Permitting Fees for Small Wind Turbines in California Counties

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Summary

The California Wind Energy Collaborative (CWEC) performed a study reviewing the permitting fees for small wind turbines in California counties. This work was based on recommendations from participants in a small wind turbine workshop and short courses. The Collaborative reviewed fees for all 58 counties. Less than half have standard requirements for small wind systems. The range of fixed fees varied widely, from as little as $0 to as much as $10,000. The Collaborative recommended setting a permit fee ceiling of $1,000. This figure is based on fees from several counties with requirements in accordance with California Assembly Bill 1207, and is considered reasonable in comparison to lower solar permitting fees.

1.0 Introduction and Background

The California Wind Energy Collaborative (CWEC) hosted a small wind workshop in October of 2008 (CWEC, 2008). During the permitting discussions, the participants suggested that CWEC develop a list of small wind permitting requirements and fees for California municipalities. This information could then be used by policy makers to develop standard fees and permitting requirements for statewide adoption, which would foster small wind development in the state. This report documents the permitting fee information.

California introduced statewide standards for small wind turbines with Assembly Bill (AB) 1207, which expired in 2005. Asmus et al. (2003) discusses AB1207 in their report, but there is no mention of fees under AB1207. The American Wind Energy Association (AWEA) has published a guide on small wind permitting (AWEA, 2008). Their report suggests that fees be similar to non-commercial end-use objects or structures. The report also mentions that some government agencies had waived small wind permitting fees entirely to encourage renewables-based energy production.

The authors have already compiled a list of permitting requirements and fees for 20 (out of 58) California counties. The authors used this information for the permitting section of the Collaborative's small wind courses (CWEC, 2008). An attendee at one of those courses mentioned that a permitting fee list had been compiled by a Sierra Club chapter for solar energy. The Sierra Club used this list in the report by Mills and Newick (2008) to successfully reduce permitting fees for solar installations.

Mills and Newick (2008) compiled solar permitting fees for 131 municipalities in 13 California counties. The permit fees varied from $0 to $671, with an average of $214. Based on the study, Mills and Newick recommend a reasonable fee ceiling of $300, citing that experienced building department staff would take 2-4 hours to process the permit and inspect the system.

For small wind systems, counties use the following permit types (after AWEA, 2008):

- **Building**- similar to permits for other types of structures, where the building department staff reviews the structural and electrical safety and compliance to standard codes (Uniform Building Code and National Electric Code).

- **Permitted Use**- justification for small wind systems has been firmly established, with the installation following standard requirements.
- **Conditional Use**- the installation requires special consideration and review which may include public hearings.

Counties may or may not include the building permit fees within the fees for the permitted use and conditional use permits. Counties use the permit fees to cover costs of ensuring that installations comply with county ordinances. These costs include the salaries and overhead for building and planning department staff reviewing the applications, and if required, the costs to hold public hearings.

Small wind ordinances are unique compared to solar ordinances, and would require extra review. Below is a list of key requirements based on AB1207 from Asmus and Fullerton (2003):

- Notice to neighbors within 300 feet.
- Allowable tower height by county ordinance but at least 65 feet for parcels of one to five acres.
- Setback by county ordinance but no greater than tower height.
- Not exceed sound pressure level of 60 dB(A) at closest neighboring inhabited dwelling.
- Must have standard drawing and engineering analysis of turbine tower certified by a professional engineer.
- Tower height must comply with applicable Federal Aviation Administration requirements.

2.0 Methods

- This report is on permitting fees for small wind turbines, which are installed primarily for the property owner's own energy use. As shown in typical code language, these turbines are installed on properly engineered towers. CWEC assumes that technology for building-mounted or other types of installations have not progressed enough to be considered for standardized permitting.
- CWEC studied California counties, and not municipalities, for this report. It was assumed that most residential wind development would occur in unincorporated land with parcels accommodating tower-mounted (as opposed to building mounted) wind turbines.
- CWEC studied 20 California counties in detail for the CWEC small wind course. If information was not available on the Internet, CWEC called the county planning and/or building departments for more detailed information. Due to timing of this report, for the remaining counties CWEC only obtained information from the Internet.
- Most of the information in this report is available in the county codes and fee schedules.

3.0 Findings

Table 1 shows the county permitting fees and type arranged alphabetically. Less than half of California counties have clear permitting requirements for small wind systems. Several of these counties have fixed fees, while others base fees on the cost of the installation. Results from the installer surveys (Johnson et al., 2009) included some permitting cost estimates for select counties, those estimates are indicated with a " # "in Table 1.

Table 1. County permitting fees and type arranged alphabetically. Cost dependent building permits are typically a percentage of the installed cost.

County	Fee	Permit type
Alameda*	Unknown	Conditional use and building permit
Alpine	Unknown	Unknown
Amador	Unknown	Unknown
Butte*	Unknown	Unknown
Calaveras*	$4,764	Conditional use
Colusa	Unknown	Unknown
Contra Costa*	$2,700	Land use
Del Norte	Unknown	Unknown
El Dorado*	Unknown	Unknown
Fresno	Unknown	Unknown
Glenn	$485#	Conditional use
Humboldt	Unknown	Unknown
Imperial	Unknown	Conditional use
Inyo*	$1,353	Conditional use
Kern	$960	Small wind energy system permit
Kings	Unknown	Unknown
Lake*	Unknown	Zoning clearance and building permit
Lassen	Unknown	Provisions in code
Los Angeles*	$5,369 - $10,000#	Conditional use
Madera	Unknown	Unknown
Marin*	$1,280	Use for accessory
Mariposa	Unknown	Unknown
Mendocino	Unknown	Unknown
Merced	Unknown	Unknown
Modoc	Unknown	Unknown
Mono	Unknown	Unknown
Monterey*	$6,600	Conditional use
Napa*	$5,735	Conditional use (deposit)
Nevada	Unknown	Unknown
Orange	Unknown	Unknown
Placer*	$3,500	Conditional use (deposit)
Plumas	Unknown	Unknown
Riverside	$1,100	Accessory WECS

County	Fee	Permit type
Sacramento*	Unknown	Building and conditional use?
San Benito	Unknown	Unknown
San Bernardino	$495 - $995#	Wind energy system
San Diego	$0 - $45#	
San Francisco	Unknown	Unknown
San Joaquin*	Cost dependent	Building permit
San Luis Obispo	$2,332	Minor use permit
San Mateo	Unknown	Unknown
Santa Barbara	Unknown	Minor conditional use
Santa Clara	Unknown	Building
Santa Cruz*	Cost dependent	Building
Shasta	$693 - $1,200#	Conditional use and building permit
Sierra	Unknown	Unknown
Siskiyou	Unknown	Unknown
Solano*	Cost dependent	Building permit for towers < 100 ft
Sonoma*	$467 - $965	Zone or use
Stanislaus*	$733	Staff approval
Sutter*	Cost dependent	Building
Tehama	$400#	Building
Trinity	Unknown	Unknown
Tulare	Unknown	Unknown
Tuolumne	Unknown	Unknown
Ventura	Unknown	Unknown
Yolo*	Cost dependent - $5,500#	Building
Yuba	Unknown	Unknown

* Counties were studied for CWEC small wind courses.

\# Approximate fee provided by installer survey results (Johnson et al., 2009)

Table 2 shows the known fees for 19 counties, arranged by amount. For those counties with a fee range, the high end is listed here. The fees vary from $45 - $10,000, with a $2,666 average.

Table 2. Known county permitting fees arranged by amount, with $2,666 average

County	Fee
Los Angeles^	$10,000#
Monterey	$6,600
Napa	$5,735
Yolo^^	$5,500#
Calaveras	$4,764
Placer	$3,500
Contra Costa	$2,700
San Luis Obispo	$2,332
Inyo	$1,353
Marin	$1,280
Shasta^	$1,200#
Riverside	$1,100
San Bernardino^	$995#
Sonoma^	$965
Kern	$960
Stanislaus	$733
Glenn	$485#
Tehama	$400#
San Diego^	$45

Approximate fee provided by installer survey results (Johnson et al., 2009)

^ The listed fees are the high end of their fee range.

^^ Yolo county has a "cost dependent" fee. The listed price was provided by the installer survey results (Johnson et al., 2009)

4.0 Discussion

4.1. Discussion of Findings

- As seen in Table 1, many of the county permitting fees and requirements are unknown; this is probably due to local wind energy development scarcity.
- Results from the installer survey (Johnson et al., 2009) indicate that there are many instances when unexpected costs are added to the permitting fees. Unexpected costs may include labor fees, non-refundable deposits, public hearing printing costs, environmental evaluation fees, and others. These additional fees may not apply to all installations. Some of the fees listed in Table 1 may not account for unexpected costs.
- Although the costs of a small wind energy system vary widely depending on options and rating ($3,000-$5,000 per kilowatt according to AWEA), the average permitting fee in Table 2 of $2,666 would be a substantial percentage of the overall cost. For example, the average fee would be 35% of the capital cost ($7,500) for a 1.5 kW high-end system. In some counties the permit may cost more than the wind turbine. These high fees would prohibit most installations based on economic considerations.
- From Mills and Newick (2008), solar permit fees vary from $671 to $0, with an average of $214. The standard solar installation cost is $18,600. The average fee is therefore 1.2% of the total cost. They recommend a fee ceiling of $300.

4.2. Recommendations

Recommendations on permitting fees from Asmus and Fullerton (2003) are:

- "Total permitting costs should not exceed two percent of the original capital cost of the turbine."
- "Don't require all small wind turbine applicants to obtain a conditional use permit. Instead, create a permitted use designation with appropriate requirements and restrictions."

Further recommendations from AWEA are (2008):

- "However, there is little, if any, correlation between the size of a turbine and the costs and time required for its inspection and review process. Flat fees are therefore more practical and desirable."
- "Furthermore, the valuation method inadvertently discourages larger systems and their associated public benefits. Paradoxically, under this fee structure, the more a turbine owner wants to contribute to the community, the more difficult it becomes to do so."

Based on the above information, CWEC recommends that total permitting costs should not exceed $1,000. This is slightly above the high end of Sonoma County fees, where requirements approximately follow the AB1207 guidelines and include public hearings. Eight counties are already close to or below this fee ceiling. This ceiling is several times more than the ceiling recommended for solar installations (Mills and Newick 2008), and therefore should cover the unique requirements of wind energy permitting compared to solar energy permitting.

5.0 References

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