

What's happening in the Energy Division?

The [Energy Research, Development and Demonstration Grants](#) pre-application period is closed. Due to the large volume of applications, there will be a delay in notifications for Phase Two. The full application period will be delayed. Updates will be posted on the webpage.

The [Grid Modernization Program](#) will be accepting concept applications starting September 17th. A bidders conference call will be September 19. You must submit an application to be considered for the full application period which opens October 30. More information on Page 2 and on the program website.

Next week we hope to publish the **Notice of Funding Opportunity for the Energy Efficiency and Solar Grants program**. Check [the website](#) for updates.

Commerce is working the [Clean Tech Alliance](#) and the

[NW Environmental Business Council](#) on our annual energy conference on Oct 30th. The [Energy Leadership Summit](#) will be held at the Washington State Convention Center in Seattle.

Commerce is also working with [Smart Grid NW](#) on the [GridFWD regional conference](#) October 10-11 in Vancouver B.C.

Governor Inslee will be participating in the [Global Climate Action Summit](#) held in San Francisco Sept 12-14. The Summit is expected to attract thousands of participants from around the world. The 10-year old [Pacific Coast Collaborative](#)'s activities on low-carbon transportation, ocean acidification reduction, and reduction of good waste (a major contributor to global emissions) will be highlighted.

Commerce co-hosted the [2018 NW Energy Resiliency](#)

[Summit](#) in Seattle on June 12. The conference attracted more than 100 attendees and was widely praised as a highly informative program. From survey responses, 92% said it was a good use of time, 100% learned something useful, 96% would consider attending again and speaker quality and content was especially high.

Job Opening in Energy

The Energy Division will soon be looking for an Emergency Management Program Specialist for a project position. This position will update and create statewide plans focusing on the energy sector for coordination in preparedness, response, and recovery components of emergency management to facilitate programs, projects and functions with state agencies, local jurisdictions, tribal governments, federal agencies, the private sector, and other states and countries.

Notice of Funding Opportunity—Grid Modernization

The [Grid Modernization program](#) was allocated money for implementing innovative projects through matching grants to Washington's retail electric utilities in order to provide public benefits.

Commerce will make grants to public and/or private utilities under this solicitation. Commerce grants will fund no more than 50 percent of the total project cost associated with obtaining eligible assets.

We intend to issue the **Notice of Funding Opportunity by Sept. 17**, with Phase 1 concept submissions due Oct. 15 at 5 p.m. PST. Phase 2 full application period opens on October 30 and due Dec. 28 at 5 p.m. PST.

All information will be posted on the [Grid Modernization website](#).

There will also be an applicant bidder's conference for the Grid Modernization Program. It is to address questions about the grant application process and other items relating to the program.

The Applicants Bidders Conference will be held by Skype and in person on Sept. 19 from 11 a.m. - 12:30 p.m. at 1011 Plum Street SE, Olympia, WA. Please notify Cathy Brockmann at cathy.brockmann@commerce.wa.gov if you plan on attending in person.

Skype meeting information:

[Join Skype Meeting](#) - -

Trouble Joining? [Try Skype Web App](#)

Join by phone [1 \(360\) 407-3813](#)
Conference ID: 6701344

[Find a local number](#)

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Notice of Funding Opportunity—CEF3 Solar Program

We will open the Solar Deployment Program grant application period next week. It will be open to Washington-based entities developing solar generating projects.

The program has \$1,552,000 in State funds and \$2,328,000 from U.S. DOE ARRA funds, which will be competitively awarded.

Priorities will be given to:

- distribution side projects
- projects capable of generating at least 500 kilowatts of direct current generating capacity
- applicants may not use other state grants
- 25% of the allocation of a project shall be for projects that provide direct benefits to low-income residents or communities
- major components made in Washington

Congratulations on US Dept. of Energy Awards

Washington State University (WSU) for "[Optimizing the Hei-](#)

[senberg Vortex Tube for Hydrogen Cooling](#)".

[Arzeda](#) (Seattle) for "[Fermentative production of Tulipalin A: next-generation, sustainable monomer that drastically improves the performance of pMMA](#)".

WSU for [Hybrid HEFA-HDCJ Process for the Production of Jet Fuel Blendstocks](#).

Univ of WA for "[Technology integration to demonstrate efficient urban goods delivery system](#)".

Dedication of a New Research Vessel

The vessel, the R/V Russell Davis Light, was manufactured in Port Townsend for the University of Washington, Northwest National Marine Renewable Energy Center.

The Clean Energy Fund Federal Match program supported this project, which was led by Cathy Brockmann, Jill Nordstrom and Hans Berg.

The work involved construction of a test platform to be used for hydrokinetic turbine testing, evaluation and calibration on inland waters.



Snohomish PUD Groundbreaking for Arlington Microgrid

Bob Kirchmeier and others moving the first dirt at the Snohomish PUD's groundbreaking for the Arlington Microgrid and Clean Energy Technology Center Project. This is a Clean Energy Fund project which represents a new technology and approach offering grid resiliency and renewable energy integration. The project will include a 500-kilowatt solar array with smart inverters, a 1,000 kW/1,000



From left to right: US Rep. Rick Larsen, SnoPUD VP Sig Logan, Dept. of Commerce staff Bob Kirchmeier and SnoPUD Assistant GM, Tom

kWh lithium-ion battery storage system and several vehicle-to-grid charging stations for use with the PUD's electric fleet vehicles.

Welcome to Hanna Waterstrat

The State Efficiency and Environmental Performance (SEEP) program is moving forward with the hiring of Hanna Waterstrat as Assistant Director of the program.

Hanna has been the Staff Services Manager at the Department of Ecology for the last 4 years, where she led agency participation with the SEEP Executive Order and provided guidance on environmental performance, including oversight of greenhouse gas reporting for Ecology operations statewide. Hanna was sometimes referred to as Ecology's Swiss Army Knife, as she was also responsible for a broad assortment of administrative functions including emergency and risk management, transportation, budget development, and strategic planning.

Hanna's other work experience

includes renewable energy development, environmental consulting, plant ecology, and wildland fire. She has an MBA in Sustainable Business from Bainbridge Graduate Institute (now Presidio Graduate School) and a BS in Forest Ecology from the University of Washington.



Hanna was born and raised in Seattle, and has also lived in Oregon, California, and Alaska. She enjoys running, hiking, and skiing and is a devoted dog mom.

Washington State Department of Commerce
1011 Plum St SE, Mail Stop: 42525
Olympia WA 98504-2525

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Rather read the highlights on a blog?
We're at <http://www.commerce.wa.gov/energy-blog/>

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Orcas Power and Light Cooperative Microgrid & Solar Array

This 504 kW community solar array has been installed in the San Juan Islands on Decatur Island and co-located with a recently modernized substation where the primary submarine cables from the mainland terminate. With assistance from a Clean Energy Fund grant, [OPALCO](#) will be procuring additional services and assets to be located at the Decatur Island Substation. It will include a 500 kW/2.0 MWh energy storage system (ESS) and control systems to support multiple use cases. These use cases include integration of the solar PV generation, reducing utility demand, load shifting, deferral of submarine cable replacements and outage mitigation. It will be designed for the overall system to operate as an islandable microgrid capable of sustained operation during system outages. See the build on [their facebook page](#).



Working in the Wild

~courtesy of Commerce staff

Michael Furze, assistant director of the Energy Division, was recently spotted improvising an agile approach to the modern work environment. His embrace of pollution-reducing electric vehicles accentuates the fluid nature of our modern workplace. While probably a little too creative for his own



good, at least he is not driving. Owning our work takes many forms — even in the parking lot!

Energy Headlines

Electric

[After Russian Hack, Officials Panic About Vulnerable U.S. Electric Grid](#)—TPM

[Avista proposes lower electric and natural gas rates in Washington starting Nov. 1](#)—The Spokesman-Review

[OIC of Washington offering help with winter heating bills for Grant, Adams county households](#)—iFiberOne

[Utility asks judge to block release of coal plant facts](#)—The Olympian

Renewables

[Renewable Energy Saves Water and Creates Jobs](#)—Scientific American

[Power Worth Less Than Zero Spreads as Green Energy Floods the Grid](#)—Bloomberg

Electric Vehicles

[Fast-charging station for electric vehicles unveiled along I-5 in Tacoma](#)—Jay Inslee

[The Future of Transportation Electrification: Utility, Industry and Consumer Perspectives](#)—Berkeley Lab

Solar

[Spokane Tribe launches ‘Children of the Sun’ solar initiative, with long-range plans for energy independence](#)—The Spokesman-Review

Carbon

[Don’t call it a tax: Carbon fee heads to ballot](#)—Crosscut

[A Boatload of Scientists Head Out to Sea](#)—NASA

Energy Efficiency & Health

[Energy-Efficient Smart Gadgets: Convincing Homeowners to Make the Switch](#)—Energycentral

Clean Energy

[What if clean energy was as easy as pressing ‘print’?](#) - Crosscut

[Washington State Utility Readies with a Microgrid Should Transmission Lines Fail](#)—Microgrid Knowledge

[PUD breaks ground on cutting-edge Arlington Microgrid](#) – Arlington Times

Other

[As States Look to Expand EV Charging Networks, the West Offers Lessons](#)—Morning Consult

[Report on Washington’s sea level rise gets boost from UO data](#)—University of Oregon

[Washington regulators schedule October hearing on proposed Avista sale](#)—The Spokesman-Review

[4 Reasons Why U.S. Nuclear Power Plants Are Safe from Drones](#)—NEI

[Scientists turn to the quantum realm to improve energy transportation](#)—ScienceDaily

[BPA Briefs NW Power Conservation Council on the Spring Spill Surcharge Numbers](#)—Columbia Basin Bulletin

[How energy companies set off earthquakes miles away from their waste dumps](#)—Washington Post

Energy Price Overview



River & Snowpack Info

Observed Aug. stream flow at The Dalles: 86% of average.

Observed Aug. precipitation above The Dalles: 16% of average.

Est. 2018 Final runoff at The Dalles (Jan.—August):

119.5 million acre-feet

118% of normal

Estimated regional snowpack: n/a

Federal hydropower generation in July:

7,826 aMW

5-year average: 7,750 aMW.

Reservoir content (Libby, Hungry Horse, Grand Coulee, Dworshak) in July:

89.1%

5-year average: 90.2%.

Petroleum: In August crude oil prices decreased slightly relative to the July average. The decrease in price occurred despite reductions in exports from Iran and Venezuela.

The average West Texas Intermediate price for June was \$68.2 per barrel.

Transportation Fuels:

Transportation fuel prices at the national level were largely unchanged during August. The national average gasoline price is about 47 cents per gallon higher than last year at this time.

National gasoline and diesel at the end of August were \$2.83 and \$3.23 per gallon respectively.

Washington state average gasoline price for the same period (relative to the last week of June) decreased by 3 cents, to \$3.37 per gallon, diesel decreased 3 cents to \$3.52 per gallon.

Natural Gas: The average Henry Hub natural gas price for August increased slightly to \$2.91 per MMBtu.

Locally, the average natural gas spot price at the Sumas hub, relative to the previous month, increased 25 cents for August

and averaged \$2.47 per MMBtu.

National gas storage levels increased only 70 Bcf last week and are at 2,505 Bcf: about 19% below the 5-year natural gas storage average for this time of the year.

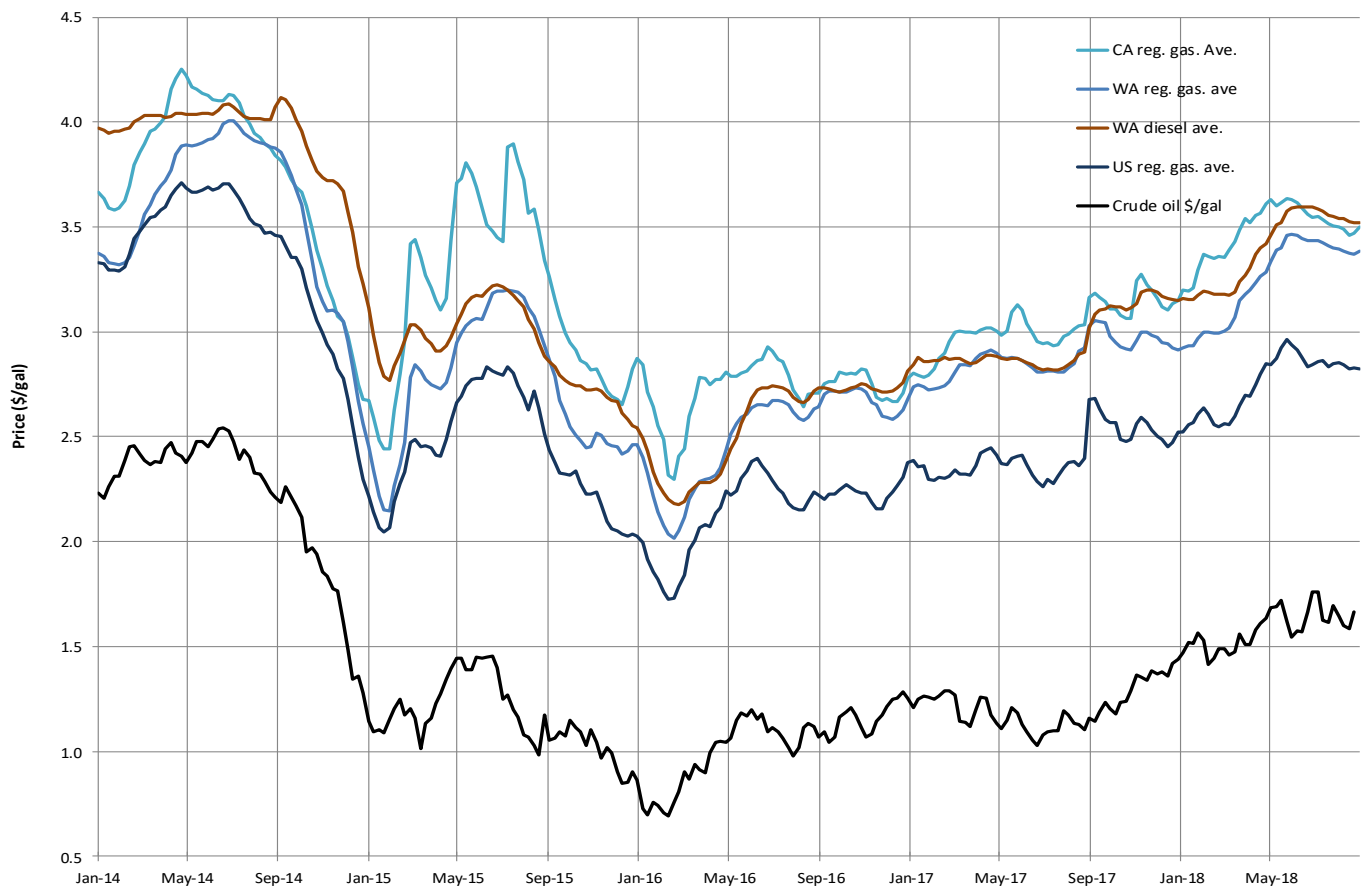
Gas storage in the Pacific region was 25% below the 5-year average. High electricity demand has resulted in a higher burn rate of natural gas in the electric sector which has reduced the amount of gas available for storage injection.

Electricity: Northwest hydropower generation was lower in August compared to July but was about equal to the 10 year average for the month.

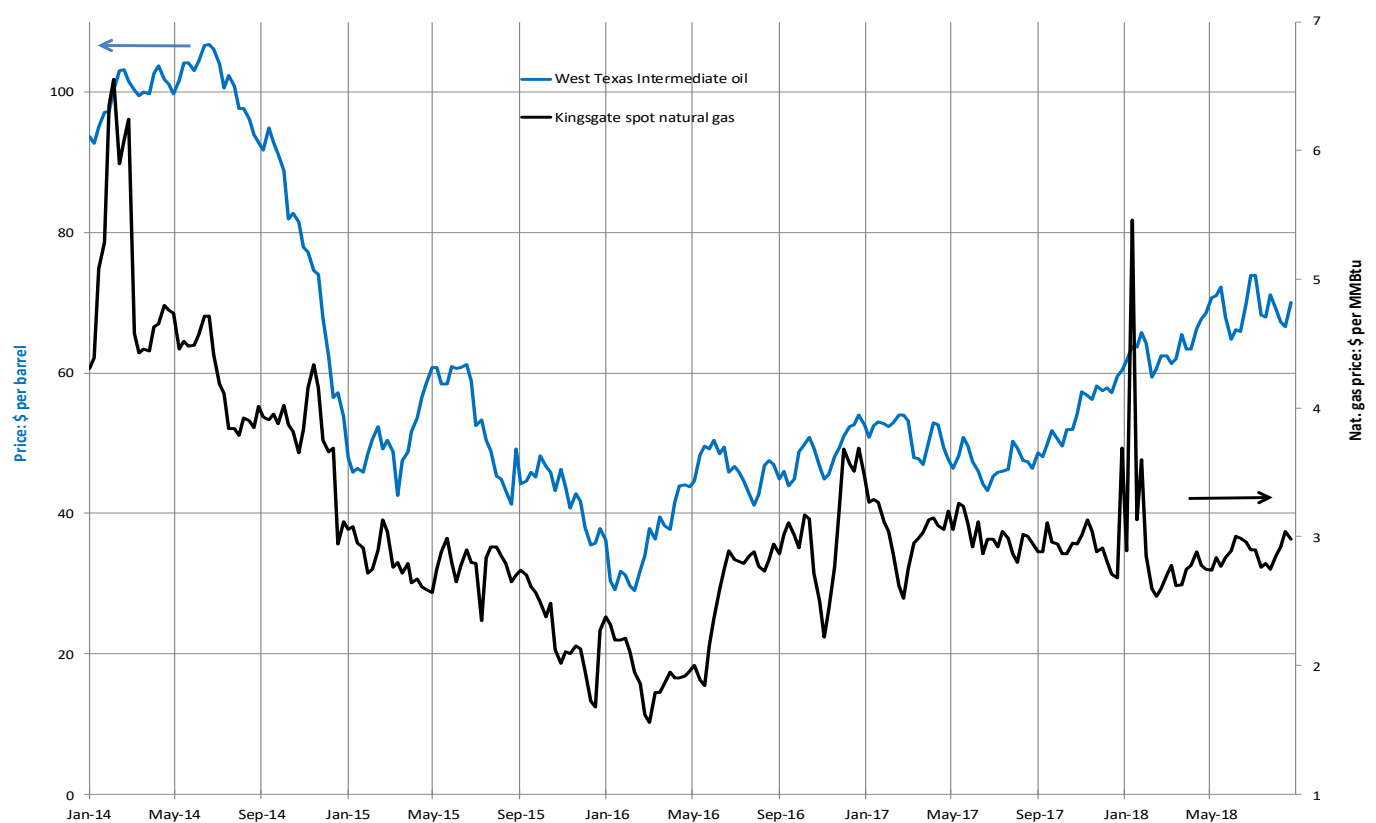
The Mid-Columbia spot (peak) market price remained high during August at just over \$79 per MWh compared to \$51.4 per MWh in August 2017.

The current forecast 2018 river runoff is at 118% of normal and reservoir levels are slightly below normal for this time of year: see River and Snowpack report.

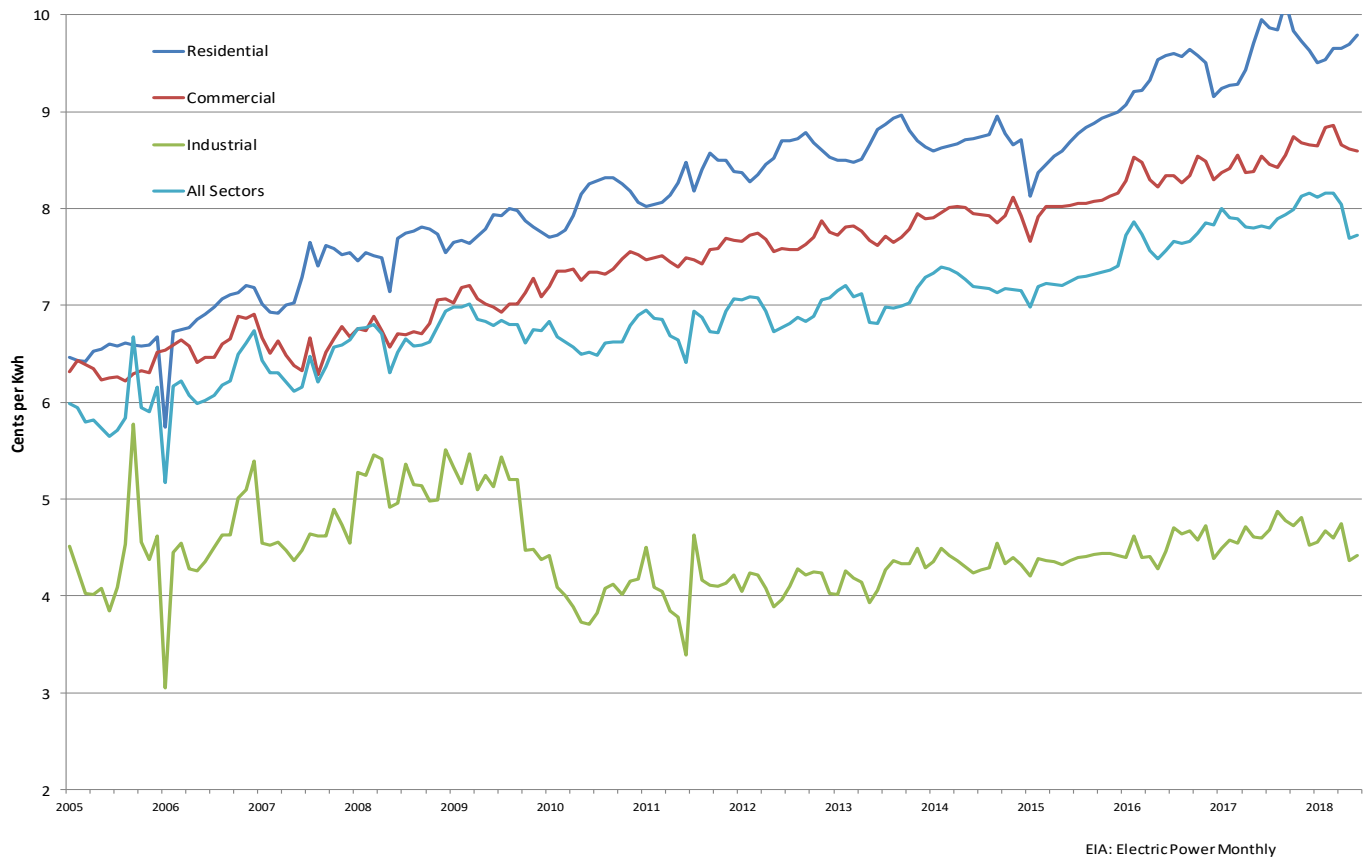
Retail Gasoline and Diesel Prices: Jan. 2014 - Aug. 2018



West Texas Intermediate Oil and Henry Hub Natural Gas: Jan. 2014 - Aug. 2018



Washington State Electricity Rates by Sector: Jan. 2005 - June 2018



Energy Price Summary, August 2018	Current	Month Ago	Year Ago
Monthly Range at Mid-C (Peak: \$ per MWh)	19-310	19.8-250	24-125
Average Mid C price (Peak hours \$ MWh, current month)	79.4	71.0	51.4
Electricity WA Ave. Retail: June (cents/kWh)	7.73	7.69	7.82
Natural gas Kingsgate spot price (next day: \$ per million BTU)	2.45	2.19	2.54
Natural gas Sumas futures price (next month \$ per million BTU)	2.32	1.90	2.68
Natural gas Sumas monthly average: June (\$ per million BTU)	1.66	1.58	2.59
Natural gas H.H. futures (NYMEX next month: \$ per million BTU)	2.94	2.82	2.89
E85 (national average: \$ per gallon gasoline)	2.87	2.83	2.36
Ethanol (CBT next month contract: \$ per gallon)	1.32	1.46	1.48
Corn (CBT next month contract: \$ per bushel)	3.68	3.86	3.55
Petroleum, West Texas Intermediate futures (\$ per barrel)	68.2	71.0	47.7
Seattle gasoline price (\$ per gallon, last week of the month)	3.44	3.47	2.96
U.S. gasoline price (\$ per gallon, last week of the month)	2.86	2.85	2.35
Gasoline futures (NYMEX next month: \$ per gallon)	2.05	2.10	1.62
State diesel price (\$ per gallon, last week of the month)	3.52	3.55	2.91
Heating oil futures (NYMEX next month: \$ per gallon)	2.13	2.14	1.62
U.S. residential propane price report (\$ per gallon)	NA	NA	NA
Clean Cities: Alternative Fuel Price Report, April 2018	Current qtr US avg	Current qtr west coast	Last qtr avg west coast
Ethanol E85 (\$ per gas gallon equiv.)	2.87	3.52	3.29
Biodiesel B20 (\$ per diesel gallon equiv.)	2.93	3.08	3.07
Biodiesel B99-100 (\$ per diesel gallon equiv.)	3.81	3.93	3.97
Compressed Natural Gas (\$ per gas gallon equiv.)	2.18	2.48	2.45
Propane (\$ per gas gallon equiv.)	3.88	4.21	4.06

U.S. Energy Information Administration

- [Annual Energy Outlook 2018](#)
- [Electric Power Monthly](#)
- [Monthly Biodiesel Production Report](#)
- [Monthly Crude Oil and Natural Gas Production](#)
- [Monthly Energy Review](#)
- [Monthly Solar Photovoltaic Module Shipments](#)
- [Natural Gas Monthly](#)
- [Petroleum Marketing Monthly](#)
- [Petroleum Supply Monthly](#)
- [Short-term Energy Outlook](#)
- [State Carbon Dioxide Emissions](#)
- [This Week in Petroleum](#)
- [U.S. Wind Turbine Database](#)

Federal Funding Opportunities

[DE-FOA-0001965 Request for Information on H2@scale \(Hydrogen at scale\): Determining opportunities to facilitate wide-scale hydrogen adoption for energy security and economic growth](#)

Submission deadline, October 31, 2018

[Tribal Energy Loan Guarantee Program](#)

#89303018RLP000005

First part submission due date: Sept. 19, 2018

[DE-FOA-0001963: RFI: National Offshore Wind Energy R&D Test Facilities](#)

[DE-FOA-0001959: RFI—National Wind Technology Center Facility and Infrastructure Investments—no deadline](#)

[Request for Information DE-FOA-0001978 High-Efficiency Internal Combustion Engine Development](#)

Events Coming Soon

[Shades of Green Forum](#), Portland OR, Sept 12-13

[NASCSP 2018 Annual Training Conference](#), Bellevue WA, Sept 17-21

[2018 Washington State Solar Summit](#)—Bellevue WA, Oct 19

[Northwest Green Building Slam + Summit](#)—UW, Seattle, Oct 26-27

[Energy Leadership Summit](#)—Seattle WA, Oct 30

[The R&D 100 Conference](#)—Orlando FL, Nov 15-16

[2018 Conference on Health, Environment and Energy](#)—New Orleans LA, Dec 3-5

Regional Power Flow, Aug. 4-Sept. 4		
Intertie	Average power flow	Direction
California (AC+DC)	7,556 mw	export to California
Canada (BC)	-538 mw	export to Canada
Total	4,018 mw	export

River Data		
Data for Sept. 4th	Outflow (kcfs)	Ave. outflow for last 10 years (kcfs)
(Snake) Lower Granite	23.6	25.3
(Columbia) The Dalles	103.7	94.6