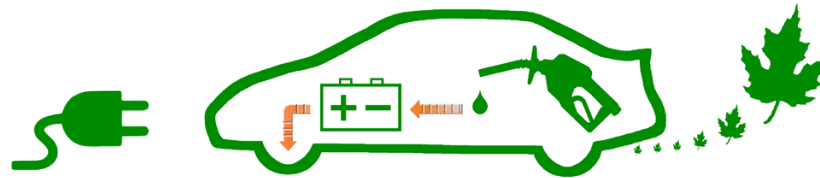


Prius PHV

First-Year Report



Real-World Data

Many years ago, there was much doubt about hybrids, those cars with both a combustion engine and an electric motor. Fortunately, most of the misconceptions from back then have since been proven false and forgotten, no longer impairing the spread of the cleaner and more efficient technology. Even the implied stigma from those hoping to undermine progress has faded. It's now common to see hybrids every time you drive... so common, the next step has been taken by automakers: the introduction of a plug.

Full hybrids (like Prius) utilize a power-split device. This delivers the ability to vary the power & direction of energy by connecting a motor for traction, a motor for generating electricity, and an engine. The flexibility provides a wide array of behavior which can rapidly change from one mode to another. That means being able to both create & consume electricity at the same time, resulting in a very efficient way of using it for propulsion and recharging the battery-pack. Adding a plug increases efficiency opportunities.

As with regular hybrids, success depends upon real-world data. Automakers advertisements cannot convey the complexities & expectations of ownership. Owners can. Their endorsements are a powerful tool for educating & informing. This document supplies detail of owning a 2012 Prius PHV, the plug-in model.

Note: Standard household outlets, the common 110/120 volt connection we all have in our homes, is all that's needed for recharging Prius PHV. From "empty" (battery-pack level of about 23%) it will take 2.5 hours to recharge to "full" (battery-pack level to 85%). A faster 220/240 volt connection is available. It reduces recharge time to 1.5 hours. But the extra expense of purchasing that faster charger isn't necessary. The 110/120 included with purchase is all owners recharging overnight will ever need.

Annual Totals

The following are the totals, spanning from March 11, 2012 to March 10, 2013:

18,477	Total Miles
6,328	EV Miles (displayed amount)
12,123	HV Miles (displayed amount)
365	Days (12 months)
574	Recharges (based on capacity replenished)
239.9	Total Gallons (measured at the pump)
1,721	Total kWh (including charging losses)
1,505	Total kWh (displayed amount)
77.0	Lifetime MPG
50.5	MPG (HV)
27	kWh / 100 miles

Those numbers in the summary are from an owner in Minnesota, where extreme cold temperature driving reduces efficiency in all types of vehicles. Driving roughly 19,000 miles per year is another above average factor to consider. The few miles you drive, the higher MPG can be. More electricity usage translates to better efficiency. This is true even when the engine runs. That means HV miles benefit from having plug-supplied electricity available too.

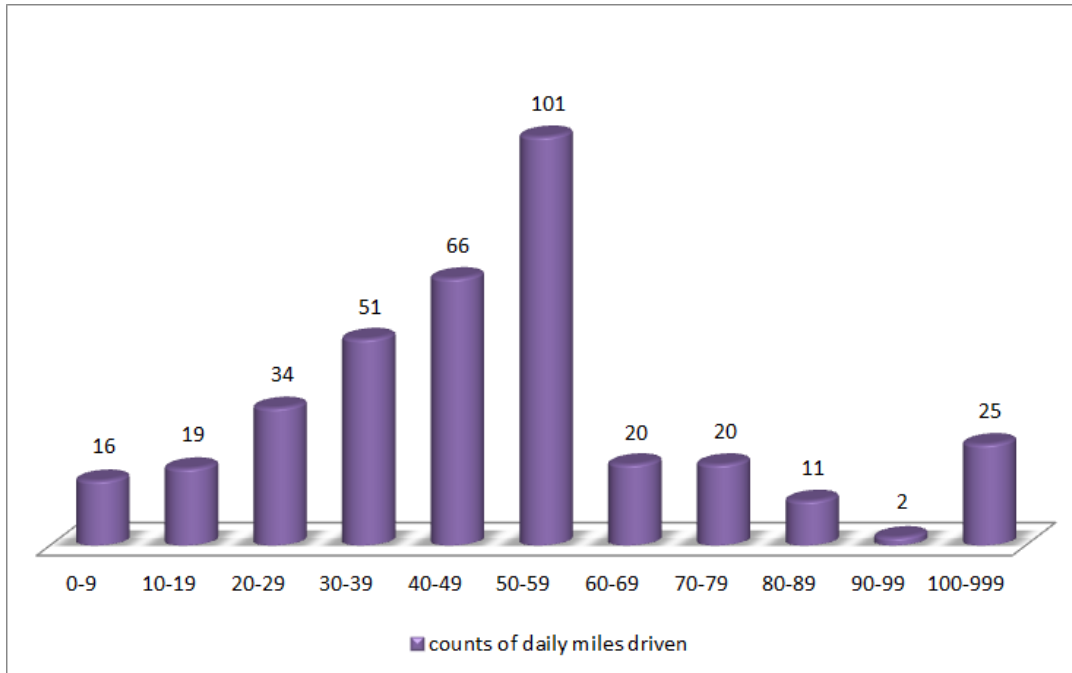
Each owner's driving circumstances are different. This is why the window-sticker always comes with a YMMV (Your Mileage May Vary) warning. With the case of a plug being included, change that "May" to a "Will". Nonetheless, real-world data is still an important means of measuring the effectiveness of the technology.

What is clear though is the efficiency improvement the larger battery-pack and plug provide. The resulting MPG is well above what a regular Prius would deliver.

Note: With the owner data above, it is important to be aware that a charging-station was available at work and was used most afternoons prior to the commute home. The commute itself was about 34 miles round-trip. Lots of other driving during evenings and on weekends also took place. Shorter commutes, less frequent driving, or not recharging a second time daily would result in different MPG.

Daily Miles - Summary

Don't be fooled by generalized estimates claiming standard daily-driving quantities. Most people assume they follow a routine. You'd be surprised how often the demands of life cause unpredictable variation. There usually isn't a pattern to the driving. This real-world data clearly shows that:

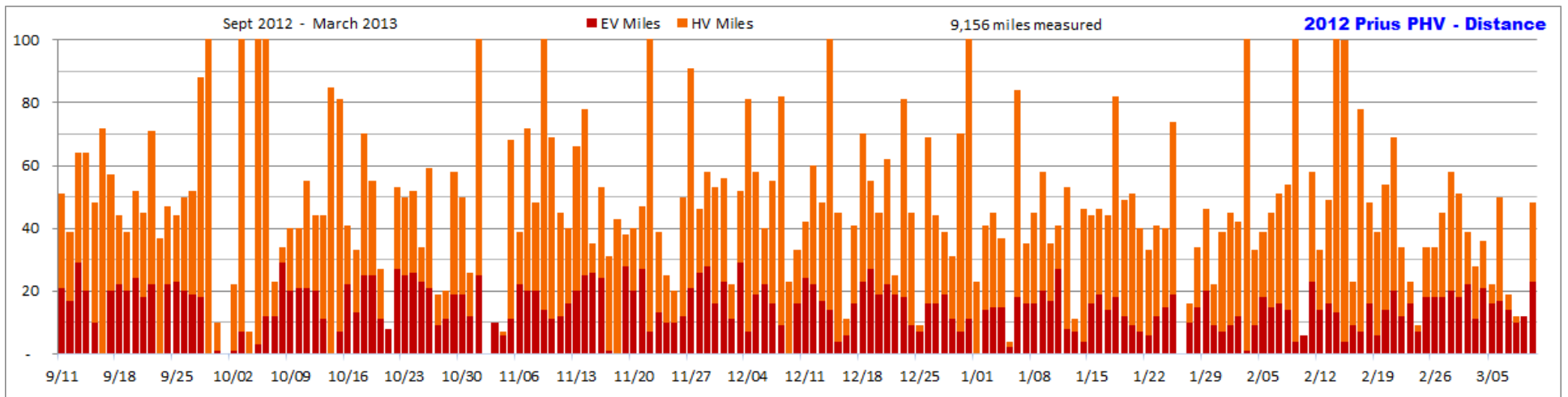
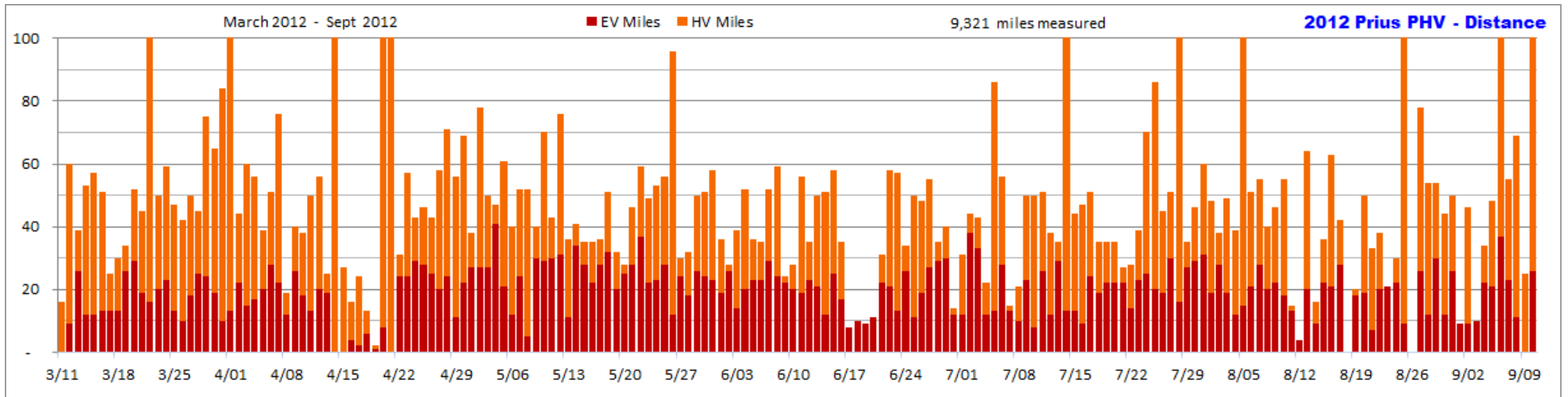


Think about how often you run to the store for household items, buy groceries, meet a friend, visit family, go to a theater, eat at a restaurant, get a coffee, pick up a prescription, rent a movie or game, go to the bank, have late night food cravings... the list of possible non-work driving you could routinely do is extensive. That doesn't even include any of the running around you do for your children.

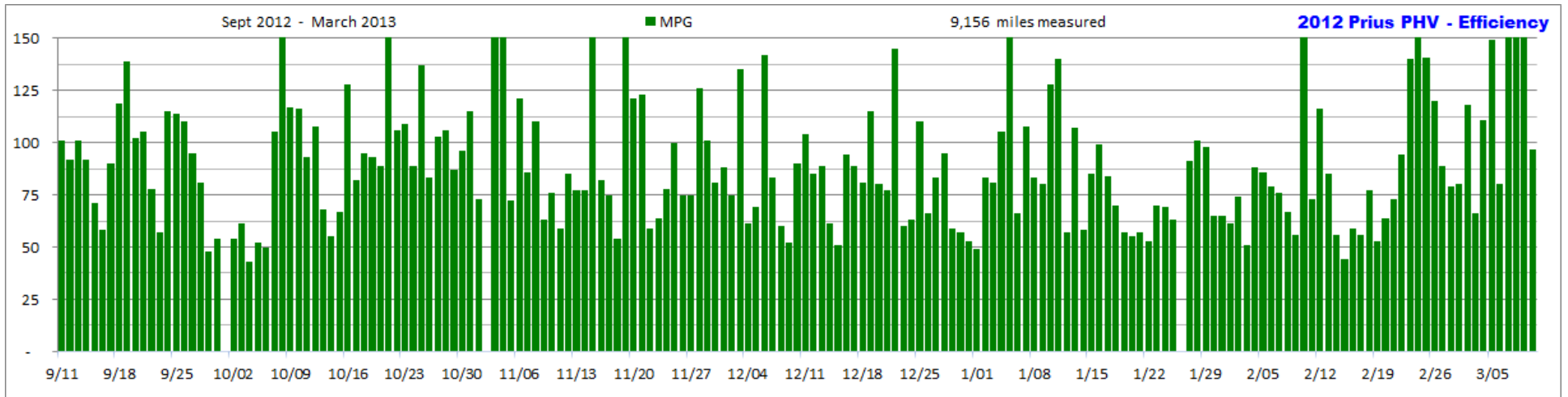
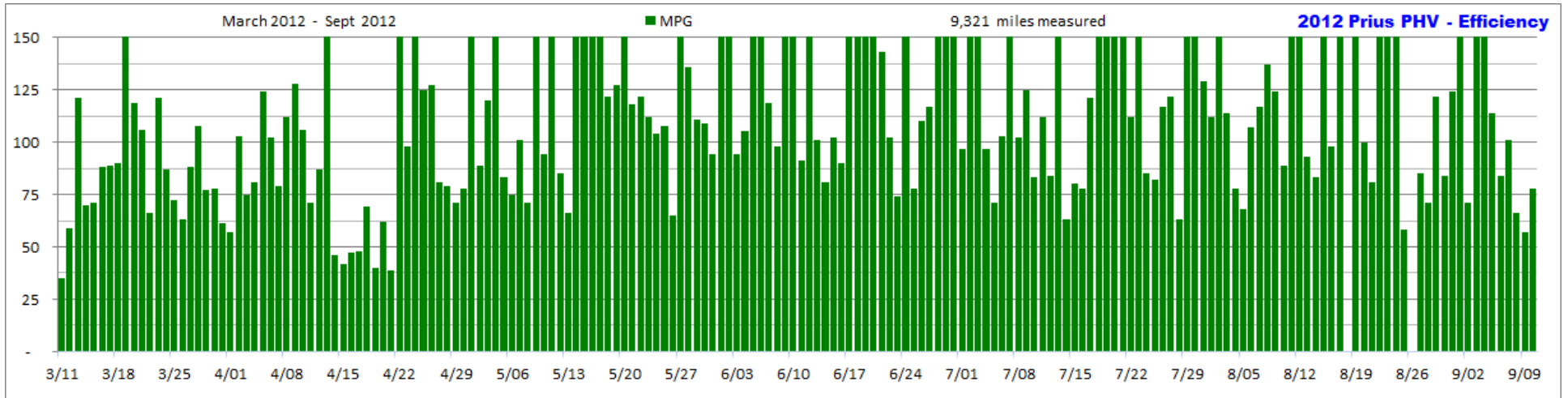
Daily Miles - Detail

That cliché pointing out “*the devil is in the detail*” most definitely applies when it comes to a plug-in hybrid like Prius. Use of the plug-supplied electricity varies greatly, even when consistently charge once or twice per day. It’s very important to remember that when miles are not logged as EV, the miles in HV still take advantage of the battery-pack.

Notice the variation. The lack of any pattern becomes quite evident when the real-world data is plotted in a daily graph like these:



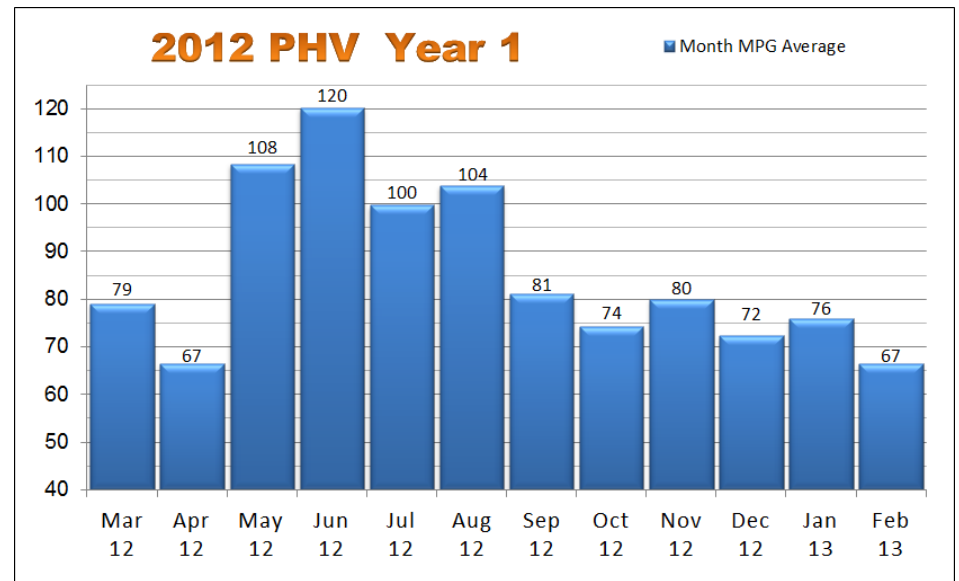
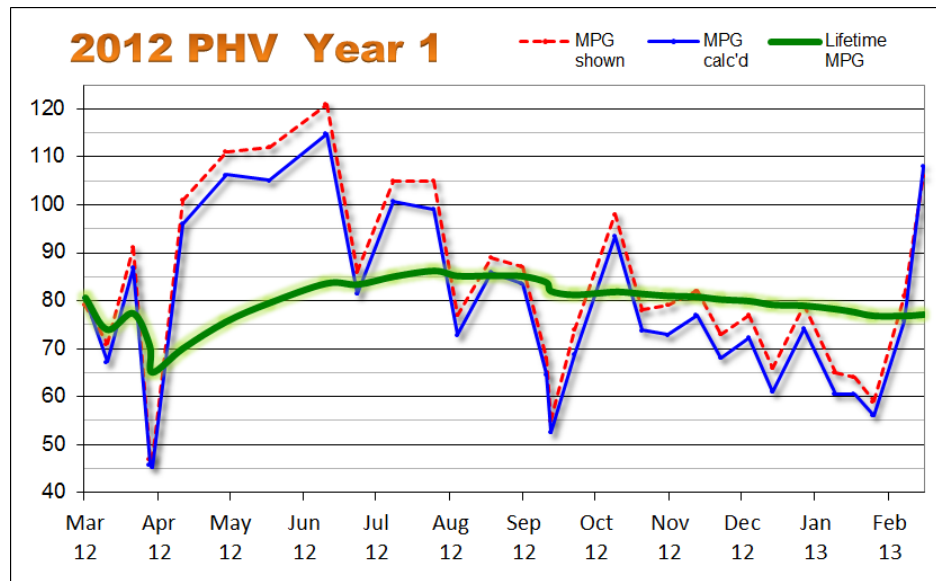
Coinciding with the EV & HV mile data is the detail for MPG. Each day varies widely, which is very easy to see:



The benefit of the plug and larger battery-pack is obvious. Notice that most days are well the 50 MPG mark.

Tank Efficiency - Summary

Based on **gas consumption** and **total miles driven**, these graphs are 2 different ways of showing the efficiency results, per tank & per month:

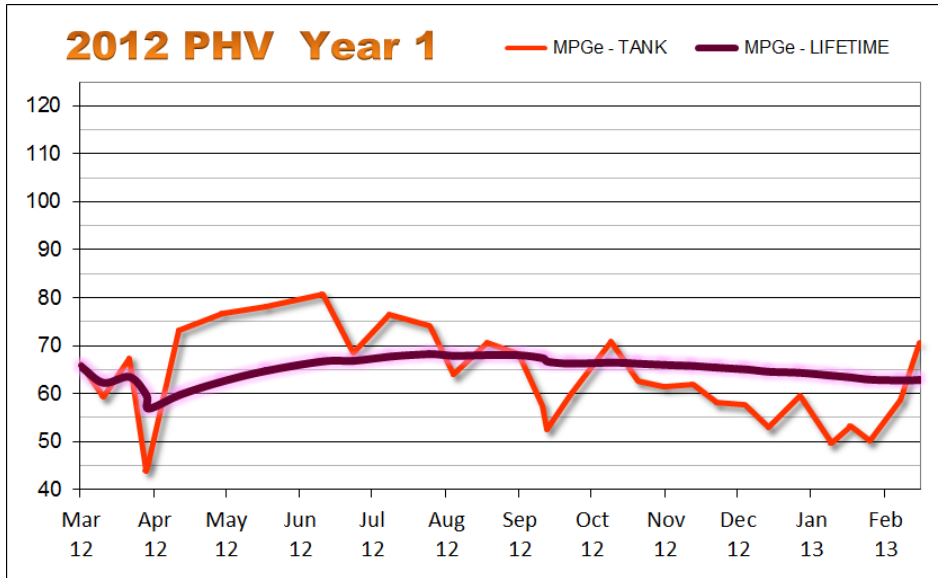


In both, you can clearly see the variation caused by season change. Many factors influence the outcome. But even without know how & why detail, it's easy to confirm the same type of up & down with traditional vehicles applies to the hybrid as well. Fortunately, the resulting MPG itself is quite a bit better.

Notice that green line in the "per tank" graph on the left? That's the lifetime MPG value. It's a running total illustrating the overall average taking the entire year's worth of data into account. This is what ultimately informs the owner of what their particular gas consumption level is for ownership of the vehicle.

Combining gallons of gas with kWh of electricity results in a new type of efficiency measure, called “MPGe”.

Notice how different it appears compared to just gallons of gas alone:



The purpose is to take all forms of energy into account, conveying a complete picture of efficiency.

This is the formula used: $MPGe = (\# \text{ EV miles} + \# \text{ HV miles}) / ((\# \text{ kWh} / 32.6 \text{ kWh}) + \# \text{ gallons})$

32.6 kWh represents the electrical equivalent of one gallon of E10

33.7 kWh represents the electrical equivalent of one gallon of 100% gas

kWh value from the real-world data must include charging losses.

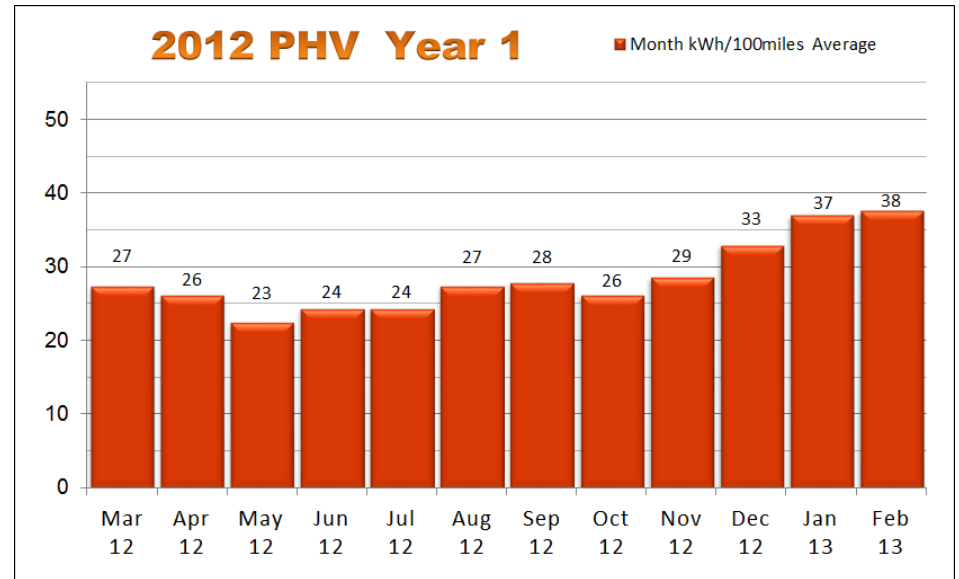
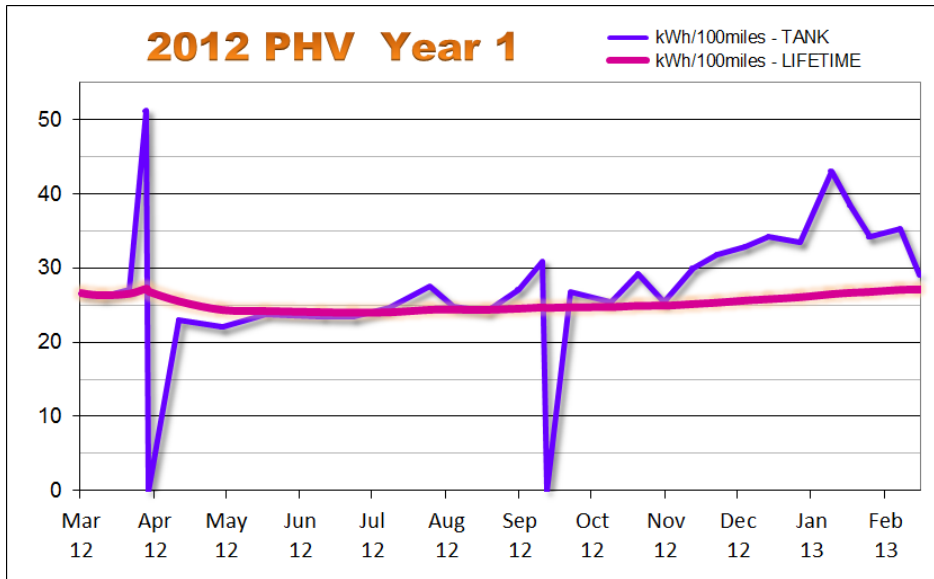
Tank Efficiency - Detail

These are the values documented each time the gas tank was refilled. Notice the difference between shown (computer displayed) quantities and the pump & outlet measurements. Study closely the relation between electricity (kWh) & gas (gallons), how they influence efficiency results. Don't forget about season influence either. The real-world data is far from the simple estimates people assume and those greenwashers attempt to convince you of.

	MPG shown	MPG calc'd	Lifetime MPG	EV	HV	Total Miles	Gallons	Total Gallons	Recharges	kWh shown	kWh calc'd	Total kWh	MPG (HV)	kWh / 100 miles	Lifetime kWh/100m calc'd
3/24/2012	79	80.6	80.6	237	448	685	8.504	8.504	21.0	60	63.0	63.0	52.7	26.6	26.6
4/02/2012	71	67.2	73.9	157	418	1,255	8.477	16.981	13.7	36	41.1	104.1	49.3	26.2	26.4
4/13/2012	91	86.8	77.3	214	305	1,775	5.988	22.969	19.3	53	57.9	162.0	50.9	27.1	26.6
4/20/2012	47	45.8	70.4	17	279	2,072	6.481	29.450	2.9	4	8.7	170.7	43.0	51.2	27.3
4/21/2012	47	45.3	65.0	9	357	2,438	8.072	37.522	0.0	0	0.0	170.7	44.2	0.0	26.9
5/04/2012	101	96.0	70.0	329	371	3,140	7.314	44.836	25.2	69	75.6	246.3	50.7	23.0	25.6
5/22/2012	111	106.2	75.6	454	393	3,998	8.077	52.913	33.3	92	99.9	346.2	48.7	22.0	24.4
6/09/2012	112	105.1	79.4	407	444	4,840	8.015	60.928	32.3	88	96.9	443.1	55.4	23.8	24.3
7/03/2012	121	114.9	83.5	479	432	5,752	7.938	68.866	37.5	104	112.5	555.6	54.4	23.5	24.1
7/16/2012	86	81.4	83.3	218	449	6,421	8.222	77.088	17.0	46	51.0	606.6	54.6	23.4	24.1
7/31/2012	105	100.8	84.9	346	457	7,225	7.977	85.065	28.4	77	85.2	691.8	57.3	24.6	24.1
8/17/2012	105	99.1	86.1	325	452	8,002	7.841	92.906	29.8	79	89.4	781.2	57.6	27.5	24.5
8/27/2012	77	72.9	85.1	150	434	8,587	8.028	100.934	12.4	33	37.2	818.4	54.1	24.8	24.5
9/10/2012	89	85.9	85.1	254	474	9,316	8.490	109.424	20.5	53	61.5	879.9	55.8	24.2	24.5
9/23/2012	87	83.5	85.0	228	458	10,002	8.213	117.637	20.6	57	61.8	941.7	55.8	27.1	24.6
10/03/2012	68	64.6	83.7	106	406	10,515	7.937	125.574	10.9	26	32.7	974.4	51.2	30.8	24.8
10/05/2012	55	52.5	81.9	11	399	10,924	7.797	133.371	0.0	0	0.0	974.4	51.2	0.0	24.7
10/15/2012	74	68.8	81.1	156	412	11,493	8.267	141.638	13.9	36	41.7	1016.1	49.8	26.7	24.8
11/01/2012	98	93.5	81.8	311	378	12,182	7.371	149.009	26.4	71	79.2	1095.3	51.3	25.5	24.8
11/12/2012	78	73.8	81.3	164	430	12,777	8.061	157.070	16.0	40	48.0	1143.3	53.3	29.3	25.0
11/23/2012	79	72.9	80.9	201	398	13,377	8.234	165.304	17.0	42	51.0	1194.3	48.3	25.4	25.0
12/05/2012	82	77.0	80.7	218	406	14,003	8.128	173.432	21.8	57	65.4	1259.7	50.0	30.0	25.2
12/15/2012	73	68.1	80.2	149	403	14,555	8.103	181.535	15.8	40	47.4	1307.1	49.7	31.8	25.4
12/27/2012	77	72.3	79.8	206	366	15,128	7.923	189.458	22.6	59	67.8	1374.9	46.2	32.9	25.7
1/06/2013	66	60.9	79.1	119	380	15,629	8.221	197.679	13.6	35	40.8	1415.7	46.2	34.3	25.9
1/19/2013	79	74.2	78.9	199	391	16,219	7.954	205.633	22.2	56	66.6	1482.3	49.2	33.5	26.2
2/01/2013	65	60.5	78.2	140	353	16,712	8.149	213.782	20.1	48	60.3	1542.6	43.3	43.1	26.6
2/09/2013	64	60.6	77.5	93	387	17,194	7.954	221.736	11.9	29	35.7	1578.3	48.7	38.4	26.8
2/17/2013	59	56.1	76.8	93	369	17,658	8.268	230.004	10.6	24	31.8	1610.1	44.6	34.2	26.9
3/02/2013	81	75.8	76.7	210	368	18,238	7.651	237.655	24.7	59	74.1	1684.2	48.1	35.3	27.2
3/10/2013	106	107.9	77.0	128	106	18,477	2.214	239.869	12.4	32	37.2	1721.4	47.9	29.1	27.2

Plug Efficiency - Summary

Based on **electricity consumption** and **EV miles driven**, these graphs are 2 different ways of showing the efficiency results, per tank & per month:



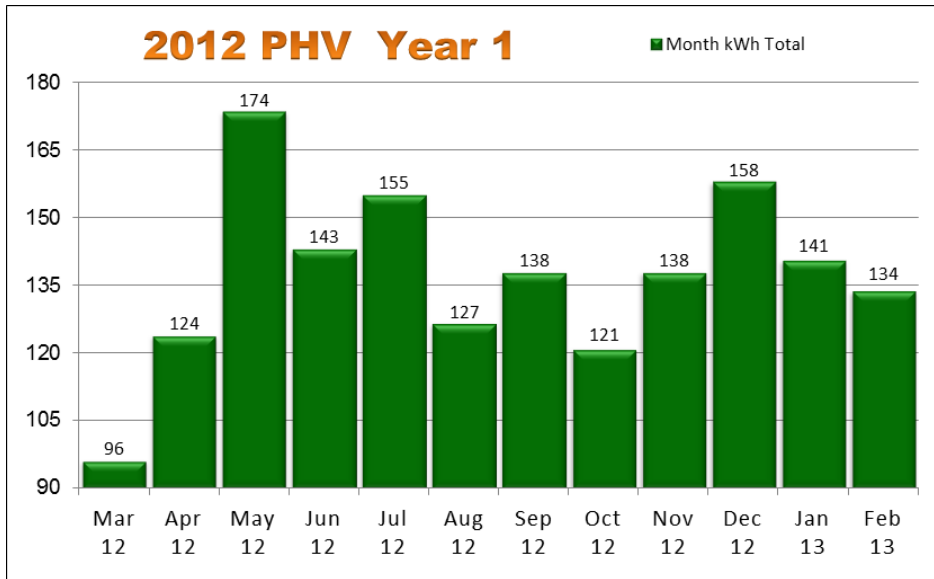
The purpose of this information is to give a general idea of the efficiency coming from the traction motor specifically. It documents electricity usage only. This is why only the EV miles are used in the calculations, not overall miles which would also include HV miles.

The unit of measure for this is “**kWh/100miles**”, indicating the quantity of electricity it takes to travel 100 miles. This is very different from the efficiency MPG measures.

Note: When tank data on the graph drops all the way to zero, that indicates driving was done without plugging. For example, a road-trip was taken without outlet or recharger access available.

Plug kWh - Summary

This particular graph visually depicts the quantity of electricity consumed per month, in units of kWh:



Don't forget that the recharging process itself consumes electricity. This is known as "*charging loss*". Some sources of electricity consumption only report the kWh extracted from the battery-pack, excluding the loss. Not accounting for that extra electricity is very misleading.

Prius PHV has a 4.4 kWh size battery-pack. Approximately 62% is used for EV miles. That translates to roughly 2.75 kWh being used for EV travel when that entire available capacity is used. 3 kWh is how much owners typically observe from meters measuring the quantity of electricity used to replenish that capacity while recharging.

Month - Detail

Some of the prior graphs originated from the calculation results found in this matrix:

	MPG	Miles	Gallons	kWh	kWh/100m
Mar - 12	79.1	1,100	13.915	96.0	27.4
Apr - 12	66.5	1,828	27.481	123.9	26.2
May - 12	108.4	1,546	14.261	173.7	22.6
Jun - 12	120.2	1,161	9.659	143.1	24.5
Jul - 12	99.8	1,594	15.978	155.1	24.4
Aug - 12	103.9	1,570	15.111	126.6	27.5
Sep - 12	81.1	1,691	20.846	138.0	27.9
Oct - 12	74.3	1,679	22.589	120.9	26.3
Nov - 12	80.0	1,565	19.557	138.0	28.7
Dec - 12	72.4	1,647	22.754	158.1	33.0
Jan - 13	75.9	1,291	17.012	140.7	37.0
Feb - 13	66.6	1,477	22.182	133.8	37.7
Mar - 13	100.8	328	3.255	49.5	30.2
TOTAL	82.3	18,477	224.600	1,697.4	28.2

That monthly detail was based upon the real-world daily data collected as well as the values documented each time the gas tank was refilled.

Daily - Detail

The following are real-world owner log entries, the complete collection of daily detail that was used to create the summary & graphs:

Date	ODO	MPG	Charges	EV	HV	calc'd gallons	tank gallons
Sun - Mar 11	16	35	-	-	16	0.46	
Mon - Mar 12	75	59	1.0	9	51	1.00	
Tue - Mar 13	115	121	2.0	26	13	0.33	
Wed - Mar 14	169	70	1.0	12	41	0.77	
Thu - Mar 15	227	71	1.0	12	45	0.82	
Fri - Mar 16	279	88	2.0	13	38	0.59	
Sat - Mar 17	304	89	1.0	13	12	0.28	
Sun - Mar 18	335	90	1.0	13	17	0.34	
Mon - Mar 19	371	209	2.0	26	8	0.17	
Tue - Mar 20	424	119	2.0	29	23	0.45	
Wed - Mar 21	470	106	2.0	19	26	0.43	
Thu - Mar 22	574	66	2.0	16	87	1.58	
Fri - Mar 23	625	121	2.0	20	30	0.42	
Sat - Mar 24	685	87	2.0	23	36	0.69	21.0
Sun - Mar 25	733	72	1.0	13	34	0.67	
Mon - Mar 26	776	63	1.0	10	32	0.68	
Tue - Mar 27	827	88	2.0	18	32	0.58	
Wed - Mar 28	873	108	2.0	25	20	0.43	
Thu - Mar 29	949	77	2.0	24	51	0.99	
Fri - Mar 30	1,015	78	2.0	19	46	0.85	
Sat - Mar 31	1,100	61	1.0	10	74	1.39	
Sun - Apr 01	1,215	57	1.0	13	101	2.02	
Mon - Apr 02	1,260	103	1.7	22	22	0.44	13.7
Tue - Apr 03	1,321	75	1.9	15	45	0.81	
Wed - Apr 04	1,378	81	1.7	17	39	0.70	
Thu - Apr 05	1,418	124	2.0	20	19	0.32	
Fri - Apr 06	1,470	102	2.0	28	23	0.51	
Sat - Apr 07	1,548	79	2.0	22	54	0.99	
Sun - Apr 08	1,568	112	0.9	12	7	0.18	
Mon - Apr 09	1,609	128	2.0	26	14	0.32	
Tue - Apr 10	1,647	106	2.0	18	20	0.36	
Wed - Apr 11	1,698	71	1.0	13	37	0.72	
Thu - Apr 12	1,755	87	2.0	20	36	0.66	
Fri - Apr 13	1,781	170	1.8	19	6	0.15	19.3
Sat - Apr 14	1,970	46	1.0	-	188	4.11	
Sun - Apr 15	1,998	42	-	-	27	0.67	
Mon - Apr 16	2,016	47	0.9	4	12	0.38	

Tue - Apr 17	2,041	48	-	2	22	0.52	
Wed - Apr 18	2,055	69	-	6	7	0.20	
Thu - Apr 19	2,057	40	1.0	1	1	0.05	
Fri - Apr 20	2,234	62	-	8	168	2.85	2.9
Sat - Apr 21	2,445	39	-	-	210	5.41	-
Sun - Apr 22	2,477	196	2.0	24	7	0.16	
Mon - Apr 23	2,535	98	1.9	24	33	0.59	
Tue - Apr 24	2,579	152	2.0	29	14	0.29	
Wed - Apr 25	2,626	125	2.0	28	18	0.38	
Thu - Apr 26	2,670	127	2.0	25	18	0.35	
Fri - Apr 27	2,729	81	1.5	20	38	0.73	
Sat - Apr 28	2,800	79	2.0	24	47	0.90	
Sun - Apr 29	2,858	71	1.0	11	45	0.82	
Mon - Apr 30	2,928	78	2.0	22	47	0.90	
Tue - May 01	2,967	159	2.0	27	11	0.25	
Wed - May 02	3,046	89	1.9	27	51	0.89	
Thu - May 03	3,096	120	2.0	27	23	0.42	
Fri - May 04	3,144	280	2.9	41	6	0.17	25.2
Sat - May 05	3,206	83	2.0	21	40	0.75	
Sun - May 06	3,247	75	1.0	12	28	0.55	
Mon - May 07	3,300	101	2.0	24	28	0.52	
Tue - May 08	3,353	71	1.0	5	47	0.75	
Wed - May 09	3,394	157	2.0	30	10	0.26	
Thu - May 10	3,465	94	2.0	29	41	0.76	
Fri - May 11	3,508	151	2.0	30	13	0.28	
Sat - May 12	3,584	85	2.0	31	45	0.89	
Sun - May 13	3,622	66	1.0	11	25	0.58	
Mon - May 14	3,664	326	2.4	34	7	0.13	
Tue - May 15	3,700	236	2.0	28	7	0.15	
Wed - May 16	3,735	188	1.9	22	13	0.19	
Thu - May 17	3,772	188	2.0	28	8	0.20	
Fri - May 18	3,824	122	2.0	32	19	0.43	
Sat - May 19	3,856	127	1.5	20	12	0.25	
Sun - May 20	3,885	443	1.9	25	3	0.07	
Mon - May 21	3,932	118	2.0	28	18	0.40	
Tue - May 22	3,992	122	2.6	37	22	0.49	33.3
Wed - May 23	4,042	112	2.0	22	27	0.45	
Thu - May 24	4,095	104	1.7	23	30	0.51	
Fri - May 25	4,151	108	1.9	28	28	0.52	

Sat - May 26	4,248	65	1.0	12	84	1.49	
Sun - May 27	4,279	234	1.8	24	6	0.13	
Mon - May 28	4,312	136	1.4	18	14	0.24	
Tue - May 29	4,363	111	2.0	26	24	0.46	
Wed - May 30	4,415	109	2.0	24	27	0.48	
Thu - May 31	4,474	94	2.0	23	35	0.63	
Fri - Jun 01	4,511	159	2.0	19	17	0.23	
Sat - Jun 02	4,539	495	2.0	26	2	0.06	
Sun - Jun 03	4,579	94	1.0	14	25	0.43	
Mon - Jun 04	4,632	105	1.9	20	32	0.50	
Tue - Jun 05	4,669	206	2.0	23	13	0.18	
Wed - Jun 06	4,706	219	2.0	23	12	0.17	
Thu - Jun 07	4,759	119	2.0	29	23	0.45	
Fri - Jun 08	4,819	98	2.0	24	35	0.61	
Sat - Jun 09	4,844	416	1.6	22	2	0.06	32.3
Sun - Jun 10	4,873	176	1.7	20	8	0.16	
Mon - Jun 11	4,931	91	1.9	19	37	0.64	
Tue - Jun 12	4,967	174	2.0	23	12	0.21	
Wed - Jun 13	5,018	101	1.9	21	29	0.50	
Thu - Jun 14	5,070	81	1.5	12	39	0.64	
Fri - Jun 15	5,128	102	1.9	25	33	0.57	
Sat - Jun 16	5,164	90	1.0	17	18	0.40	
Sun - Jun 17	5,172	999	0.6	8	-	0.01	
Mon - Jun 18	5,182	999	0.7	10	-	0.01	
Tue - Jun 19	5,192	999	0.7	9	-	0.01	
Wed - Jun 20	5,203	999	0.9	11	-	0.01	
Thu - Jun 21	5,235	143	1.5	22	9	0.22	
Fri - Jun 22	5,294	102	2.0	21	37	0.58	
Sat - Jun 23	5,353	74	1.0	13	44	0.80	
Sun - Jun 24	5,388	171	2.0	26	8	0.20	
Mon - Jun 25	5,438	78	1.0	11	39	0.64	
Tue - Jun 26	5,488	110	1.9	19	29	0.45	
Wed - Jun 27	5,543	117	2.0	27	28	0.47	
Thu - Jun 28	5,579	250	2.0	29	6	0.14	
Fri - Jun 29	5,620	161	2.0	30	10	0.25	
Sat - Jun 30	5,635	365	1.0	12	2	0.04	
Sun - Jul 01	5,666	97	1.0	12	19	0.32	
Mon - Jul 02	5,712	295	2.7	38	6	0.16	
Tue - Jul 03	5,756	366	2.6	33	10	0.12	37.5
Wed - Jul 04	5,779	97	1.0	12	10	0.24	
Thu - Jul 05	5,866	71	1.0	13	73	1.23	
Fri - Jul 06	5,923	103	2.0	28	28	0.55	
Sat - Jul 07	5,939	455	1.0	13	2	0.04	
Sun - Jul 08	5,960	102	1.0	10	11	0.21	

Mon - Jul 09	6,011	125	2.0	23	27	0.41	
Tue - Jul 10	6,063	83	1.0	8	42	0.63	
Wed - Jul 11	6,114	112	2.0	26	25	0.46	
Thu - Jul 12	6,153	84	1.0	12	26	0.46	
Fri - Jul 13	6,189	231	2.0	29	6	0.16	
Sat - Jul 14	6,333	63	1.0	13	130	2.29	
Sun - Jul 15	6,378	80	1.0	13	31	0.56	
Mon - Jul 16	6,426	78	1.0	9	38	0.62	17.0
Tue - Jul 17	6,478	121	2.0	24	27	0.43	
Wed - Jul 18	6,514	191	2.0	19	16	0.19	
Thu - Jul 19	6,550	184	1.9	22	13	0.20	
Fri - Jul 20	6,586	218	1.9	22	13	0.17	
Sat - Jul 21	6,613	238	1.7	22	5	0.11	
Sun - Jul 22	6,642	112	1.0	14	14	0.26	
Mon - Jul 23	6,683	156	2.0	23	16	0.26	
Tue - Jul 24	6,754	85	2.0	25	45	0.84	
Wed - Jul 25	6,841	82	2.0	20	66	1.06	
Thu - Jul 26	6,887	117	1.7	19	26	0.39	
Fri - Jul 27	6,940	122	2.0	30	21	0.43	
Sat - Jul 28	7,086	63	1.0	16	129	2.32	
Sun - Jul 29	7,121	181	2.0	27	8	0.19	
Mon - Jul 30	7,169	202	2.5	29	17	0.24	
Tue - Jul 31	7,229	129	2.7	31	29	0.47	28.4
Wed - Aug 01	7,278	112	1.9	19	29	0.44	
Thu - Aug 02	7,317	190	2.0	28	10	0.21	
Fri - Aug 03	7,366	114	2.0	19	30	0.43	
Sat - Aug 04	7,407	78	1.0	12	27	0.53	
Sun - Aug 05	7,510	68	1.0	15	87	1.51	
Mon - Aug 06	7,562	107	2.0	21	30	0.49	
Tue - Aug 07	7,617	117	2.4	28	27	0.47	
Wed - Aug 08	7,658	137	2.0	20	20	0.30	
Thu - Aug 09	7,705	124	2.0	22	24	0.38	
Fri - Aug 10	7,761	89	2.0	18	37	0.63	
Sat - Aug 11	7,777	256	1.0	13	2	0.06	
Sun - Aug 12	7,781	999	1.0	4	-	0.00	
Mon - Aug 13	7,845	93	2.0	20	44	0.69	
Tue - Aug 14	7,862	83	1.0	9	7	0.20	
Wed - Aug 15	7,899	171	2.0	22	14	0.22	
Thu - Aug 16	7,963	98	1.9	21	42	0.65	
Fri - Aug 17	8,006	230	2.6	28	14	0.19	29.8
Sat - Aug 18	8,006	-	1.0	-	-	-	
Sun - Aug 19	8,028	247	0.4	18	2	0.09	
Mon - Aug 20	8,079	100	2.0	19	31	0.51	
Tue - Aug 21	8,113	81	1.0	7	26	0.42	

Wed - Aug 22	8,152	164	1.9	20	18	0.24	
Thu - Aug 23	8,173	999	1.7	21	-	0.02	
Fri - Aug 24	8,205	174	2.0	22	8	0.18	
Sat - Aug 25	8,514	58	0.7	9	299	5.33	
Sun - Aug 26	8,514	-	-	-	-	-	
Mon - Aug 27	8,593	85	1.7	26	52	0.93	12.4
Tue - Aug 28	8,647	71	1.0	12	42	0.76	
Wed - Aug 29	8,702	122	2.0	30	24	0.45	
Thu - Aug 30	8,747	84	1.0	12	32	0.54	
Fri - Aug 31	8,799	124	2.0	26	24	0.42	
Sat - Sep 01	8,808	999	1.0	9	-	0.01	
Sun - Sep 02	8,855	71	1.0	9	37	0.66	
Mon - Sep 03	8,866	999	0.8	10	-	0.01	
Tue - Sep 04	8,901	243	2.0	22	12	0.14	
Wed - Sep 05	8,951	114	2.0	21	27	0.44	
Thu - Sep 06	9,057	84	2.7	37	69	1.26	
Fri - Sep 07	9,113	101	2.0	23	32	0.55	
Sat - Sep 08	9,184	66	1.0	11	58	1.08	
Sun - Sep 09	9,209	57	-	-	25	0.44	
Mon - Sep 10	9,321	78	2.0	26	85	1.44	20.5
Tue - Sep 11	9,373	101	2.0	21	30	0.51	
Wed - Sep 12	9,424	92	2.0	17	22	0.55	
Thu - Sep 13	9,489	101	2.5	29	35	0.64	
Fri - Sep 14	9,554	92	2.0	20	44	0.71	
Sat - Sep 15	9,602	71	1.0	10	38	0.68	
Sun - Sep 16	9,674	58	-	-	72	1.24	
Mon - Sep 17	9,732	90	2.0	20	37	0.64	
Tue - Sep 18	9,777	119	2.2	22	22	0.38	
Wed - Sep 19	9,817	139	2.0	20	19	0.29	
Thu - Sep 20	9,869	102	2.0	24	28	0.51	
Fri - Sep 21	9,916	105	1.9	18	27	0.45	
Sat - Sep 22	9,988	78	1.0	22	49	0.92	
Sun - Sep 23	10,025	57	-	-	37	0.65	20.6
Mon - Sep 24	10,073	115	2.0	22	25	0.42	
Tue - Sep 25	10,118	114	2.0	23	21	0.39	
Wed - Sep 26	10,169	110	1.9	20	30	0.46	
Thu - Sep 27	10,222	95	2.0	19	33	0.56	
Fri - Sep 28	10,311	81	2.0	18	70	1.10	
Sat - Sep 29	10,480	48	1.0	-	168	3.52	
Sun - Sep 30	10,490	54	-	1	9	0.19	
Mon - Oct 01	10,490	-	-	-	-	-	
Tue - Oct 02	10,513	54	-	1	21	0.43	
Wed - Oct 03	10,711	61	-	7	188	3.25	10.9
Thu - Oct 04	10,719	43	-	-	7	0.19	

Fri - Oct 05	10,858	52	-	3	136	2.67	-
Sat - Oct 06	11,043	50	1.0	12	172	3.70	
Sun - Oct 07	11,067	105	1.0	12	11	0.23	
Mon - Oct 08	11,103	231	2.0	29	5	0.16	
Tue - Oct 09	11,144	117	2.0	20	20	0.35	
Wed - Oct 10	11,184	116	1.9	21	19	0.34	
Thu - Oct 11	11,240	93	2.0	21	34	0.60	
Fri - Oct 12	11,285	108	2.0	20	24	0.42	
Sat - Oct 13	11,330	68	1.0	11	33	0.66	
Sun - Oct 14	11,415	55	-	-	85	1.55	
Mon - Oct 15	11,498	67	1.0	7	74	1.24	13.9
Tue - Oct 16	11,540	128	2.0	22	19	0.33	
Wed - Oct 17	11,574	82	1.0	13	20	0.41	
Thu - Oct 18	11,645	95	2.6	25	45	0.75	
Fri - Oct 19	11,701	93	2.0	25	30	0.60	
Sat - Oct 20	11,728	89	1.0	11	16	0.30	
Sun - Oct 21	11,736	999	0.6	8	-	0.01	
Mon - Oct 22	11,790	106	2.0	27	26	0.51	
Tue - Oct 23	11,841	109	1.9	25	25	0.47	
Wed - Oct 24	11,894	89	2.0	26	26	0.60	
Thu - Oct 25	11,929	137	2.0	23	11	0.26	
Fri - Oct 26	11,990	83	2.0	21	38	0.73	
Sat - Oct 27	12,010	103	0.9	9	10	0.19	
Sun - Oct 28	12,031	106	1.0	11	9	0.20	
Mon - Oct 29	12,090	87	2.0	19	39	0.68	
Tue - Oct 30	12,142	96	2.0	19	31	0.54	
Wed - Oct 31	12,169	115	1.4	12	14	0.23	26.4
Thu - Nov 01	12,273	73	2.0	25	78	1.42	
Fri - Nov 02	12,273	-	-	-	-	-	
Sat - Nov 03	12,283	999	0.9	10	-	0.01	
Sun - Nov 04	12,290	156	0.6	6	1	0.04	
Mon - Nov 05	12,359	72	1.0	11	57	0.96	
Tue - Nov 06	12,399	121	2.0	22	17	0.33	
Wed - Nov 07	12,471	86	2.0	20	52	0.84	
Thu - Nov 08	12,520	110	2.0	20	28	0.45	
Fri - Nov 09	12,626	63	1.5	14	90	1.68	
Sat - Nov 10	12,695	76	1.0	11	58	0.91	
Sun - Nov 11	12,740	59	1.0	12	33	0.76	
Mon - Nov 12	12,781	85	2.0	16	24	0.48	16.0
Tue - Nov 13	12,847	77	2.0	20	46	0.86	
Wed - Nov 14	12,926	77	2.0	25	53	1.03	
Thu - Nov 15	12,969	157	2.0	26	9	0.27	
Fri - Nov 16	13,023	82	2.0	24	29	0.66	
Sat - Nov 17	13,065	75	1.0	1	30	0.56	

Sun - Nov 18	13,108	54	-	-	43	0.80	
Mon - Nov 19	13,146	178	2.0	28	10	0.21	
Tue - Nov 20	13,187	121	2.0	20	20	0.34	
Wed - Nov 21	13,235	123	2.0	27	20	0.39	
Thu - Nov 22	13,345	59	0.7	7	103	1.86	
Fri - Nov 23	13,385	64	1.3	13	26	0.63	17.0
Sat - Nov 24	13,411	78	1.0	10	15	0.33	
Sun - Nov 25	13,431	100	1.0	10	10	0.20	
Mon - Nov 26	13,482	75	2.0	12	38	0.68	
Tue - Nov 27	13,574	75	2.0	21	70	1.23	
Wed - Nov 28	13,621	126	2.5	26	20	0.37	
Thu - Nov 29	13,679	101	2.5	28	30	0.57	
Fri - Nov 30	13,734	81	2.0	16	37	0.68	
Sat - Dec 01	13,791	88	2.0	23	33	0.65	
Sun - Dec 02	13,814	75	1.0	11	11	0.31	
Mon - Dec 03	13,867	135	2.9	29	23	0.39	
Tue - Dec 04	13,949	61	1.0	7	74	1.34	
Wed - Dec 05	14,008	69	1.9	19	39	0.86	21.8
Thu - Dec 06	14,050	142	2.2	22	18	0.30	
Fri - Dec 07	14,106	83	2.0	16	39	0.67	
Sat - Dec 08	14,189	60	1.0	9	73	1.38	
Sun - Dec 09	14,213	52	-	-	23	0.46	
Mon - Dec 10	14,247	90	2.0	16	17	0.38	
Tue - Dec 11	14,290	104	2.6	24	18	0.41	
Wed - Dec 12	14,351	85	2.0	22	38	0.72	
Thu - Dec 13	14,401	89	2.0	17	31	0.56	
Fri - Dec 14	14,515	61	1.7	14	99	1.87	
Sat - Dec 15	14,561	51	0.3	4	41	0.90	15.8
Sun - Dec 16	14,573	94	0.7	6	5	0.13	
Mon - Dec 17	14,615	89	2.0	16	25	0.47	
Tue - Dec 18	14,687	81	2.6	23	47	0.89	
Wed - Dec 19	14,743	115	2.9	27	28	0.49	
Thu - Dec 20	14,789	80	2.0	19	26	0.58	
Fri - Dec 21	14,853	77	2.7	22	40	0.83	
Sat - Dec 22	14,879	145	1.8	19	6	0.18	
Sun - Dec 23	14,961	60	2.0	18	63	1.37	
Mon - Dec 24	15,006	63	1.0	9	36	0.71	
Tue - Dec 25	15,017	110	0.9	7	2	0.10	
Wed - Dec 26	15,086	66	2.0	16	53	1.05	
Thu - Dec 27	15,132	83	2.0	16	28	0.55	22.6
Fri - Dec 28	15,172	95	2.0	19	20	0.42	
Sat - Dec 29	15,203	59	1.0	11	20	0.53	
Sun - Dec 30	15,275	57	1.0	7	63	1.26	
Mon - Dec 31	15,381	53	1.5	11	94	2.00	

Tue - Jan 01	15,405	49	0.3	-	23	0.49	
Wed - Jan 02	15,448	83	2.0	14	27	0.52	
Thu - Jan 03	15,494	81	2.0	15	30	0.57	
Fri - Jan 04	15,532	105	2.0	15	22	0.36	
Sat - Jan 05	15,538	162	0.4	2	2	0.04	
Sun - Jan 06	15,623	66	1.4	18	66	1.29	13.6
Mon - Jan 07	15,659	108	2.0	16	19	0.33	
Tue - Jan 08	15,705	83	2.0	16	29	0.55	
Wed - Jan 09	15,765	80	2.0	20	38	0.75	
Thu - Jan 10	15,800	128	2.0	17	18	0.27	
Fri - Jan 11	15,842	140	2.5	27	14	0.30	
Sat - Jan 12	15,896	57	1.0	8	45	0.95	
Sun - Jan 13	15,907	107	0.9	7	4	0.10	
Mon - Jan 14	15,954	58	1.0	4	42	0.81	
Tue - Jan 15	15,998	85	1.9	16	28	0.52	
Wed - Jan 16	16,045	99	1.9	19	27	0.47	
Thu - Jan 17	16,091	84	2.0	14	30	0.55	
Fri - Jan 18	16,174	70	1.7	18	64	1.19	
Sat - Jan 19	16,225	57	1.3	12	37	0.89	22.2
Sun - Jan 20	16,277	55	1.6	9	42	0.95	
Mon - Jan 21	16,318	57	2.0	7	33	0.72	
Tue - Jan 22	16,352	53	1.0	6	27	0.64	
Wed - Jan 23	16,394	70	2.0	12	29	0.60	
Thu - Jan 24	16,435	69	2.0	15	25	0.59	
Fri - Jan 25	16,510	63	2.0	19	55	1.19	
Sat - Jan 26	16,510	-	-	-	-	-	
Sun - Jan 27	16,527	91	1.0	10	6	0.19	
Mon - Jan 28	16,562	101	2.0	15	19	0.35	
Tue - Jan 29	16,609	98	2.0	20	26	0.48	
Wed - Jan 30	16,632	65	1.0	9	13	0.35	
Thu - Jan 31	16,672	65	2.0	7	32	0.62	
Fri - Feb 01	16,717	61	1.5	9	36	0.74	20.1
Sat - Feb 02	16,761	74	1.7	12	30	0.59	
Sun - Feb 03	16,893	51	0.2	1	130	2.59	
Mon - Feb 04	16,927	88	2.0	9	24	0.39	
Tue - Feb 05	16,967	86	2.0	18	21	0.47	
Wed - Feb 06	17,014	79	2.0	15	30	0.59	
Thu - Feb 07	17,066	76	2.0	16	35	0.68	
Fri - Feb 08	17,121	67	1.6	14	40	0.82	
Sat - Feb 09	17,233	56	0.4	4	107	2.00	11.9
Sun - Feb 10	17,239	999	0.7	6	-	0.01	
Mon - Feb 11	17,299	73	2.0	23	35	0.82	
Tue - Feb 12	17,332	116	2.0	14	19	0.28	
Wed - Feb 13	17,383	85	1.9	16	33	0.60	

Thu - Feb 14	17,488	56	1.5	13	92	1.88	
Fri - Feb 15	17,590	44	0.5	4	96	2.32	
Sat - Feb 16	17,614	59	1.0	9	14	0.41	
Sun - Feb 17	17,692	56	1.0	7	71	1.39	10.6
Mon - Feb 18	17,742	77	2.0	16	32	0.65	
Tue - Feb 19	17,787	53	1.0	6	33	0.85	
Wed - Feb 20	17,835	64	1.8	14	40	0.75	
Thu - Feb 21	17,905	73	1.9	20	49	0.96	
Fri - Feb 22	17,940	94	2.0	12	22	0.37	
Sat - Feb 23	17,964	140	2.0	16	7	0.17	
Sun - Feb 24	17,973	218	1.9	7	2	0.04	
Mon - Feb 25	18,008	141	2.0	18	16	0.25	
Tue - Feb 26	18,044	120	2.0	18	16	0.30	
Wed - Feb 27	18,090	89	2.0	18	27	0.52	

Thu - Feb 28	18,149	79	2.0	20	38	0.75	
Fri - Mar 01	18,202	80	1.8	18	33	0.66	
Sat - Mar 02	18,242	118	2.3	22	17	0.34	24.7
Sun - Mar 03	18,271	66	1.0	11	17	0.44	
Mon - Mar 04	18,308	111	2.0	21	15	0.33	
Tue - Mar 05	18,331	149	1.6	16	6	0.15	
Wed - Mar 06	18,382	80	2.0	17	33	0.64	
Thu - Mar 07	18,403	169	1.5	14	5	0.12	
Fri - Mar 08	18,416	276	1.0	10	2	0.05	
Sat - Mar 09	18,428	999	1.2	12	-	0.01	
Sun - Mar 10	18,477	97	2.1	23	25	0.51	12.4