The amount of crude oil and refined petroleum products moved by U.S. railroads increased 9% during the first seven months of this year compared with the same period in 2013. In July, monthly average carloadings of oil and petroleum products were near 16,000 carloads per week, according to the Association of American Railroads (AAR). The increase in oil volumes transported by rail reflects rising U.S. crude oil production, which reached an estimated 8.5 million barrels per day in June for the first time since July 1986.

AAR estimates that more than half of the nearly 460,000 carloads tracked in its petroleum and petroleum products category from January through July consisted of crude oil, up from around 3% in 2009. With the average rail tank car holding around 700 barrels of crude oil, about 759,000 barrels of crude oil per day were moved by rail during the first seven months of 2014, equal to 8% of U.S. oil production.

The Bakken Shale, primarily in North Dakota, has provided a significant share of the total increase in U.S. oil production over the past three years. North Dakota, now the second-largest oil producing state, provides nearly one out of every eight barrels of oil produced in the United States. Between 60% and 70% of the more than 1 million barrels per day of oil produced in the state has been transported to refineries by rail each month in the first half of 2014, according to the North Dakota Pipeline Authority.

In the future, proposed rules published in August by the U.S. Department of Transportation to improve the safety of tank cars will affect how crude oil is moved by rail, particularly trains that carry 20 or more carloads of oil. The proposed rules would require new oil tank cars constructed after October 2015 to have thicker steel and require retrofitting of existing tank cars. Voluntary actions by railroads in anticipation of the new rules have resulted in reduced speeds and increased inspections.
What's Happening in the Energy Office

**Washington Future Energy Conference**
November 5, 2014
Hilton Seattle Airport, 17620 International Blvd, Seattle WA
http://www.futureenergyconference.com/wa14

Now in its fifth year, the Washington Future Energy Conference is the state’s best clean energy event. Presented by NEBC and the Washington State Department of Commerce, this unique conference provides an unmatched forum for learning, networking, and business development. Join us in exploring the nexus of energy, climate change, and the state's economy, with educational tracks covering: Policy & Economic Development, the Business of Renewable Energy, the Business of Energy Efficiency, and Clean Transportation.

**Energy Independence Act—Advisory Opinion Process**

The Energy Independence Act provides a way for utilities and project developers to get answers on whether a renewable or conservation project is eligible to meet the law's targets. They may apply to Commerce for an advisory opinion, authorized by RCW 19.285.045. The final decision is made by the governing board of the public or cooperative utility that uses the resource for compliance.

Commerce issues the advisory opinion within 90 days after it receives a complete application. The process includes a legal analysis and opportunity for public comment. The application fee is $1,250, and complex applications may be charged for additional costs. Entities proposing to sell renewable energy or credits to an investor-owned utility may request a declaratory order from the Washington Utilities and Transportation Commission (UTC).

Commerce also issues advisory opinions for renewable projects that want a “Washington eligible” indicator on their renewable energy credits. For a list of pending applications or of those received with opinions issued, go to http://www.commerce.wa.gov/Programs/Energy/Office/EIA/Pages/EIA-Advisory-Opinions.aspx

**Spreading the Word on Solar**

Patti Miller-Crowley, of the State Energy Office at Commerce, will lead off a session called “Distributing Residential Solar” at the upcoming Western Planner Conference in Salt Lake City on September 30th. The conference provides an excellent opportunity to share planning and permitting tools and guidance that the NW Solar Communities project has produced.

The project between Washington, Oregon and our partnering local jurisdictions is working to make solar faster, more efficient, and cheaper through reducing delays, inconsistencies and “soft costs” associated with permitting and interconnection. The conference and session will also provide us with an opportunity to learn more about what other states are doing in the area of planning and permitting to help support the growing distributed solar industry as well as some of the challenges and controversies they face.

Providing models and tools that can be replicated elsewhere is a key goal of the DOE grant which funds this project. The other session presenters include a Salt Lake City planner who will discuss the impetus, and process that led to the solar ordinance they adopted two years ago and a representative of the Rocky Mountain Power Company, who will discuss this multi-state utility’s perspective and concerns.
Electricity, Petroleum & Natural Gas Prices

Energy Price Overview

Political instability continued in the Mideast during August, but energy markets showed little concern. During August the WTI price continued to decline and has stabilized in the range of $93-95/barrel during the last week of the month. Brent crude oil price has declined a similar amount during August, but maintains a $8 premium to WTI. Above average economic growth in the U.S. was offset by subpar growth in the E.U. and China, resulting in ample energy supplies.

Retail prices for gasoline at the national continued their slow decline from the peak observed in late June. During the last full week in August U.S. gasoline and diesel prices averaged $3.47 and $3.84/gallon respectively. In Washington state gasoline and diesel prices also continued to decline slowly, averaging 3.88 and 4.01 respectively this last week in August. Nationally and locally we usually observe a fuel price increase during the last two weeks of August and first week of September. This year the predicted late summer price jump has not appeared. Diesel prices have been relatively stable for the last year and a half, while gasoline prices have shown typical or greater volatility.

The price for month ahead NYMEX natural gas declined slightly to $3.91/MMBtu during August. Spot prices have been running around $3.85/MMBtu up 5 percent form end of July. Locally, the natural gas month-ahead future contract for Sumas this past week was relatively unchanged from a month ago, averaging $3.80/MMBtu. The EIA reported a weekly natural gas storage injections of 75 Bcf. Injections have been running well a head of the 5-year averages and storage is now “only” 17 percent below its 5-year average; in the West we are 12 percent below our 5 year average. In April national gas storage was 50 percent below the 5 year average for that month.

Electricity spot prices at the Mid C increased about $2/megawatt-hr relative to July, averaging $42.1/megawatt-hr during August. Spot market prices have stayed high as persistent warm weather has been observed in the Northwest. Hydropower generation has been plentiful during July and August.

<table>
<thead>
<tr>
<th>Energy Price Summary</th>
<th>Current</th>
<th>Month Ago</th>
<th>Year Ago</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monthly Range at Mid-C (Peak: $ per MWh)</td>
<td>34-65.2</td>
<td>29.4-72</td>
<td>31-160</td>
</tr>
<tr>
<td>Average Mid C price (Peak hours $ MWh)</td>
<td>41.5</td>
<td>40.5</td>
<td>39.2</td>
</tr>
<tr>
<td>Electricity WA Retail: June (cents/kWh)</td>
<td>7.20</td>
<td>7.27</td>
<td>7.02</td>
</tr>
<tr>
<td>Natural gas Kingsgate spot price (next day: $ per million BTU)</td>
<td>3.81</td>
<td>3.67</td>
<td>3.32</td>
</tr>
<tr>
<td>Natural gas Sumas futures price (next month $ per million BTU)</td>
<td>3.80</td>
<td>3.74</td>
<td>3.15</td>
</tr>
<tr>
<td>Natural gas Sumas monthly average: May ($ per million BTU)</td>
<td>4.46</td>
<td>4.45</td>
<td>3.77</td>
</tr>
<tr>
<td>Natural gas H.H. futures (NYMEX next month: $ per million BTU)</td>
<td>3.91</td>
<td>4.04</td>
<td>3.64</td>
</tr>
<tr>
<td>E85 (national average: $ per gallon gasoline)</td>
<td>3.76</td>
<td>3.87</td>
<td>3.82</td>
</tr>
<tr>
<td>Ethanol (CBT next month contract: $ per gallon)</td>
<td>2.16</td>
<td>2.19</td>
<td>2.47</td>
</tr>
<tr>
<td>Corn (CBT next month contract: $ per bushel)</td>
<td>3.56</td>
<td>3.71</td>
<td>5.00</td>
</tr>
<tr>
<td>Petroleum, West Texas Intermediate futures ($ per barrel)</td>
<td>93.9</td>
<td>100.9</td>
<td>109.6</td>
</tr>
<tr>
<td>Seattle gasoline price ($ per gallon)</td>
<td>3.98</td>
<td>4.06</td>
<td>3.95</td>
</tr>
<tr>
<td>Gasoline futures (NYMEX next month: $ per gallon)</td>
<td>2.71</td>
<td>2.92</td>
<td>3.05</td>
</tr>
<tr>
<td>State diesel price ($ per gallon)</td>
<td>4.02</td>
<td>4.09</td>
<td>4.05</td>
</tr>
<tr>
<td>Heating oil futures (NYMEX next month: $ per gallon)</td>
<td>2.82</td>
<td>2.89</td>
<td>3.17</td>
</tr>
<tr>
<td>U.S. residential propane price report (reported Oct.-Mar.)</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Alternative Fuel</th>
<th>US Avg current</th>
<th>West Coast current qtr</th>
<th>West Coast last qtr avg</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethanol E85 ($ per gas gallon equiv.)</td>
<td>4.81</td>
<td>5.09</td>
<td>4.55</td>
</tr>
<tr>
<td>Biodiesel B20 ($ per diesel gallon equiv.)</td>
<td>4.09</td>
<td>4.20</td>
<td>4.15</td>
</tr>
<tr>
<td>Biodiesel B99-100 ($ per diesel gallon equiv.)</td>
<td>4.65</td>
<td>4.95</td>
<td>4.99</td>
</tr>
<tr>
<td>Compressed Natural Gas ($ per gas gallon equiv.)</td>
<td>2.15</td>
<td>2.36</td>
<td>2.33</td>
</tr>
<tr>
<td>Propane ($ per gas gallon equiv.)</td>
<td>4.57</td>
<td>4.64</td>
<td>4.50</td>
</tr>
</tbody>
</table>
Energy Headlines - If you only have time to read a few articles—read these.

Grand Coulee: Bonneville Power Administration Partners on Overhaul of World's Largest Turbines Bonneville Power Administration


Analyst: Cap-And-Trade Will Push Gas Prices Up as Much as 20 Cents. Sacramento Business Journal,

Energy Headlines—continued

Renewable Energy

British Columbia: Wind Blows Favorably for Independent Power Producers. Vancouver Sun,  
http://www.vancouversun.com/business/Wind+blows+favourably+independent+power+producers/10102454/story.html

Despite Uptick in Activity, Wind Industry Faces Uncertainty in Congress. E&E Publishing.  
http://www.eenews.net/stories/1060004357

Rules Prevent Solar Panels in Many States with Abundant Sunlight. Los Angeles Times,  

http://www.ect.coop/power-supply/renewable-energy/is-waste-wood-the-future-of-power/71806

Petroleum & Natural Gas


Climate Change

Shattering Myths to Help the Climate. The Upshot, Aug. 2,  


River & Snow Pack Info

- Observed June stream flow at The Dalles: 102% of average.
- Observed June precipitation above The Dalles: 76% of average.
- Forecast runoff at The Dalles, June: 107.7 million acre-feet, 105% of 30-year average
- Forecast snowpack volume: May, 117% of average.
- Federal hydropower generation in June: 11,184 aMW, 2009-2013 average: 11,982 aMW.
- Reservoir content (Libby, Hungry Horse, Grand Coulee, Dworshak): June 92%, 5-year average: 90%.

River Flow

Average flow at Lower Snake and Columbia dams

<table>
<thead>
<tr>
<th>Data for 8/30/2014</th>
<th>Daily Outflow (kcf)</th>
<th>Avg. for last 10 years (kcf)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lower Granite</td>
<td>23.9</td>
<td>26.6</td>
</tr>
<tr>
<td>The Dalles</td>
<td>136.0</td>
<td>128.1</td>
</tr>
</tbody>
</table>
State-Level Energy-Related Carbon Dioxide Emissions, 2000-2011
http://www.eia.gov/environment/emissions/state/analysis/?src=home-b1