

THE FLOWER MOUND TOWN COUNCIL WORK SESSION AND SPECIAL MEETING HELD ON THE 21ST DAY OF OCTOBER, 2010 IN THE FLOWER MOUND TOWN HALL, LOCATED AT 2121 CROSS TIMBERS ROAD IN THE TOWN OF FLOWER MOUND, COUNTY OF DENTON, TEXAS AT 6:00 P.M.

The Town Council met in a work session with the following members present:

Melissa Northern	Mayor
Al Filidoro	Mayor Pro Tem
Mike Wallace	Councilmember Place 3
Steve Lyda	Councilmember Place 4

with the following members of council absent:

Tom Hayden	Deputy Mayor Pro Tem
Steve Dixon	Councilmember Place 1

constituting a quorum with the following members of the Town Staff participating:

Harlan Jefferson	Town Manager
Joy Franklin	Executive Assistant
Kent Collins	Assistant Town Manager
Doug Powell	Executive Director of Development Services

A. CALL WORK SESSION TO ORDER

Mayor Northern called the work session to order at 6:02 p.m.

B. INVOCATION

Councilmember Lyda gave the invocation.

C. PLEDGE OF ALLEGIANCE TO THE AMERICAN FLAG AND THE TEXAS FLAG

Councilmember Lyda led the pledges.

D. WORK SESSION ITEMS

1. Review and discuss wind turbine regulations.

Doug Powell, Executive Director of Development Services gave the following presentation.

Wind Turbines Workshop

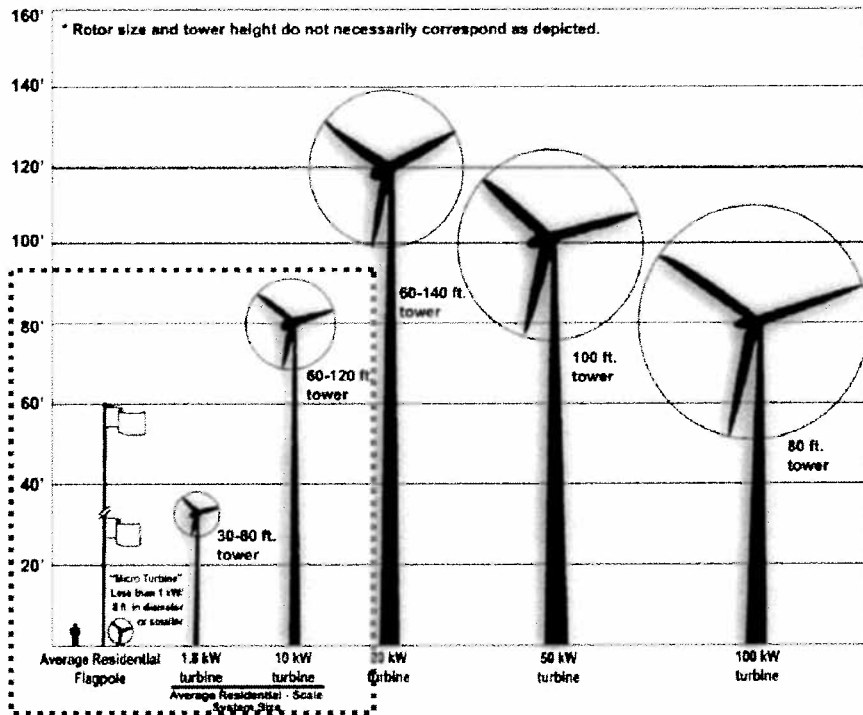
Town Council
October 21, 2010

Wind Turbine Regulations

- Currently not allowed under Town's regulations
- Several individuals have requested that the Town amend the regulations to allow
- Council Communication
- Town Council directed the Planning & Zoning Commission to review the issue
- Workshops
 - August 23 – technical / regulatory background
 - August 30 – receive public input
- Code of Ordinance Amendment would require public hearings at P&Z & TC

Small Wind Turbines

- American Wind Energy Association (AWEA)
- Definitions
 - Wind Turbines
 - WECS – Wind Energy Conservation System
 - A “small” wind turbine is a unit that has a rated capacity of 100 kilowatts and less
- Survey
- P&Z Discussion

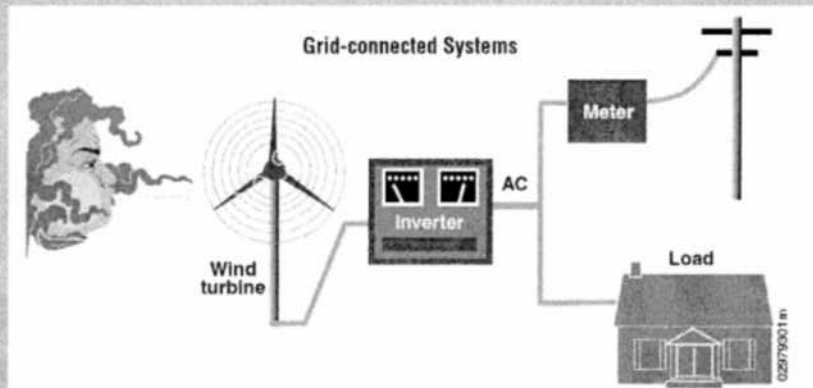


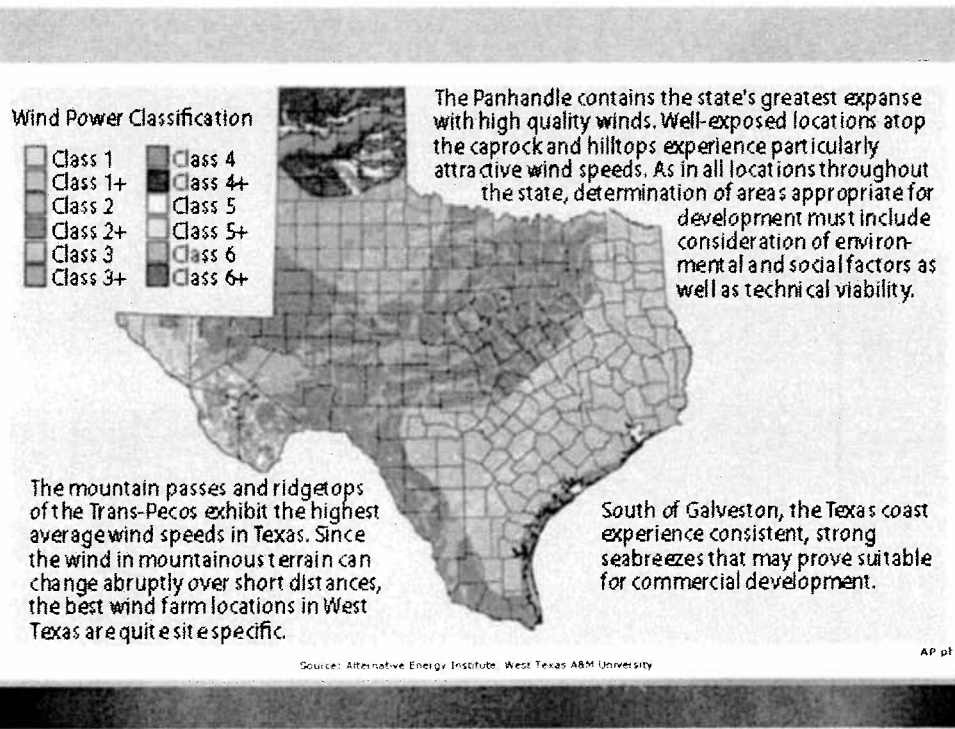
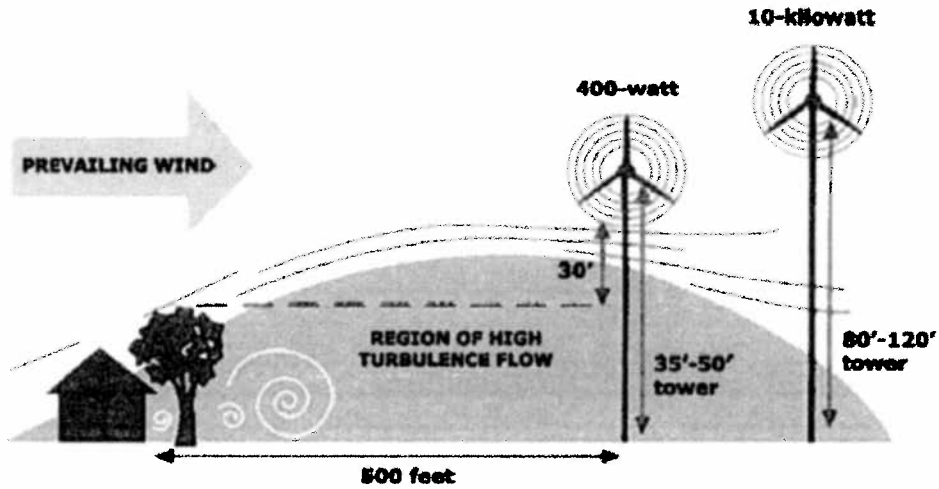
Benefits & Issues

- Benefits
 - Reduced energy consumption
 - Decreased energy dependence
 - Renewable energy
- Issues
 - Height
 - Setbacks
 - Noise
 - Aesthetics
 - Engineering requirements

Net Metering

State of Texas allows up to 10 megawatts (MW) at a voltage less than or equal to 60 kilovolts (KV) to connect to power grid



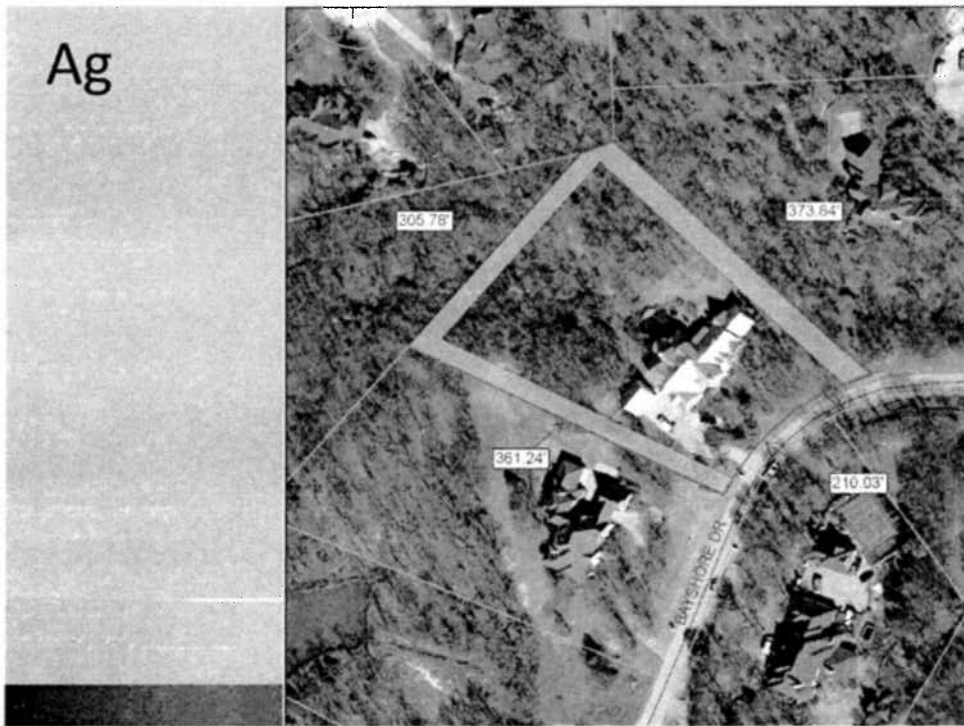


Setbacks

Zoning District	Min. Lot Size	Min. Front Yard	Min. Side Yard	Min. Rear Yard	Max. Height
Ag	87,120 sq. ft.	40 feet	25 feet	20 feet	3/35'
SF-E	43,560 sq. ft.	40 feet	20 feet	20 feet	3/35'
SF-30	30,000 sq. ft.	25 feet	15 feet	30 feet	3/35'
SF-15	15,000 sq. ft.	25 feet	12 feet	30 feet	3/35'
SF-10	10,000 sq. ft.	25 feet	10 feet	25 feet	3/35'

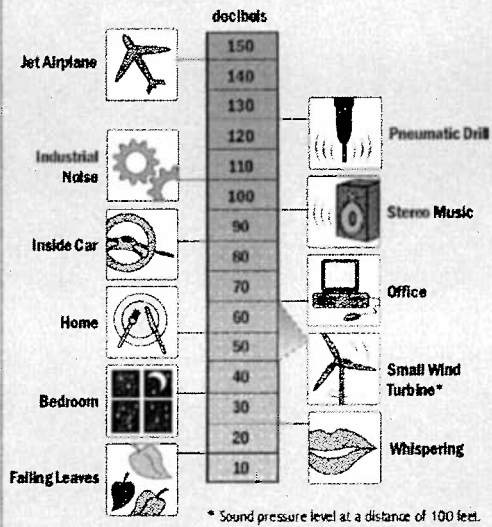
SF-10





Noise

- Largely eliminated through improved engineering & design
- Affected by setbacks
- Design improvements
 - Thickness of the blades' trailing edges
 - Making machines "upwind" rather than "downwind"
 - wind hits the rotor blades first, then the tower

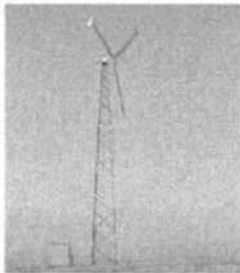


<http://www.avea.org/faq/noisefaq.html>

Towers



Guyed Monopole Tower

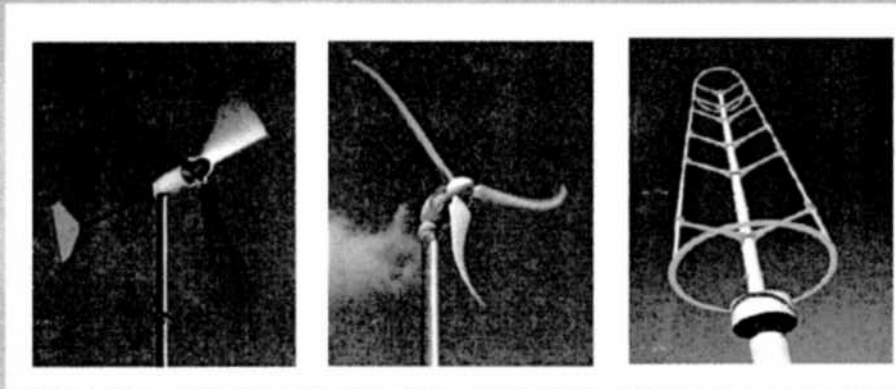


Lattice Tower



Monopole Tower

Design



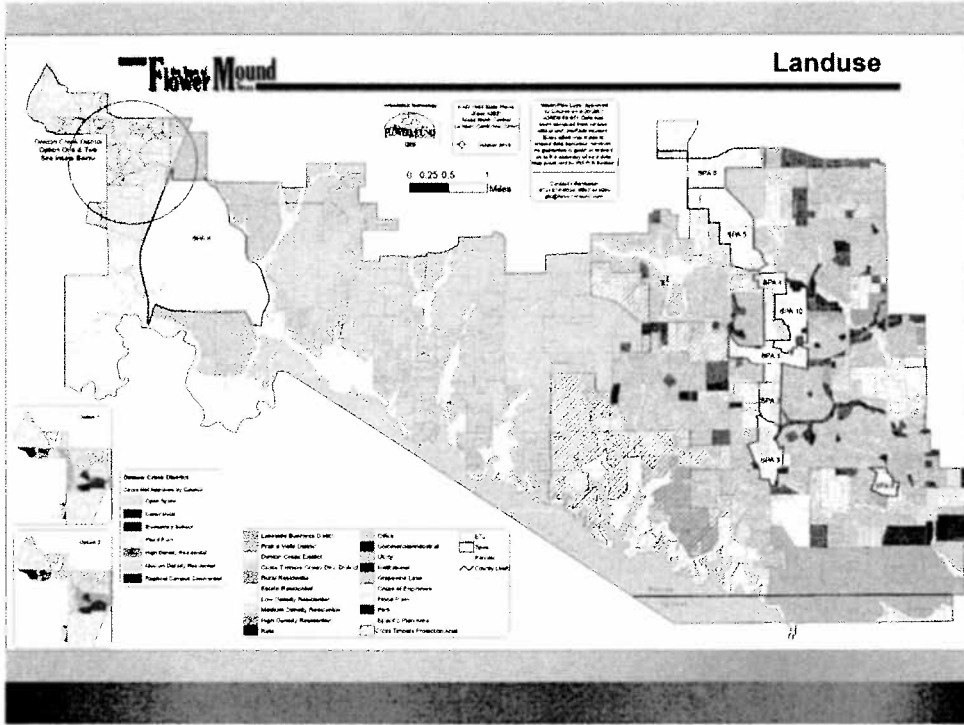
Wind Turbine Comparison Survey

SURVEY CITY	DO THEY HAVE? YES/NO	IF YES, WHEN WAS IT ADOPTED, & WHAT IS THE PROCESS?	IF NO, ARE THEY CONSIDERING IT?	COMMENTS
ALLEN	No, see comments		Yes.	There are a series of amendments scheduled to go to Council later this year. Wind turbines are being considered as a possibility of that list.
CARROLLTON	No, see comments		No.	The city considers them an "accessory structure," the same as (for example) a ham radio antenna.
COLLEYVILLE	Yes	Adopted 2/17/09. Special Use Permit.		There are currently no wind turbines in the city.
COPPELL	No, see comments		No.	Staff brought forward a proposal to include them within an ordinance by SUP only within certain limitations. The council not only did not approve this code change, they voted to bring back an ordinance that prohibits them.
DENTON	No, see comments			The city currently does not have any wind turbine regulations or issues. This is something that is being researched, but no direction to regulate has been decided.
FRISCO	No, see comments	They are allowed subject to: 1) They comply with the maximum height allowed & 2) The setback is equal to the height of the structure.		They have asked a consultant to research specific criteria regarding wind devices. The only complaint has been about noise. Based on readings and talking with others, wind turbines in urban areas may not work efficiently because the surrounding buildings can impact wind direction and speed.
GRAPEVINE	No			The city discussed adding wording to the zoning ordinance to address wind turbines, e.g. requiring an SUP, but P&Z elected to take no action given the lack of demand and low average wind speed in the area. Also, the height restrictions in each residential zoning district would render the current wind turbine designs untenable. No permits had been issued for wind turbines in the city. For non-residential areas an interpretation could be made that wind turbines were "mechanical equipment" and, as long as height and setback standards were met, they could be allowed as accessory uses. So, it was determined their current ordinance sufficiently handled the matter.
IRVING	No			The City has discussed the issue, but it has been determined that the required height for an effective system is not acceptable for Irving in residential areas. Turbines are considered accessory structures subject to the same height restrictions as an accessory use. An industrial user has proposed one, but it has not been permitted yet.

SURVEY CITY	DO THEY HAVE? YES/NO	IF YES, WHEN WAS IT ADOPTED, & WHAT IS THE PROCESS?	IF NO, ARE THEY CONSIDERING IT?	COMMENTS
LEWISVILLE	No, see comments			The City prohibits the use of wind turbines, but expects that at some time in the future this will change. The industry information suggests having a minimum 1 acre site with a fall zone at least the same distance as the height of the pole and turbine. This would result in turbines typically being 65-90' tall. There is at least one home in Lewisville that has had 2 very small, roof-mounted turbines prior to the ordinance prohibiting them, which were used to supplement his existing solar panels. There are examples in larger cities of buildings being powered by a series of roof-mounted turbines rather than on poles, but studies suggest this would not have adequate efficiency to provide much power in a suburban, single family area.
MCKINNEY	Yes	Ordinance 2009-11-079 adopted Nov. 2009		
NORTH RICHLAND HILLS	Yes, see comments	Currently wind turbines in NRH are regulated by requiring an SUP, and additionally are only permitted on lots of 2+ acres. The SUP requirement was adopted in 1993. Along with the SUP a building permit is also required.		NRH is considering crafting some regulations to better address small turbines, such as those that can be placed on roofs. Noise issues do not seem to be as much of an issue as in the past; however, there are visual impacts. The "green movement" and emerging technologies and regulatory control of wind power will need to be better addressed.
PLANO	No		No	Plano has allowed turbines if they meet height requirements of the zoning district, and a couple of commercial developers have erected them in the city. The majority of single family lots in Plano are too small for the turbines to be clear of trees and surrounding structures, which also limit their efficiency. It has not been a high priority to date.
RICHARDSON	No		No	Wind turbines would require a Special Permit.
ROWLETT	No			Staff is currently working on drafting an ordinance on this topic.
SOUTHLAKE	No		No	Staff drafted an ordinance, but a determination was made to not allow wind turbines as a permitted use in the city.

P&Z Discussion

1. Maximum height
2. Minimum setbacks
3. Minimum size lot
4. Maximum noise levels
5. Engineering / construction standards
6. Decommissioning standards
7. Annual inspections
8. Design – including color, type of poles
9. Density, or number of units per lot



Wind Turbines Workshop

Town Council
October 21, 2010

Councilmember Lyda asked if staff had talked to any cities outside of the Town's survey cities that had a wind turbine ordinance.

Mr. Powell answered yes.

Councilmember Lyda asked Mr. Powell what he thought the minimum lot size regulation should be.

Mr. Powell stated that he felt it would be hard not to disturb a neighbor if a wind turbine was put on a typical 10,000-square-foot lot. He stated that he felt it would be possible to put a wind turbine on a one acre lot but a two acre lot would be a lot easier.

Councilmember Lyda asked about restricting the wind turbines to agricultural zoning.

Mr. Powell stated that the Town would restrict the wind turbines to the Cross Timbers Conservation Development District.

Councilmember Lyda stated that he thought restricting wind turbines to agricultural zoning would be reasonable.

Mr. Powell stated that the Planning and Zoning Commission requested that once approved the ordinance be reviewed after a year.

Councilmember Wallace stated that he felt five acre lot size would be the minimum but wasn't sure if that was too restrictive. He stated he thought they should be in agricultural zoning only.

Mr. Powell stated that there was a point at which having a large enough lot would address the impacts of the wind turbines.

Mayor Northern asked about the fall zone if a wind turbine was placed on a two acre lot.

Mr. Powell stated that there was no need for fall zones as it would be required to have an engineered foundation. He stated that the wind usually goes around the wind turbines and they are not generally an impediment to the wind.

Mayor Pro Tem Filidoro asked what type of variance process would be involved with a wind turbine.

Mr. Powell stated that there was nothing requiring them to set the limit at 5 acres. He stated that it was discussed to make the wind turbines a SUP process. He stated that there needed to be a minimum.

Mayor Pro Tem Filidoro stated that there needed to be a minimum. He stated that an SUP variance was a good idea as long as a clear criterion was set.

Mr. Powell stated that if the Council desired to have the wind turbines in a rural setting the minimum might need to be greater than two acres because of the two acre lot subdivisions.

Councilmember Lyda suggested a five acre minimum with an allowed variance up to two acres through an SUP process.

Mayor Northern stated that Homeowners Associations (HOA) may have restrictions that residents may need to consider.

Mr. Powell stated that by State regulation the Town could not enforce HOA regulations but can suggest that they check with their HOA.

Councilmember Wallace clarified that two to five acres would require an SUP and greater than five acres could be administratively approved.

E./F. ADJOURN WORK SESSION AND CALL SPECIAL MEETING TO ORDER

Mayor Northern adjourned the briefing session and called the special meeting to order at 6:32 p.m.

G./H. CLOSED/OPEN MEETING

The Town Council convened into a closed meeting at 6:32 p.m. on October 21, 2010 pursuant to Texas Government Code Section 551.074 to discuss matters relating to personnel and reconvened into an open meeting at 7:06 p.m. on October 21, 2010 to take action on the items as follows:

- a. Discuss selection of and applications for Town Secretary position, and all matters incident and related thereto.

No action taken.


I. ADJOURN SPECIAL MEETING

Mayor Northern adjourned the regular meeting at 7:06 p.m. on Monday, October 21, 2010, and all were in favor.

TOWN OF FLOWER MOUND, TEXAS


MELISSA D. NORTHERN, MAYOR

ATTEST:


TRACY KNERIM, INTERIM TOWN SECRETARY

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