



The Use of Electricity and Biofuels to Fuel Local Government Vehicles

Commerce likes to take a collaborative approach to strengthening communities. The new rule regarding alternative fuel types in government vehicles is one such example, where we don't have the authority or resources to enforce the rule. Using outreach and education, we're asking local governments to self-report their vehicle purchases according to [RCW 43.19.648](#).

The law, amended in 2013, requires local governments to fuel publicly owned vehicles, vessels and construction equipment with electricity or biofuels to the extent practicable. It charges the Department of Commerce with developing and implementing rules that define practicability and provide guidance on how to comply with the law's intent.

After extensive stakeholder consultation, Commerce enacted [Chapter 194-29 WAC](#) in 2016. The rules define practicability in terms of lifetime vehicle cost of ownership, availability of fuels and charging infrastructure and ability to meet governments' service needs.

The rules took effect June 1, 2018. In preparation for this date, Commerce has been performing outreach to local governments on the rule. Commerce also convenes a

bimonthly [Alternative Fuels and Vehicles Technical Advisory Group](#) (AFV-TAG). AFV-TAG provides a forum for disseminating advances in alternative fuel technology and policy, as well as fostering peer exchange between organizations engaged in advancing electric vehicles and biofuels. Meetings take place the third Friday of every odd-numbered month from 9-12 at Commerce's Olympia offices, with remote attendance options available.

In addition, as stipulated by the rules, Commerce is working to collect data by July 1 from all local governments using more than 200,000 gallons of fuel a year. A draft web-based survey was distributed to reporting governments in May, with a final form sent out June 4.

At this time, no reporting or requests for exemptions are requested from local governments using less than 200,000 gallons of fuel a year. The intent of this data is to inform the state of progress towards meeting alternative fuel goals, as well as identify obstacles to, and opportunities for, further progress.

To help local governments comply with the rule, Commerce has also produced a spreadsheet-based cost

of ownership model for use in their procurement processes. The latest version of this model can be downloaded at the [Washington Alternative Fuel and Vehicle GroupSpaces site](#). In addition, Commerce produced a [guide](#) that summarizes how local governments can apply the rules to their fuel and vehicle procurements.

Agencies meeting the threshold for individual compliance assessment in WAC [194-28-050](#) are:

- WA State Dept. of Agriculture
- WA State Dept. of Corrections
- WA State Dept. of Ecology
- WA State Dept. of Enterprise Services
- WA State Dept. of Fish and Wildlife
- WA State Dept. of Labor and Industries
- WA State Dept. of Natural Resources
- WA State Dept. of Social and Health Services
- WA State Dept. of Transportation
- WA State Liquor Control Board
- WA State Parks and Recreation Commission
- Washington State Patrol
- Eastern Washington University
- University of Washington
- Washington State University
- Western Washington University

US Dept. of Energy Awards

USDOE's [Small Business Innovation Research \(SBIR\) and Small Business Technology Transfer](#) awards have been announced for 2018 Phase 1, Release 2.

Congratulations to the following grantees:

[Molecule Works, Inc.](#), Richland WA (Concentration and Dewatering of micro-algae cultures with high throughput ceramic membranes.)

[Artesion, Inc.](#), Federal Way WA (Development of an Environmentally acceptable Hydraulic Fluid.)

[Clearsign Combustion Corp.](#), Seattle WA (Low Temperature Plasma Flame Stabilization in a Porous Ceramic Medium.)

[CTFusion, LLC](#), Seattle WA (Advanced feedback control of AC plasmas)

[Eagle Harbor Technologies, Inc.](#), Seattle (2 projects—Solid-State Klystron Driver for Lower Hybrid Current Drive and A Cuk Converter for Validation Platform Experiments)

Ralph B. Fiorito, Shoreline WA (Novel Bunch Length Diagnostic)

Congratulations to [Oscilla Power, Inc.](#) of Seattle, the [Office of Energy Efficiency and Renewable Energy's Water Power Technologies Office](#) has awarded funding for an Advanced Linear Hybrid Power Take-Off for Wave Energy Conversion. They are also grantees under WA State Clean Energy Fund for a community-scale wave energy converter.



What are they looking at?

Visit to a Project at John Day Pool

Staff from the office, along with folks from Ecology, visited the Klickitat County PUD1 site for a closed-loop pump storage hydropower project at the John Day pool. This is being funded in part by the Clean Energy Fund through appropriations by the 2018 legislature.



Oh, the site for the project at John Day Pool.

A closed loop system consists of two reservoirs at different elevations, and apart from a free flowing water source, such as a river.



They have fewer environmental impacts.

The system generates power as water moves down through a turbine and draws power as it pumps water to the upper reservoir.

Pumped-storage hydropower currently accounts for 95% of all utility-scale energy storage in the United States.

Events Coming Soon

[NW Energy Resiliency Summit](#)—Seattle, June 12

[National Fuel Cell and Hydrogen Forum](#)—WA DC, June 12

[CleanTech Innovation Showcase 2018](#)—Seattle, June 25

[47th Annual National Solar Conference](#)—Boulder CO, Aug 5-8

[Electrification 2018](#)—Long Beach CA, Aug 20-23

[2018 Energy Exchange and Better Buildings Summit](#)—Cleveland OH, Aug 21-23

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

Job Opening in the Energy Division

[Commerce Specialist 5](#)—Housing Improvement & Preservation Unit, Weatherization program. This position's main purpose is to successfully sustain and improve the \$58 million per biennium weatherization services to statewide low-income households through leading and managing the Policies and Contracts Section.

Commerce to Manage State Efficiency and Environmental Performance Executive Order

On January 16th, Governor Inslee signed [Executive Order 18-01](#), State Efficiency and Environmental Performance (SEEP), which aims to align the state's day-to-day operations with its policy goals to reduce greenhouse gas emissions and other pollution. SEEP sets targets related to new facilities, existing facilities, ferries, electric vehicles, environmentally preferable purchasing, and finance.

SEEP also establishes a governance framework designed to empower state employees, foster peer support and establish accountability in pursuit of those goals. A Governance Council, headed by the Governor's Office and comprising executives from large-emitting and key resource agencies, oversees implementation and addresses policy barriers, while thematic interagency and internal agency working groups develop strategies, implement programs, publicize SEEP efforts to state employees, and identify obstacles for the Governance Council. Expert staff form an interagency Guidance Council that develops overall strategy and advises staff responsible for day-to-day SEEP management.

Commerce staff have provided expertise throughout SEEP's development and implementation. Because of Commerce's ongoing involvement in SEEP, broad technical expertise, history of leading clean energy initiatives, and role as the agency that most directly supports the Governor's energy policy priorities, the Governor's Office and the Department of Enterprise



Services have agreed to transfer to Commerce day-to-day responsibilities for overseeing SEEP implementation. Future newsletters will highlight some of the initiatives the state is taking under SEEP to continue its clean energy leadership.

Solar Plus All Hands Meeting

Commerce staff hosted a Solar Plus All Hands Meeting on May 24th to review progress toward goals of the Solar Plus program. This Department of Energy funded program is a regional effort to plan and implement state strategies in Oregon and Washington to achieve the full technical, social, and economic benefits of solar.

Solar Plus looks all the advantages of solar, and in addition to how many megawatts of distributed solar can be generated, benefits of solar include job creation and advancing equity in accessing solar.

This meeting brought together partners from both Oregon and Washington to discuss progress toward Solar Plus established milestones, strategies, community solar, community & grid resilience, and workforce & economic development.



Washington State Department of Commerce
1011 Plum St SE
Mail Stop: 42525
Olympia WA 98504-2525
Phone: 360-725-3130
To sign up for the newsletter send an email to:
energy_policy@commerce.wa.gov

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Energy Price Overview



Nine Canyon Wind Turbine

River & Snow Pack Info

Observed April stream flow at The Dalles: 195% of average.

Observed April precipitation above The Dalles: 74% of average.

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

122.1 million acre-feet

120% of normal

Estimated regional snow-pack: 119% of normal.

Federal hydropower generation in April:

9.942 aMW

5-year average: 10,251 aMW.

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

26.6%

5-year average: 45.1%.

Petroleum: After rising most of May, crude oil prices decreased sharply during the last week of the month. The sudden drop was caused by news reports out of Saudi Arabia and Russia that they will be exceeding the self-imposed production limits that they set 2 years ago in an effort to boost world oil prices. The average West Texas Intermediate price for May was \$70.48 per barrel, but declined to about \$66 during the last few days of May.

Transportation Fuels: Transportation fuel prices at the national level continued to increase during May, in part due to steadily rising crude oil prices, but also because of increasing demand. The national average gasoline price is about 47 cents per gallon higher than last year at this time. Part of the recent increase is because in the spring refiners' start producing summer blends of gasoline which are less volatile and more costly to produce. National gasoline and diesel at the end of May were \$2.97 and \$3.29 per gallon respectively. Washington state average gasoline price for the same period (relative to the last week of April) increased by 17 cents, to \$3.46 per gallon, while diesel increased 15 cents to \$3.57 per gallon.

Natural Gas: The average Henry Hub natural gas price for May was unchanged at \$2.80 per MMBtu. Locally, the average natural gas spot price at the Sumas hub dropped nearly 50 cents for May and averaged \$1.38 per MMBtu. National gas storage levels increased 96 Bcf last week and are at 1,725 Bcf: about 31% below the 5-year natural gas storage average for this time of the year. Gas storage in the Pacific region was 14% below the 5-year average.

Electricity: Spring runoff (see river flow data) and high hydropower generation in the Northwest pushed electricity prices lower during May with many off-peak periods and several on-peak periods exhibiting negative prices. BPA curtailed wind generation in its balancing area several times during May. The Mid-Columbia spot market price was down 50% and averaged \$12 per MWh during May. Current snowpack is 119% of normal and the current forecast for 2018 runoff is at 120% of normal: see the River and Snow-pack report.

2018 Better Buildings Progress Report

The [2018 progress report](#) reviews the past years progress and results, highlighting goal achievers and sectors.

The Better Buildings Initiative helps organizations to identify energy efficiency options to help keep energy costs down. Over 900 organizations make up the Better Buildings Initiative.

Over 16,000 users have reported on energy performance in over 38,000 properties, with over 4.4 billion square feet of building space. Together with the U.S. Department of Energy, they are working to identify new efficiency innovations, sharing strategies and developing resources.

The [Better Buildings Solution Center](#), an online tool, has over 1,500 proven energy reduction resources available for use.

Over 244 Utilities Now Offer Rooftop Unit Incentives

The [Advanced Rooftop Unit \(RTU\) Campaign](#) has a database of [utility RTU incentives](#) for commercial efficiency. Over 244 utilities offer RTU replacements or retrofits.

For Washington state, the following 10 utilities offer HVAC RTU financial incentives and financing programs for high energy savings opportunities:

- [Avista Utilities](#)
- [Bonneville Power Administration](#)
- [Clark Public Utilities](#)
- [Cowlitz PUD](#)
- [Energy Trust of Oregon](#)
- [Grays Harbor PUD](#)
- [Puget Sound Energy](#)
- [Seattle City Light](#)
- [Snohomish County PUD](#)
- [Tacoma Power](#)

Utility Fuel Mix Disclosure Stakeholder Meeting

The Energy Division of the Dept. of Commerce will be hosting a stakeholder meeting on utility fuel mix disclosure. in June. We will discuss several methodology changes that we are considering for the 2018 Fuel Mix reporting cycle which we will be initiating in about four weeks.

We will inform stakeholders by email and post information on the [webpage for fuel mix](#) as soon as a date is selected.

Federal Funding Opportunities

SOLAR

- [American-Made Solar Prize](#)—\$3 million competition to accelerate and sustain American solar innovation.

ENERGY CYBERSECURITY

- [DE-FOA-0001755 Industry Partnerships for Cybersecurity of Energy Delivery Systems](#)—due July 2, 2018

WIND

- Request for Information [DE-FOA-0001932 Pathways to Success for Next-Generation Super-sized Wind Turbine Blades](#) - due June 11, 2018

BUILDING EFFICIENCY & LIGHTING

- [DE-FOA-0001825 Buildings Energy Efficiency Frontiers & Innovation Technologies \(BENEFIT\) - 2018](#) - Concept due June 8, 2018 and application due August 23, 2018

ARPA-E

- [DE-FOA-0001858](#): Advanced Research Projects—Open 2018—Innovative energy R&D
- [DE-FOA-0001906: Duration Addition to Electricity Storage \(DAYS\)](#) - Notice of Intent due June 15, 2018, applications due July 2, 2018.
- [DE-FOA-0001936: RFI ONLY on upgrading carbon derived from methane pyrolysis.](#)

Energy Headlines

Alternative Fuel and Electric Vehicles

[Are electric cars worse for the environment?](#) - Politico

[Gas-Guzzling Cities, State Blow Past Deadline for Electric vehicles in Washington](#)—NPR

[Electrified vehicles continue to see slow growth and less use than conventional vehicles](#)—U.S. EIA

[What's the Current State of Wireless EV charging?](#) - ChargedEV

[JetBlue-backed private jet company signs up for hybrid electric planes](#)—CNBC (Zunum Aero funded by CEF)

[Electric vehicles to displace 2.5 million b/d of oil demand by 2030: IEA](#)—Platts

Renewables

[Renewable Energy Jobs Reach 10.3 Million Worldwide in 2017](#)—IRENA

[Renewable Energy Jobs Top Record 10 Million Led by Solar](#)—Bloomberg

[Department of Energy launches two new green initiatives](#)—Power-Technology

Solar

[Washington and Oregon Solar projects face legal hurdles from farmland protection groups](#)—NPR

[Work begins on 204-acre solar farm in Washington](#)—Capital Press

[From consumer interest to fully subscribed programs: SEPA report drills into details of community solar success](#)—SEPA

[California's Rooftop Decree May Be Hasty. Don't Let the Sun Shine In Just Yet](#) —Sacramento Bee, CA

Grid

[Energy Adviser: Here's how 'the grid' powers homes](#)—The Columbian

[Bitcoin backlash as 'miners' suck up electricity, stress power grids in Central Washington](#)—Seattle Times

Other

[Alternative Policies in Power Generation and Energy Demand Markets](#)—U.S. EIA

[We're keeping our Paris climate change commitments and our economies are booming: Governors](#)—USA Today

Petroleum & Natural Gas

[United States Remains the World's Top Producer of Petroleum and Natural Gas Hydrocarbons](#)—U.S. EIA

[Why the Reign of Natural Gas May Come to a Quick End](#)—UtilityDive

[Washington State Blamed for Holding Up Fossil Fuel Exports](#)—Associated Press

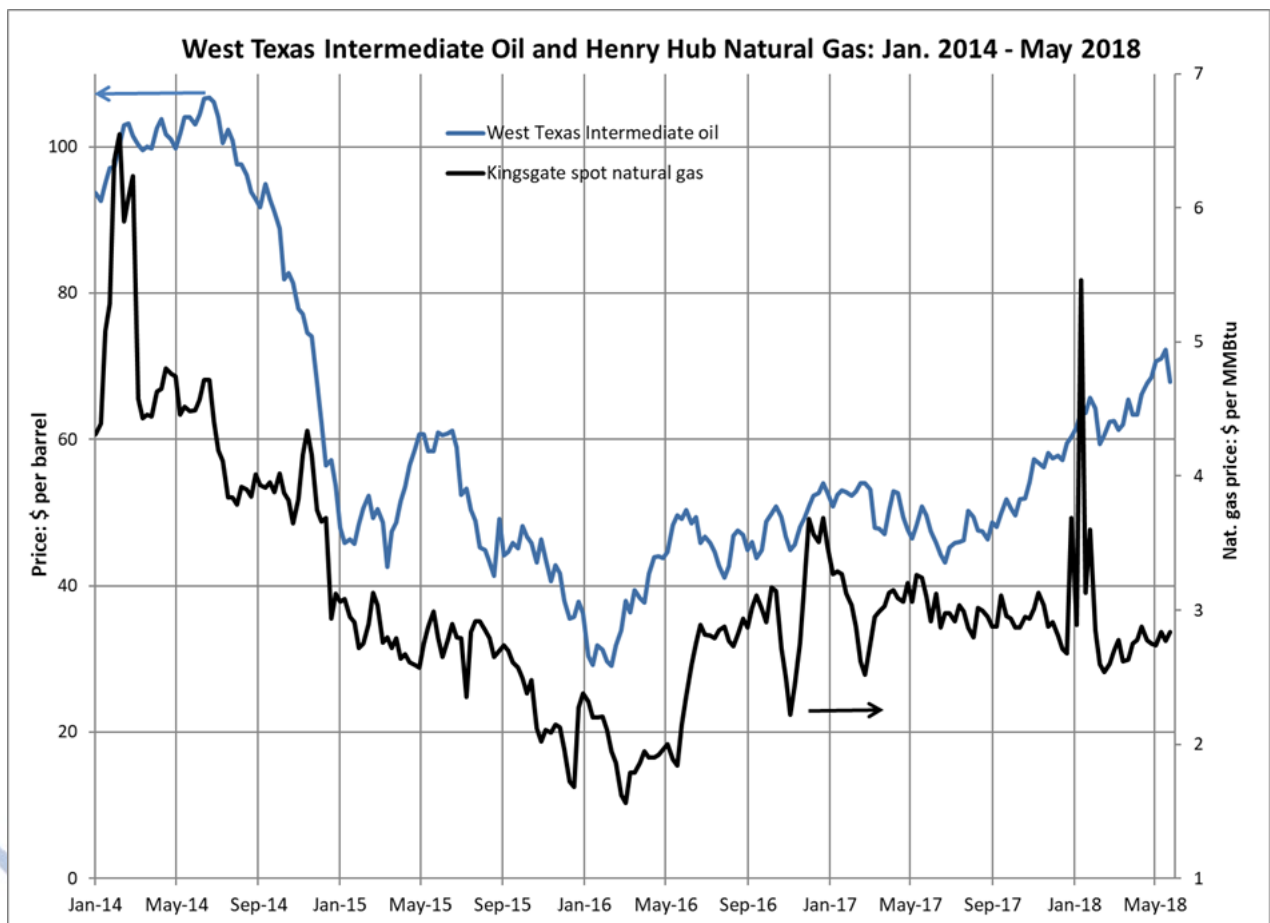
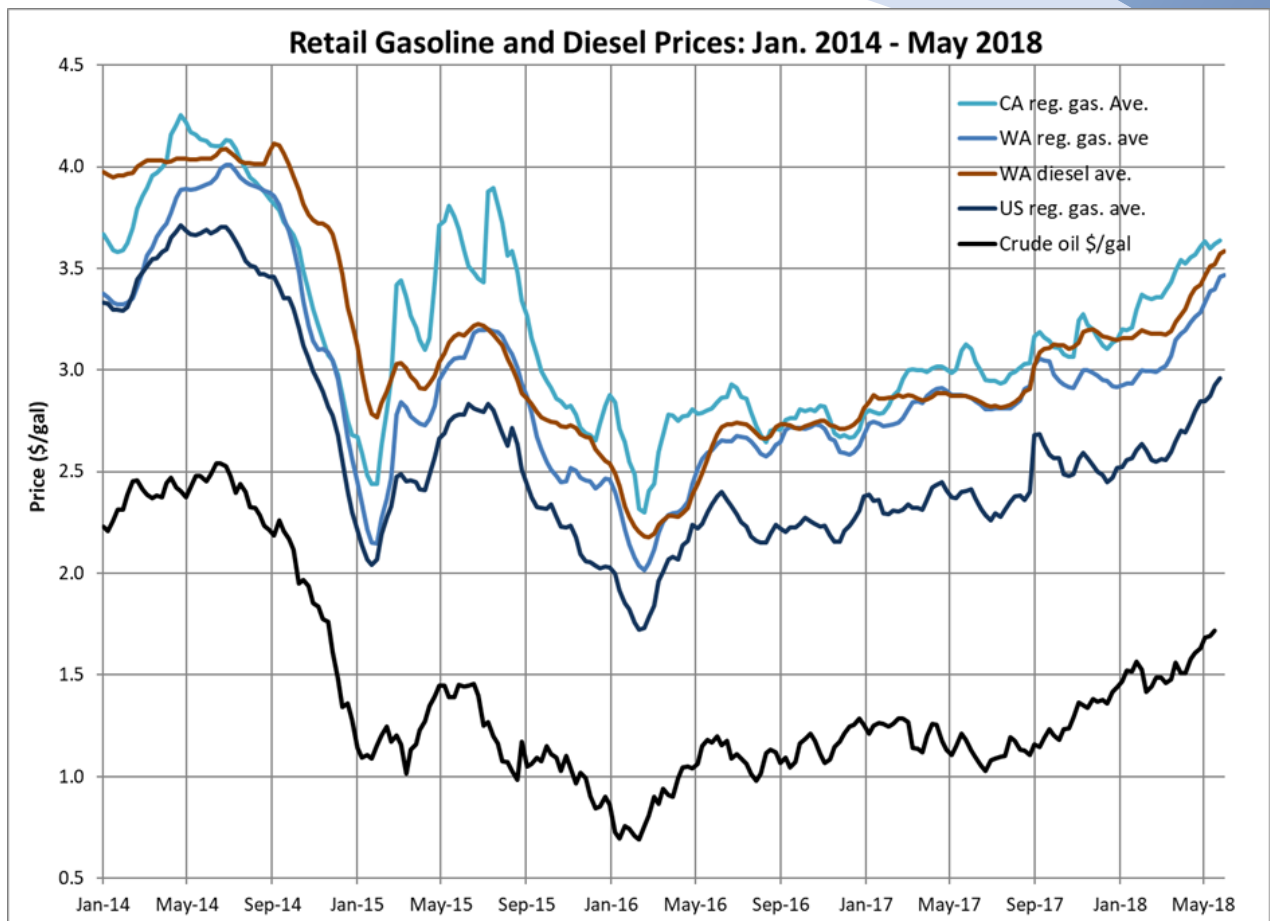
Utilities

[Energy regulators want closer look at utilities' coal plant costs](#)—WUTC

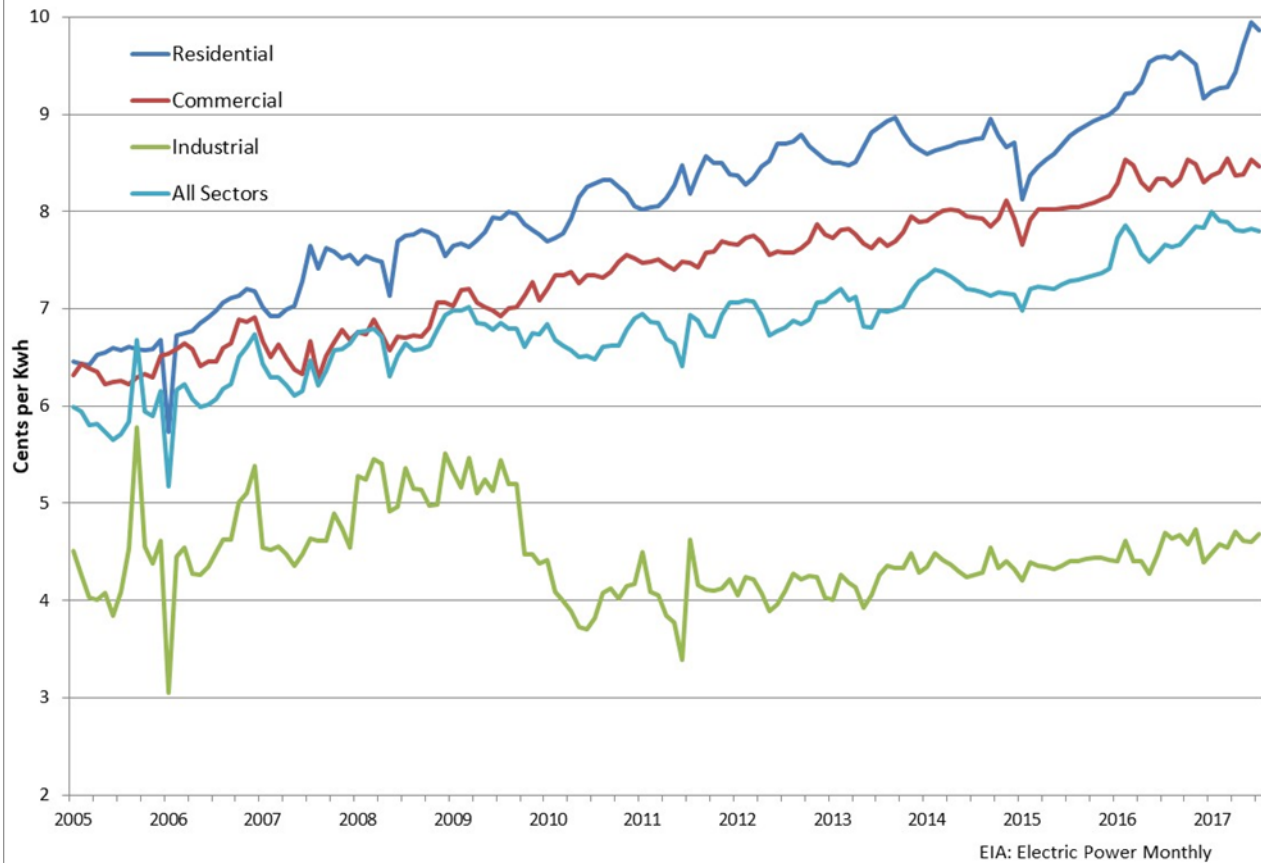
[Electric Power Sector Consumption of Fossil Fuels at Lowest Level since 1994](#)—US EIA

[Washington utilities need better carbon cost estimates in IRPs, regulator says](#)—Utility Dive

[Avista announces plan for \\$165 million smart meter rollout in Washington](#)—Spokesman Review



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



Energy Price Summary, May 2018			
	Current	Month Ago	Year Ago
Monthly Range at Mid-C (Peak: \$ per MWh)	-1-24.0	8-26.5	-2.0-24.0
Average Mid C price (Peak hours \$ MWh, current month)	12.0	18.0	16.7
Electricity WA Ave. Retail: March (cents/kWh)	8.16	8.16	7.89
Natural gas Kingsgate spot price (next day: \$ per million BTU)	1.28	1.42	2.35
Natural gas Sumas futures price (next month \$ per million BTU)	1.48	1.53	0.00
Natural gas Sumas monthly average: March (\$ per million BTU)	2.15	2.43	2.36
Natural gas H.H. futures (NYMEX next month: \$ per million BTU)	2.82	2.80	3.17
E85 (national average: \$ per gallon gasoline)	2.81	2.70	2.54
Ethanol (CBT next month contract: \$ per gallon)	1.48	1.47	1.57
Corn (CBT next month contract: \$ per bushel)	3.95	3.95	3.71
Petroleum, West Texas Intermediate futures (\$ per barrel)	70.5	65.8	48.6
Seattle gasoline price (\$ per gallon, last week of the month)	3.53	3.37	2.96
Gasoline futures (NYMEX next month: \$ per gallon)	2.18	2.05	1.58
State diesel price (\$ per gallon, last week of the month)	3.57	3.42	2.89
Heating oil futures (NYMEX next month: \$ per gallon)	2.22	2.07	1.51
U.S. residential propane price report (\$ per gallon)	2.30	2.20	1.74
Clean Cities: Alternative Fuel Price Report, January 2018			
	Current qtr US avg	Current qtr west coast	Last qtr avg west coast
Ethanol E85 (\$ per gas gallon equiv.)	2.68	3.29	3.25
Biodiesel B20 (\$ per diesel gallon equiv.)	2.90	3.07	2.85
Biodiesel B99-100 (\$ per diesel gallon equiv.)	3.83	3.97	3.80
Compressed Natural Gas (\$ per gas gallon equiv.)	2.17	2.45	2.44
Propane (\$ per gas gallon equiv.)	3.88	4.06	4.16

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](#)

Under-Served Energy Efficiency Markets Assessment Report

The NW Power and Conservation Council has worked over the last year on a paper assessing and identifying segments of the population that are currently under-served by existing efficiency programs, identifying ways to improve participation in those populations.

The [Northwest Under-served Energy Efficiency Markets Assessment](#) is currently in a public comment period ending July 6, 2018.

This report is a result of action item MCS-1 from [Chapter 4 Action Plan](#).

Commerce Energy Staff Andy Etue, Britt Pomush, Bill Kraus, Donny Westfall at the Energy OutWest conference in Arizona last month.



Regional Power Flow		
Intertie	Average	Direction
California (AC+DC)	5,762 mw	export to California
Canada (BC)	154 mw	export to Canada
Total	5,916 mw	export

River Data		
Data for Nov. 7	Outflow (kcfs)	Ave. outflow for last 10 years (kcfs)
(Snake) Lower Granite	123.9	118.9
(Columbia) The Dalles	347.9	314.0