



Update on Clean Energy Fund Programs

The final review of [RD&D](#) applications is underway and Commerce anticipates announcing awardees the week of February 21.

The [Solar Deployment](#) application period closed on Dec. 3 and are currently under review. Additional applications are being accepted, with a review timeframe pending.

[Grid Modernization](#) application period closed Dec. 28. We received 5 applications. After going through the review period, awardees will be announced on February 20.

[Electrification of Transportation](#) (ET) program Notice of Funding Opportunity should open on Jan. 19.

Update on the Energy Efficiency and Solar Program

The [Energy Efficiency and Solar](#) (EE&S) application period closed on December 31. We received 88 applications, over half were for solar projects. The Governor's budget has a \$35 million request for this program (up from \$10 million this year). Awardees should be announced by March 1.

Fuel Mix Disclosure

The fuel mix disclosure law, [RCW 19.29A](#), requires Washington State utilities to report to electricity consumers the sources of power they use to serve them. Washington's fuel mix is the total of fuel sources associated with the electricity delivered by all electric utilities to end users in our state, including Bonneville Power Administration's direct electricity

sales. The report has been posted on the web at <https://www.commerce.wa.gov/growing-the-economy/energy/fuel-mix-disclosure/>

Utility Resource Planning

Electric utilities in Washington vary in size and scope of operations. This is reflected in the way utilities approach resource planning and forecasting. Larger utilities typically use multiple sources of electricity supply to meet their customers' requirements and engage in sophisticated assessments of risks and benefits in evaluating alternative sources of new energy. Many smaller utilities rely on a single supplier to supply all of the power required by their customers. For smaller utilities, the upstream provider – often the Bonneville Power Administration but sometimes another

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er electric utility – undertakes the complex planning and forecasting that leads to a resource plan.

The current round of utility resource plans indicates a continued reliance on energy conservation as the primary resource for balancing electricity supply and demand. The statewide aggregate growth in electricity demand is expected to be moderate and most of this growth will be offset through energy conservation programs operated by utilities. Several utilities project that their conservation programs will result in more electricity savings than their projected amount of load growth. These utilities expect to experience negative growth in observed electric loads. With the majority of load growth met by conservation programs, utilities are projecting minimal need to acquire additional generating supply resources. The additional resources will primarily be used to replace retiring coal-fired generation.

Federal Energy Management Program (FEMP)

FEMP has a good group of [Better Buildings](#) webinars, such as:

- [Prioritizing Labs to Meet Your Energy Goal](#)
- [Lessons from the Field: Real World Applications that Inform R&D](#)

- [Benchmarking Water: New Approaches & Opportunities for Buildings](#)

They have released a [Water Evaluation Data Tool](#). This will help managers to do a comprehensive walk-through, collecting data about water end-uses and estimates.

eProject Builder

US. Dept. of Energy, Energy Efficiency & Renewable Energy Office has released [eProject Builder](#). A free and secure data management system to track, benchmark and report on portfolios of energy projects. There is a [demonstration webinar](#) on January 22, 1-2:30 pm EST.

\$20 Million Available to Small Business Innovation Research and Technology Transfer

The U.S. Energy Department's Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) offices have announced a funding opportunity for about \$37 Million.

Nine EERE offices will manage the proposals. There are over 40 topics that the grants cover. To read about this, register for the webinar and possibly apply, go to <https://www.energy.gov/eere/articles/office-energy-efficiency-and-renewable-energy-announces-20-million-available-small>

Director Brian Bonlender leaving agency

Brian Bonlender, the Director of the Department of Commerce announced he would be leaving the agency on January 15. He has served as director since February 2013.



Energy Headlines

Electric

[Is your holiday energy use naughty or nice?](#) - ACEEE

[Bonneville Power Administration Cuts Costs in Proposed Rates for 2020 & 2021](#)—BPA

[Highest Lighting Energy on the Block](#)—Omagdigital.com

[The Switch to Outdoor LED Lighting Has Completely Backfired](#)—Gizmodo

[Siemens: Cities are prioritizing electrification, but grid modernization is required](#)— Utility Dive

Renewables

[Washington ranks high in clean energy, toward the bottom with solar power](#)—KIMAtv.com

[Renewables on the Rise 2018 - Decade of Progress Towards a Clean Energy Future](#)—Environment Washington

[California officially becomes first state to require solar panels on new homes](#)—LA Times

[This AI Just Mapped Every Solar Panel in the United States](#)—Gizmodo

[Rooftop Solar Remains Marginal in America](#)—The Economist

Electric Vehicles

[As More Cars Plug In, Utilities and Makers Juggle Ways to Power Them](#)—NY Times

[Alliance 50x50 Commission on U.S. Transportation Sector Efficiency](#)—Alliance to Save Energy

Carbon and Climate

[U.S. Carbon Emissions Surged in 2018 Even as Coal Plants Closed](#)—NY Times

[The political perils of carbon taxes, in Paris and Olympia](#)—Crosscut

[‘Carbon removal is now a thing’: Radical fixes get a boost at climate talks](#)—Washington Post

[Fourth National Climate Assessment—Volume II](#)—US. Global Change Research Program

Energy Efficiency & Health

[Rural Households Spend Much More of Their Income on Energy Bills Than Others](#) —ACEEE

[Zero energy buildings on the rise but barriers remain](#)—ACEEE

Other

[Idaho test reactor is pivotal in US nuclear power strategy](#)—AP News

[Finally, Fusion Power is About to Become a Reality](#)—Medium

Energy Price Overview



Attic Insulation

River & Snow Pack Report

Observed Dec. stream flow at The Dalles: 90% of average.

Observed Dec. precipitation above The Dalles: 84% of average.

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

93.5 million acre-feet
92% of normal

Estimated regional snow-pack: early Jan. 93% of normal

Federal hydropower generation in Dec.:

7,198 aMW
5-year average: 8,484 aMW.

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

71.3%
5-year average: 73.7%

Petroleum: The West Texas Intermediate crude oil spot price continued to decline during December, starting the month at just over \$53 per barrel and ending at \$47 per barrel. During this time frame international Brent oil price declined from \$58.7 to \$50.6 per barrel. The decrease in spot crude oil price is being attributed to concerns about trade, slowing growth in Asia and rising production and inventories in North America. Saudi Arabia announced that it was decreasing oil production in December in order to shore up oil prices. Other OPEC members may follow suit. The average West Texas Intermediate price for the month of December was \$49.36 per barrel.

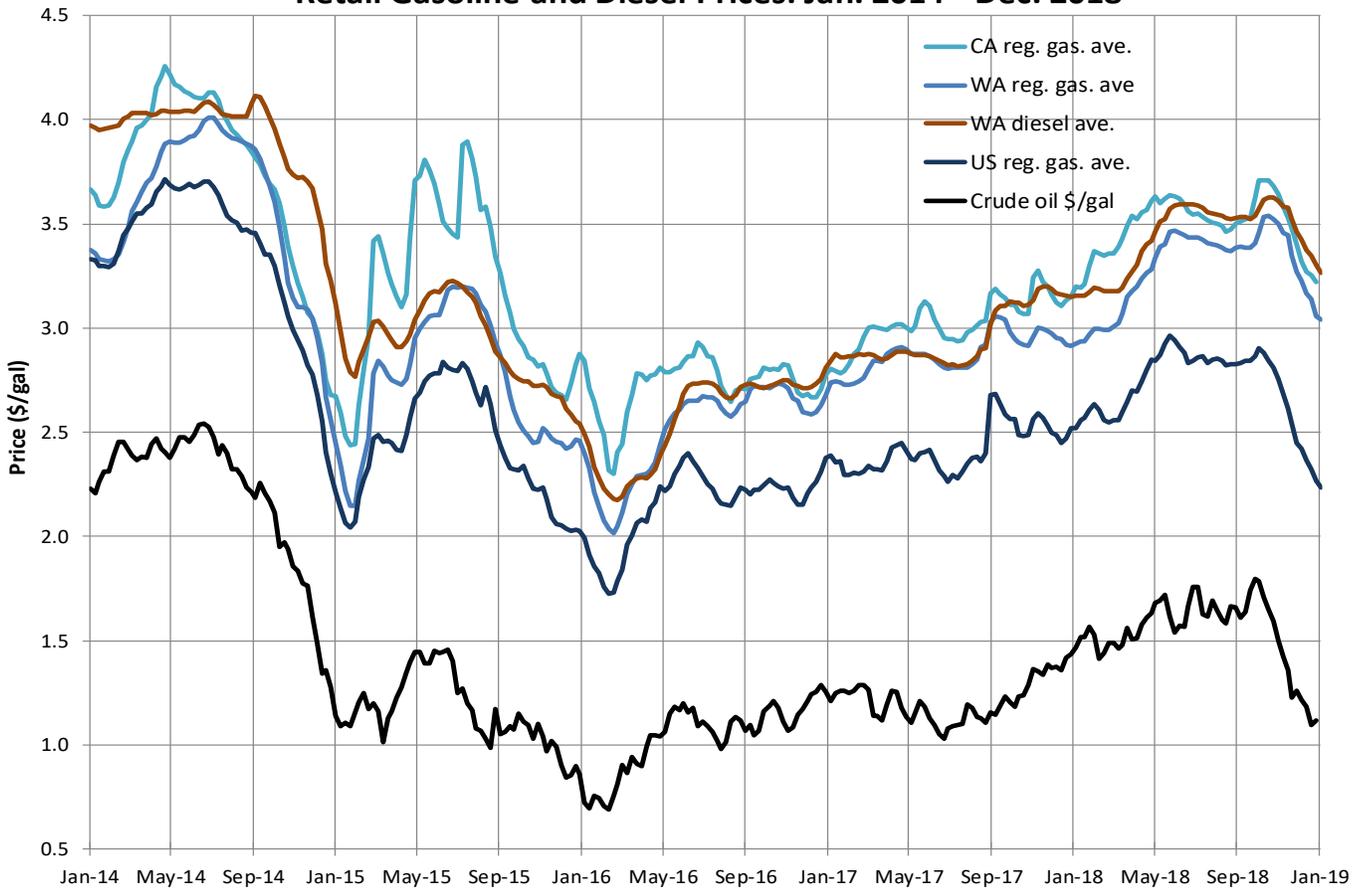
Transportation Fuels: Driven by declining crude oil prices, transportation fuel prices at the national level also declined during December: gasoline down about 27 cents, diesel was down 21 cents per gallon. National gasoline and diesel at the end of December were \$2.27 and \$3.05 per gallon respectively. Diesel fuel continues to sell at a significant premium to gasoline. Several states have gasoline prices under \$2 per gallon. In Washington State, average gasoline and diesel prices decreased slightly more rapidly than national prices. Relative to the last week of the previous month, state gasoline and diesel prices were 29 and 22 cents per gallon lower: Gasoline \$3.06 per gallon, diesel at \$3.30 per gallon. The 79 cent per gallon differential between the average

state and national gasoline price is the largest recorded.

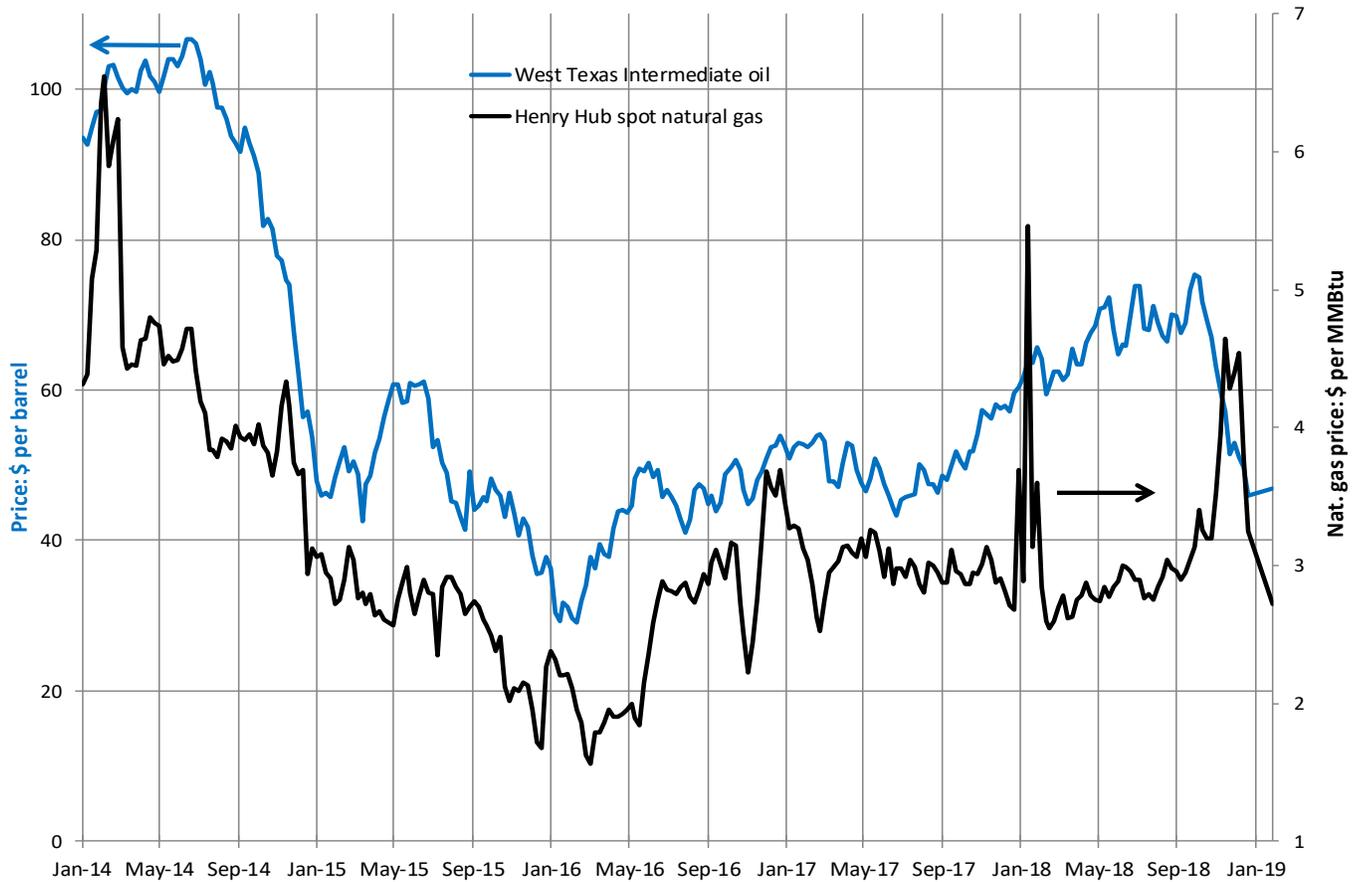
Natural Gas: The average Henry Hub natural gas price for December decreased by 10 percent, relative to the previous month, to \$3.74 per MMBtu. Enbridge announced that, after testing, the operating pressure of the repaired T-South pipeline was being raised. Gas flow was still below normal in early December but was slowly increased through the remainder of the month. Due to the increased natural gas flows through the Sumas hub spot prices declined: December average \$5.73 per MMBtu vs. \$17.5 per MMBtu, in November. The Sumas hub prices are still higher than spot prices at other regional gas hubs: \$4.88 at Malin, \$4.84 at Stanfield. National gas storage levels decreased 20 Bcf last week and are at 2,705 Bcf: about 17% below the 5-year natural gas storage average for this time of the year. Gas storage in the Pacific region, in part because of the storage draw following the Enbridge pipeline incident, was 26% below the 5-year average.

Electricity: The Mid-Columbia average spot (peak) market price for December was high compared to year ago prices: \$49 vs \$25.4 per MWh. Some of the higher price was due to the reduced availability of natural gas delivered via the Enbridge T-South natural gas pipeline. River flows and hydro generation, see tables, were also lower than average.

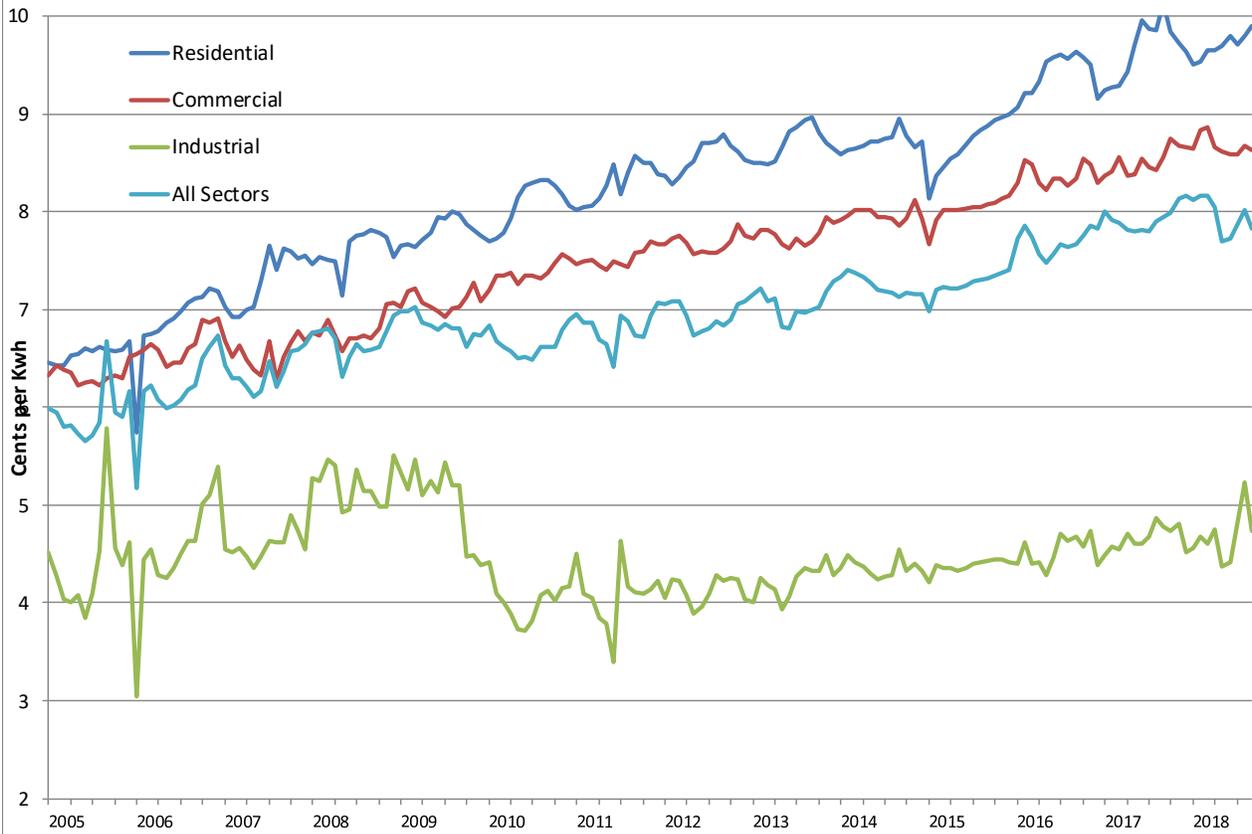
Retail Gasoline and Diesel Prices: Jan. 2014 - Dec. 2018



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



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



Energy Price Summary, December 2018	Current	Month Ago	Year Ago
Monthly Range at Mid-C (Peak: \$ per MWh)	34-112	19-75	23-36
Average Mid C price (Peak hours \$ MWh, current month)	49.0	55.9	28.6
Electricity WA Ave. Retail: October (cents/kWh)	7.95	7.83	7.99
Natural gas Kingsgate spot price (weekly ave : \$ per million BTU)	3.66	14.85	3.02
Natural gas Sumas futures price (next month \$ per million BTU)	3.80	17.75	2.95
Natural gas Sumas monthly average: October (\$ per million BTU)	3.19	2.15	2.43
Natural gas H.H. futures (NYMEX next month: \$ per million BTU)	3.95	4.01	2.79
E85 (national average: \$ per gallon gasoline)	2.67	2.75	2.46
Ethanol (CBT next month contract: \$ per gallon)	1.30	1.24	1.35
Corn (CBT next month contract: \$ per bushel)	3.82	3.74	3.53
Petroleum, West Texas Intermediate futures (\$ per barrel)	49.4	57.9	58.0
Seattle gasoline price (\$ per gallon, last week of the month)	3.29	3.48	2.97
U.S. gasoline price (\$ per gallon, last week of the month)	2.57	2.70	2.47
Gasoline futures (NYMEX next month: \$ per gallon)	1.39	1.59	1.73
State diesel price (\$ per gallon, last week of the month)	3.30	3.52	3.15
Heating oil futures (NYMEX next month: \$ per gallon)	1.81	2.08	1.95
U.S. residential propane price report (\$ per gallon)	3.16	NA	2.48
Clean Cities: Alternative Fuel Price Report, July 2018	Current qtr US avg	Current qtr west coast	Last qtr avg west coast
Ethanol E85 (\$ per gas gallon equiv.)	3.06	3.81	3.52
Biodiesel B20 (\$ per diesel gallon equiv.)	3.12	3.12	3.08
Biodiesel B99-100 (\$ per diesel gallon equiv.)	3.91	4.06	3.93
Compressed Natural Gas (\$ per gas gallon equiv.)	2.22	2.47	2.48
Propane (\$ per gas gallon equiv.)	3.85	4.04	4.21



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](#)
- [WindIQ](#)—online database of wind projects

Federal Funding Opportunities

- [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
- [Notice of Intent—DE-FOA-0002053](#) R&D Projects on Fossil Energy
- [Request for Information DE-FOA-0001978](#) High-Efficiency Internal Combustion Engine Development
- [DE-FOA-0001975 FY 2019 SBIR/STTR Phase II Release 1](#) Letters of Intent due January 29
- [DE-FOA-0001941 DOE SBIR/SSTR Phase I Release 2](#) Letters of Intent due February 25

Events Coming Soon

[2019 Home Performance Coalition Northwest Regional Conference & Trade Show](#)—Portland, Feb 11-12

[Healthy Home Training for Building Professionals](#)—Bellevue, Feb 21-Apr 11

[AWEA Wind Project O&M and Safety Conference](#)—San Diego CA, Feb 27-28

[2019 Passive House Northwest \(PHnw\) Annual Conference](#)—Portland, Feb 28-March 1

[2019 National Home Performance Conference & Trade Show](#)—Chicago IL, April 1-4

[Efficiency Exchange 2019](#)—Coeur d’Alene ID, May 14-15

[North American Smart Energy Week](#)—Salt Lake City, UT, Sept. 23-26

Regional Power Flow		
Intertie	Average power flow	Direction
California (AC+DC)	2,629 mw	export to California
Canada (BC)	389 mw	export to Canada
Total	3,018 mw	export

River Data		
Data for Nov. 7	Outflow (kcfs)	Ave. outflow for last 10 years (kcfs)
(Snake) Lower Granite	19.4	26.2
(Columbia) The Dalles	119.9	150.4