particularly for PV systems that meet the following criteria:
 - Solar panel weight is under five pounds per square foot.
 - Weight of the solar array at each attachment point is less than 45 pounds.
 - The solar panels are no more than 18 inches off the surface of the roof.
 - The residence was built after 1950 with adequate rafters or trusses.
5. Consider posting solar permit guidelines, permit fees and the application on your City website.
6. Reduce the window for inspection appointments to no more than two hours. When feasible, cities should offer specific appointment times. This recommendation eliminates half-day inspection windows where expensive man hours are racked up waiting for inspectors.
7. Municipalities should not require Professional Engineering stamps for structural issues for flush-mounted rooftop PV systems, unless there are unique structural issues that need to be addressed (such as roof rafters being over spanned).
8. Do not tie permit issuance to utility approval. Some municipalities with their own electric utility require that the utility process and approve all paperwork relating to the PV system (e.g. net metering agreements, time-of-use metering agreements, solar rebate/incentive forms) before the building department will issue the permit. This needlessly adds time to the permitting process. We recommend that, before issuing a permit, such municipalities require only that the PV installer notify the utility of the pending project and submit an interconnection agreement and net metering application. The utility can then conduct its review and approval process concurrently with the PV contractor's installation process and the building department's subsequent inspection.

Laws Governing PV Permits and Fees:

California Government Code Section 66014 provides that fees associated with building inspections and building permits "**shall not exceed the estimated reasonable cost of providing the service for which the fee is charged.**" (Emphasis added).

The California Solar Rights Act **limits the review of solar energy systems by city building officials to whether they meet applicable health and safety requirements.** (See California Government Code Section 65850.5 (b) and California Health and Safety Code Section 17959.1.) Discretionary reviews, including a design review for aesthetics, are prohibited. Section 65850.5(a) states: "It is the intent of the Legislature that local agencies not adopt ordinances that create unreasonable barriers to the installation of solar energy systems, including, but not limited to, design review for aesthetic purposes...." For details on this issue, see the letter of intent about solar permit fees and design reviews that State Senator Lois Wolk authored that was sent to all California cities on June 7, 2006. This letter can be downloaded at:

http://www.noricalsolar.org/downloads/city_resources/WolkPVFeeLetter.pdf

For more information on streamlining permit requirements:

1. Local chapters of the International Code Council in Northern California have approved some PV permit guidelines: <http://www.gosolarnow.com/PermitStandards.pdf>
2. The American Board of Codes and Standards is working on a technical wiring diagram that may become a national standard for PV solar permits, once approved. It is similar to: http://www.brooksolar.com/files/Code_Organizer-Expedited-blank_INPUTS.pdf
3. View a Sierra Club report entitled Solar Electric Permit Fees in Southern California (a comparative report). This report includes permit fee and processing time information for Southern California Cities and it has additional recommendations on PV permitting best practices. It can be downloaded at: <http://angeles.sierraclub.org/energy/pvfeereport.asp>

For more information on related solar PV permit issues, you may contact Kurt Newick via email at SolarPermitFees@gmail.com or by phone at 408-370-9636.

ICC TRI-CHAPTER UNIFORM CODE COMMITTEE (TUCC)



POLICY NUMBER: 11

APPROVAL DATE: November 6, 2008 (Revised December 9, 2008)

SUBJECT: Residential (Single-Family) Solar Photovoltaic System Utility Grid-Tie Connection

This guideline is developed by the Tri-chapter Uniform Code Committee and is intended to enhance regional consistency in application and enforcement of the Building Code. Please verify acceptance of this guideline with your local building department prior to its application.

CODE REFERENCES:

2007 California Electrical Code Article 690 Solar Photovoltaic Systems

ISSUE:

There is a substantial increase in the number of solar photovoltaic system installations because of the California Solar Initiative and the Governor's support for solar energy. However, the permitting process for these systems is not consistent among jurisdictions. Often times, the submitted plans are incomplete and thus delay permit issuance. This guideline will promote uniformity of solar photovoltaic plans in our region and help expedite permit issuance.

PROPOSED GUIDELINES/

Plans submitted for a permit must contain the following items:

- 1) Plan view showing location of the PV installation and layout of existing roof framing members that support the system;
- 2) Details on mounting of PV modules, type and number of roof coverings, and subsequent weatherproofing of the roof;
- 3) Electrical single-line diagram clearly identifying all devices installed in the PV system and indicating total kVA rating of system;
- 4) Clearly identify the point of interconnection with the utility supplied wiring system and provide details on main breaker, PV breaker and rating of bussing;
- 5) Indicate type and size of all conduit and conductors throughout the PV system;

- 6) Provide manufacturer's cut-sheets and installation instructions for all PV modules, mounting systems, combiner boxes (if used), inverters, and disconnects;
- 7) Provide structural calculations, prepared by a registered California design professional, if the total weight of the photovoltaic system is over five pounds per square foot;
- 8) The installation of the PV system shall conform to the requirements of CEC Article 690 and any other applicable articles or standards.

A sample of the plan view and electrical one-line diagram pages are attached.

PV ARRAY LAYOUT & WIRING PLAN

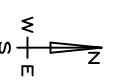
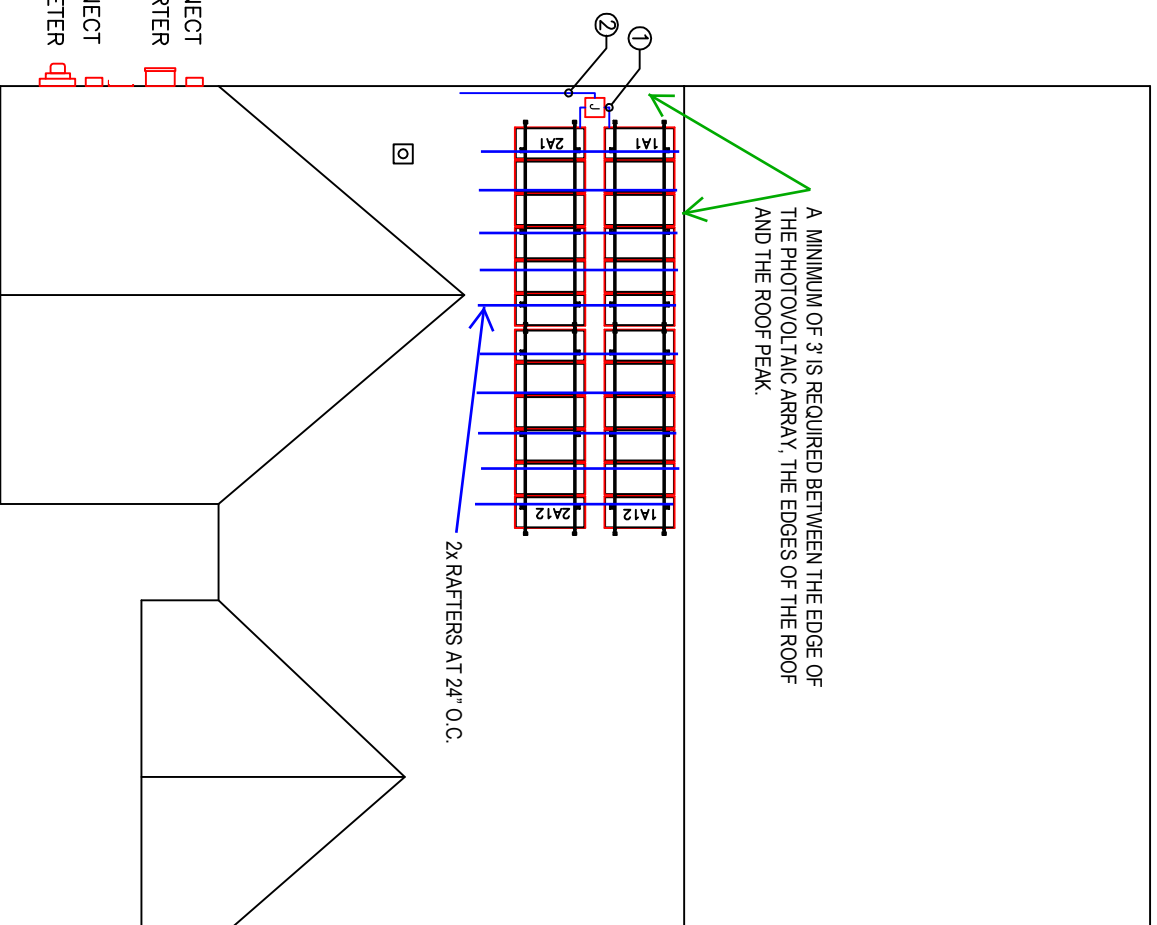
MOUNTING NOTES

1. PANELS MOUNTED ON ALUMINUM RACKING
2. PV ARRAY MOUNTS TO ROOF STRUCTURE WITH $\frac{5}{8}$ " LAGS EMBEDDED 2 $\frac{1}{2}$ " INTO RAFTERS OR SEE NOTE 5 BELOW
3. PV PANELS ARE ANCHORED @ 48" O.C. TRUSSES/ RAFTERS ARE 24" O.C. OR SEE NOTE 5 BELOW
4. WEIGHT OF PV MODULES AND ASSEMBLY LESS THAN 5 LBS PER SQUARE FOOT
5. ALL INSTALLATIONS MUST COMPLY WITH MANUFACTURER'S INSTALLATION INSTRUCTIONS.

ARRAY CONDUIT & WIRING ARRANGEMENT

1. FREE-AIR / $\frac{1}{2}$ " CONDUIT SLEEVE**
(2) #12 AWG; R, W
 2. TO DC DISCONNECT
1/2" CONDUIT
(4) #12 AWG: (2)R, (2)W
(1) #8 GND
- ** SLEEVE PROVIDES PROTECTION FROM PHYSICAL DAMAGE PER NEC 300.13 & 300.18

DC DISCONNECT
INVERTER
PHOTOVOLTAIC SYSTEM DISCONNECT
EXISTING SERVICE PANEL / NET METER



CUSTOMER NAME

ADDRESS

DRAWN BY	?	CHECKED BY	?
SCALE	NTS	DATE DRAWN	?

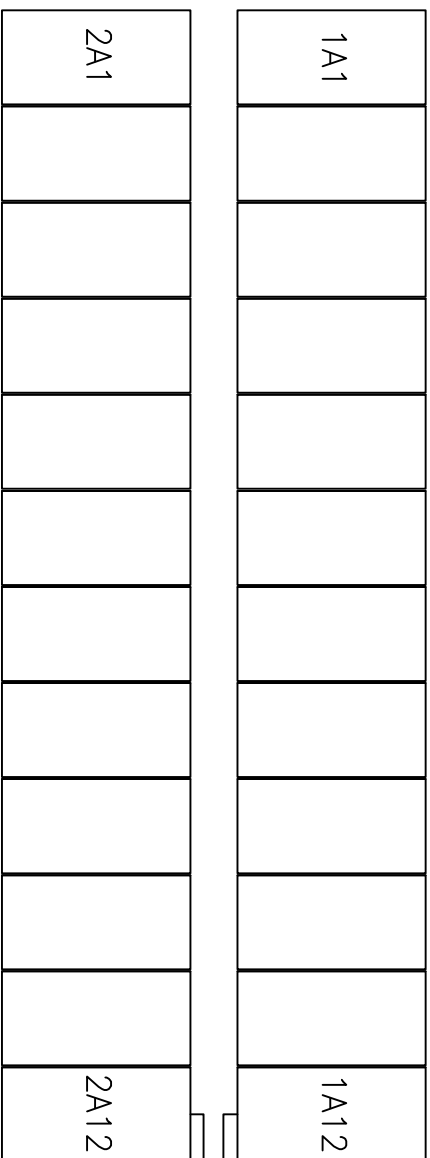
COMPANY LOGO

COMPANY NAME

COMPANY NAME

ADDRESS

ELECTRICAL SCHEMATIC



SEE LAYOUT PLAN FOR CONDUIT & WIRING ARRANGEMENT.

COMBINER
(IF USED)

DC
DISCONNECT

INVERTER
MODEL NAME

1/2" CONDUIT
(2) #8 AWG: BK, R
(1) #6 GND
(EXAMPLE ONLY)

AC
DISCONNECT

3/4" CONDUIT OR CABLE
(3) #10 AWG: BK,R,W
(1) #8 GND
(EXAMPLE ONLY)

1/2" CONDUIT
(3) #10 AWG: BK,R,W
(1) #8 GND
(EXAMPLE ONLY)

MAIN PANEL

AC
DISCONNECT
(IF USED)

UTILITY
METER
(IF USED)

- GENERAL NOTES**
1. BOND PV SYSTEM AND PV RAIL ASSEMBLY TO SERVICE ELECTRODE.
 2. CONNECT AC TO CUSTOMER SERVICE VIA 1 DP GE 15 AMP BREAKER.
 3. ELECTRICAL INSTALLATION IN ACCORDANCE WITH 2007 CALIFORNIA ELECTRICAL CODE

CONDUCTOR DESIGNATION BY CONDITION

CONDITION	ALLOWABLE CONDUCTOR TYPE(S)
FREE-AIR	USE-2/RHH/RHW-2
RACEWAY ROOF-TOP	THWN-2 OR XHHW-2 OR RHH/RHW-2
RACEWAY OR CABLE INDOORS OR SHADED	THHN OR THWN OR XHHW*
RACEWAY UNDERGROUND	THHN OR THWN OR XHHW*

* MAY SUBSTITUTE "-2" RATED CONDUCTORS

CUSTOMER NAME

ADDRESS

DRAWN BY

?

CHECKED BY

?

SCALE

NTS

DATE DRAWN

?

COMPANY
LOGO

COMPANY NAME
ADDRESS

PV ARRAY INFORMATION (Guide Sec. 6)

NUMBER OF MODULES IN SERIES _____

NUMBER OF PARALLEL CIRCUITS _____

LOWEST EXPECTED AMBIENT TEMP _____ °C

HIGHEST CONTINUOUS TEMPERATURE _____ °C

**OCPD = OVERCURRENT PROTECTION DEVICE
(IF NO OCPD-PUT "N/A" IN RELEVANT BLANKS)**

**NATIONAL ELECTRICAL CODE® REFERENCES
SHOWN AS (NEC XXX.XX)**

_____ MODULES IN SERIES SOURCE-CIRCUIT

_____ MODULES IN SERIES SOURCE-CIRCUIT

_____ MODULES IN SERIES SOURCE-CIRCUIT

_____ MODULES IN SERIES SOURCE-CIRCUIT

SOURCE-CIRCUIT COMBINER RATINGS (IF USED)

MAX OCPD RATING = _____ A

OCPD AMP RATING = _____ A

OCPD VOLT RATING = _____ V

DC DISCONNECT RATINGS (See Guide Appendix B)

DISCO AMP RATING = _____ A

DISCO VOLT RATING = _____ V

INVERTER RATINGS (Guide Sec. 4)

INVERTER MAKE _____

INVERTER MODEL # _____

MAX DC VOLT RATING = _____ V

MAX POWER @ 40°C = _____ W

NOMINAL AC VOLTAGE = _____ V

MAX AC CURRENT = _____ A

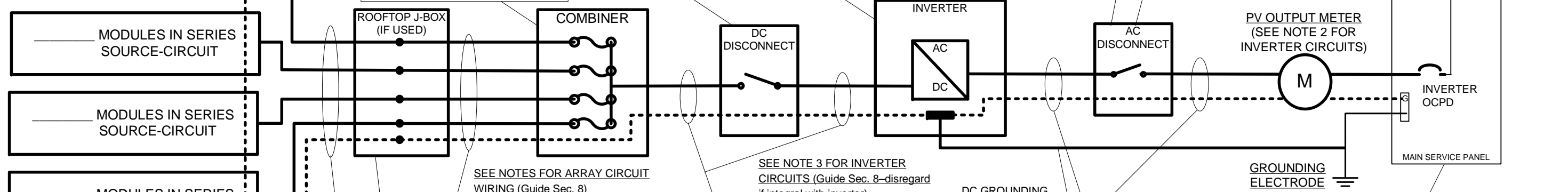
MAX OCPD RATING = _____ A

**AC DISCONNECT RATINGS (IF USED)
(See Guide Appendix B)**

DISCO AMP RATING = _____ A

DISCO VOLT RATING = _____ V

UTILITY SERVICE



**FOR UNUSED SERIES STRINGS
PUT "N/A" in BLANK ABOVE**

**SEE GUIDE SECTION 10 FOR
INFORMATION ON MODULE
AND ARRAY GROUNDING**

**SEE NOTES FOR ARRAY CIRCUIT
WIRING (Guide Sec. 8)**

CONDUIT TYPE _____

CONDUIT SIZE _____

CONDUCTOR TYPE (SEE BELOW)

CONDUCTOR SIZE _____ AWG

NUMBER OF CONDUCTORS _____

(____ Red, ____ White, 1 Green)

EGC SIZE _____ AWG (NEC 250.122)

**SEE NOTE 3 FOR INVERTER
CIRCUITS (Guide Sec. 8—disregard
if integral with inverter)**

CONDUIT TYPE _____

CONDUIT SIZE _____

CONDUCTOR TYPE _____

CONDUCTOR SIZE _____ AWG

NUMBER OF CONDUCTORS _____

(____ Red, ____ White, 1 Green)

EGC SIZE _____ AWG (NEC 250.122)

**DC GROUNDING
ELECTRODE
CONDUCTOR
SIZE _____ AWG
(NEC 250.166,
Guide Sec. 10)**

**SEE NOTE 4 FOR INVERTER
CIRCUITS (Guide Sec. 8)**

CONDUIT TYPE _____

CONDUIT SIZE _____

CONDUCTOR TYPE _____

CONDUCTOR SIZE _____ AWG

NUMBER OF CONDUCTORS _____

(____ Black, ____ Red, ____ White,
____ Green)

EGC SIZE _____ AWG (NEC 250.122)

SERVICE PANEL RATINGS

BUS AMP RATING = _____ A

SERVICE VOLTAGE = _____ V

MAIN OCPD RATING = _____ A

INVERTER OCPD
AMPERE RATING = _____ A

(SEE NOTE 5 FOR INVERTER OCPDs
BELOW, ALSO SEE GUIDE SECTION 9)

PV MODULE RATINGS @ STC (Guide Sec. 5)

MODULE MANUFACTURER _____

MODULE MODEL # _____

MAX POWER-POINT CURRENT (I_{mp}) = _____ A

MAX POWER-POINT VOLTAGE (V_{mp}) = _____ V

OPEN-CIRCUIT VOLTAGE (V_{oc}) = _____ V

SHORT-CIRCUIT CURRENT (I_{sc}) = _____ A

MAX SERIES FUSE (OCPD) = _____ A

MAXIMUM POWER (P_{max}) = _____ W

MAX SYSTEM VOLTAGE (typ 600Vdc) = _____ V

V_{oc} TEMP COEFF = _____ mV/°C or %/°C
(IF SUPPLIED, CIRCLE TYPE OF COEFF)

**ROOFTOP JUNCTION BOX
NEMA 3R MINIMUM REQUIRED
WITH WATERPROOF SPLICES
OR OTHER APPROVED
TERMINATION METHOD
(NEC 110.14; 300.6; 314)**

**SOURCE-CIRCUIT CONDUCTORS
OUTSIDE CONDUIT—MINIMUM 12 AWG
AND TWO TYPE OPTIONS—(CIRCLE ONE)
USE-2; PV WIRE/CABLE**

SIGNS—SEE GUIDE SECTION 7

<p>SIGN FOR DC DISCONNECT</p> <p>PHOTOVOLTAIC POWER SOURCE</p> <p>RATED MPP CURRENT = _____ A</p> <p>RATED MPP VOLTAGE = _____ V</p> <p>MAX SYSTEM VOLTAGE = _____ V</p> <p>MAX CIRCUIT CURRENT = _____ A</p> <p>WARNING: ELECTRICAL SHOCK HAZARD—LINE AND LOAD MAY BE ENERGIZED IN OPEN POSITION</p>	<p>SIGN FOR AC DISCONNECT (if used)</p> <p>SOLAR AC DISCONNECT</p> <p>AC OUTPUT CURRENT = _____ A</p> <p>NOMINAL AC VOLTAGE = _____ V</p>
	<p>SIGN FOR INVERTER OCPD</p> <p>AC POINT OF CONNECTION</p> <p>AC OUTPUT CURRENT = _____ A</p> <p>NOMINAL AC VOLTAGE = _____ V</p>

NOTES FOR INVERTER CIRCUITS (Guide Sec. 8):

- 1) IF UTILITY REQUIRES A VISIBLE-BREAK SWITCH, DOES THIS SWITCH MEET THE REQUIREMENT? YES/NO (CIRCLE ONE)
- 2) IF GENERATION METER REQUIRED, DOES THIS METER SOCKET MEET THE REQUIREMENT? YES/NO (CIRCLE ONE)
- 3) SIZE PHOTOVOLTAIC POWER SOURCE (DC) CONDUCTORS BASED ON MAX CURRENT ON 690.53 SIGN OR OCPD RATING AT DISCONNECT (IF SUPPLIED)
- 4) SIZE INVERTER OUTPUT CIRCUIT (AC) CONDUCTORS ACCORDING TO INVERTER OCPD AMPERE RATING.
- 5) TOTAL OF _____ INVERTER OCPD(S), ONE FOR EACH INVERTER. DOES TOTAL SUPPLY BREAKERS COMPLY WITH 120% BUSBAR EXCEPTION IN 690.64(B)(2)(a)? YES/NO (CIRCLE ONE)

NOTES FOR ARRAY CIRCUIT WIRING (Guide Sec. 8):

- 1.) THREE OPTIONS FOR SOURCE CIRCUIT CONDUCTOR TYPE (INSIDE CONDUIT—CIRCLE ONE) THWN-2; XHHW-2; RHW-2
- 2.) 2005 ASHRAE FUNDAMENTALS 2% DESIGN TEMPERATURES DO NOT EXCEED 47°C IN THE UNITED STATES (PALM SPRINGS, CA IS 44.1°C). FOR LESS THAN 9 CURRENT-CARRYING CONDUCTORS IN ROOF-MOUNTED SUNLIT CONDUIT AT LEAST 0.5" ABOVE ROOF AND USING THE OUTDOOR DESIGN TEMPERATURE OF 47°C OR LESS (ALL OF UNITED STATES).
 - a) 12 AWG, 90°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR MODULES WITH I_{sc} OF 7.68 AMPS OR LESS WHEN PROTECTED BY A 12-AMP OR SMALLER FUSE.
 - b) 10 AWG, 90°C CONDUCTORS ARE GENERALLY ACCEPTABLE FOR MODULES WITH I_{sc} OF 9.6 AMPS OR LESS WHEN PROTECTED BY A 15-AMP OR SMALLER FUSE.

Contractor Name and Address:		Standard Electrical Diagram for Small-Scale, Single-Phase PV Systems			
Site Name: _____ Site Address: _____ System AC Size: _____					
Drawn By:	SIZE	FSCM NO	DWG NO	REV	
Checked By:	SCALE	NTS	Date:	SHEET	
			E1.1	0	

PV Permit Fees for 3kW Residential Systems in the San Francisco Bay Area as of 12/12/08

Ranked by Fee	
Municipality	Fee
Vallejo **	\$671
Calistoga	\$585
Yountville	\$585
East Palo Alto	\$534
Hercules	\$533
Windsor	\$509
Cotati	\$500
Daly City	\$490
Cloverdale	\$486
Union City	\$475
Los Altos	\$474
Napa County	\$401
Watsonville	\$399
Woodland	\$395
Los Gatos	\$390
San Ramon	\$387
Sonoma County	\$373
Napa (City)	\$364
Alameda County	\$358
Millbrae*	\$358
San Mateo County**	\$345
Sunnyvale	\$339
Pacifica	\$334
West Sacramento	\$330
Palo Alto	\$327
Corte Madera	\$313
Sonoma (City)	\$309
Piedmont	\$307
Oakley	\$303
Cupertino	\$300
Gilroy	\$300
Hayward	\$300
Larkspur	\$300
Pinole	\$300
South San Francisco	\$300
San Jose	\$294
American Canyon	\$292
Half Moon Bay	\$291
Danville	\$290
Concord	\$288
Suisun City	\$282
Solano County	\$281
Livermore	\$280
Newark	\$267
Milpitas	\$265
Redwood City	\$261
Rohnert Park	\$260

Listed Alphabetically		
Municipality	Fee	Notes
Alameda (City)	\$108	Reduced from \$510
Alameda County	\$358	Reduced from \$458
Albany	\$183	
American Canyon	\$292	
Antioch	\$243	Reduced from \$745
Atherton	\$250	Reduced from \$970
Belmont	\$0	Reduced from \$1,100
Belvedere	\$155	Increased from \$73
Benicia	\$125	
Berkeley	\$0	Reduced from \$261
Brentwood	\$250	
Brisbane	\$250	Reduced from \$816
Burlingame	\$0	Reduced from \$1,022
Calistoga	\$585	
Campbell	\$225	Reduced from \$687
Capitola	\$130	Increased from \$125
Citrus Heights	\$0	Reduced from \$732
Clayton	\$230	
Cloverdale	\$486	
Colma	\$80	
Concord	\$288	Reduced from \$600
Contra Costa County	\$195	
Corte Madera	\$313	Reduced from \$660
Cotati	\$500	
Cupertino	\$300	Reduced from \$1,002
Daly City	\$490	Reduced from \$986
Danville	\$290	Reduced from \$850
Davis	\$196	
Dixon	\$149	
Dublin	\$250	Reduced from \$740
East Palo Alto	\$534	
El Cerrito	\$0	Reduced from \$840
Elk Grove	\$0	Reduced from \$336
Emeryville	\$250	Reduced from \$674
Fairfax	\$0	Reduced from \$783
Fairfield	\$203	
Folsom	\$0	Reduced from \$823
Foster City	\$0	Reduced from \$983
Fremont	\$237	Reduced from \$850
Galt	\$0	Reduced from \$575
Gilroy	\$300	Reduced from \$769
Half Moon Bay	\$291	Reduced from \$335
Hayward	\$300	Reduced from \$1,000
Healdsburg	\$130	
Hercules	\$533	Reduced from \$894
Hillsborough	\$0	Reduced from \$699
Hollister	\$224	

Winters	\$260
Santa Clara County	\$253
Atherton	\$250
Brentwood	\$250
Brisbane	\$250
Dublin	\$250
Emeryville	\$250
Lafayette	\$250
Moraga	\$250
Orinda	\$250
Pittsburg	\$250
Scotts Valley	\$250
Petaluma	\$243
Antioch	\$243
Santa Cruz County	\$242
Fremont	\$237
San Mateo (City)	\$232
Clayton	\$230
Campbell	\$225
Rio Vista	\$225
Sausalito	\$225
Hollister	\$224
Paicines	\$224
San Benito County	\$224
San Juan Bautista	\$224
Tres Pinos	\$224
Morgan Hill	\$222
Novato	\$207
Fairfield	\$203
Pleasanton	\$200
Oakland	\$199
Davis	\$196
Contra Costa County	\$195
Marin County	\$190
Albany	\$183
San Carlos	\$176
Martinez	\$158
Belvedere	\$155
Mountain View	\$152
Santa Rosa	\$150
Dixon	\$149
Santa Cruz	\$136
Capitola	\$130
Healdsburg	\$130
Benicia	\$125
San Rafael	\$124
San Leandro	\$122
San Bruno	\$117
Alameda (City)	\$108
San Pablo	\$93
Saratoga	\$92

Lafayette	\$250	
Larkspur	\$300	Reduced from \$813
Livermore	\$280	
Los Altos	\$474	Reduced from \$869
Los Altos Hills	\$0	Reduced from \$340
Los Gatos	\$390	Reduced from \$1,287
Marin County	\$190	
Martinez	\$158	Reduced from \$303
Menlo Park	\$0	Reduced from \$411
Mill Valley	\$3	
Millbrae*	\$358	Reduced from \$1,180
Milpitas	\$265	Reduced from \$680
Monte Sereno	\$0	Reduced from \$569
Moraga	\$250	
Morgan Hill	\$222	Reduced from \$1,188
Mountain View	\$152	Reduced from \$156
Napa (City)	\$364	Reduced from \$768
Napa County	\$401	Reduced from \$433
Newark	\$267	
Novato	\$207	Reduced from \$763
Oakland	\$199	
Oakley	\$303	Reduced from \$650
Orinda	\$250	
Pacifica	\$334	Increased from \$332
Paicines	\$224	
Palo Alto	\$327	Increased from \$110
Petaluma	\$243	Reduced from \$513
Piedmont	\$307	Reduced from \$541
Pinole	\$300	Reduced from \$550
Pittsburg	\$250	
Pleasant Hill	\$55	
Pleasanton	\$200	
Portola Valley	\$50	
Rancho Cordova	\$0	Reduced from \$493
Redwood City	\$261	Reduced from \$385
Richmond	\$0	Reduced from \$735
Rio Vista	\$225	Reduced from \$783
Rohnert Park	\$260	
Ross	\$0	Reduced from \$125
Sacramento (City)**	\$0	Reduced from \$774
Sacramento County	\$0	Reduced from \$195
San Anselmo	\$80	
San Benito County	\$224	
San Bruno	\$117	Reduced from \$1,200
San Carlos	\$176	Reduced from \$922
San Francisco	\$85	
San Jose	\$294	Increased from \$220
San Juan Bautista	\$224	
San Leandro	\$122	Reduced from \$430
San Mateo (City)	\$232	Reduced from \$1,224
San Mateo County**	\$345	Reduced from \$690

San Francisco	\$85	San Pablo	\$93
Colma	\$80	San Rafael	\$124 Reduced from \$386
San Anselmo	\$80	San Ramon	\$387
Sebastopol	\$75	Santa Clara (City)***	\$0 Decreased from \$384
Walnut Creek	\$65	Santa Clara County	\$253 Decreased from \$450
Vacaville	\$56	Santa Cruz	\$136 Increased from \$125
Pleasant Hill	\$55	Santa Cruz County	\$242
Portola Valley	\$50	Santa Rosa	\$150
Tiburon	\$35	Saratoga	\$92 Reduced from \$95
Woodside	\$30	Sausalito	\$225 Reduced from \$552
Yolo County	\$6	Scotts Valley	\$250
Mill Valley	\$3	Sebastopol	\$75 Reduced from \$376
Belmont	\$0	Solano County	\$281 Reduced from \$1,113
Berkeley	\$0	Sonoma (City)	\$309
Burlingame	\$0	Sonoma County	\$373 Reduced from \$500
Citrus Heights	\$0	South San Francisco	\$300 Reduced from \$825
El Cerrito	\$0	St. Helena	\$0 Reduced from \$700
Elk Grove	\$0	Suisun City	\$282
Fairfax	\$0	Sunnyvale	\$339 Reduced from \$399
Folsom	\$0	Tiburon	\$35
Foster City	\$0	Tres Pinos	\$224
Galt	\$0	Union City	\$475 Reduced from \$1,074
Hillsborough	\$0	Vacaville	\$56 Reduced from \$404
Los Altos Hills	\$0	Vallejo **	\$671
Menlo Park	\$0	Walnut Creek	\$65
Monte Sereno	\$0	Watsonville	\$399 Increased from \$304
Rancho Cordova	\$0	West Sacramento	\$330
Richmond	\$0	Windsor	\$509
Ross	\$0	Winters	\$260 Reduced from \$1,298
Sacramento (City)	\$0	Woodland	\$395
Sacramento County	\$0	Woodside	\$30 Reduced from \$728
Santa Clara (City)***	\$0	Yolo County	\$6
St. Helena	\$0	Yountville	\$585
Average	\$214	Average	\$214

* In Millbrae, customers pay \$558 up front, then receives a \$200 rebate after installation.

** Under review

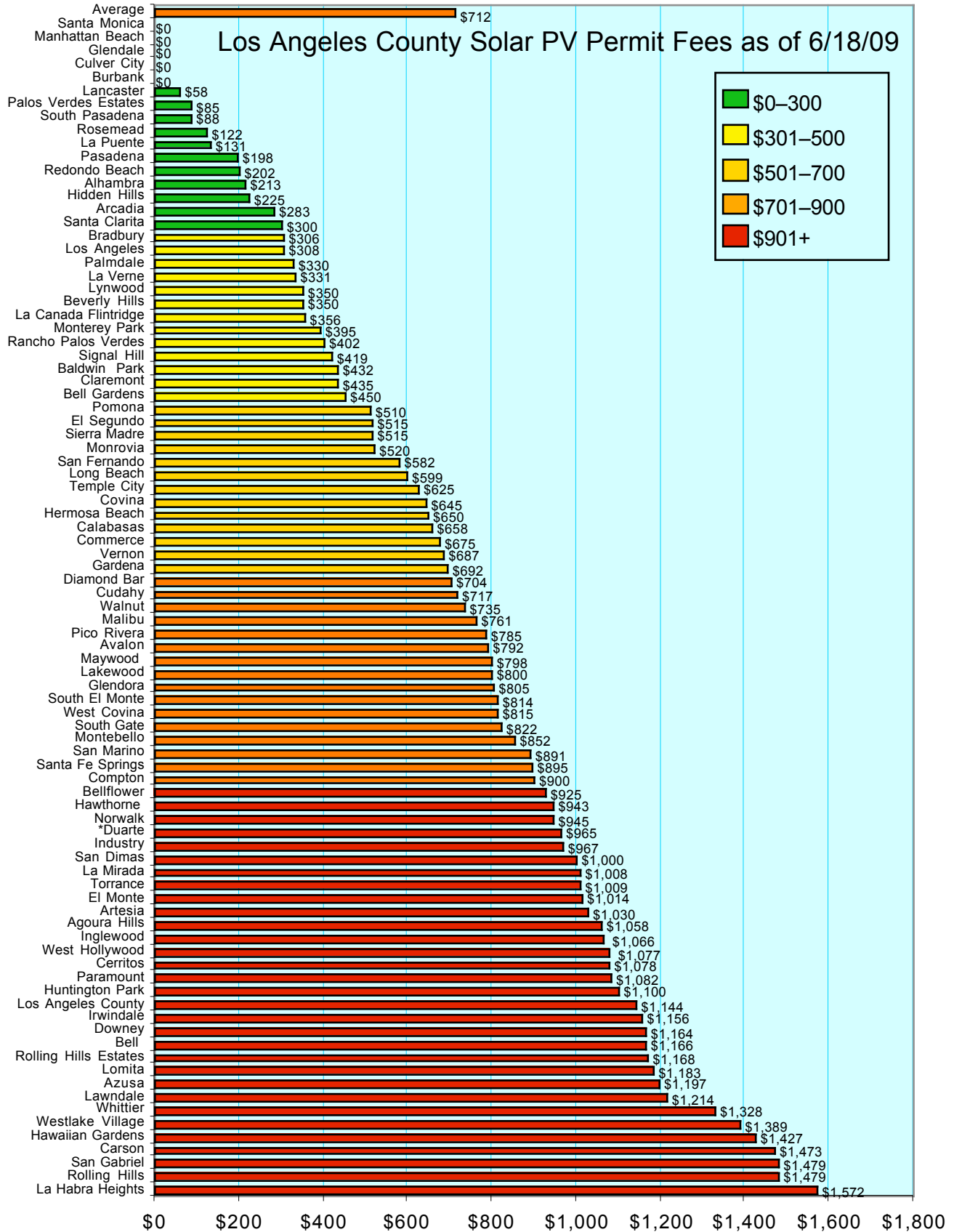
*** In Santa Clara (city), customers pay the up front permit cost which is refunded after installation.

Source: http://lomaprieta.sierraclub.org/global_warming/pv_permit_study.htm

Data compiled by Kurt Newick (last comprehensive survey completed in Summer of 2007).
Kurt may be reached via email at KurtNewick@yahoo.com or by phone at 408-370-9636

Photovoltaic (PV) Permit Fees for 3kW Residential systems in Los Angeles County

This permit fee ranking chart shows what municipalities in Los Angeles County charge for a permit to install a 3 kW roof mounted PV system with 20 solar modules and 1 inverter valued at \$27,000. Data compiled by Sierra Club volunteers via a survey done between 2/1/09 – 4/15/09.



State Capitol
P.O. Box 942849
Sacramento, CA 94249-0008
(916) 319-2008
Fax (916) 319-2108

District Office
555 Mason Street, Suite 275
Vacaville, CA 95688
(707) 455-8025
Fax (707) 455-0490

E-mail
assemblymember.wolk@assembly.ca.gov

Website
www.assembly.ca.gov/wolk

Assembly California Legislature



LOIS WOLK
ASSEMBLYMEMBER, EIGHTH DISTRICT

Chair
Water, Parks and Wildlife

Committees

Budget
Natural Resources
Local Government

Subcommittees

Budget Subcommittee on
Transportation and Information Technology

Select Committees

Biotechnology
Domestic Violence
Children's School Readiness and Health
Growth and Infrastructure
Ports
Rural Economic Development
Water, Infrastructure and the Economy
Wine

Boards

Public Library Construction and Renovation
Wildlife Conservation

June 7, 2006

TO: All California City Attorneys and City Planners
All County Counsels and County Planners

FR: Assembly Member Lois Wolk

RE: **Solar Energy System Permit Fees – Legislative Intent**

Dear Friends,

As you may know, I have had the honor of refining and expanding the California Solar Rights Act as the author of Assembly Bill 1407 (Chapter 290, Statutes of 2003) and AB 2473 (Chapter 789, Statutes of 2004). During the last year I have received many calls from solar contractors and local government staff regarding the intent of this legislation. I thought it might be helpful to spell things out in more practical terms for everyone's benefit. Thus, this memorandum.

My intent in authoring this legislation was to establish a consistent set of standards for the review and approval of solar energy systems and to eliminate unreasonable barriers to the installation of solar energy systems, including, but not limited to, design review for aesthetic purposes. In addition, AB 2473 expressly declares the Legislature's intent that costs of permitting solar energy systems be minimized.

It has come to my attention that a number of quite different approaches have been taken in the design-review of solar energy systems and in the process of establishing the costs of issuing a permit for the installation of a solar energy system. Some of these approaches appear to be inconsistent with the intent of my legislation amending the California Solar Rights Act. The purpose of this letter is to clarify the Legislature's intent with respect to design review for aesthetic purposes and the assessment of fees for the permitting of solar energy systems.

Design-Review For Aesthetic Purposes May Not Restrict Installation of Solar Systems

Under the provisions of AB 2473, permitting of all types of solar systems "*shall not be willfully avoided or delayed.*" AB 2473 requires a city or county to permit the installation of a solar energy system by right if the system meets specified requirements. Among other things, my intent in enacting AB 2473 was to establish the principle that any application of a design review process for aesthetic purposes that effectively prohibits or restricts the installation or use of a solar energy system is void and unenforceable. AB 2473 expressly provides that a local agency may not deny an application for a use permit to install a solar energy system unless the local agency finds a specific, adverse impact on public health and safety.

AB 2473 amended California Civil Code Section 714(d)(1) so as to specifically limit restrictions imposed on photovoltaic systems to those that cost less than \$2,000, and prohibit any restrictions that are based on aesthetics alone. In addition, AB 2473 recast Section 65850.5 of the Government Code and Section 17959.1 of the Health and Safety Code to limit a building official's review of installations to those items that relate to specific health and safety requirements of local, state and federal law.

These Sections of California law apply to current and future permitting, design/review, and approval processes, and also to review of existing permit applications.

Permit Fees Must Be Reasonable

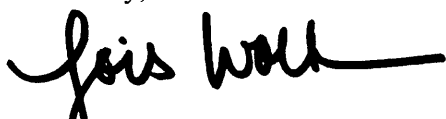
As I am sure you are aware, California Government Code section 66005 (a), provides that “[development permit] *fees or exactions shall not exceed the estimated reasonable cost of providing the service...*” On December 22, 2005 the California State Supreme Court upheld this statute by ruling that building permit fees must be based on the "*estimated reasonable costs of providing the services for which the fees are charged*" (Barratt v. C. of Rancho Cucamonga, Ct.App. 4/2 E032578).

I have been advised by industry experts that the average time spent by local jurisdictions to permit and inspect a solar system is between 2 and 5 hours. A fixed fee method to compute solar permit fees has been shown to be an appropriate method of establishing solar permit fees, since it takes about the same amount of time to permit a 2 kilowatt photovoltaic system, a 6 kilowatt system, or a residential or commercial solar water heating system. A permit fee computation methodology that is based on the monetary valuation of the system or its sales price, rather than the estimated reasonable costs of providing the permit service is inconsistent with the intent of AB 2473 as well as the Supreme Court case cited above and may unnecessarily discourage the installation of solar energy systems.

On December 12, 2005 the California Public Utilities Commission approved the California Solar Initiative, reflecting the will of the Governor and the Legislature to establish the largest publicly supported solar energy program in the world. One purpose of this letter is to ask local governments to consider their role in achieving this major state goal by looking carefully at how you assess fees for the permitting of solar energy installations and, in so doing, encourage the utilization of solar technologies by minimizing the obstacles to their use.

I respectfully request that all local permitting agencies enact reasonable permitting policies that encourage affordable solar energy system installations (including over-the-counter permits, permit fees based on the permitting agency's actual costs, and cessation of design reviews for aesthetic concerns).

Sincerely,



Lois Wolk
Assemblywoman, 8th District

Attached: AB 1407 (Chapter 290, Statutes of 2003), AB 2473 (Chapter 789, Statutes of 2004)



COMMUNITY DEVELOPMENT DEPARTMENT

CITY HALL
10300 TORRE AVENUE • CUPERTINO, CA 95014-3255
TELEPHONE: (408) 777-3308 • FAX: (408) 777-3333

SUMMARY

Agenda Item No. 19

Meeting Date: May 5, 2009

SUBJECT AND ISSUE

Consider adopting a resolution amending the fee schedule for 2009-10, Schedule D, Miscellaneous Items, photovoltaic fees.

BACKGROUND

All user fees are reviewed each year in conjunction with the preparation of the budget. Our goal is to ensure that to the extent possible fees cover the cost of providing services, or are competitive to market. Council adopted fee increases at their April 7, 2009 meeting. During this meeting, Council requested that staff research photovoltaic fees for commercial customers and bring back updated information.

Under the previously approved 2009-10 fee schedule, commercial customers will be charged \$633 for photovoltaic systems up to four kilowatts and \$253 for each additional kilowatt. Customers with a typical multi-family residential or commercial building of 24 kilowatts would be charged over \$5,600. Under the proposed amended fee, the same multi-family residential or commercial customer will be charged \$505 for buildings up to eight kilowatts and \$7 for each additional kilowatt. Therefore, a 24 kilowatt system would now cost only \$617.

It is also proposed that fees for quasi public buildings be eliminated and incorporated under the multi-family residential and commercial fee structure. Photovoltaic fees for quasi public buildings could be calculated using the proposed amended rate and therefore the cost for a typical 24 kilowatt building would be reduced to \$617 rather than the previously approved fee of \$1,162.

Fees covered in this amendment would become effective on July 1 with the entire 2009-10 fee schedule.

RECOMMENDATION

Staff recommends Council adopt a resolution amending the fee schedule for 2009-10, Schedule D, Miscellaneous Items, photovoltaic fees.

Submitted by:

A handwritten signature in black ink, appearing to read "Greg Casteel", written over a horizontal line.

Greg Casteel
Building Official

Approved for submission:

A handwritten signature in black ink, appearing to read "David W. Knapp", written over a horizontal line.

David W. Knapp
City Manager

Attachment A & B

CITY OF CUPERTINO
Resolution 09-051 & 09-070
Fees Effective July 1, 2009
Schedule D - Miscellaneous Items

Work Item	Unit	Fee
Standard Hourly Rate		\$ 126
Lighting pole	each	\$ 380
each add'l pole	each	\$ 380
Modular Structures	each	\$ 760
Partition—Commercial, Interior (up to 30 l.f.)	up to 30 l.f.	\$ 443
Additional partition	each 30 l.f.	\$ 95
Partition—Residential, Interior (up to 30 l.f.)	up to 30 l.f.	\$ 443
Additional partition	each 30 l.f.	\$ 95
Patio Cover/ Sun Room		
Wood frame	up to 300 sf	\$ 633
Metal frame	up to 300 sf	\$ 633
Other frame	up to 300 sf	\$ 633
Additional patio	each 300 sf	\$ 507
Enclosed, wood frame	up to 300 sf	\$ 760
Enclosed, metal frame	up to 300 sf	\$ 760
Enclosed, other frame	up to 300 sf	\$ 760
Additional enclosed patio	each 300 sf	\$ 633
Photovoltaic System		
Residential	each	\$ 207
Multi-Family Res/Commercial, up to 4- 8 kilowatts	up to 4- 8 kW	\$ 505
Multi-Family Res/Commercial, each additional 1 kilowatt	each 1 kW	\$ 7
Quasi-Public Buildings		\$ 1,162
Pile Foundation		
Cast in Place Concrete (first 10 piles)	up to 10	\$ 887
Additional Piles (increments of 10)	each 10	\$ 760
Driven (steel, pre-stressed concrete)	up to 10	\$ 887
Additional Piles (increments of 10)	each 10	\$ 760
Product Review	per hour	\$ 126
Remodel—Residential		
Kitchen	up to 300 sf	\$ 570
Bath	up to 300 sf	\$ 570
Other Remodel	up to 300 sf	\$ 380
Additional remodel	each 300 sf	\$ 63
Other Remodel	1000 sf	\$ 3,823
Additional remodel	each 300 sf	\$ 250
Other Remodel	2500 sf +	\$ 5,079
Additional remodel	each 300 sf	\$ 181
Re-roof		
Residential	each 100 sf	\$ 13
Multi-Family Dwelling	each 100 sf	\$ 13
Commercial		
Commercial (first 5,000 sf)	each	\$ 348
Commercial (each add'l 2,500 sf)	each 2,500 sf	\$ 158
Retaining Wall (concrete or masonry)		
Standard (up to 50 lf)	up to 50 l.f.	\$ 760
Additional retaining wall	each 50 l.f.	\$ 633
Special Design, 3-10' high (up to 50 lf)	up to 50 l.f.	\$ 887
Additional retaining wall	each 50 l.f.	\$ 760
Special Design, over 10' high (up to 50 lf)	up to 50 l.f.	\$ 950
Additional retaining wall	each 50 l.f.	\$ 823
Gravity/Crib Wall, 0-10' high (up to 50 lf)	up to 50 l.f.	\$ 950
Additional Gravity/Crib Wall	each 50 l.f.	\$ 823
Gravity/Crib Wall, over 10' high (up to 50 lf)	up to 50 l.f.	\$ 950
Additional Gravity/Crib Wall	each 50 l.f.	\$ 823
Revisions		
Commercial New	each	\$ 760
Tenant Improvement	each	\$ 760
SFDWL	each	\$ 760
Addition	each	\$ 633
Remodel	each	\$ 633
Roof Structure Replacement	up to 100 sf	\$ 633
Additional roof structure replacement	each 100 sf	\$ 507
Sauna—steam	each	\$ 697

RESOLUTION NO: 09-070

A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CUPERTINO
AMENDING RESOLUTION NO. 09-051, USER FEES SCHEDULE D,
MISCELLANEOUS ITEMS, PHOTOVOLTAIC FEES

WHEREAS, the State of California requires fees charged for service rendered not to exceed the cost of delivering said services; and

WHEREAS, the City Council of the City of Cupertino has established guidelines for setting user fees;

NOW, THEREFORE, BE IT RESOLVED that:

1. User fees, Schedule D, Miscellaneous Items, Photovoltaic fees for multi-family residential and commercial buildings, and quasi public buildings are hereby amended.
2. User fees are effective July 1, 2009.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Cupertino this 5th day of May, 2009 by the following vote:

Vote

Members of the City Council

AYES:

NOES:

ABSENT:

ABSTAIN:

ATTEST:

APPROVED:

City Clerk

Mayor, City of Cupertino

**AGENDA
FREMONT CITY COUNCIL REGULAR MEETING
OCTOBER 10, 2006
COUNCIL CHAMBERS, 3300 CAPITOL AVE., BUILDING A
7:00 P.M.**

1. PRELIMINARY

- 1.1 Call to Order
- 1.2 Salute the Flag
- 1.3 Roll Call
- 1.4 Announcements by Mayor / City Manager

2. CONSENT CALENDAR

Items on the Consent Calendar are considered to be routine by the City Council and will be enacted by one motion and one vote. There will be no separate discussion of these items unless a Councilmember or citizen so requests, in which event the item will be removed from the Consent Calendar and considered separately. Additionally, other items without a "Request to Address Council" card in opposition may be added to the consent calendar. The City Attorney will read the title of ordinances to be adopted.

- 2.1 *Motion to Waive Further Reading of Proposed Ordinances (This permits reading the title only in lieu of reciting the entire text.)*
- 2.2 *Approval of Minutes – for the Regular Meeting of September 26, 2006.*
- 2.3 **RESIDENTIAL SOLAR PANEL INSTALLATION BUILDING PERMITS**
Public Hearing (Published Notice) to Consider an Amendment to Section VII.C. Building & Safety of the Master Fee Schedule to Establish a New Fee Category for Residential Solar Panel Installations

Contact Person:

<i>Name:</i>	<i>Dan Schoenholz</i>	<i>Massoud Abolhoda</i>
<i>Title:</i>	<i>Policy & Special Projects Manager</i>	<i>Chief Building Official</i>
<i>Dept.:</i>	<i>Community Development</i>	<i>Community Development</i>
<i>Phone:</i>	<i>510-494-4438</i>	<i>510-494-4461</i>
<i>E-Mail:</i>	<i>dschoenholz@ci.fremont.ca.us</i>	<i>mabolhoda@ci.fremont.ca.us</i>

RECOMMENDATIONS:

- 1. *Hold the public hearing.*
- 2. *Adopt a resolution to amend the Master Fee Schedule to establish the new Residential Solar Panel Installation combination permit fee of \$236.70, account 012-4220-3356.*

***2.3 RESIDENTIAL SOLAR PANEL INSTALLATION BUILDING PERMITS
Public Hearing (Published Notice) to Consider an Amendment to Section VII.C. Building
& Safety of the Master Fee Schedule to Establish a New Fee Category for Residential Solar
Panel Installations**

Contact Person:

Name:	Dan Schoenholz	Massoud Abolhoda
Title:	Policy and Special Projects Manager	Chief Building Official
Dept.:	Community Development	Community Development
Phone:	510-494-4438	510-494-4461
E-Mail:	dschoenholz@ci.fremont.ca.us	mabolhoda@ci.fremont.ca.us

Executive Summary: Staff recommends that the City Council adopt a resolution to amend the master fee schedule to establish a new combination permit fee category for installation of solar panels on residences. The new fee category helps implement the Resolution to Support Sustainable Building and Landscaping Practices adopted by Council in July 2006.

BACKGROUND: On July 25, 2006, the City Council adopted a Resolution to Support Sustainable Building and Landscaping Practices. The Resolution directed staff to explore incentives to encourage private parties to utilize sustainable building practices. Concurrently, staff received a request from the Sierra Club to review solar panel permitting fees. Consistent with the Council's policy direction and in response to the Sierra Club's request, staff has researched establishment of a new permit category for installation of residential solar panels.

Currently, since the City does not have a specific permit fee for solar panels, customers must obtain the permits under general building and electrical fee structures. The average fee for a residential solar panel installation is \$835.

Staff is now recommending a flat fee for solar panels based on estimated staff time. Similar fee structures were adopted for bathroom and kitchen remodels in the late 1990's. Staff estimates that, in addition to the time to process the application, a typical residential solar panel installation requires approximately one hour for plan checking and one and one-half hours for inspection per residential unit. This level of effort is consistent with the Sierra Club's findings that a typical residential solar panel installation requires between two and five hours of staff time.

Staff is recommending a new flat combination permit fee per residential unit that would include the standard permit application fee, plus plan checking and inspection. The proposed fee structure for residential solar panel systems correlates with the estimated level of effort involved in plan review and inspections for typical residential installations. In addition to the fee for the combination permit, the applicant would be charged the standard Community Planning Fee, Strong Motion Instrumentation Program fee (SMIP) (a state mandated fee), and copying fee which typically would bring the total fee up to \$267.88. The proposed flat fee amount of \$236.70 (and total charges of \$267.88) would put Fremont's fees at slightly below the median permit fee of \$325 for residential solar panel installation for communities in the East and North Bay area, according to a recent study conducted by the Sierra Club.

Activity	Hours	Hourly Fee (includes 23% overhead)	Cost
Application	(Based on application fee currently in Fee Schedule)		\$55.20
Plan Check	1.0	\$81	\$81.00
Inspection	1.5	\$67	\$100.50
Combination Permit Fee			\$236.70

Restructuring the solar panel installation permit fee will advance the sustainable buildings policy adopted by Council by making the economics of solar panel installation more attractive to Fremont residents. In addition, implementing a separate permit category will enable staff to more readily track the number of solar panel installation projects in Fremont.

The impact of this new fee category on the overall budget of the Building and Safety Division will be negligible due to the limited number of solar panel permits issued annually. In the last few years, the City has issued only a few permits each year for solar panel installations.

If approved, the new fee will become effective 60 days after Council action.

Environmental Review: Adoption of the resolution to establish a new solar panel installation permit fee does not constitute a project under the California Environmental Quality Act pursuant to CEQA Guideline Section 15378 (B)(4) as it is government fiscal activity that does not involve any commitment to a specific project.

ENCLOSURE: Draft Resolution

RECOMMENDATIONS:

1. Hold the public hearing.
2. Adopt a resolution to amend the Master Fee Schedule to establish the new Residential Solar Panel Installation combination permit fee of \$236.70, account 012-4220-3356.