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Moving to Portland™

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Portland Home Market

April Residential Highlights

Market Activity in the Portland Metro Area continues to be mixed when comparing April 2006 with April 2005. The number of new listings increased 7.5%. However, the number of accepted offers and closed sales both fell, 18.2% and 16.2% respectively.

At the end of April 2006, there were 6,266 active residential listings in the Portland Metro area. Given the month's rate of sales they would take approximately 2.4 months to sell.

Year To-Date

When comparing market activity through April 2006 to the same time period in 2005, the number of closed and pending sales has decreased 9.1% and 11.7% respectively. However, new listings increased 2.9%.

Appreciation

The area's average sale price for the last twelve months ending in April 2006 was $296,600–up 16.8% from the $254,000 average for the twelve months prior. Using the same date range to compare median sale price we see a 17.9% appreciation rate ($249,900 v. $211,900).

Affordability

At the end of the first quarter of 2006, a family bringing home the area's median income ($66,900 according to HUD) made 7% more money than necessary to afford the area's median-priced home ($262,000), based on a NAR formula. The formula requires a 20% down payment and a 30-year-fixed-rate mortgage at Freddie Mac's reported 6.32%.

Cost of Residential[1] Homes in the Portland Metro Area
April 2006

Area	April 2006 Average Sales Price	Year-to-Date For Period Ending April 2006		Average Price Appreciation[2]
		Average Sales Price	Median Sale Price	
Portland Metro Area				
Includes these counties in Oregon: Clackamas, Columbia, Multnomah, Washington, & Yamhill	$325,000	$309,500	$260,000	16.8%
Portland				
North	$259,800	$244,500	$234,000	21.6%
Northeast	304,900	294,800	255,000	17.7%
Southeast	272,200	254,400	225,500	17.0%
West (Includes SW and NW Portland and parts of eastern Washington County)	468,500	433,600	359,000	14.4%
Portland Metro Suburban Areas				
Corbett, Gresham, Sandy, Troutdale	$254,000	$249,900	$239,000	14.7%
Clackamas, Milwaukie, Gladstone, Sunnyside	352,200	340,500	297,000	21.4%
Canby, Beavercreek, Molalla, Mulino, Oregon City	332,100	315,600	279,500	18.7%
Lake Oswego and West Linn	495,400	496,900	433,500	13.7%
Northwest Washington County & Sauvie Island	413,600	374,500	335,000	13.6%
Beaverton and Aloha	277,300	273,300	247,000	14.8%
Tigard, Tualatin, Sherwood, Wilsonville	379,300	355,600	315,000	27.5%
Hillsboro and Forest Grove	279,400	271,000	245,000	19.2%
Mt. Hood: Brightwood, Government Camp, Rhododendron, Welches, Wemme, ZigZag	277,500	285,200	278,200	33.5%
Columbia County	233,700	221,100	199,900	17.2%
Yamhill County	235,800	239,600	215,000	20.2%
Marion and Polk Counties	236,100	214,800	188,400	22.3%
North Coastal Counties	292,900	311,100	245,000	18.4%
Southwest Washington State				
Clark County (Battleground, Camas, Ridgefield, Vancouver, Woodland, etc.)	$294,500	$290,800	$250,600	18.4%

[1] Residential includes detached single-family homes, condos, townhomes, manufactured homes, and multi-family (e.g., duplexes, triplexes, etc.) homes when one of the units is sold.
[2] Appreciation percents based on a comparison of average price for the last 12 months (5/1/05-4/30/06) with 12 months before (5/1/04-4/30/05). The average price was $296,600 vs. $254,000.

Source: Regional Market Listing Service (RMLS™).

Inflation Fears Push Rates Upward

June 1, 2006

Freddie Mac released the results of its Primary Mortgage Market Survey (PMMSSM) in which the 30-year fixed-rate mortgage (FRM) averaged 6.67 percent, with an average 0.4 point, for the week ending June 1, 2006, up from last week's average of 6.62 percent. Last year at this time, the 30-year FRM averaged 5.62 percent. The 30-year FRM has not been higher since the week ending June 13, 2002, when it averaged 6.71 percent.

The average for the 15-year FRM this week is 6.26 percent, with an average 0.4 point, up from last week's average of 6.23 percent. A year ago, the 15-year FRM averaged 5.20 percent. The 15-year FRM has not been higher since the week ending May 24, 2002, when it averaged 6.28 percent.

Five-year Treasury-indexed hybrid adjustable-rate mortgages (ARMs) averaged 6.26 percent this week, with an average 0.5 point, up from last week when it averaged 6.21 percent. A year ago, the five-year ARM averaged 5.10 percent.

One-year Treasury-indexed ARMs averaged 5.68 percent this week, with an average 0.7 point, up from last week when it averaged 5.61 percent. At this time last year, the one-year ARM averaged 4.26 percent. The 1-year ARM has not been higher since the week ending August 17, 2001, when it averaged 5.71 percent.

(Average commitment rates should be reported along with average fees and points to reflect the total cost of obtaining the mortgage.)

Freddie Mac Economist

"The Fed released the minutes of its most recent FOMC meeting, which showed that some members were concerned about inflationary pressure. This caused the bond market yields to rise, and brought about market speculation that the Fed may hike rates sooner than had been expected," said Frank Nothaft, Freddie Mac vice president and chief economist. "All this combined to nudge rates up again this week.

"Higher mortgage rates will coincide with a cooling housing market. Although our forecast is for slightly higher rates, the rise will be gradual and orderly over the year."

Portland Area Mortgage Rates

The average APR for a 30-year fixed rate mortgage was 6.36% for the Portland metro area; the low was 5.780%, and the high was 7.120%. All rates are for a loan with 20% down. In late May the following lenders and mortgage brokers were offering these rates:

- The Money Store: Rate of 6.250 for a 30-year FRM (APR of 6.325%) and zero points.
- Mortgage Capital Associates: Rate of 6.250 for a 30-year FRM (APR of 6.331%) and zero points.

To check on more Portland metro area mortgage rates visit the website for Yahoo! Finance.

Recommended Mortgage Solutions

- Windermere Mortgage Services Telephone: (503) 464-9215 or (800) 867-1337. Office: 636 NW 21st Avenue, Portland, OR 97209. Ms. Bertha Ferran is the contact.
- Washington Mutual One of the largest home mortgage lenders in the Pacific Northwest with numerous offices in the Portland area.

Portland Weather

May 2006: Summer Then Back to Spring

The first weeks of May were a continuation of April – warm sunny days. We set some records for warm days with highs in the 80s and even 90s. Portlanders know that eventually things will even out so we take advantage of these days for hiking, biking, and sunbathing. Sure enough, the last ten days or so of May brought us rain. We had a series of thunderstorms with flashes of lighting.

Water Year (Oct 1 - Sep 30)	Average Precipitation In Inches	Actual Precipitation in Inches	Water Year
Year-to-Date	32.18	37.37	
October	2.88	3.38	Portland's rainfall is measured according to the "water year" which is from October 1 through the end of September. The average precipitation is about 37-38 inches in the metro area. Precipitation is measured from the NOAA Weather Station near the Portland International Airport.
November	5.61	4.98	
December	5.71	7.52	
January	5.07	10.92	
February	4.18	2.15	
March	3.71	2.96	
April	2.64	2.46	
May	2.38	3.00	
June	1.59		
July	0.70		
August	0.89		
September	1.65		
Year Average	37.07		

Here is the National Weather Service data for the month of May 2006:

- Average Monthly Temperature: 59.8 or 2.7 degrees above normal.
- Average Maximum Temperature: 70.2.
- Average Minimum Temperature: 49.3.
- Highest Temperature: May 15 with 93.
- Average Monthly Wind Speed: 6.8 MPH.
- Clear/Cloudy Days: 8 clear day, 10 partly cloudy days, and 13 cloudy days.
- Greatest 24 hour Rainfall: May 21-22 with .98 inches.

Oregon People: Steve Prefontaine

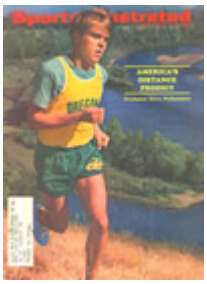
In late May, the Prefontaine Classic (track and field) took place at the University of Oregon in Eugene. The event is regarded as the biggest annual track meet in the United States. The Classic renews our memory of one of Oregon's most beloved personalities, Steve Prefontaine, and also of the passion for track and field in the state. Track and field is really an individual sport, unlike team sports such a baseball, basketball, and football; so Oregonians' love of this solitude sport reflects the individualism of Oregonians. Where else in the country would over 13,000 people stand shoulder to shoulder to watch some of the best track and field athletics in the world as they did on May 28, 2006 at Eugene. Oregon.

Writer Mark Mathabane (author of the best-selling novel *Kaffir Boy*) has lived in Portland for six years, but he articulates the affinity that many people in Oregon have for the sport of track and field. Mark sums it up well in a story about the event (*The Oregonian*, May 26, 2006). "Running in Oregon is very Homeric," Mathabane said. "It's a heroic tale, full of trials and tragedy. It is truly epic."

Who was Steve Prefontaine

Born on January 25, 1951, Steve Prefontaine was raised in Coos Bay, Oregon by his father, Raymond, a carpenter, and his mother, Elfriede, a seamstress. He set records in track from the beginning of his running career at Marshfield High School and went on to run at the University of Oregon under noted track coach, Bill Bowerman. Pre died in an auto accident on Skyline Boulevard in Eugene on May 30, 1975.

Winner of Four Consecutive NCAA Titles



Prefontaine was the first athlete to win four consecutive NCAA titles in the same event, the 5,000 meters. In 1972, he won a spot on the U.S. Olympic team, barely missing a medal to come in fourth in Munich. By the time of his death, Prefontaine held the American record in every event (eight records) from 2,000 to 10,000 meters.

In addition to his outstanding athletic performances, he was admired for his enthusiasm, determination, and charisma. He never lost a meet at the University of Oregon's Hayward Field, and thousands of loyal fans would gather and chant "Pre, Pre, Pre," as he competed. Prefontaine made the cover of *Sports Illustrated* magazine at the age of 19 and was known for the passion and confidence he brought to his sport. Not a tactical runner, Prefontaine ran hard from the start, at least partially relying on an extremely high threshold of pain.

Oregon Events: Biggest Disaster

While certainly not a "fun" fact, it is worth noting that in 1903 the north central/east town of Heppner was devastated by the most deadly natural disaster in the Oregon's recorded history. A very strong thunderstorm precipitated a severe flash flood along Willow Creek, normally a quiet stream running through the town. The storm caused a 40 foot wall of water to sweep away much of the town in just a few minutes. The disaster left 247 people dead and one-third of the town's structures destroyed.

Heppner Resident Races Nine Miles on His Horse to Save 500

Leslie Matlock, a Heppner resident who was able to escape the flood, heroically jumped on a horse and raced ahead of the rampaging waters to the neighboring town of Lexington, nine miles to the northwest. His warnings to the town's 500 residents to "head for the hills" saved them. By the time the flood passed, only two houses in Lexington were still standing.

Morrow County

Heppner is located in Oregon's Morrow County (north central/east Oregon) where three creeks merge with the much larger Willow Creek. Willow Creek flows north for approximately 70 miles from its source in the Blue Mountains to its confluence with the Columbia River upstream of the town of Arlington, Oregon.

Early cattlemen found an abundance of rye grass along the creek bottoms of the region and drove their herds into the area to forage on these natural pastures. They established cattle camps and from them grew the county's first settlements. Stock raising was the primary economic force in the county for many years. Increased settlement, the enclosure of the free grazing lands and diminished pastures due to overgrazing, resulted in the decline of ranching during this century. Farming and other agricultural pursuits became predominant. The completion of rail lines into the county in 1883 increased access to markets and encouraged wheat production in the area.

Ethanol 101

This month the San Francisco-based research company SustainLane.com named Portland the most sustainable city in the U.S. When gas prices began their steep ascent, the organization called Portland one of the ten cities best equipped to weather an oil crisis (mostly owing to the public transportation systems).

Even with public transportation, we will still need fuel to survive as a city. Ethanol, as well as other alternative fuels, is relevant to where we live and to the kind of home we live in. Our public transportation system is accessible (within walking distance) to a small percentage of Portlanders so many will still have to drive to the rail stations and bus stops. Plus, many of us use our vehicles as part of our job. Without fuel, we will all have to live in rural areas and survive off the land using horses and mules like popular author James Howard Kunstler writes about. And there goes my real estate career!

The media is full of ethanol stories the last few months and most of them tout the benefits of corn-produced ethanol. Many of the stories give the picture that corn-produced ethanol will let us continue driving vehicles that get low MPG - they give the impression that we can continue on our "merry way." Looking at the evidence, we have reservations about the effectiveness of using corn to produce ethanol for the simple reason it takes too much energy (fuel) to produce ethanol.

A Sense of Urgency

In the past months, the war in Iraq, an oil refinery fire, and drilling rig shutdowns in the Gulf caused by hurricanes--not to mention mounting worries over global warming--have all contributed to a sense of urgency to revamp the way America's vehicles run. Rising oil prices are leading skeptics to take another look at formerly ignored alternative automotive fuels. Ethanol is getting the most attention--but interest is growing in methanol and even leftover French fry oil for use in diesel engines. In addition to these biofuels, research continues into electricity and natural gas as vehicle power sources. Department of Energy (DOE) policy calls for eventually making a transition to a hydrogen-based economy.

We need to remove ourselves from the grip of petrol producing countries and create a long-term alternative to petroleum. Plus we are face with a diminishing supply of oil – see www.peakoil.org.

Some Numbers to Guide You

According to the Department of Energy (DOE), the United States currently uses nearly 20 million barrels of oil a day, importing 55 percent of it. Here is another DOE number: The average American driver uses 464 gallons of gasoline a year and there are 198 million drivers in the United States.

Measuring the Energy of Fuels To provide a common measure for the energy values of different fuels, engineers use the British thermal unit, or B.T.U., which is the amount of heat needed to raise the temperature of a pound of water by one degree Fahrenheit. The Department of Energy gives a definition that is a bit less abstract: a B.T.U. is the approximate amount of energy released by striking a match. Gasoline has about 115,000 B.T.U.'s per gallon depending on the season and the refinery, according to the Argonne National Laboratory, a federal science and engineering lab in Illinois.

If our choice for a petrol alternative is ethanol, much of our croplands will have to be converted from food production. This could mean we would have to import a considerable amount of our food. We would be feeding our cars at the price of our stomachs.

The booming ethanol industry will consume 20 percent of this year's U.S. corn crop, the government forecast in mid-May, 2006, and soy-based biodiesel also is taking off. Biofuels will bolster corn and soybean prices, the Agriculture Department said in its first look at this year's crop harvest.

- Some 2.15 billion bushels of this year's corn crop were projected to go to ethanol plants, up 34 percent from the 1.6 billion bushels now being used yearly.
- USDA projected 2.3 billion pounds of soyoil would be used in biodiesel in the year beginning September 1, up 1.1 billion pounds from this year.

The Process of Making Ethanol

Ethanol is a fuel that is produced from renewable sources. At its most basic, ethanol is grain alcohol, produced from crops such as corn and sugar cane. Other crops such as, barley, wheat, rice, sorghum, sunflower, potatoes, cassava, molasses, and sugar beets can also be used to produce ethanol. Since alcohol is created by fermenting sugar, sugar crops are the easiest to convert into alcohol. Brazil, the world's largest ethanol producer, makes its ethanol this way.

Ethanol for fuel is made with the same process that produces moonshine. Grain is crushed, fermented a few days, and distilled to remove water. Only the starch portion of the corn, which is about 70% of the kernel, is made into ethanol. The remaining portion is left over in the form of a co-product called distillers grain. This is a highly nutritious animal feed that contains all the remaining fats, oils, and proteins after the starch is taken out and converted to ethanol.

Three Blends of Ethanol

Pure 100% ethanol is not generally used as a motor fuel; instead, a percentage of ethanol is combined with unleaded gasoline. Any amount of ethanol can be combined with gasoline, but the three most common blends according to an article in the May 2006 issue of Popular Mechanics entitled *The Truth About Biofuels*:

- **E10** 10% ethanol and 90% unleaded gasoline. Runs on all vehicles. E10 is approved for use in any make or model of vehicle sold in the U.S. Many automakers recommend its use because of its high performance, clean-burning characteristics. In 2004, about one-third of America's gasoline was blended with ethanol, mostly E10. E10 is not considered an alternative fuel under EPAct regulations.
- **E85/Ethanol** 85% ethanol and 15% unleaded gasoline. Runs only on flex fuel vehicles. E85 is often referred to as grain alcohol. A gallon of E85 has an energy content of about 80,000 BTU, compared to gasoline's 124,800 BTU. So about 1.56 gallon of E85 takes you as far as one gallon of gas. The Renewable Fuels Association claims that 6.3 billion gallons of ethanol will be produced by 2007 – this still represents just three percent of our annual consumption of gasoline and diesel.
- **M85/Methanol** Methanol is methyl alcohol, commonly called wood alcohol; M85 is a blend of 85 percent methanol and 15 percent gasoline. Methanol is a potent fuel with an octane rating of 100 that allows for higher compression and greater efficiency than gasoline but it has only 51 percent of the BTU content of gasoline by volume, which means its fuel economy is worse than ethanol's. Virtually all methanol produced in the States uses methane derived from natural gas. Methane also can be obtained from coal and from biogas, which is generated by fermenting organic matter--including byproducts of sewage and manure. The future of M85 is cloudy.

How Your Vehicle Works with Ethanol Ethanol has been used in cars since Henry Ford designed his 1908 Model T to operate on alcohol. Since the 1980s, all automakers have covered the use of up to 10% ethanol under warranty, and no engine modifications are necessary to use E10.

A gallon of ethanol has only about two-thirds as much energy as a gallon of gasoline. Because fuel for cars is sold by the gallon - by volume and not by energy content - an engine needs to burn more of a lower-energy fuel to do the same work. It takes 1.5 times the amount of ethanol to produce the same energy as gasoline. Gasohol, which is 10 percent ethanol and 90 percent unleaded regular (and the highest level of alcohol that regular cars will tolerate), has about three percent less energy, because ten percent of the volume has one-third fewer BTU's.

Until recently, drivers paid little attention to such calculations. But with the price of oil in the $70 plus a barrel, there is new interest in alternative fuels. The differences in energy content, and thus mileage, can be readily measured, as reflected in the fuel economy ratings listed by the federal Environmental Protection Agency for flexible-fuel cars and trucks.

For example, a 2006 Dodge Ram pickup with a 4.7-liter flexible-fuel V-8 engine will return 12 miles a gallon in the city and 15 on the highway using gasoline, according to the E.P.A. On E85 ethanol, the economy drops to 9 m.p.g. in town and 11 on the highway. Ethanol would have to be about 25 percent cheaper than gasoline - this has not been the case recently - for the dollars-per-mile costs to be equal.

One benefit is that ethanol can be used instead of methyl tertiary-butyl ether (MTBE), which pollutes groundwater quality. MTBE is almost exclusively used as a fuel additive in motor gasoline - it is one of a group of chemicals commonly known as "oxygenates" because they raise the oxygen content of gasoline.

The Case for Ethanol

Ethanol is a clean-burning fuel that could potentially provide more horsepower than gasoline. Ethanol has a higher octane rating (over 100) and burns cooler than gasoline.

According to the National Ethanol Vehicle Coalition (NEVC), E85 currently is available in 36 states. The Environmental Protection Agency (EPA) lists 34 models of flex-fuel vehicles (FFV)--cars and trucks that can burn pure gasoline, E85 or any ratio of gas/ethanol in between--available in the 2006 model year. The NEVC estimates that six million FFVs have been sold in the States to date.

The performance of E85 vehicles is potentially higher than that of gasoline vehicles because E85's high octane rating allows a much higher compression ratio, which translates into higher thermodynamic efficiency. However, FFVs that retain the capacity to run on gasoline alone can't really take advantage of this octane boost since they also need to be able to run on pump-grade gasoline.

DOE says that the growing, fermenting, and distillation chain actually results in a surplus of energy that ranges from 34 to 66 percent. Moreover, the carbon dioxide (CO2) that an engine produces started out as atmospheric CO2 that the cornstalk captured during growth, making ethanol greenhouse gas neutral. Recent DOE studies note that using ethanol in blends lowers carbon monoxide (CO) and CO2 emissions substantially. In 2005, burning such blends had the same effect on greenhouse gas emissions as removing 1 million cars from American roads.

On the negative side, alcohol is a corrosive solvent. Anything exposed to ethanol must be made of corrosion-resistant (and expensive) stainless steel or plastic--from fuel-injection components to the tanks, pumps and hoses that dispense E85, as well as the tankers that deliver it. Existing pipelines cannot be used to transport ethanol.

The Energy Yield

Energy yield is the amount of the alternative fuel (i.e., ethanol) that is produced when burning up a unit of energy (usually a fossil fuel) that is used to produced the alternative fuel. This ratio is called the energy output/input ratio. If the ratio is small, it doesn't yield much of a return. Studies on corn show a return of 1.3 to 1.67. The U.S. Department of Agriculture study by Hosein Shapouri (indicating that corn ethanol has an energy output/input ratio of 1.67) is cited by pro-corn sources. Another study by Cornell University and the University of California-Berkeley concluded that there is just no energy benefit to using plant biomass for liquid fuel. The author of the study, David Pimentel, professor of ecology and agriculture at Cornell, says, "These strategies are not sustainable." Read the Pimentel study by click here.

In Brazil, the energy output/input ratio is over 8 to 1 using sugar cane. One major reason is that the bagasse, that is the fiber portion of the sugar cane, comes along with the cane to the sugar mill and is used to provide all the energy needed by the mill and the ethanol refinery

The important thing to remember is that the productivity of Brazil's ethanol producers has steadily increased. In 1975, Brazil squeezed 2,000 liters, or about 520 gallons, of ethanol from a hectare, or nearly 2.5 acres, of sugar cane. Today, it's nearly 6,000 liters (close to 1,600 gallons). It took 30 years to get this kind of result. Perhaps over time, corn will yield better results.

Sugar cane is grown in hot, wet tropical countries but there are a whole host of such countries available, in the Caribbean and the northern reaches of South America. A small amount of sugar cane is grown in the USA - mainly in Florida, California, Louisiana, Hawaii and Texas.

Ethanol yields per acre for sugar beets are roughly double those for American corn. Sugar beets are grown extensively in the Red River Valley along the border of Minnesota and North Dakota.

The Case Against Corn

Growing corn is an intensive process that requires pesticides, fertilizer, heavy equipment, and transport. When considering the viability of ethanol, the total impact of all that activity needs to be taken into account.

While the Government's commitment to ethanol has been welcomed by agricultural interests and the ethanol industry, critics question the rationale behind policies that promote ethanol for energy security benefits, often citing that corn ethanol has a low energy value. That is, the liquid fuel and other energy sources required to grow and convert corn into ethanol may be greater that the energy value present in the ethanol fuel. This implies that corn ethanol is not an energy substitute and that increasing its production does little to displace oil imports and increase energy security.

Here are some figures to digest. One acre of corn can produce 300 gallons of ethanol per growing season. So, in order to replace the 200 billion gallons of petroleum products, American farmers would need to dedicate 675 million acres, or 71 percent of the nation's 938 million acres of farmland, to growing feedstock. Clearly, ethanol alone won't kick our fossil fuel dependence--unless we want to replace our oil imports with food imports.

The Politics of Corn

The tax on ethanol is 54 plus cents a gallon for imports thanks to the Iowa corn farmers (along with Illinois, Nebraska, Indiana, etc.) lobby in Washington. Companies engaged in agriculture are also well represented by lobbyists. We could obtain ethanol from Brazil (at least temporarily) at a real bargain if the tax were eliminated. This was proposed in Congress recently, but the idea was quickly quashed by Midwestern congressional members.

Present law provides for a partial federal excise tax exemption of 51 cents per gallon for ethanol blended into gasoline. For example, fuel blended with 10 percent ethanol receives a tax credit of 5.1 cents per gallon. E-85 receives a 43-cent-per-gallon credit. Petroleum blenders – not corn farmers – receive this tax credit. The largest blender is ADM, Inc and they claim about one-fourth of U.S. ethanol capacity. The Volumetric Ethanol Excise Tax Credit (VEETC) legislation passed in 2004 extends the effective date of the tax credit through 2010.

The Associated Press reported this story about Archer Daniel Midland (ADM) in late May 2006:

> ADM has seen a sharp run-up in its stock price, partly due to investors looking for ways to get in on the ethanol boom. Its shares reached an all-time high of $46.71 last Thursday. It was trading in the $18-$19 range a year ago. About 5 percent of its revenue comes from ethanol, and it's aiming to boost annual production to 1.5 billion gallons, up from its current 1 billion. And in what's been widely seen as a sign of the importance of ethanol in ADM's future, ADM went to the oil industry for its newest leader. Last month it hired Patricia Woertz, a former executive vice president at Chevron Corp., as its CEO and president.

Ethanol Plants

The photograph is an ethanol plant on the outskirts of Garnett, Kansas. This distillation plant is part of the nation's energy future: It is East Kansas Agri-Energy's ethanol facility, one of 100 or so such heartland garrisons in America's slowly gathering battle to reduce its dependence on fossil fuels. The plant processes about 13 million bushels of corn to produce approximately 36 million gallons of ethanol a year. Experts say that's enough high-quality motor fuel to replace 55,000 barrels of imported petroleum.

There are nearly 97 ethanol plants in the United States with a capacity of 4.5 billion gallons a year. There are 44 projects under way that will add 1.4 billion gallons of capacity this year, says an industry trade group. Production in 2005 totaled 3.9 billion gallons.

The Ethanol Renewable Fuels Association Web site states that "Countries covered under the Caribbean Basin Initiative (CBI) can import ethanol with no local feedstock requirements into the U.S. duty free up to 7% of U.S. demand. The U.S. International Trade Commission recently determined the cap on these duty free imports is 240.4 million gallons for fiscal year 2005 (Oct. 2004 to Sept. 2005). Additional duty free imports from CBI countries are allowed if the ethanol is produced for CBI feedstocks. Approximately 70 million gallons of CBI ethanol was imported to the U.S. in 2004."

Ethanol Plant Cost The cost varies widely depending upon the production desired. Costs go from $25 million to over $200 million – much cheaper than a petroleum distiller. Production varies from just over 20 million gallons a year to well into the 50 millions. For example, Adkins Energy Cooperative, located near Lena, Ill, was formed with 349 members made up of producers and local investors from twelve counties in Southern Wisconsin and Northern Illinois. The 40 million gallon facility created 70 new jobs and utilize more than 11 million bushels of corn each year. The plant cost $63 million to build and production started in July 2002.

Oregon Ethanol Plants Construction is slated to begin in June on two ethanol plants in Oregon - a $192 million plant near the Clatskanie on the Columbia River and a $50 million plant in Boardman. "We believe that by early 2007, we're going to be producing at a rate of 6.5 billion gallons a year," said Collins, requiring 2.15 billion bushels of corn.

The Brazil Ethanol Story: 30 Years in the Making

At the fuel pumps in São Paulo, customers have a choice: gas or alcohol? Since the mid-1970s, Brazil has worked to replace imported gasoline with ethanol. Today ethanol accounts for 40 percent of the fuel sold in Brazil. Brazil led world ethanol production in 2004, distilling 4 billion gallons (15 billion liters).

The country's use of gasoline has actually declined since the late 1970s when they embarked on a much criticized energy policy. The two key factors in Brazil: Their production of Flex Fuel Vehicles (FFV as 70-80 percent of the vehicles are FFVs) and getting a 1 to 8 plus energy return on the sugar cane.

See this Web site for more information: http://yaleglobal.yale.edu/display.article?id=6817. This story is extremely interesting.

Cellulose Ethanol

In the near future we will extract sugars from the planet's most abundant and potentially lowest cost living material: cellulose. Cellulose materials include fast growing trees, grasses, corn stalks, wheat straw, waste paper, seaweed and many other kinds of plants. It is difficult to break down cellulose to convert it into usable sugars for ethanol production. Yet, making ethanol from cellulose dramatically expands the types and amount of available material for ethanol production. Currently, Iogen Corporation in Ottawa, Canada, produces just over a million gallons annually of cellulose ethanol from wheat, oat and barley straw in their demonstration facility. Their Web site claims that they are ready to go into commercial production.

Popular Mechanics: How Far Can You Drive on a Bushel of Corn?

The May 2006 issue of Popular Mechanics reported on tests it conducted driving from New York to California. It takes five barrels of crude oil to produce enough gasoline (nearly 97 gallons) to power a Honda Civic from New York to California. So how do the alternative fuels that may gradually reduce America's dependence on foreign oil stack up against the mileage and convenience of the filling-station stalwart?

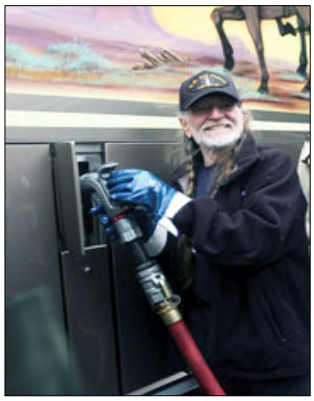
The results in the cover article by Mike Allen are intriguing and surprising. Here are the costs for seven different fuels:

- The cheapest fuel was electricity. About one ton of coal would be needed to produce the requisite energy. Cost to drive coast to coast: $60.
- Using compressed natural gas would set a driver back $110.
- Biodiesel, made of used vegetable oil in the magazine's example, would cost $231.
- Gasoline figured in the middle of the pack. It would take 4.5 barrels of crude oil to produce the 91 gallons of gasoline necessary to get a Honda Civic coast to coast. The cost would be $213.

- On the high end were E85/ethanol, a mixture of 85 percent ethanol and 15 percent gasoline, at $425.
- M85/methanol, 85 percent methanol and 15 percent gasoline, at $619.
- And then there was hydrogen. It would require 16,000 cubic feet of hydrogen to power General Motors' Hy-wire concept car: $804.

You can view a comparison chart at http://media.popularmechanics.com/documents/Fuel_of_the_Future-e852.pdf

Biodiesel



When Willie Nelson heads out on tour, he fuels his bus with BioWillie, his own brand of biodiesel. Photo by Paul Natkin – AP.

Biodiesel is a renewable fuel produced from vegetable oils or animal fats. Renewable feed stocks include soybeans, canola, cotton seed, mustard seed, tallow, rape seed, sunflower seed, and restaurant grease. Biodiesel is used in place of petroleum based-diesel fuel. Most diesel cars require no modifications to the fuel system to run on biodiesel.

Biodiesel begins as a vegetable based oil. The oil is chemically transformed into methyl esters (biodiesel) and glycerin (a byproduct). The chemical process is known as transesterfication. Biodiesel can be made from new oil, but the biodiesel is usually made from used oil from a local restaurant.

Biodiesel can be blended in any amount with petroleum based diesel fuel. B100 is the name for pure biodiesel, whereas B20 contains only 20% biodiesel and B10 only 10% biodiesel. Like petroleum based diesel fuel, biodiesel will need additives to keep it from "gelling" in extreme cold weather.

The National Biodiesel Board says 45 U.S. plants brewed 75 million gallons of biodiesel in 2005, three times as much as in 2004. And 2006 production is on track to double 2005, according to the board's figures. More than 55 new plants are planned, including a 100-million-gallon-a-year facility just announced to be built near Aberdeen, Washington.

Diesel fuel delivers far more miles per gallon and in recent months has sold for nearly the same price as gasoline. From the consumer's point of view, the math is simple: diesel delivers more miles per dollar – diesel vehicles can go about one-third farther on a gallon. Diesel has more B.T.U.'s per gallon than gasoline, about 128,000 (gasoline has 115,000 B.T.U.s).

But on a global basis the gain is not as great as it might seem. That is because fewer gallons of diesel fuel than of gasoline can be produced from a barrel of crude oil.

Events

For a complete schedule of events in the Portland metro area, visit the Portland Oregon Visitors Association (POVA), Web site at http://www.pova.com/event_calendar.

Everything's Coming up Roses (and dragons)

Portland comes up roses each June with the Portland Rose Festival. Celebrate 99 years of tradition and family fun this year at the Waterfront Village, June 1-11; Fireworks Spectacular, June 2; Grand Floral Parade, June 10; Fleet Week, June 7-11; Dragon Boat Races, June 10-11; Champ Car Grand Prix, June 16-18; Portland Arts Festival, June 16-18 and much, much more! Telephone: 503.227.2681.

Anchors Away

Portland's myriad river excursions offer maritime delights for every palate. Whether fast-paced or slow, wet or dry, there's something for everyone. Here are just a few ideas we think you'll enjoy:

- Willamette Jetboat Excursions
- Portland Spirit
- Outrageous Jetboat
- Sternwheeler Columbia Gorge
- Sternwheeler Rose
- Oregon City's Belle of the Falls excursion boat.

For a dockside maritime experience, visit the Oregon Maritime Museum.

Waterfront Blues Festival

Five jam-packed days of music feature more than 100 top blues and zydeco bands on four stages on the banks of the beautiful Willamette River. Blues Fest performers include Dr. John (pictured), Irma Thomas, Little Feat and others. June 30-July 4. Fireworks light up the sky on the 4th. Telephone: 503.793.FEST.

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