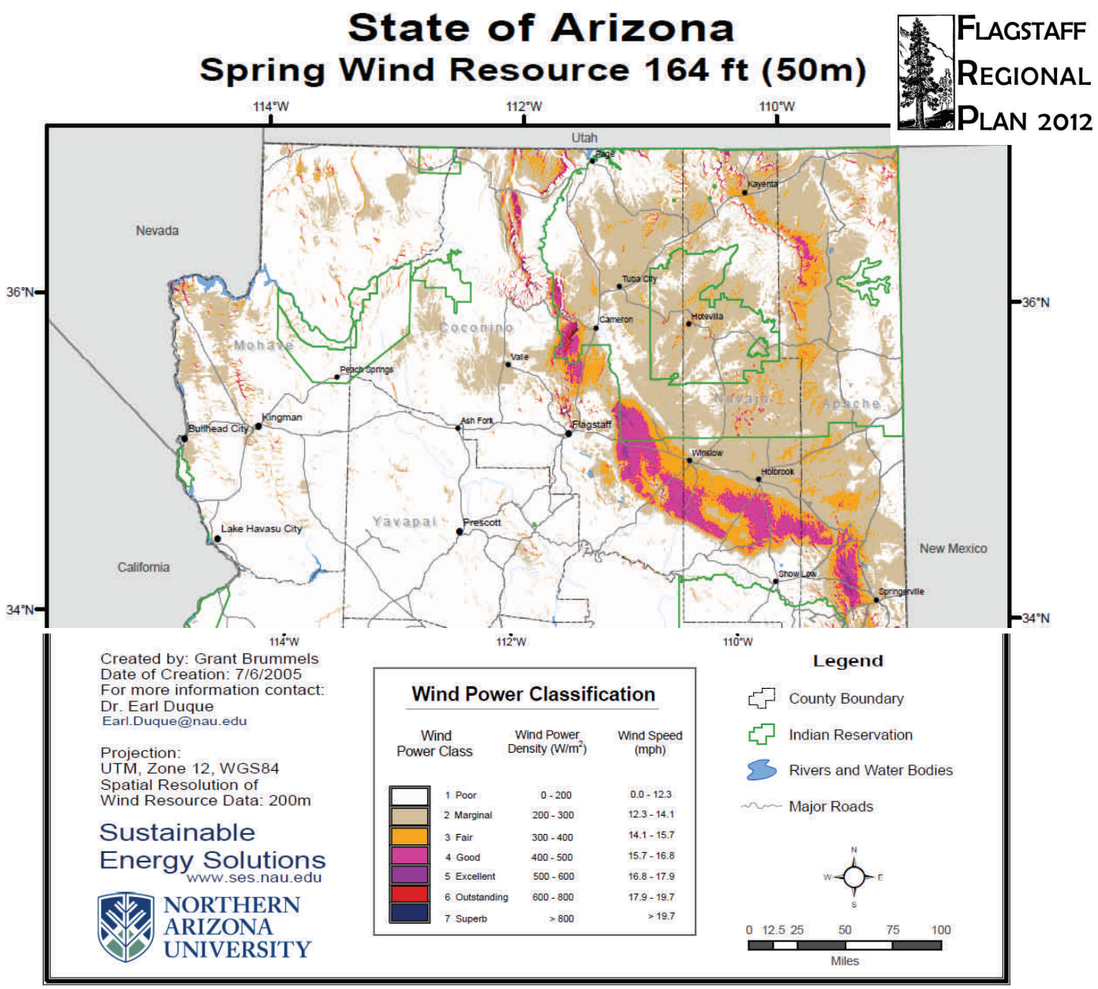

Many more Arizona wind maps: http://wind.nau.edu/maps/maps.shtml#hub

Zoning Code Update

CITY FORM FLAGSTAFF ZONING CODE UPDATE

All Focus Groups have finished! The summaries may be read on-line:
http://www.flagstaff.az.gov/zoningupdate

Contact Roger E. Eastman, AICP at 928-779-7631 Ext. 7606 for more information, or via e-mail at reastman@flagstaffaz.gov.

Contact Information

www.flagstaff.az.gov/regionalplan

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FLAGSTAFF REGIONAL PLAN 2012

Citizen Advisory Committee:
Ben Anderson
Paul Babbitt
Susan Bean
Carol Bousquet
Michael Chaveas
Beatrice Cooley
Steve Darden
Alex Frawley
Jean Griego
Shaula Hedwall
Richard Henn
Maury Herman
Ken Kaemmerle
Judy Louks
Devonna McLaughlin
Jerome Naleski
Eva Putzova
William Ring
Larry Stevens
David Walker
Nat White

Core Planning Team:
Jim Cronk—*City Planning Director*
Bob Caravona—*City Comprehensive Planner*
Kimberly Sharp—*City Neighborhood Planner*
Erika Mazza—*City Housing Planner*
Roger Eastman—*City Zoning Code Admin.*
Mark Sawyers—*Current Planning Mgr.*
David Wessel—*FMPO Director*
Bill Towler—*County CD Director*
Sue Pratt—*County Assist. CD Director*
John Aber—*County Principal Planner*
Tiffany Antol—*County Senior Planner*

Steering Committee:
Councilmember Karla Brewster
Councilmember Coral Evans
Supervisor Mandy Metzger
Supervisor Matt Ryan
Kevin Burke—City Manager
Steve Peru—County Manager

Energy

Cliff Notes

Element 7
August 1, 2009

Required Element Description: According to Arizona State Statute

The **energy element** will include: (a) A component that identifies policies that encourage and provide incentives for efficient use of energy; and (b) An assessment that identifies policies and practices that provide for greater uses of renewable energy sources.

2001 Goals and Policies: summarized bullet points from Flagstaff Regional Plan

No existing goals and policies

What does the Flagstaff Region use energy for?

Number of houses in the FMPO region: 24,333 (16,774 in City)
Average size of home in FMPO: 2053 sf
Average size of home in City of Flagstaff: 1909 sf
Number of apartments in the FMPO region: 8041 (7878 in City)

How many residential units have air conditioning: 1472 (751 in City)
Average summer temperature of Flagstaff: 80 degrees

Square feet of commercial space in FMPO region: 716,992 sq.ft. on 76 parcels
(one parcel has a 423,377sqft building-Georgia Pacific Tissue in Bellemont)

Commercial Space in City: 9,303,885 sq.ft. on 814 parcels

Square feet of office space in FMPO region:144,747sq feet on 17 parcels
Office Space in City: 2,638,676sq feet on 361 parcels

Getting from 'A' to 'B'! Eating, playing, working and living!

What is ENERGY CONSERVATION?

Energy conservation is decreasing the amount of energy used by promoting the wise use of energy. Energy conservation is the most economical solution to reduce climate change, promote energy independence and increase economic vitality. Doing things like replacing all incandescent bulbs in your home and business with efficient compact fluorescent lights, is a good place to start. For more ideas on energy conservation, visit: www.flagstaff.az.gov/sustainable

ANNOUNCEMENTS:

Open Houses for Water, Conservation, Energy & Environment:

Wednesday, August 12 - 4 to 7 p.m. St. Pius Church in Sunnyside - Farmers Market
Sunday, August 16 - 8 a.m. - NOON - Farmer's Market City Hall downtown
Wednesday, August 26 - 6 p.m.– 2500 N. Fort Valley Rd., Thomas Auditorium
Saturday, September 12 - 11 a.m. - 2 p.m. - Picnic in the Park, Kachina Village

APS Electricity Report

Revenue Class	Jun 09 Customer Count	12 months Consumption (Kwh)	Consumption Ratio
Residential Total	36,013	224,867,031	30.40%
Commercial Total	4,317	380,052,485	51.39%
Industrial Total	115	129,493,656	17.51%
Irrigation Total	8	950,773	0.13%
Streetlight/Public Total	1	2,664,480	0.36%
APS Use Total	14	1,544,437	0.21%
	40,468	739,572,862	100.00%
Based on Consumption from July 2008 thru June 2009—Reported by APS 07/31/09			

***2008 Statistics*—APS Electricity production (inside and outside the Flagstaff FMPO area):**

Coal generation - 36%
Nuclear generation - 22%
Gas/Oil - 17%
Hydro/Wind/Solar & Purchased Power - 25%

Average Kwh used by Flagstaff FMPO area resident (monthly in a 12 month period): 520 Kwh

Current APS efforts to produce renewable energy:

- Solana and Starwood Solar 1 projects, plus additional contractual agreements = 800 megawatts of energy in renewable energy portfolio in 2014. This is enough energy to power nearly 250,000 customers and is the highest percentage of renewable energy production per customer of any investor-owned public utility in the country.

- APS ***Green Choice*** program - allows customers to direct any or all of the energy consumed by the customer to be generated from renewable energy sources. While the cost to participate in the program is at a slight premium, the premium allows APS to procure a wider array of renewable energy sources for its customers' benefit and reduces the amount of generation derived from non-renewable sources.

Some local examples of APS-sponsored renewable energy projects include:

- The 163 Kw photovoltaic system APS customers made possible to help NAU to achieve their Platinum LEED certification of the new Applied Research and Development (ARD) building located on campus;
- The 32 Kw photovoltaic system located at the APS Service Center in Flagstaff which powers the APS ***Solar Partners*** program for participating Flagstaff customers;
- The 18 Kw photovoltaic system APS customers made possible for the National Park Service to power approximately 30% of the electrical needs of the Visitors Center at the South Rim of the Grand Canyon;
- The 2,000 Kw (distributed) recently announced Community Power Project where between 200 and 300 residential and commercial customers will have the opportunity to have APS-owned, operated and maintained photovoltaic systems installed in trade for an easement and a fixed rate over a 20 year period for the solar portion of their bill.

Current APS economic programs for citizens to incorporate <u>renewable energy</u> into their homes/businesses:

- Incentives (in addition to federal and state tax credits) for residential and commercial customers to help offset the cost of purchasing and installing customer-owned alternative energy generation devices such as photovoltaic panels or wind turbines.

- Many Energy Efficiency programs designed to help its customers to reduce the overall consumption of electricity by improving the efficiency of electrical equipment and heating and cooling systems.

Did you know that if just 10% of homes in Arizona were equipped with Solar Hot Water Heaters, we would save enough energy to power all of the residences in the City of Flagstaff?

For information on the programs mentioned above (and more), go to http://www.aps.com/main/services/default.html.

Alternative Energy & Energy Conservation Providers

ENERGY STAR certified appliances: www.energystar.gov

Northern Arizona Wind & Sun—4091 E Huntington Drive, Flagstaff, AZ 86004
Sales & Service: 800 383-0195 || 928 526-8017 || www.solar-electric.com

Southwest Windpower—1801 W. Route 66, Flagstaff, AZ 86001 www.windenergy.com
"Worlds largest manufacturer of small wind turbines"

APS Renewable Incentive Program: http://www.aps.com/my_community/Solar/solar_4.html

Dry Lake Wind Project—30 wind turbines in Northern Arizona:
http://www.azcentral.com/arizonarepublic/news/articles/2009/05/12/20090512biz-windfarm0512.html

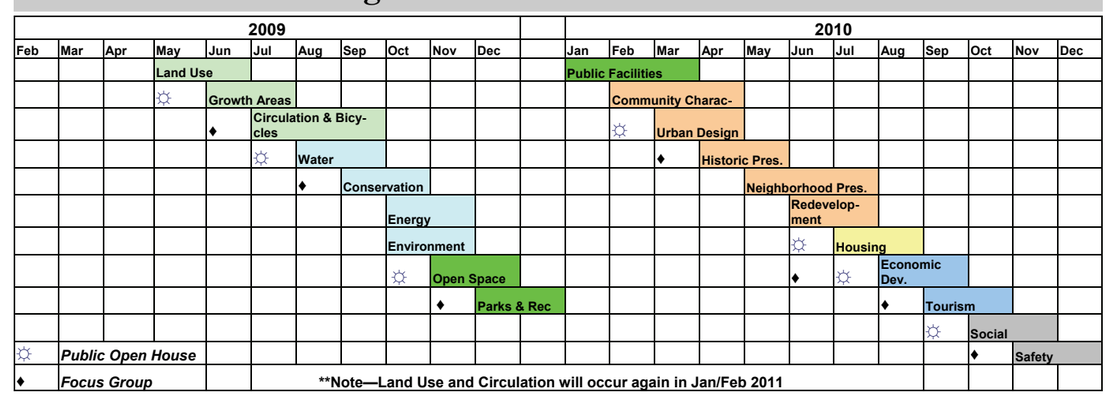
City of Flagstaff Wind Turbine ordinance: LDC Chapter 10-03-005-0001-K, 'Accessory Energy Wind Systems'

Coconino County Sustainable Building Program: http://www.coconino.az.gov/comdev.aspx?id=148
For—resources, education, consultation

Report on **alternative energy production potential for the State of Arizona:**
http://www.energyatlas.org/PDFs/LowRes/atlas_state_AZ.pdf

We have 288 days of sun in Flagstaff per year !

Regional Plan Re-write Schedule



Information Needed:

1. What is the potential production of alternative energy for the Northern Arizona region? *NAU class study?*

NEW URBANISM PRINCIPLES:

Walkability - Most things within a 10-minute walk of home and work; Pedestrian friendly street design

Connectivity - Interconnected street grid network disperses traffic & eases walking; A hierarchy of narrow streets, boulevards, and alleys; High quality pedestrian network and public realm makes walking pleasurable

Smart Transportation - Pedestrian-friendly design that encourages a greater use of public transit, bicycles, rollerblades, scooters, and walking as daily transportation