

AGENDA ITEM: 2.

DATE: 08-17-09

STAFF REPORT

AMENDMENT TO TITLE 17 OF THE LANCASTER MUNICIPAL CODE (ZONING ORDINANCE)

DATE: August 17, 2009

TO: Lancaster Planning Commission

FROM: Planning Department

APPLICANT: City of Lancaster

LOCATION: City wide

REQUEST: Amendment to Title 17 (Zoning Ordinance) of the Municipal Code, modifying the Wind Energy requirements to regulate non-commercial Vertical Axis Wind Turbine System (VAWTS) in the residential zones

RECOMMENDATION: Adopt Resolution No. 09-24 recommending to the City Council approval of an amendment to the Zoning Ordinance, Title 17 of the Lancaster Municipal Code, in order to modify the Wind Energy requirements and to provide regulations for residential zones with the addition of Sections 17.08.060.Y and 17.08.335.

BACKGROUND: The Lancaster Municipal Code (LMC) establishes guidelines for the installation of Wind Energy devices (either vertical or horizontal) in the residential zones. The zoning ordinance currently states that a Conditional Use Permit is required for all Wind Energy devices located in residential zones.

ENVIRONMENTAL REVIEW: The project is classified as a categorical exemption from the California Environmental Quality Act (CEQA) under Section 15303, Class 3. The ordinance amendment if approved would allow the placement of small wind energy systems as an accessory use in the residential areas of the city, consistent with this exemption.

LEGAL NOTICE: Notice of Public Hearing was posted in three places, and noticed in a newspaper of general circulation per prescribed procedures.

ANALYSIS: A wind energy conversion system is an apparatus for converting kinetic energy from wind to mechanical or electric energy. Wind energy is an abundant, renewable, and nonpolluting energy resource, which when converted to electricity, reduces dependence on nonrenewable energy

resources, and reduces air and water pollution that results from conventional sources. In 2001, the California legislature passed Assembly Bill 1207, which promoted small wind turbine installations and established incentives.

In order to address the demand for alternative renewable energy, and reduce the demand on the state electric grid, staff is recommending the addition of Section 17.08.060.Y to allow VAWTS subject to a Director's Review and approval for private use in residential zones.

The necessary guidelines and regulations for the installation of VAWTS in residential zones would be found in Section 17.08.335. This section would address issues as to the location, setbacks, size and various other issues as they pertain to VAWTS in residential zones.

In addition, modification to Section 17.08.070.DD would exclude VAWTS subject to the Conditional Use Permit process. However, wind energy systems in residential zones that do not fall under the guidelines of VAWTS or are of commercial grade would still be subject to the Conditional Use Permit process.

Some of the issues that arise with (VAWTS) are associated with noise, aesthetics, electronic interference, safety, air traffic, viability, energy credits and State rebates, and are discussed below:

Noise

There are different types of wind turbines, and the different styles can provide varying noise levels. The most common non-commercial VAWTS is a wind turbine with rotating blades that can have two sources of noise, one from the gear box, and the other from the rotating blades. The City's General Plan (Table III-1) establishes an outdoor maximum CNEL of 65 dBA for residential uses. The noise level for these types of VAWTS is generally around 55 dBA, which would be similar to air conditioners and pool equipment. The noise levels can increase with wind speeds, however, with increased wind speeds, the ambient background noise also increases, which may partially mask the noise level generated by the wind turbine.

Aesthetics

Concerns related to aesthetics are typically associated with disruptions of the view of ridgelines or scenic corridors. As part of the approval, the staff shall ensure that the colors used in the construction materials or finished surface shall be muted and visually compatible with surrounding development.

Electronic Interference

There are reports that older large VAWTS may have interfered with antenna reception. However, there is no current evidence that the VAWTS provide any electromagnetic interference.

Safety

According to The American Wind Energy Association, the rotations of non-commercial VAWTS can be equivalent to 100,000 miles a year, and, like any mechanical equipment, must have periodic maintenance to operate effectively for the estimated 20-year life of the VAWTS. The proposed ordinance provides that if VAWTS are not utilized for a six-month period that they shall be

removed. This provision will help minimize the opportunity for abandoned VAWTS to fall into further disrepair.

Air Traffic

The VAWTS will be consistent with the height restrictions of the zones in which it is located. VAWTS should not interfere with operations at Fox Field and Plant 42, due to existing land buffering from residential VAWTS. However, Fox Field and Plant 42 reserve the right to impose additional restrictions on the VAWTS, should any issues arise.

Viability

The viability of VAWTS relies on the micro-climate (wind energy) of the location in which it is proposed, and the available technology for wind conversion systems. Generally, a wind source of approximately 10 miles per hour is necessary to turn the turbines, though with new technologies, 7 miles per hour may be adequate. Several sources publish exhibits identifying the primary areas within the State of California that are optimum for wind energy technology, as shown in the California Wind Sources map (Attachment 1) from the California Energy Commission. According to the Wind Energy Resource Atlas of the United States, the City of Lancaster is located in the area of class 3, which is considered a high wind area of Southeastern California.

Energy Credits

Southern California Edison (SCE) customers who produce energy through solar, wind or other methods can participate in SCE's Net Metering Energy program. Through this program, a meter is placed on the customer's system to measure the amount of energy produced. The customer will receive a credit equal to the amount of energy used. Credits in excess of the amount used are maintained for a 12-month period, and can go towards months when the amount of energy generated is less than what is utilized. However, at the commencement of each 12-month period, the credit is returned to a zero balance. Excess energy is not purchased backed into the SCE system.

State Rebates

The California Energy Commission administers the Emerging Renewables Program, which provides rebates for qualifying wind and fuel cell systems. Rebate funds are available on a first-come-first-serve basis until the funding is exhausted.

By approving the proposed amendments and modification to the current Zoning Ordinance, residential property owners would have the ability to construct VAWTS subject to a Director's Review application. The application for a Director's Review would be less costly, and would expedite the process, making it easier for the property owner to access alternative energy.

Respectfully submitted,

Randie Davis, Assistant Planner

RESOLUTION NO. 09-24

A RESOLUTION OF THE PLANNING COMMISSION OF THE
CITY OF LANCASTER, CALIFORNIA, RECOMMENDING TO
THE CITY COUNCIL APPROVAL OF AMENDMENTS TO
TITLE 17 OF THE LANCASTER MUNICIPAL CODE, THE
ZONING ORDINANCE

WHEREAS, staff is recommending amendments to Title 17 of the Lancaster Municipal Code, the Zoning Ordinance, modifying the wind energy requirements to regulate Vertical Axis Wind Turbine System (VAWTS) in residential zones; and,

WHEREAS, notice of intention to consider the amendments to Title 17 of the Lancaster Municipal Code has been given in accordance with Section 65090 of the Government Code of the State of California; and

WHEREAS, staff has prepared a written report recommending approval of the amendments; and

WHEREAS, a public hearing on the petition was held on August 17, 2009; and

WHEREAS, this Commission hereby adopts the following findings in support of approval of these amendments:

1. The proposed amendments are consistent with the General Plan, because it will not alter the land use patterns and requirements established by the General Plan.
2. The proposed amendments to the Lancaster Municipal Code will not adversely affect the public health, peace, comfort or welfare, because development standards would regulate the installation and maintenance of VAWTS.
3. The modification to the Lancaster Municipal Code would not cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat because the proposed use is an accessory to existing legally permitted structures in the residential zone and not in areas that are in their natural state.
4. The proposed amendments will not alter the land use patterns and requirements established by the General Plan, and will not alter the development standards contained in Title 17 (Zoning Ordinance) of the Lancaster Municipal Code, or any other adopted development requirements; therefore, this Commission hereby finds that the environmental findings adopted by the City Council under City Council Resolution No. 09-52 on July 14, 2009, are valid for these proposed amendments, and no further environmental review is required pursuant to Section 15162 of the State CEQA Guidelines.

NOW, THEREFORE, BE IT RESOLVED:

This Commission hereby recommends that the City Council to approve the Ordinance to amend Title 17 of the Lancaster Municipal Code as attached hereto and incorporated herein.

PASSED, APPROVED and ADOPTED this 17^h day of August 2009, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

JAMES D. VOSE, Chairman
Lancaster Planning Commission

ATTEST:

BRIAN S. LUDICKE, Planning Director
City of Lancaster

ORDINANCE NO.

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF LANCASTER, CALIFORNIA, AMENDING TITLE 17 OF THE MUNICIPAL CODE, MODIFYING THE WIND ENERGY REQUIREMENTS WITH THE ADDITION OF SECTION 17.08.332 TO REGULATE VERTICAL AXIS WIND TURBINE SYSTEM IN RESIDENTIAL ZONES

WHEREAS, the City Council of the City of Lancaster, finds that it is necessary to amend Title 17 of the Municipal Code (Zoning Ordinance) based on increasing energy demands facing California by allowing Vertical Axis Wind Turbine System (VAWTS) in residential zones with a Director's Review application; and

WHEREAS, the Attorney General Bill Lockyer from the California Department of Justice has determined in a report dated April 2004 that the State of California has a shortage of reliable electricity supply; and

WHEREAS, wind energy is an abundant, renewable, and nonpolluting energy resource, which when converted to electricity, reduces dependence on nonrenewable energy resources and reduces air and water pollution that results from conventional sources; and

WHEREAS, the City Council finds that the Legislature of the State of California recognized the need to promote all feasible adoption of clean, renewable, and distributed energy sources by enacting the Reliable Electric Service Investments Act (Article 15 (commencing with Section 399) of Chapter 2.3 of Part 1 of Division 1 of the Public Utilities Code); and

WHEREAS, the City Council finds that small wind energy systems, designed for non-commercial residential use, are recognized by the State Energy Resources Conservation and Development Commission as an excellent technology to help achieve the goals of increased in-state electricity generation, reduced demand on the state electric grid, increased consumer energy independence, and nonpolluting electricity generation; and

WHEREAS, the establishment of regulations for small-scale VAWTS would streamline the ability for property owners to utilize alternative energy sources; and

WHEREAS, the amendment to Title 17 of the Lancaster Municipal Code will modify the current requirements by requiring a Director's Review and approval in lieu of a Conditional Use Permit to regulate VAWTS in all residential zones, and thereby would reduce fees and time necessary for approval; and

WHEREAS, the City Council hereby makes the following findings in support of the Ordinance:

1. The proposed zoning ordinance amendment is consistent with the General Plan, because it will not alter the land use patterns and requirements established by the General Plan; and
2. The proposed amendments to the Lancaster Municipal Code will not adversely affect the public health, peace, comfort or welfare, because development standards would regulate the installation and maintenance of VAWTS; and
3. The modification to the Lancaster Municipal Code would not cause substantial environmental damage or substantially and avoidably injure fish or wildlife or their habitat because the proposed use is an accessory to existing legally permitted structures in the residential zone and not in areas that are in their natural state; and
4. The Council hereby finds the environmental findings adopted by the City Council Resolution No. 09-52 on July 14, 2009, are valid for the amendment because the project is consistent with the General Plan. Therefore, no further environmental review is required pursuant to Section 15162 of the State CEQA Guidelines.
5. A uniform and comprehensive set of standards, conditions, and procedures for the placement of VAWTS is necessary to regulate the generation of electricity for on-site use, thereby reducing the consumption of electrical power supplied by utility companies.

THE CITY COUNCIL OF THE CITY OF LANCASTER, CALIFORNIA, DOES HEREBY ORDAIN AS FOLLOWS:

Title 17 of the City of Lancaster Municipal Code is hereby amended as follows:

“Section 1. Add Section 17.08.060.Y to read as follows:

Vertical Axis Wind Turbine System for private use. (See Article V of Chapter 17.08 for standards.)

Section 2. Modified Section 17.08.070.DD to read as follows:

Wind energy conversion systems for private and public use, excluding VAWTS allowed pursuant to Section 17.08.060.Y. (See Article XI of Chapter 17.40 for standards.)

Section 3 Add under Article V, Specific Provision for Designated Uses Subject to Director’s Review and Approval, Section 17.08.335 as provided in Exhibit A.

Section 4. That the City Clerk shall certify to the passage of this Ordinance and will see that it is published and posted in the manner required by law.”

I, Geri K. Bryan, CMC, City Clerk of the City of Lancaster, do hereby certify that the foregoing ordinance was regularly introduced and placed upon its first reading on the ____ day of _____, 2009, and placed upon its second reading and adoption at a regular meeting of the City Council on the ____ day of _____, 2009, by the following vote:

AYES:

NOES:

ABSTAIN:

ABSENT:

ATTEST:

APPROVED:

GERI K. BRYAN, CMC
City Clerk
City of Lancaster

R. REX PARRIS
Mayor
City of Lancaster

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) ss
CITY OF LANCASTER)

CERTIFICATION OF ORDINANCE
CITY COUNCIL

I, _____, _____ City of Lancaster, California, do hereby certify that this is a true and correct copy of the original Ordinance No. _____, for which the original is on file in my office.

WITNESS MY HAND AND SEAL OF THE CITY OF LANCASTER, on this _____ Day of the _____, _____.

(seal)

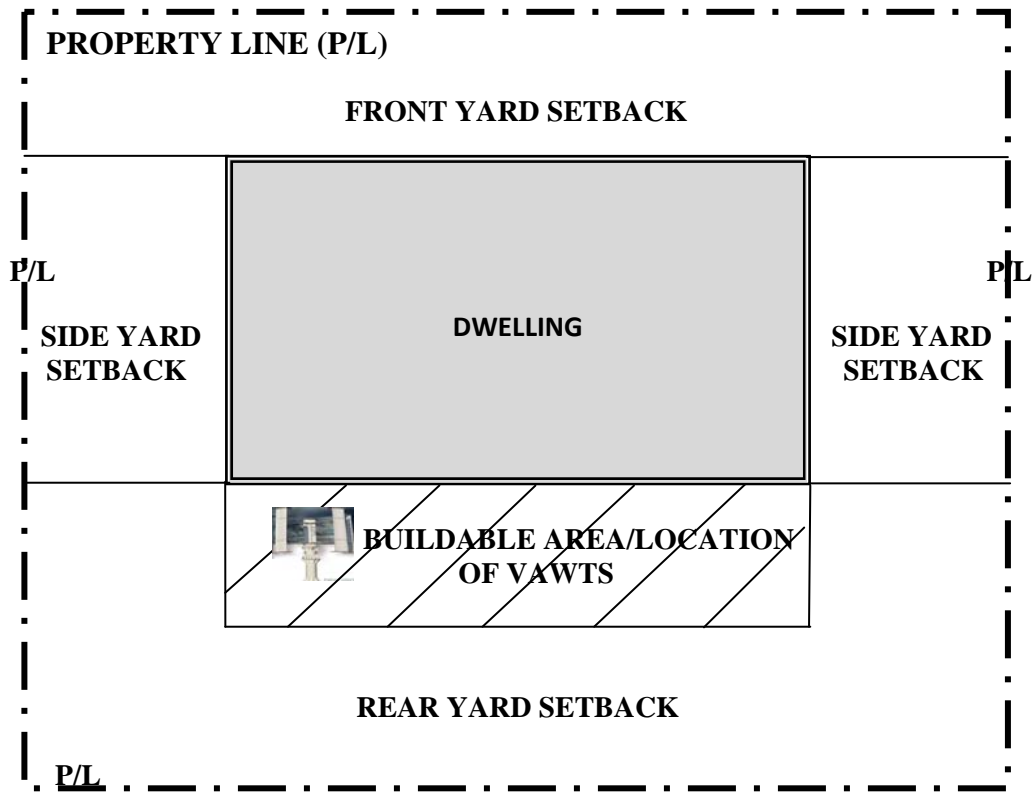
“EXHIBIT A”

SECTION 17.08.335 – Vertical Axis Wind Turbine System (VAWTS)

- A. **Purpose and Intent.** It is the purpose and intent of this section to promote the safe, effective and efficient construction and use of VAWTS on residential lots within the city limits of the City of Lancaster. These regulations are intended to assure that VAWTS are designed and located in a manner that minimizes visual, noise, and safety impacts on the surrounding community. Commercial Wind Turbines in residential zones are subject to a Conditional Use Permit.
- B. **Applicability** These specific standards are applicable for all Vertical Axis Wind Turbine System in residential zones allowed subject to approval of a Director’s Review in accordance with Article VI of Chapter 17.32.
- C. **Definitions.** The following are definitions of specialized terms and phrases used in this section. Definitions of general terms and phrases are located in Chapter 17.04 Section 17.04.240 (Definitions).
1. **Director** means the Planning Director of the City of Lancaster’s.
 2. **FAA** means Federal Aviation Administration.
 3. **Guy Wires** means wires or cables used in tension to support a tower.
 4. **Tower** means the portion of the VAWTS upon which the turbine is mounted.
 5. **Tower Height** means the height above grade of the fixed portion of the tower measured from the ground to the top of the tower, excluding the VAWTS, blades and wind-measuring devices.
 6. **USGS** means the United States Geological Survey.
 7. **Vertical Axis Wind Turbine (“VAWTS”)** means a small scale, non-commercial vertical axis wind turbine system, designed with a vertical axis, suitable for residential zones consisting of a wind turbine, tower, blades, associated controls and conversion electronics, which has a rated capacity that does not exceed the allowable rated capacity under the Emerging Renewables Fund of the Renewables Investment Plan administered by the California Energy Commission and which will be used primarily to reduce on-site consumption of utility power by converting mechanical energy into electricity. For the purposes of this section, “wind turbine” shall mean the same as VAWTS.
- D. **Restriction on Use of Electricity Generated by VAWTS.** A VAWTS shall be used exclusively to supply electrical power for on-site consumption. Electrical power generated by the VAWTS exceeding on-site consumption may be used by the utility company in exchange for a reduction in the cost of electrical power supplied by that company to the parcel for on-site use, as long as no net revenue is produced by such excess electrical power. VAWTS, as allowed pursuant to this section shall not be used for commercial production or profit.

- E. **Type of Device.** Vertical Axis Wind Turbines System (VAWTS) shall meet the following guidelines. All other non-commercial and commercial wind energy conversions system shall meet the requirements outlined in Article XI Wind Energy Conversion Systems and shall be subject to a conditional use permit.
- F. **Property Development Regulations.** A VAWTS shall be subject to all applicable regulations of the residential zone in which it is proposed, except that the following standards shall take precedence over the regulations of the residential zones to the extent that they differ. The following shall be deemed to be conditions of approval of every VAWTS unless specifically modified under the Director's Review and approval process.
1. No part of a VAWTS shall be located within or over drainage, utility, or any other established easements. Each VAWTS shall be setback from the nearest above-ground public communication or electrical line by a distance which is equivalent to the height of the VAWTS.
 2. Blade Clearance. No part of a VAWTS blade shall extend within fifteen (15) feet of the ground, trees, or any other structure.
 3. Only one VAWTS shall be allowed per residence.
 4. Devices mounted on a building may require strengthening of the existing structure to bear the additional weight and stress created by the VAWTS for which a building permit shall be obtained.
- G. **Yard Requirements.** The following shall apply for Building and Ground mounted VAWTS in all residential zones:
1. VAWTS shall be located behind the primary building outside of the front, side and rear yard setbacks (refer to Diagram 1 and Section 17.08.100.B.3).
 2. Tower height shall not exceed the maximum height of the zone in which the VAWTS is located (refer to Section 17.08.100.B.3).

DIAGRAM 1



H. VAWTS Standards.

1. **Cage Width.** Maximum 78 inches (6.5 feet).
2. **Cage Height.** Maximum 60 inches (5 feet).
3. **California Energy Commission Approval.** The equipment shall meet California Energy Commission standards for approved small wind turbines (VAWTS) [www.consumerenergycenter.org].
4. **Compliance with Aviation Safety Standards.** The VAWTS shall comply with all applicable FAA requirements, including any necessary approvals for installations close to airports and other facilities with flight operations in the vicinity such as Fox Field, and Plant 42.
5. **Design.** An VAWTS must be designed and constructed in accordance with the following:
 - a. **Colors.** The colors used in the construction materials or finished surface shall be muted and visually compatible with surrounding development.
 - b. **Lighting.** If required by FAA requirements, all required lights shall be shielded from adjacent properties, and no other lights shall be placed upon the Tower.

- c. Noise. Noise from a VAWTS shall conform with normally acceptable noise standards of 65 dBA at property line.
 - d. Visual Effects. Any VAWTS that is placed within the viewshed of a designated Scenic Highway or vista shall be assessed for its visual effects, and appropriate conditions relating to setting, buffers, and design of the facility.
 - e. Climbing Apparata. All climbing apparatus for ground-mounted VAWTS must be located at least fifteen (15) feet above the ground, and the structure must be designed to prevent climbing within the first fifteen (15) feet.
 - f. Automatic Overspeed Controls. VAWTS shall be equipped with manual and automatic overspeed controls to limit the blade rotation speed to within the design limits of the VAWTS.
 - g. Access Doors. If a VAWTS is equipped with access doors, all access doors shall be lockable.
6. **Grid Interconnection.** The renewable energy must be permanently interconnected to the electrical distribution grid of the utility serving the customer's electrical load. The VAWTS shall interconnect to the electricity distribution system and must comply with applicable electrical codes and utility interconnection requirements.
 7. **Maintenance.** VAWTS shall be maintained in an operational condition that poses no potential safety hazards.
 8. **Removal.** Within six (6) months after the VAWTS has ceased to operate the permittee shall remove the VAWTS, clear the site of all equipment, and restore the site as nearly as practicable to its condition prior to the installation of the VAWTS. Failure to remove such VAWTS shall constitute as a public nuisance.
- I. The Planning Director can require additional design criteria or other information as deemed necessary to integrate the proposed VAWTS with the surrounding area.