

# MADISON'S LUMBER REPORTER

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## News & Updates

### Tembec Mill Strike

Tembec ceased production at its lumber mill in Temiscaming, QC, Thursday after workers went on strike late Wednesday. The Quebec-based pulp, paper, and lumber producer says 650 unionized employees of Unifor local 233 have walked off the job at the facility.

An additional 200 workers employed at the mill are not unionized.

The union and the company have been in negotiations since August 2014, according to Canadian Press. Their four-year collective agreement expired on September 30.

The company also said the closure will delay the installation of a boiler and turbine at the mill, which was expected to be completed by mid-December.

Local president Roger Gauthier told BayToday late Wednesday that the company refused to negotiate in good faith. BayToday's attempts to contact the company spokesperson were unsuccessful.

A vote last Wednesday saw 94 per cent reject the latest company offer.

Tembec is a manufacturer of forest products with operations in Canada and France. It employs approximately 3,500 employees and has annual sales of approximately \$1.6 billion.

### Canada Producer Price, Raw Materials Index: Oct 2014

The Industrial Product Price Index in Canada decreased 0.5 per cent in October, mainly due to lower prices for energy and petroleum products, said Statistics Canada Friday. The Raw Materials Price Index declined 4.3 per cent in October, largely as a result of lower prices for crude energy products.

The IPPI declined 0.5 per cent in October after decreasing 0.3 per cent in September. Of the 21 major commodity groups, 12 were up, 4 were down and 5 were unchanged.

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### Producer Price Index, US: Oct 2014

US producer prices unexpectedly rose in October, but the underlying trend continued to point to a benign inflation environment that could bolster the Federal Reserve's resolve to keep interest rates very low a bit longer.

The US Labour Department said November 18 that its producer price index increased 0.2 per cent, driven by a jump in prices for services, after slipping 0.1 per cent in September. However, the so-called core PPI, which excludes food, energy and trade services, edged up only 0.1 per cent after dipping 0.1 per cent in the prior month.

October saw the annual introduction of prices for new motor vehicle models, which can cause volatility in the series.

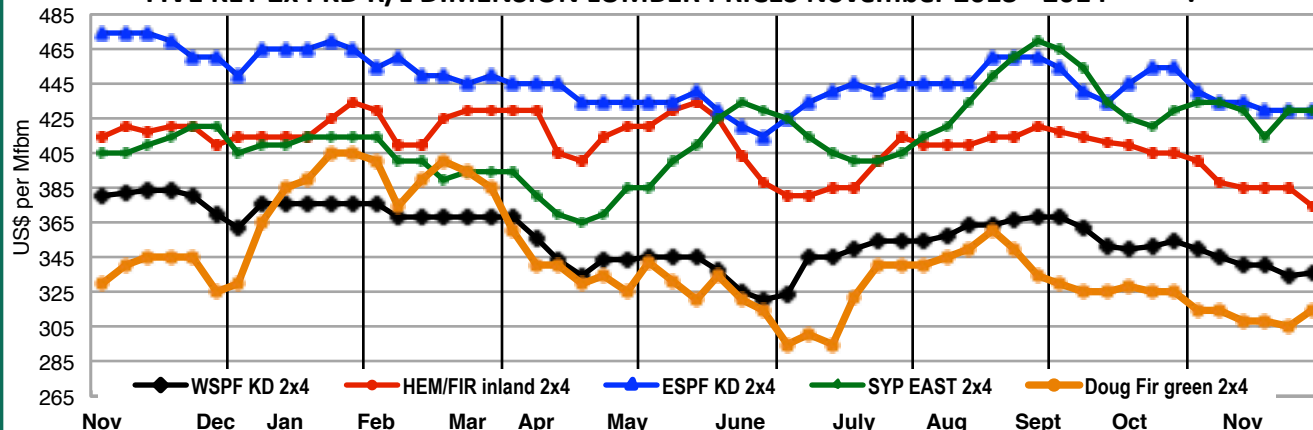
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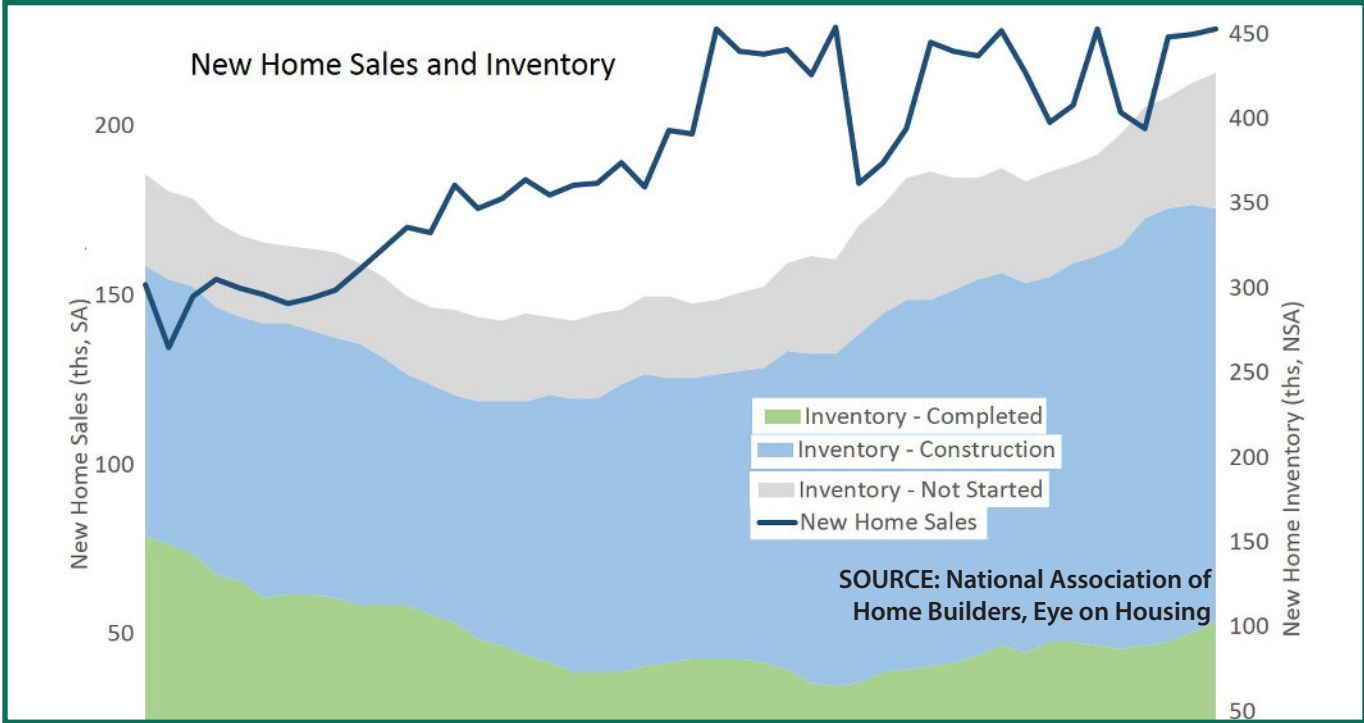
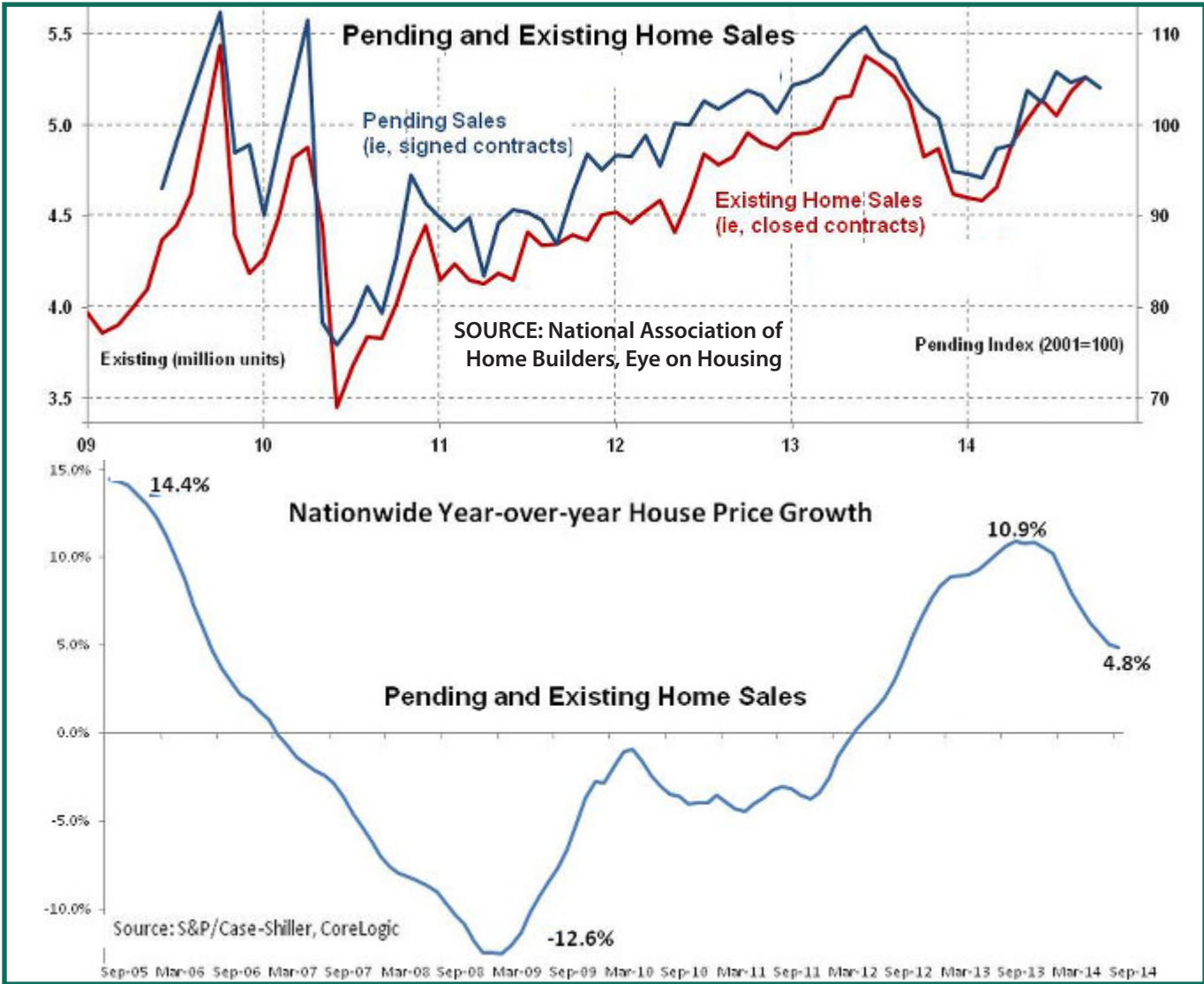
### Biomass Fuel from Cellulose

Belgian researchers announced this week, in the journal Energy & Environmental Science, they have developed a method that allows turning sawdust into building blocks for gasoline that could be used as an additive in plastics or fuel.

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FIVE KEY 2x4 KD R/L DIMENSION LUMBER PRICES November 2013 - 2014







# Madison's Weekly Lumber Key Prices Table

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	This Week	Last Week	Change	Month Ago	Change	Year Ago	Change
Prices are in U.S. dollars per 1,000 fbm (net FOB mill)							
WSPF KD R/L 2x4	336	335	+1	345	-9	380	-44
WSPF KD R/L 2x6	345	345	0	362	-17	360	-15
WSPF KD R/L 2x8	342	342	0	358	-16	354	-12
WSPF KD R/L 2x10	360	363	-3	370	-10	454	-94
WSPF KD PET 2x4 Stud	355	355	0	350	+5	325	+30
WSPF KD PET 2x6 Stud	380	380	0	380	0	315	+65
Douglas Fir Green R/L 2x4	315	305	+10	315	0	345	-30
Douglas Fir Green R/L 2x10	402	405	-3	413	-11	545	-143
ESPF KD 2x4 8ft Stud	405	405	0	420	-15	375	+30
OSB Ontario 7/16" (CDN\$)	215	215	0	225	-10	230	-15
CSPLYwood Toronto 3/8" (CDN\$)	425	425	0	462	-37	386	+39

## Madison's Weekly Lumber News

### Producer Prices, Canada

CONT'D FROM PG 2 The decline in the IPPI was led by lower prices for energy and petroleum products, down 4.6 per cent, said Statistics Canada Friday. This was the largest decline for energy and petroleum products since June 2012. Motor gasoline dropped 7.2 per cent, and, to a lesser extent, light fuel oils, down 4.3 per cent and diesel fuel, down 3.3 per cent, were the main reasons for the decline in this commodity group.

Moderating the decline in the IPPI for October was higher prices for motorized and recreational vehicles, up 0.9 per cent.

For its part, the Raw Materials Price Index fell 4.3 per cent in October, following a 2.1 per cent decrease in September. It was the fourth consecutive monthly decline and the largest decrease in the index since the 4.4 per cent drop in June 2012. Of the six major commodity groups, two were down, three were up and one was unchanged.

The RMPI fell 2.3 per cent in the 12-month period ending in October,

after declining 1.3 per cent in September. On a year-over-year basis, it was the largest decrease in the index since November 2013.

Compared with the same month a year earlier, the decrease in the RMPI was almost entirely attributable to a 9.2 per cent drop in the prices of crude energy products.

The decrease in the RMPI over the 12-month period was moderated mainly by higher prices for animals and animal products, up 14.3 per cent, which have been trending upward on a year-over-year basis since April 2013.

### US Producer Price Index

CONT'D FROM PG 2 In the 12 months through October, US producer prices increased 1.5 per cent, the smallest advance since February, said the US Labour Department November 18. The core PPI, which covers about two-thirds of final demand, increased 1.6 per cent.

Last month, prices for services rose 0.5 per cent, the largest gain since July, 2013. That was largely due to an increase in margins at wholesalers and

retailers, which some economists said reflected an effort by producers to take advantage of the extra cash a drop in energy prices has left in consumers' wallets.

Energy prices fell 3.0 per cent in October, the fourth successive monthly decline.

Wholesale passenger car prices recorded their biggest gain in five years, while food prices increased for the first time in two months.

### Sawmill Fire

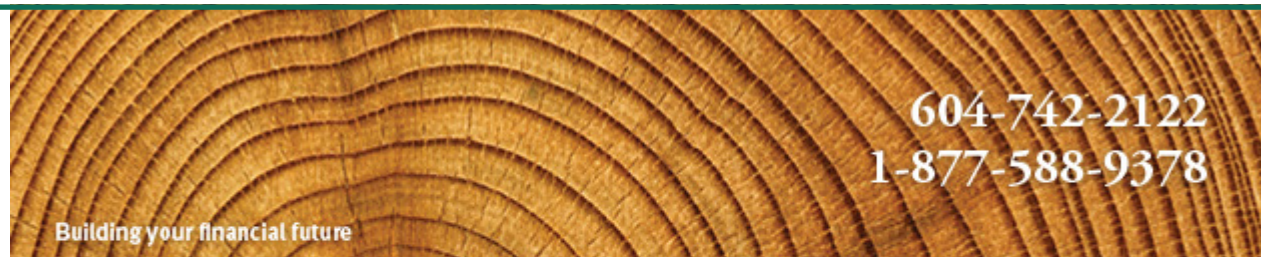
Several crews from a three different fire departments battled a fire at a New Waverly lumber yard in Texas overnight Saturday.

It happened at the Universal Forest Products plant on near State Highway 75. Investigators say a lumber kiln on the property was on fire.

Firefighters were able to contain the damage to the lumber kiln in about 90 minutes, and spare several adjacent buildings.

The lumber kiln was completely destroyed but nearby buildings only suffered minor heat damage.

There were no injuries.



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# Biomass Fuel

## Energy from Cellulose

The innovative chemical process modifies cellulose, present in non-edible plant matter such as wood, straw, grass, cotton, or paper, by removing oxygen bonded to its hydrocarbon chains while preserving the chains' structure.

There has also been recent progress in developing cellulosic nanomaterials from wood material, stiff and lightweight products from cellulose manipulated at the molecular level.

The development of commercial markets for cellulosic nanomaterials, tiny, naturally occurring structural building blocks, hold great promise for many products in electronics, construction, food, energy, health care,

automotive, aerospace, and defence. These products could include jet fuel, aerogels, oil drilling additives, paints, coatings, adhesives, cement, food additives, lightweight packaging materials, paper, health care products, tissue scaffolding, lightweight vehicle armour, space technology, and automotive parts.

The US Forest Service released a report last week "Cellulose Nanomaterials – A Path towards Commercialization" [link: [http://www.fpl.fs.fed.us/documnts/pdf2014/usforestservice\\_nih\\_2014\\_cellulose\\_nano\\_workshop\\_report.pdf](http://www.fpl.fs.fed.us/documnts/pdf2014/usforestservice_nih_2014_cellulose_nano_workshop_report.pdf)] out of a workshop it sponsored earlier this year. It will be very helpful to a wood products industry looking for ways to innovate develop new products and markets.

Back to Belgium, Bert Lagrain, from the Centre for Surface Chemistry and Catalysis at the Catholic University of Leuven, who led the sawdust research said, "This is a new type of bio-refining, and we currently have a patent pending for it. We have also built a chemical reactor in our lab: we feed sawdust collected from a sawmill into the reactor and add a catalyst – a substance that sets off and speeds the chemical reaction."

Cellulose is the main substance in plant matter. At the molecular level, cellulose contains strong carbon chains, the researchers wanted to conserve these chains

while at the same time dropping the oxygen bonded to them, which is undesirable in high-grade gasoline. With the right temperature and pressure, it takes about half a day to convert the cellulose in the wood shavings into saturated hydrocarbon chains.

The new method allows the researchers to create a petrochemical product using these wood shavings. That said, this is an intermediary product that still requires another step before it becomes fully-distilled gasoline. Yet it's an important step forward when it comes to creating sustainable fuel.

The team believes their invention would be particularly valuable for Europe, which doesn't have abundant resources of oil. The hydrocarbon chains could be added into gasoline, replacing a portion of the fossil fuel. Unlike conventional energy crops, cellulose doesn't compete for land use with food crops as it is basically a side product of any plant production.

The resulting product does not come out as fully-distilled gasoline, the intermediary product requires one last simple step to become fully-distilled gasoline, said Sels.

"Our product offers an intermediate solution for as long as our automobiles run on liquid gasoline. It can be used as a green additive, as a replacement for a portion of traditionally-refined gasoline," Sels said.

"The green hydrocarbon can also be used in the production of ethylene, propylene and benzene – the building blocks for plastic, rubber, insulation foam, nylon, coatings and so forth," Sels added.

"Essentially, the method allows us to make a 'petrochemical' product using biomass – thus bridging the worlds of bio-economics and petro chemistry," Sels' colleague Bert Lagrain said.

The material can also be used to make chemicals such as ethylene, propylene, and benzene – the building blocks for plastic, rubber, insulation foam or nylon.

The researchers are also excited about the potential of cellulose to replace other products currently derived from petroleum, and its general abundance and accessibility.

"From an economic standpoint, cellulose has much potential," said Sels. "Cellulose is available everywhere; it is essentially plant waste, meaning it does not compete with food crops."

"It also produces chains of 5 to 6 hydrocarbon atoms. We are currently facing shortages in this because it is becoming quite difficult and more expensive to distil these specific hydrocarbon chains from crude oil or shale gas.

Two phases are involved within the one container. Tungstosilicic acid in aqueous phase causes the cellulose to hydrolyse and dehydrate, after which hydrogenation creates the liquid alkanes, which are saturated hydrocarbons. The high yield consists of 82 per cent n-decane-soluble products, mainly hexanes, known as light nafta. There is only a small amount of charring and a low percentage of gaseous products. And the length of time this takes is a mere few hours. Although not instant, this is catalytic and therefore able to convert more and more cellulose to glucose, especially with gradual heating of the reaction.

The second phase consists of a Ru/C (ruthenium) catalyst that is hydrothermally modified (ie. tuned) to make it chemo-selectively suitable. More rapid hydrogenation of the correct substrate is therefore possible, while for the whole set of reactions, subsequent batches of softwood cellulose can be introduced. The liquid alkanes can then accumulate over several runs.

