



## Shifting Gears:

### Despite struggling economy, Northwest gasoline use ticks up

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#### SUMMARY

- ◆ **We're using more gas.** Drivers in the Northwest states of Idaho, Oregon, and Washington used more gasoline last year, reversing a decade-long trend of declining personal gas consumption. Per capita gas consumption increased slightly in 2009, while total consumption rose by 2 percent.
- ◆ **Lower fuel prices boosted consumption.** After gasoline prices fell from their peaks in 2008, gasoline sales inched up. Even in the face of the worst economy in decades, in which regional unemployment averaged 9.5 percent, low gas prices mattered more than light wallets. The sharp price decline spurred higher consumption.
- ◆ **British Columbia binges.** Per capita gasoline consumption in the province rose by nearly 10 percent in 2009—the largest year-over-year increase in at least 30 years—likely because of economic activity preceding the Winter Olympics. Per capita diesel use was also up, though at a more moderate pace. Despite these increases, residents of BC still consumed roughly 25 percent less gasoline and diesel, on average, than residents of the Northwest states.
- ◆ **Diesel is down.** In the Northwest states, diesel fuel consumption declined sharply in 2009. Most highway diesel consumption is related to commercial activity, especially trucking, which fell sharply when the economy sputtered.
- ◆ **Smart policies are key to progress.** The right policies—such as pollution fees or carbon taxes—could put the Northwest back on the path to reducing its gasoline consumption. And in light of the Gulf oil disaster, policymakers could levy stiffer clean-up charges on the oil industry, which would help guard against spills and other contamination in Northwest waters.

#### NORTHWEST STATES: GASOLINE RISING, DIESEL FALLING

Per-person gasoline consumption increased in the Northwest states in 2009, after reaching a 43-year low in 2008. Annual gasoline consumption for a typical resident of the US Northwest—Washington, Oregon, and Idaho—rose from 389 gallons in 2008 to 392 gallons in 2009, a modest but significant increase.

Last year's uptick represented a reversal of a decade of nearly uninterrupted declines in per capita consumption. Between 1999 (when inflation-adjusted oil prices reached post-war lows) and 2008 (when oil prices were soaring) per capita consumption of gasoline in the Northwest states fell by 15 percent. All told, northwesterners reduced their consumption by 65 gallons per person per year over the period, achieving the lowest personal gasoline usage in the region since 1965.

Yet in 2009, gas consumers shifted out of reverse, purchasing more gasoline per person than they had the year before (see Figure 1). Preliminary data for early 2010 suggest that this uptick may be continuing.

Consumption trends were inconsistent across the region. Idaho drivers, already the largest per capita consumers of gasoline in the region, increased their purchases by nearly 4 percent. By contrast, drivers in Oregon and Washington increased per-person use by less than 1 percent. Overall consumption rose in each of the three states, boosting total gasoline consumption by 100 million gallons.

Still, total consumption of gasoline in the region has been at a rough plateau for about a decade as population growth has been counterbalanced by declining per capita usage (see Figure 2).

The rise in fuel consumption was especially striking given that the Northwest experienced the worst economic downturn in a generation—a downturn that trimmed employment, cut personal income, and dampened consumer spending.<sup>1</sup> In the past, fuel consumption tracked with overall economic trends: during recessions, people bought less gasoline.<sup>2</sup> Yet the recent downturn was coupled with a sharp decline in retail gas prices from the lofty peaks of the summer of 2008. In the Northwest, declining prices trumped economic insecurity, as drivers reached for the pump more often than they did during 2008. The increase in consumption is evidence of the effect that fuel prices can have on personal fuel use: high prices trim consumption, while price cuts increase consumption.<sup>3</sup>

The uptick in 2009 marked a departure from the region's recent history and also bucked the national

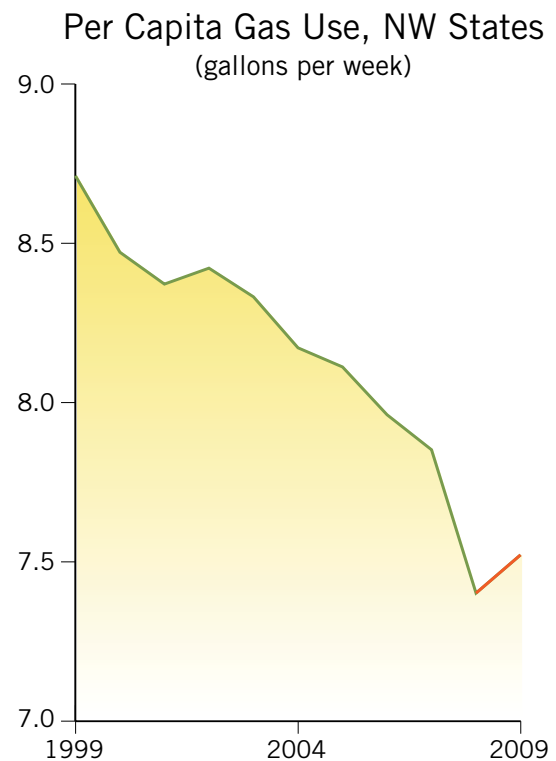


Figure 1. Despite the worst economy in decades, per capita consumption ticked up in 2009.

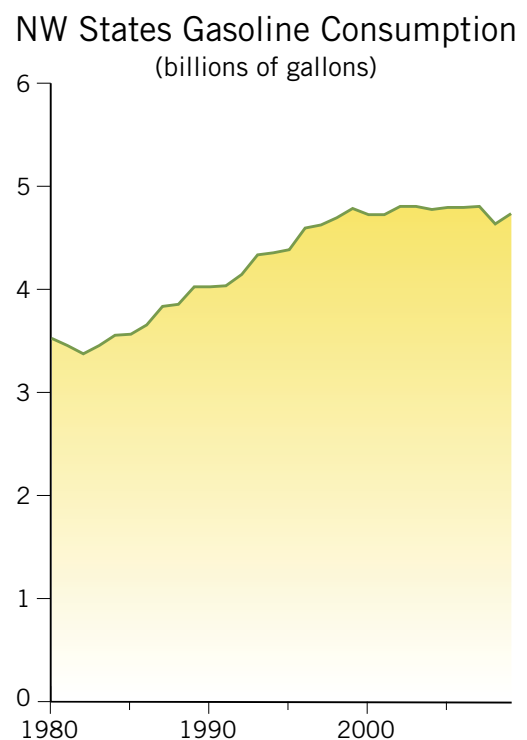


Figure 2. Total gasoline consumption in the Northwest states has been essentially flat for more than a decade.

trend. Compared with 2008, total US gasoline purchases fell slightly in 2009. Still, drivers in the Northwest states used about 9 percent less gasoline than the US average.

In contrast with the gasoline trends, diesel use dropped steeply in each of the Northwest states in 2009. Highway diesel consumption in North America is closely tied to commercial activity, especially long-distance trucking, which fell sharply when the economy stumbled.

Measured per person, diesel consumption fell by 10 percent in the region, mirroring the national trend. In fact, the decline in diesel use was so steep that it more than offset the increase in gasoline use. In aggregate, considering both gasoline and diesel, total consumption of highway fuel in the Northwest states actually declined, with highway fuel consumption falling by 33 million gallons compared with 2008.

### BRITISH COLUMBIA: A SURGE IN ALL HIGHWAY FUELS

Gasoline consumption rose throughout the Pacific Northwest, but the increase in British Columbia was particularly striking. British Columbia racked up the largest year-over-year spike in gasoline sales in at least three decades, with per capita use leaping by nearly 10 percent—a surprising figure given that the annual variation in per capita consumption is typically less than 3 percent. At the same time, per capita diesel consumption in the province inched up by nearly 2 percent.

Yet despite these increases, residents of the province still consumed about 25 percent less per capita than their neighbors in the Northwest states.

British Columbia's spike in fuel sales can be traced to economic forces. As in the Northwest states, gas prices fell sharply in the province from 2008 and 2009. British Columbia, however, experienced a milder economic downturn than the Northwest states, with a far smaller increase in unemployment.<sup>4</sup> At least part of BC's comparatively bustling economy—and hence, part of the increase in gas consumption—can be traced to preparations for the 2010 Winter Olympics. Preliminary gasoline sales for the first quarter of 2010 suggest yet another surge, likely related to Olympics tourism and festivities. All told, the economic boost from the Olympics may have been responsible for tens of millions of gallons of additional highway fuel sales throughout the province in the first quarter of 2010 alone.

One countervailing factor in British Columbia was the new carbon tax, first implemented in mid-2008, which added Can 2.41 cents per liter (Can 9.1 cents per gallon) of gasoline during the first half of 2009 and Can 3.62 cents per liter (Can 13.7 cents per gallon) during the second half.<sup>5</sup> Yet year-over-year declines in fuel prices

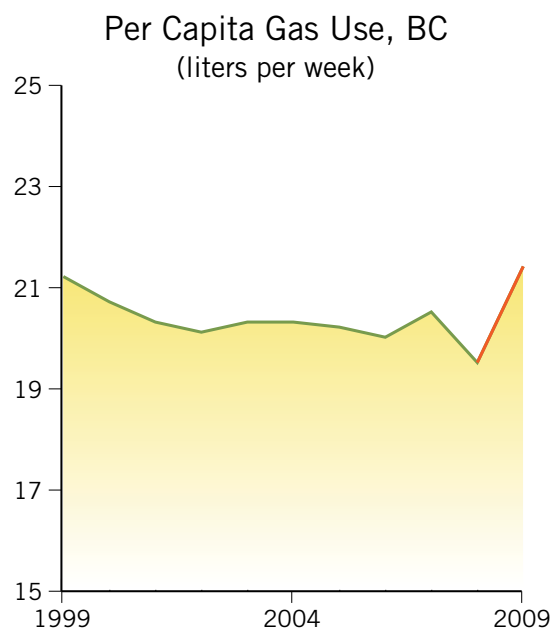


Figure 3. Per capita consumption of gasoline jumped by nearly 10 percent, the largest year-over-year increase in decades.

overwhelmed the province's modest tax. For example, gasoline prices in Vancouver dropped by about Can 33 cents per liter (Can\$1.26 per gallon) from summer 2008 to summer 2009.<sup>6</sup> In other words, the one-year decline in fuel prices was roughly an order of magnitude greater than BC's carbon tax. Still, without the carbon tax, the province's fuel consumption would have been even higher.

## THE ROAD AHEAD

It is unclear what 2010 holds for the Northwest's consumption of highway fuel. Preliminary fuel sales and delivery figures are suggestive of higher sales but are not conclusive. Yet early travel data hint that Northwest drivers are logging more miles this year than last, perhaps foretelling a continuation of last year's uptick in gasoline consumption.<sup>7</sup>

As expensive as highway fuel is at the pump, it carries even greater costs for the overall Northwest economy. The Northwest states produce no petroleum; British Columbia produces only a little.<sup>8</sup> And that makes highway fuel a significant drain on the region's economy; the Northwest states typically send billions of dollars out of the region annually in order to pay for oil imports.<sup>9</sup> Trimming our fossil fuel consumption would leave more money in the region to circulate among local businesses and residents—with significant benefits for the Northwest economy. Moreover, the burning of gasoline and diesel contributes to unhealthy air in parts of the region.<sup>10</sup> And transportation fuels are the biggest source of carbon emissions locally, making them far and away the Northwest's biggest contribution to climate change.<sup>11</sup>

Northwest policymakers have many options to reduce the region's reliance on gasoline and diesel. In the short term, the region can invest in transit and other alternatives to driving, such as walking and bicycling. In an era of sharply constricted government budgets, inexpensive off-the-shelf buys such as vanpools and high-ridership bus service may be particularly cost effective. But for longer-term impacts, policymakers looking to reduce oil consumption should scrutinize the massive, big-ticket highway projects that are likely to deepen the region's dependence on petroleum for decades to come. At present, each of the Northwest's three major metropolises is moving forward with expensive highway expansions, including a new Port Mann Bridge, east of Vancouver, BC (Can\$2.4 billion), the Highway 520 floating bridge replacement between Seattle and Bellevue (\$4.6 billion), and the Interstate 5 Columbia River Crossing between Vancouver, Washington and Portland (\$3.2 billion).<sup>12</sup>

In addition, policymakers can adopt pricing strategies to reduce oil consumption and mitigate the harm that accompanies it. British Columbia is leading the way: its comprehensive carbon tax is already helping to create the price signals that will trim provincial fossil fuel consumption over the long haul. Similarly, a cap-and-trade program that includes transportation fuels, such as the one proposed by the Western Climate Initiative (of which British Columbia, Oregon, and Washington are members) would also create the price signals that would lead to long-term reductions in highway fuel use.

Northwesterners can also consider raising pollution fees. If levied on gasoline and diesel, such fees would not only reduce consumption by raising the price, but would also generate new revenue that could be used to clean up existing water pollution and forestall future threats. During the 2010 legislative session, Washington lawmakers declined to approve a small pollution tax increase on hazardous substances, including refined petroleum products, even though cleanup efforts for Puget Sound and other water bodies are severely underfunded. In light of the severe oil spill in the Gulf of Mexico, the region's leaders should consider anew the opportunities for reducing fossil fuel consumption and protecting the Northwest from oil pollution.

## DATA SOURCES

For this analysis, gasoline and diesel consumption refers to fuel sold for consumption on highways, including consumption by private households, businesses, transit vehicles, and government agencies. It does not include fuel for non-highway purposes, such as farm use or home heating. Sightline compiled gasoline and diesel consumption data from a variety of sources, including:

- ◆ **The Federal Highway Administration.** The FHWA collects, analyzes, and corrects state-level gasoline consumption data for all 50 states and the District of Columbia. Gasoline consumption trends from 1950 through 2008 are taken from final FHWA data from the Highway Statistics Series, tables MF-26 and MF-226. Data for 2009 represent preliminary figures from the Highway Statistics Series, table MF-21.
- ◆ **State and provincial taxation agencies.** British Columbia, Washington, Oregon, and Idaho all measure gas consumption closely for the purpose of collecting state and provincial gas taxes. Note that state figures may be revised in the months and years after the data are first reported. Although federal numbers are based largely on the state figures, in some instances the federal and state data series diverge. For long-term trends, Sightline relies on federal figures. Sightline extends special thanks to Nanci Tousignant and Hugh Hughson at the BC Ministry of Finance.
- ◆ **The US and Canadian censuses.** State, provincial, and national population figures are all derived from national census department estimates.

All volumetric figures are given in US gallons unless otherwise specified. For purposes of this report, “gasoline” refers to both gasoline and gasoline-ethanol blends; “diesel” may include diesel-biodiesel blends.

### About Sightline

Sightline Institute is a not-for-profit research and communication center—a think tank—based in Seattle. Founded in 1993 by Alan Durning, Sightline's mission is to make the Northwest a global model of sustainability—strong communities, a green economy, and a healthy environment.

## DATA APPENDIX

### Per Capita Highway Gasoline Consumption (gallons)

Year	WA	OR	ID	BC	NW	NW States	USA	Canada
1950	253	297	289			273	231	
1960	313	346	362			330	307	
1970	430	477	526			457	417	
1980	432	481	467	407	443	453	445	388
1990	455	460	459	266	405	457	439	292
1999	451	450	478	292	409	454	463	308
2000	443	436	460	286	400	443	457	305
2001	438	429	451	279	393	437	456	304
2002	439	431	460	277	394	439	465	304
2003	436	424	453	280	391	434	464	308
2004	426	420	449	281	385	427	465	313
2005	421	418	444	278	381	423	459	308
2006	413	411	434	276	377	415	452	305
2007	408	403	431	283	375	409	449	315
2008	391	386	390	270	357	389	434	307
2009	392	387	404	295	366	392	429	

### Total Consumption of Highway Gasoline (millions of gallons)

Year	WA	OR	ID	BC	NW	NW States	US	Canada
1950	604	455	171			1,230	35,125	
1960	892	613	243			1,749	55,429	
1970	1,474	1,003	377			2,853	85,598	
1980	1,800	1,272	442	1,118	4,631	3,514	101,183	9,490
1990	2,231	1,316	465	875	4,886	4,012	109,529	8,075
1999	2,637	1,526	610	1,170	5,943	4,773	129,270	9,343
2000	2,620	1,495	597	1,157	5,869	4,712	129,061	9,337
2001	2,623	1,487	596	1,139	5,845	4,706	130,062	9,410
2002	2,660	1,515	617	1,135	5,927	4,792	133,736	9,517
2003	2,665	1,505	618	1,155	5,943	4,788	134,643	9,742
2004	2,637	1,499	626	1,168	5,930	4,762	136,374	9,981
2005	2,639	1,511	633	1,166	5,948	4,782	135,664	9,901
2006	2,632	1,510	636	1,170	5,948	4,778	134,882	9,918
2007	2,636	1,506	647	1,218	6,007	4,789	135,418	10,346
2008	2,564	1,459	596	1,183	5,802	4,619	132,205	10,199
2009	2,611	1,482	625	1,316	6,034	4,718	131,750	

## ENDNOTES

1. Employment from US Bureau of Labor Statistics, “Table 1. Employment Status of the Civilian Noninstitutional Population 16 Years of Age and Over by Region, Division, and State, 2008-09 Annual Averages,” <http://www.bls.gov/news.release/srgune.t01.htm>, and other BLS sources. Income from US Bureau of Economic Analysis, “Table 2.1. Personal Income and Its Disposition,” <http://www.bea.gov>. Spending from US Bureau of Economic Analysis, “Table 2.3.4U. Price Indexes for Personal Consumption Expenditures by Major Type of Product and by Major Function,” <http://www.bea.gov>.
2. Since 1977, declines in annual per capita GDP have coincided with declines in annual per capita gasoline consumption.
3. See, for example, Todd Litman, “Transportation Elasticities: How Prices and Other Factors Affect Travel Behavior,” Victoria Transport Policy Institute, May 3, 2010, <http://www.vtpi.org/elasticities.pdf>.
4. British Columbia’s unemployment rate from Statistics Canada, “Table 282-0002: Labour Force Survey Estimates (LFS), By Sex and Detailed Age Group, Annual,” CANSIM, <http://www.statcan.gc.ca>.
5. Note that gallons here refer to US gallons, not imperial gallons. For diesel, the carbon tax added Can 10.4 cents per gallon during the first half of 2009 and Can 15.7 cents per gallon during the second half, or Can 2.76 cents per liter and Can 4.14 cents per liter, respectively. Carbon tax figures from BC Ministry of Small Business and Revenue, “British Columbia Carbon Tax,” February 2008, <http://www.flclimatechange.us/ewebeditpro/items/O12F16858.pdf>.
6. Note that the price per gallon refers to US gallons, not imperial gallons. Gasoline prices from Statistics Canada, “Table 326-0009 - Average Retail Prices for Gasoline and Fuel Oil, by Urban Centre, Monthly (Cents per Litre),” CANSIM, <http://www.statcan.gc.ca>. Figures based on comparing regular unleaded gasoline at full- and self-service stations in Vancouver from the high price period in 2008 (June through August) to the high price period in 2009 (also June through August).
7. Preliminary fuel sales figures from British Columbia Tax Policy Branch, Idaho State Tax Commission, Oregon Fuels Tax Group, and US Energy Information Administration. Data for Oregon and for the United States suggest a decline in overall gasoline use, while data for Idaho and BC suggest an increase. Driving trends from US Federal Highway Administration, “Traffic Volume Trends,” <http://www.fhwa.dot.gov/ohim/tvtw/tvtpage.cfm>.
8. Oil production from US Energy Information Administration, State Energy Profiles, <http://tonto.eia.doe.gov/state/index.cfm>; and Statistics Canada, “Table 1-12: Primary and Secondary Energy, Natural Units – British Columbia,” <http://www.statcan.gc.ca/pub/57-003-x/2008000/t026-eng.htm>.
9. Spending on petroleum imports calculated by Sightline Institute from US Energy Information Administration sources.
10. Air pollution from Puget Sound Clean Air Agency, “Putting the Brakes on Air Pollution,” <http://www.pscleanair.org/actions/vehicles/default.aspx>; and Oregon Department of Environmental Quality, “Air Quality in the Portland Region,” <http://www.deq.state.or.us/aq/northwest/index.htm>.
11. Transportation fuels’ share of carbon emissions from Eric de Place, “WCI and Transportation Fuels,” Sightline Daily blog, January 8, 2008, [http://daily.sightline.org/daily\\_score/archive/2008/01/08/wci-and-transportation-fuels](http://daily.sightline.org/daily_score/archive/2008/01/08/wci-and-transportation-fuels); and BC Ministry of Environment, “British Columbia Greenhouse Gas Inventory Report 2007,” July 2009, [http://www.env.gov.bc.ca/cas/mitigation/ghg\\_inventory/pdf/pir-2007-full-report.pdf](http://www.env.gov.bc.ca/cas/mitigation/ghg_inventory/pdf/pir-2007-full-report.pdf); and US Energy Information Administration, “State CO2 Emissions,” <http://www.eia.doe.gov/environment.html>.
12. Port Mann Bridge costs from CBC News, “Province To Foot Entire Cost of New Port Mann Bridge,” February 27, 2009, <http://www.cbc.ca/canada/british-columbia/story/2009/02/27/bc-falcon-ralston-port-mann.html>; Highway 520 floating bridge replacement costs from Washington Department of Transportation, “520 – Bridge Replacement and HOV Program,” <http://www.wsdot.wa.gov/projects/SR520Bridge>; Columbia River Crossing costs from “Columbia River Crossing: Project Refinements,” <http://www.columbiarivercrossing.org/CurrentTopics/RefinementRecommendation.aspx>.