

**COUNTY OF NAPA**  
CONSERVATION, DEVELOPMENT, AND PLANNING DEPARTMENT  
1195 3<sup>rd</sup> Street, Suite 210  
Napa, Calif. 94559  
707-253-4417

**Initial Study Checklist**

1. **Project Title**  
Small Wind Energy System Zoning Ordinance, County-initiated Zoning Code Text Amendment № P10-00243-ORD.
2. **Property Owner**  
Not Applicable
3. **Contact person and phone number**  
Jeff Sharp, Project Planner, (707) 259.5936, [jeff.sharp@countyofnapa.org](mailto:jeff.sharp@countyofnapa.org)
4. **Project location and APN**  
The proposed ordinance would apply to parcels greater than 2 acres in size in the Agricultural Preserve (AP), Agricultural Watershed (AW), and Industrial (I) zoning districts of the County.
5. **Project Sponsor's Name and Address**  
Planning Director Hillary Gitelman for the Napa County Board of Supervisors, 1195 Third Street, Suite 210, Napa, Calif. 94558, (707) 253.4417, [hillary.gitelman@countyofnapa.org](mailto:hillary.gitelman@countyofnapa.org)
6. **General Plan Description**  
Agricultural Resource (AR), Agriculture, Watershed, and Open Space (AWOS), and Industrial (I)
7. **Current Zoning**  
Agricultural Preserve (AP), Agricultural Watershed (AW), and Industrial (I) zoning districts.
8. **Project Description**  
Board of Supervisors adoption of an ordinance, as provided for under California Assembly Bill 45 (Blakeslee. Distributed generation: Small Wind Energy Systems (2009)), permitting the installation of small wind energy systems ("systems") in the unincorporated areas of Napa County that are outside urbanized areas, on parcels greater than 2 acres in size in the AP, AW, and I zoning districts. The ordinance, attached hereto for reference purposes, establishes a process for the issuance of administrative and conditional use permits for these systems, subject to specified conditions regarding aspects of a system's location so as to be protective of Napa County's unique and diverse environmental resources. By providing for the safe and effective use of small wind energy systems to foster the local production of renewable energy, there should be reduced local consumption of centralized utility-supplied electricity.
9. **Background and Scope of this Review**  
*Assembly Bill 45 - Small Wind Energy Systems*  
Article 2.11 (commencing with Section 65893), entitled "Wind Energy", was recently added to Chapter 4 of Division 1 of Title 7 of the Government Code by Assembly Bill 45 (Blakeslee, 2009). Article 2.11 provides that if a local agency has not adopted an ordinance for the issuance of permits for qualified small wind energy systems ("systems") outside of defined urbanized areas in accordance with its provisions by January 1, 2011, a county ma

do so at a later date, but any applications that are submitted between January 1, 2011 and the adopted date of the ordinance must be approved through a ministerial permit if the system meets the requirements of Government Code §65896(b). Additionally, any later enacted permitting ordinance could be no more restrictive on specified conditions than as are contained Government Code §65896(b). Those requirements limit the ability to regulate systems with respect to notice, tower height, setback, noise level, visual effects, turbine approval and drawings and engineering analysis. Those conditions allow systems up to eighty feet in height to be installed on parcels of 1 to 5 acres, and up to one hundred feet in height on parcels greater than 5 acres. Required setbacks would be no greater than the systems height. County ordinances adopted prior to January 1, 2011 are not so constrained by the conditions enumerated in Government Code §65896(b).

#### Existing Regulations and Purpose of Ordinance Amendment

Title 18 of the Napa County Code currently allows for the establishment of noncommercial wind energy conversion systems with the grant of a use permit in the Agricultural Preserve (AP), Agricultural Watershed (AW), Industrial District (I), and Timber Preserve (TP) zoning districts currently (at present, no TP district is provided for on the County's zoning map). A noncommercial wind energy conversion system is specifically defined in Chapter 18.08.390, and conditions the height, setback, energy use, blade diameter and generation capacity of proposed systems in these districts (blade diameter may not exceed thirty-two feet and unit capacity may be no greater than 25kw). These specific provisions allowing for the establishment of wind energy systems in Napa County have been in place since 1983 (Ord. 757 § 7).

The purpose of the proposed ordinance subject to this review is to provide a uniform and comprehensive set of standards for the installation and use of small energy wind systems that would be subject to the provisions of AB 45 absent the ordinance's adoption. Those systems consist of wind turbine, a tower, and associated control or conversion electronics that have a rated capacity of not more than 50 kilowatts per customer site, consistent with the requirements of Public Resources Code §25744(3)(b) used primarily to reduce onsite consumption of utility power. The proposed ordinance is designed to protect public health, safety, and welfare while at the same time not unduly restricting their development and use. The ordinance contains specific development standards and requires natural resource studies to ensure proposed projects are sited, designed and operated in such a manner as to avoid significant impacts on environmental resources, and preserve the visual quality of the natural and built environment. The ordinance provides for the issuance of an administrative permit providing a system meets the specified development standards, and requires a use permit if the development standards cannot be met. Those systems that cannot be administratively approved will require individual CEQA review as a component of the use permit processing.

The ordinance limits the locating of eligible systems to parcels greater than 2 acres in size in the AP, AW, and I zoning districts. It requires a biological study to, among other things, ensure the system will not adversely impact birds and bats or other environmental resources such as special status plants. It also requires the system be located in such a manner so as to minimize adverse visual impacts. A copy of the proposed ordinance, setting forth all the permitting requirements, is attached hereto and incorporated herein by reference.

#### Wind Energy Resource

Wind power is seen as a renewable source of energy with significant potential to contribute to our nation's energy needs. Small wind energy systems consist of a single turbine, scaled appropriately for personal use. Generally, turbines large enough to provide a significant portion of electricity for a typical U.S. home require more than one acre of property and are best suited for rural areas (US Dept. of Energy 2005). As such, small scale residential systems are typically dispersed, unlike commercial utility-systems, and located on small acreages of land. These small systems can be economical if sited properly in areas with winds averaging over 10-12 mph (e.g. class 2 winds or greater). Napa County contains approximately 34,977 acres of land (or roughly 7%) with estimated average wind speeds of 10.1-11.2 mph and 437 acres land with average winds higher 11.2 mph (measured at 30m) (California Energy Commission 2003).

Current Policy and Renewable Energy

The County's General Plan (as amended by Resolution 09-88, June 23, 2009) includes a number of policies encouraging the development of distributed wind energy generation as it relates to the reduction of local greenhouse gas emissions that contribute to climate change. The General Plan specifically promotes the economic and environmental health of Napa County by conserving energy, increasing the efficiency of energy use, and producing renewable energy locally (Goal CON-16). Established policies in the Plan include the promotion of research and the development and use of advanced and renewable energy technology through expedited permit processing or other incentives, securing grants to support the implementation of photovoltaic, wind, and other renewable energy technologies, and encouraging the use of renewable energy resources in residential, commercial, industrial, and agricultural projects and uses (Policy CON-68). General Plan Policy CON-70 encourages the County to increase the amount of energy produced through locally available energy sources, including establishing incentives for, and removing barriers to, renewable and alternative energy resources (solar, wind) where they are compatible with the maintenance and preservation of the County's environmental quality (Policy CON-70).

10. **Environmental Setting and Surrounding Land Uses**

Napa County is located north of the San Francisco Bay Area, California. Napa County is bounded on the north and northeast by Yolo County, on the south and southeast by Solano County, and on the west by Lake and Sonoma counties. Major cities in the neighboring counties (outside of Napa County) include the cities of Vallejo (Solano County), Benicia (Contra Costa County), Fairfield (Solano County), Vacaville (Solano County), and Sonoma (Sonoma County). Regional land use patterns generally consist of dense urban centers associated with the cities along Interstate 80 as well as near the Bay Area to open space, natural resources (wetlands, grasslands, forests, and mountain terrain) and agricultural activities with vineyard development as one of the most visually prominent activities.

Napa County is comprised of approximately 506,000 acres, of which 23,000 acres is water (primarily in Lake Berryessa). Approximately 479,000 (95%) of the remaining acreage is included within the unincorporated areas of the County. The remaining area, approximately 6% (30,400 acres), is designated for urban uses and is distributed among the five incorporated areas in the County: City of American Canyon, City of Calistoga, City of Napa, City of St. Helena, and Town of Yountville. The majority of the balance remaining rural land is designated for agricultural uses, either agricultural resource or agricultural watershed lands. Approximately 86,000 acres of land within the County is publicly owned. At the present time, there are approximately 50,000 acres of planted vineyard acres in the County.

11. **Other agencies whose approval is required:** (e.g., permits, financing approval, or participation agreement).

N/A

12. **Responsible (R) and Trustee (T) Agencies:**

California Department of Fish & Game (T), U.S. Fish and Wildlife Service (T)

13. **Other Agencies Contacted:**

California Energy Commission Special Projects Office, County of Marin, County of Sonoma

**ENVIRONMENTAL IMPACTS AND BASIS OF CONCLUSIONS:**

The conclusions and recommendations contained herein are professional opinions developed in accordance with current standards of professional practice. They are based on a review of the Napa County Environmental Resource Maps, the Napa County Baseline Data Report, Napa County General Plan Environmental Impact Report, specific documents referenced herein, other sources of information included or referenced in the record file, comments received, conversations with knowledgeable individuals, the preparer's personal knowledge of the area, and visits to the site and

## Environmental Checklist Form

|  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporation | Less Than Significant Impact        | No Impact                |
|--|--------------------------------|---|-------------------------------------|--------------------------|
| <b>I. AESTHETICS. Would the project:</b>   |                                |   |                                     |                          |
| a) Have a substantial adverse effect on a scenic vista?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially degrade the existing visual character or quality of the site and its surroundings?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| * d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?                                  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

**Discussion:**

a.-d. The subject ordinance does not in itself cause a specific new development project to be undertaken. Absent adoption of the ordinance, as of January 1, 2011 State law would limit the restrictions a local agency may place on the installation and use of small wind energy systems (systems), including siting considerations affecting aesthetics. The systems are to be used primarily to reduce onsite consumption of electricity and located on parcels greater than two (2) acres in the AP, AW, and I zoning districts. The proposed ordinance, in § 18.117.050, restricts allowable locations of the systems in accord with AB 45 requirements. Further, that section restricts the placement of the systems with respect to their silhouetting against the skyline and placement on ridgelines that are viewable from public parks, trails, recreation areas, and designated roadways. Systems that as proposed might not comply with those requirements would require specialized findings be made for the issuance of a use permit, and probable concomitant aesthetic mitigations as determined by appropriate CEQA review. Proposed Chapter 18.117 also requires the systems towers and blades be nonreflective, unobtrusive in color, and that the systems be designed and placed in a manner to minimize adverse visual impacts from neighboring areas. Lighting is limited to that required by the FAA for protection of aircraft. These restrictions will be imposed on any proposed system either through strict adherence to the development standards necessary for an administrative permit, or specified mitigation associated with the issuance of a use permit, effectively reducing any potential visual impacts arising from the adoption of the ordinance to a less than significant level.

**Mitigation Measures:** None are required.

with alternative methods of energy generation (AWEA 2010[1]). Wind energy is a renewable source of energy and in operation produce no carbon dioxide. While some emissions of GHG takes place during the design, manufacture, transport and erection of small wind turbines, enough electricity is generated from these systems to compensate for those emissions. Studies have found that the manufacturing of very large-commercial wind turbines and the building of utility-scale wind plants creates much less carbon dioxide per unit of electrical energy generated compared to coal or natural gas facilities (on the order of 1% of coal or 2% of natural gas). In other words, using wind instead of coal reduces carbon dioxide emissions by 99%, using wind instead of gas by 98% (AWEA 2010[2]).

Small wind energy systems provided for in the proposed ordinance will not generate a net increase in greenhouse gas emissions in excess of applicable thresholds adopted by the Bay Area Air Quality Management District or the California Air Resources Board. Furthermore, there is no foreseeable significant increase in GHG emissions, either from the installation or operation of a small wind energy system, when compared to the currently-permitted baseline conditions. The systems allowed under the proposed ordinance are not in conflict with a county-adopted climate action plan or another applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Project impacts related to GHG emissions are therefore considered less than significant.

Mitigation Measure(s): None are required.

|  | Potentially Significant Impact | Less Than Significant With Mitigation Incorporation | Less Than Significant Impact | No Impact                           |
|--|--------------------------------|---|------------------------------|-------------------------------------|
| <b>VIII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:</b>   |                                |   |                              |                                     |
| a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?  | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?                                   | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area? | <input type="checkbox"/>       | <input type="checkbox"/>                            | <input type="checkbox"/>     | <input checked="" type="checkbox"/> |

| Potentially Significant Impact | Less Than Significant With Mitigation Incorporation | Less Than Significant Impact | No Impact |
|--------------------------------|---|------------------------------|-----------|
|--------------------------------|---|------------------------------|-----------|

- f) For a project within the vicinity of a private airstrip, or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?
- g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?
- h) Expose people or structures to a significant risk of loss, injury or death involving wild-land fires, including where wild-lands are adjacent to urbanized areas or where residences are intermixed with wild-lands?

**Discussion:**

a.- h. The proposed ordinance does not in itself cause a specific new development project to be undertaken. Adoption of the proposed ordinance regulating the placement of small wind energy systems will not result, either directly or indirectly, in the release of any hazardous materials into the environment. It will not impact schools, hazardous materials sites, or any emergency response or emergency evacuation plan. With respect to airports (be they public or private), the ordinance requires compliance with FAA regulations, including lighting and height restrictions. Undergrounding of electrical wires associated with the system will lessen exposure of people and/or structures to a significant risk of loss, injury or death involving wildland fires to a level of less than significant.

Mitigation Measure(s): None are required.

| Potentially Significant Impact | Less Than Significant With Mitigation Incorporation | Less Than Significant Impact | No Impact |
|--------------------------------|---|------------------------------|-----------|
|--------------------------------|---|------------------------------|-----------|

**IX. HYDROLOGY AND WATER QUALITY. Would the project:**

- a) Violate any water quality standards or waste discharge requirements?
- b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?