Slide 1

Conservation, Development and Planning

Small Wind Energy Systems Ordinance

Napa County Planning Commission

October 20, 2010

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Small Wind Energy Systems Ordinance   1

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Conservation, Development and Planning

"Don't bore them with the facts. Talk about the issues."

– January 1, 2011 Deadline

– Balancing Rival "Goods"
  • Promotion of Renewable Energy
  • Natural Resource Protection
  • Addressing Visual Impacts
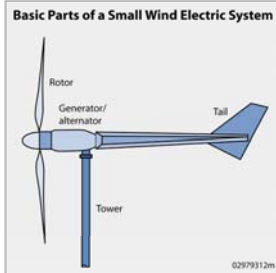 • Streamlining Permitting

Small Wind Energy Systems Ordinance   2

Slide 3

Conservation, Development and Planning

Outline

– State Laws
  • AB 45
– Code Comparison
  • Current vs. Proposed
– Overview of Proposed Ord.
  • Main Elements
– Recommended Fees
– Comments Received

Basic Parts of a Small Wind Electric System

Rotor

Generator/alternator

Tail

Tower

02979312m

Small Wind Energy Systems Ordinance   3

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Conservation, Development and Planning

State Laws

The California ENERGY COMMISSION

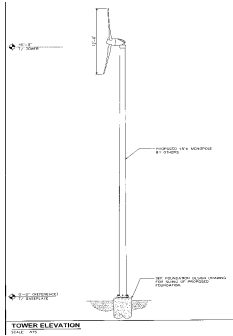*Past & Present*

– 2002
  • Sunset in 2005 – Repealed 2006
– 2009 Assembly Bill (AB) 45
  • State's renewable energy portfolio
  • Allows Counties to require Use Permits
  • Requires ministerial approval if no established process
  • Exempts ordinances approved prior to Jan. 1, 2011

Small Wind Energy Systems Ordinance   4

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Allowed Under AB 45

– Size
  • < 50kW, primary onsite use
– Location
  • ≥ 1 acre, outside cities/"urbanized areas"
– Height
  • 80' (1-5 ac), 100' (≥ 5 ac)
– Setback
  • ≥ Height of tower from property lines
– Noise
  • Lesser of 60 dBA or that established in a General Plan

TOWER ELEVATION

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Allowed Under AB 45 (cont.)

– Notice
  • Notification of neighbors w/in 300'
– Permit
  • Use permit, or
  • Administrative permit
– Local Ordinances
  • Exempt if adopted prior to Jan. 1, 2011
  • No more restrictive if adopted after Jan. 1, 2011
  • Applications after Jan. 1, 2011 prior to local adoption must be approved ministerial permit

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Current Code*	Proposed Ordinance
Zones	Zones
• AP, AW, I, TP	• AP, AW, I
Parcel Size	Parcel Size
• Any	• > 2 ac
Use	Use
• Onsite use	• Onsite use
Size	Size
• Height – 90'	• Height – 50' (2-5ac), 80' (>5ac)
• ≤ 25 kW, 32' dia.	• ≤ 50 kW
Permit	Permit
• Use Permit	• Administrative Permit
	• Use Permit (if admin. standards not met)

*18.08.390 – Noncommercial wind energy conversion system

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Proposed Ord. - Closer Look

– Similar to 2002 Ord.
  • Added administrative permit
  • Limited to AP, AW & I zones
  • Min. parcel 2ac compared to 1ac
– Includes "Development Standards"
  • Support administrative permit
  • Address environmental concerns
– Maintains use permit option
  • Address site specific challenges
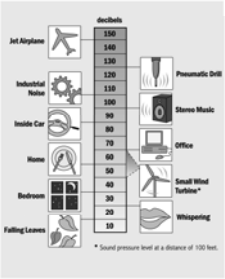 • Allow for approval beyond administrative standards

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Conservation, Development and Planning

Proposed Ord. - Closer Look
Addressing Environmental Challenges

– Biology/Natural Resources
  • Pre-development surveys
  • Setbacks
– Noise
  • Adherence to County Noise Ord.
– Visual
  • Silhouette
  • Major ridgelines
  • Height
  • Color
  • Lighting
  • Signage
  • Vegetation
  • Simulation

http://www.awea.org/faq/noisefaq.html

Small Wind Energy Systems Ordinance — 9

Slide 10

Conservation, Development and Planning

Visual Comparisons

– Context
– System Type
– Simulations

Small Wind Energy Systems Ordinance — 10

Slide 11

Panorama of Valley
Wind Machines and Power Poles

Small Wind Energy Systems Ordinance — 11

Slide 12

Power Lines and Poles

110'   28'

Small Wind Energy Systems Ordinance — 12

Power Lines, Poles and Wires

110'

28'

Small Wind Energy Systems Ordinance 13

High Voltage Lines & Agriculture

110'

≈ 55'

Small Wind Energy Systems Ordinance 14

Various Heights of Wind Machines

≈ 45'

≈ 15'

Small Wind Energy Systems Ordinance 15

Carneros Vineyards

≈ 35-40'

≈ 35-40'

Small Wind Energy Systems Ordinance 16

Buhman & Henry Rd.

≈ 40-45′
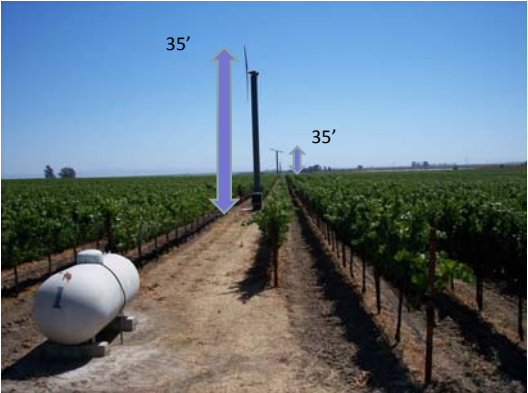
Small Wind Energy Systems Ordinance 17

Line of Wind Machines
w/Propane Generators

35′ 35′

Small Wind Energy Systems Ordinance 18

Large Wind Machines
Cuttings Warf Rd.

≈ 40-45′

Small Wind Energy Systems Ordinance 19

Large Valley Floor
Wind Machine

≈ 45-50′ ≈ 45-50′

Small Wind Energy Systems Ordinance 20

Windmill (Water) & Wind Machine

Small Wind Energy Systems Ordinance   21

80-ft Monopole System

Small Wind Energy Systems Ordinance   22

80-ft Lattice Tower System

Small Wind Energy Systems Ordinance   23

100-ft to 120-ft Systems

Small Wind Energy Systems Ordinance   24

Simulation of System Installation

≈ 70'

Small Wind Energy Systems Ordinance — 25

Simulation of System Installation

≈ 60-70'

Small Wind Energy Systems Ordinance — 26

Simulation of System Installation

≈ 80-90'

Small Wind Energy Systems Ordinance — 27

Simulation of System Installation

≈ 80-90'

Small Wind Energy Systems Ordinance — 28

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Where's the Wind

- > 10-12 MPH Ave.
- Tops of Ridgelines
- Concentration Points
- Southern Areas of CA

Slide 30

Where's the Wind

- At 30m or 100' Elev.
- > 10-12 MPH
- North-South Ridges
- South County

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Where Allowed

- Wind at 100' Elev.
- Outside cites/urban areas
- > 30% slope
- Parcels > 2 ac

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"Don't bore them with the facts. Talk about the issues."

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- Review of Comments Received