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Facts You Should Know

Statement No. 3 OFFICE OF PRICE ADMINISTRATION November 1943

GASOLINE

THE PROBLEM

Less than two years ago there was no limit whatsoever on the amount of gasoline a person could buy, other than the money in his pocketbook.

Today the average citizen is counting each quart of gasoline. He must figure very closely the amount of gasoline every little trip will take, and this determines both the number of trips he takes and the distances and places he goes.

For years this has been a nation that runs on automobiles. There were 28 million of them at the beginning of the war, about 24 million of them now. Drastically curtailing the use of those automobiles might appear to some people as the violation of a fundamental liberty, particularly if they don't realize the seriousness of the gasoline situation. But the restriction of individual gasoline usage is not a denial of a liberty. It is caused by the absolute necessity of sharing a necessarily limited amount of gasoline. It is just one of the consequences of total war.

Why is this gasoline so limited? Why is rationing of gasoline necessary? How is the allocation and distribution of gasoline determined? What can we expect, as to gasoline supply in the future?

These and other questions are being asked by the public, the people whose daily activities have been drastically affected by the necessity of rationing gasoline.

THE FACTS

In 1941, civilians used about 71,400,000 gallons of gasoline a day, based on state gasoline tax figures. Today our daily production of all types of gasoline, both for civilian and military use, totals about 75,600,000 gallons, while at the same time our stocks have been falling.

The armed forces and Lend-Lease are using approximately 25,200,000 gallons of that daily total. Deducting the military consumption we have remaining 50,400,000 gallons for all other uses, which is a drop of 21,000,000 gallons a day for civilian use, compared with 1941.

Thus, when we converted from peace to war, unlimited peacetime gasoline consumption ran into the absolutely essential and steadily increasing demands of our war machine. Obviously, the gasoline needed for war combat and shipping could not be sacrificed. As these needs increased it became clear that a point would be reached where some uses of gasoline would have to be cut. The sacrifices had to be made by the civilian.

Transportation of military gasoline to shipping points has placed a tremendous strain upon equipment that is also needed more urgently than ever before for hauling thousands of other essential war commodities, plus the handling of heavy troop travel.

We must keep war industry supplied with gasoline. We must be certain that there is always enough available for essential farm uses, for crops don't wait. A certain minimum amount of civilian usage, while not necessarily applied to war production, is essential to the basic "maintenance" and minimum well-being of the civilian himself.

Perhaps the biggest and most complex single conversion job of the war was the change-over of gasoline and its transportation facilities from unlimited civilian use to emergency war use.

The consumption of gasoline for military purposes is at the average rate of approximately 2½ gallons a day for each man in our armed forces. That is our essential and unavoidable military "ration." It supplies the power for planes, tanks, trucks, jeeps, and many types of water craft. It is used in army kitchens and medical stations. In fact, gasoline is our standard war fuel. Our fighting machine has been geared to it.

Our supply lines are much longer than those of the enemy as we are increasingly meeting the enemy on his home grounds. We must of necessity burn a large volume of fuel products to get the gasoline to the combat zones.

Thus, it is evident that the shortage of gasoline for civilian use is caused by the heavy military and Lend-Lease demands for both the product and its transport facilities. This shortage requires restriction of gasoline usage for non-military purposes, through rationing, in such a way that each civilian receives his fair share of the limited supply.

The enemy planned on our inability to accomplish the vast and complex task of fueling our part of the war. But the task is being accomplished, largely because the individual civilian is sacrificing much of his own normal gasoline consumption so that there will be plenty of combat fuel at the war fronts and for direct war purposes.

ALLOCATION AND RATIONING

Five government agencies cooperate in the supply and distribution of wartime gasoline to civilians:

The PETROLEUM ADMINISTRATION FOR WAR has responsibility for production and distribution of all petroleum products to retail outlets where they are delivered to consumers. This agency allocates gasoline to the respective claimant agencies, for use by the following: (1) military, (2) war industry, (3) agriculture, (4) basic transportation services, and (5) private transportation.

The OFFICE OF DEFENSE TRANSPORTATION is the claimant agency for the nation's entire civilian transport system, including passenger cars, and certifies the PAW allotments to each class of consumer. Commercial rations are allotted through ODT field offices. Clerical details of distributing commercial rations are handled through OPA War Price and Rationing Boards.

The WAR FOOD ADMINISTRATION claims gasoline for "off-highway" equipment used on farms such as tractors, combines, and irrigation machinery.

The OFFICE OF CIVILIAN REQUIREMENTS claims gasoline for other equipment - for example, gasoline stoves, equipment for construction, logging, mining, quarrying, railroads, and fishing.

A PETROLEUM REQUIREMENTS COMMITTEE, composed of members of all agencies involved in the gasoline problem, advises with PAW in considering the claims. The Chairman of the Committee allots quotas on the basis of available supply and military demands. OPA acts in an advisory capacity only.

A PETROLEUM RATIONING POLICY COMMITTEE, composed of representatives of OPA, WFA, PAW, OCR, ODT, and WPB, advises with OPA on rationing policy.

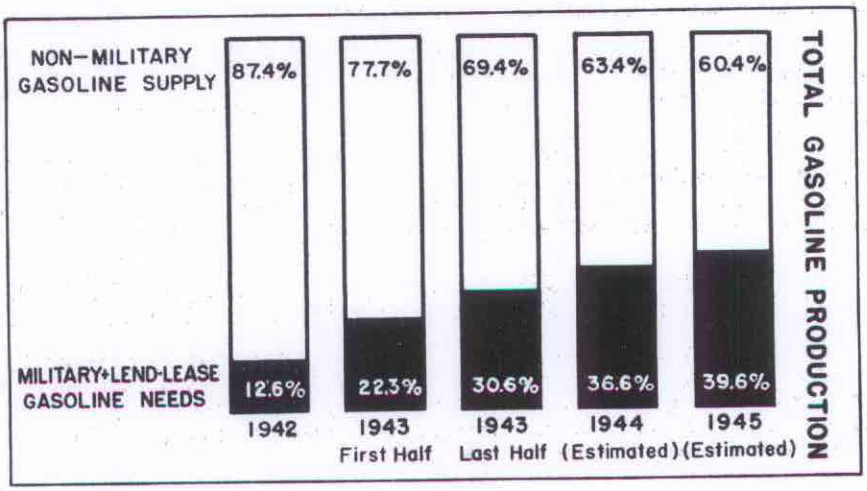
A few weeks ago the relative responsibilities of OPA, PAW, and ODT, were restated to provide for each an increased participation through the Requirements Committee and the Policy Committee in the major gasoline program decisions of the others.

After quotas are set, the OFFICE OF PRICE ADMINISTRATION, through its thousands of local War Price and Rationing Boards, allots gasoline to individual non-commercial consumers. This agency also gives out the commercial rations previously allotted by ODT.

FUTURE GASOLINE NEEDS

Expansion of

Military Gasoline Needs



The heaviest war drains on our national gasoline stocks to date have been in the regions east of the Rocky Mountains, because of their accessibility to Gulf and Atlantic ports.

It is difficult to determine the quantities of military gasoline that future developments may require. The demands upon our gasoline stocks will be largely in proportion to the amount of motorized equipment and aircraft that we can send abroad, and it is generally recognized by everyone that a primary war aim is to get as much of this fighting equipment to the front as is possible.

There are many important products derived from petroleum, aside from gasoline itself, such as fuel oil and kerosene, heavy residuals, toluene for explosives and butadiene for synthetic rubber. Only about 25 percent of each 42-gallon barrel of crude oil can now go into gasoline for civilian use, in contrast to 37 per cent of every barrel that was being processed into automotive gasoline during 1940 and 1941.

While the need for 80-octane all-purpose gasoline is increasing rapidly, the tetra-ethyl of lead that steps up this fuel to its high level of efficiency is not too plentiful. As a result, the lead content of automobile gasoline has already been reduced, and may of necessity be even further reduced.

Thus we can expect that war demands will continue to affect the quality as well as the quantity of gasoline available to civilian users.

FUTURE GASOLINE SUPPLIES

Total oil production for the Mid-West has declined from an average of 1,180,000 barrels a day in December 1941, to 950,000 barrels a day during May 1943. Search for new midwest sources continues, but PAW estimates that production will drop another 70,000 barrels a day by the first quarter of 1944. Since Pearl Harbor, Midwest crude oil stocks above ground have dropped from 90,000,000 barrels to 69,000,000. Import of crude oil to the Midwest from the Southwest is subject to definite limits. Transport facilities in the region are operating at very nearly their peak.

The long-range outlook for augmented production in important crude oil producing areas remains favorable, although it is by no means assured. For example, the Texas Railroad Commission has estimated that the state could produce 360,000 barrels a day more than its August 1943 output without wasteful depletion, while, in other areas in the Southwest, developmental work in hitherto untapped areas has resulted in a steadily rising output of crude oil. Problems of transportation, yields, and unforseeable military demands may, however, create gasoline supply difficulties.

The Rocky Mountain area has good prospects for increasing output, but it produces but three percent of the nation's total. Even the most optimistic see only slight additions to our supply from this source.

West Coast crude oil production has been stepped up from 632,000 barrels daily in December 1941, to 773,000 barrels daily at the present. Nevertheless, military demands have caused total petroleum stocks to decline during that period by some 12 million barrels. Fuel oil for the Navy and war industries constitutes one of the major petroleum requirements on the Pacific Coast.

We cannot, therefore, be certain of increased gasoline production of an extent that will relieve the shortages caused by abnormal war demands.

Summary

Military demands have made it absolutely essential to restrict civilian gasoline consumption. In order to administer this restriction fairly and equitably, rationing is necessary.

Transportation of gasoline must be assigned first of all to military needs, and our transportation facilities are already at the straining point.

Our war effort is geared to one fuel - gasoline. The gasoline being sacrificed by the civilian is in active combat at the war fronts.

The Office of Price Administration rations civilian gasoline according to allotments set by the Petroleum Administration for War. The PAW establishes these allotments according to the amount of gasoline available after allowances have been made for the needs of the military forces, and the various commercial, farm, and industrial demands.

Only 25% of a barrel of crude oil can today go into gasoline. Other necessary products for war front, industry, and home also come from petroleum - such as fuel oil, kerosene, toluol, and butadiene.

Shortages will continue to be serious, may be worse before they're better. Whereas in 1942, 87.4 of all gasoline produced could be used for non-military purposes, in the last half of 1943 only 69.4 of the total was available, and in 1944 this will probably be reduced to about 63%.

Gasoline quality will very likely not improve until the end of the war because the octane-building chemicals are critically short, are needed first for aviation gasoline. It does not appear certain that gasoline production can be stepped up sufficiently to ease civilian restrictions on a national scale, even though a few oil-producing areas may attain some production increases.

Appendix

Facts You Should Know:

GASOLINE

A. EXAMPLES OF MILITARY GASOLINE CONSUMPTION

Why is so much gasoline needed by the military?

Let's look at a few examples of how military gasoline is consumed...

A thousand flying fortresses will use 2,500,000 or more gallons in a typical 6-hour mission.

The tanks of an armored division use more than 10,000 gallons in traveling 100 miles.

It takes 12,500 gallons to train a single pilot.

A flying fortress burns 400 gallons of 100-octane gasoline per hour.

A training plane uses 50 gallons of 100-octane gasoline an hour.

A modern destroyer burns 3,000 gallons of oil per hour.

An Army transport consumes 33,000 gallons of oil a day.

Our lightning-fast PT boats carry their deadly charges along at 55 to 60 knots, burning approximately 250 gallons of oil per hour.

The average infantry division in 1917-18 had motorized equipment representing about 3,200 h.p., whereas today the average infantry division is equipped with 400,000 h.p. in motorized equipment - and that means fuel-burning equipment.

One 1000-plane bombardment consumes as much gasoline as would normally be used in the automotive vehicles during the course of a single day in a city as large as St. Louis.

Our armies have based their operations largely on one fuel product, greatly simplifying problems of supply. Gasoline is used in field hospitals to heat sterilizers for surgical instruments, for the lamps and tent operating rooms, to power refrigerators in which our blood plasma is kept. It fuels the transport and hospital planes as well as the combat planes. In the Arctic areas it heats soldiers' quarters and cooks their meals. It runs such specialized pieces of equipment as dough-kneaders in field kitchens. The list of essential war applications of gasoline - right in the combat zones - is growing rather than diminishing as the war goes on.

B. BACKGROUND OF ALLOCATION AND RATIONING

Gasoline for civilians has been rationed in the East since May 15, 1942, when a temporary card plan of rationing was instituted to meet the first supply crisis. Coupon rationing in the East followed on July 22, 1942. Nation-wide rationing to save rubber began on December 1, 1942. Additional curtailment in the East Coast states and the District of Columbia became necessary when gasoline supplies could not be maintained without more transportation than was available from the Southwest and the Midwest.

Before the war, 95 percent of the East's petroleum supply came by tanker. On an average, one of some 275 tankers would leave the Gulf for an Eastern port at intervals of about 100 minutes. Capacity of the tankers varied between 60,000 and 154,000 barrels per trip. The entire oil economy of the coastal region was based, not on periodic piling up of immense reserves, but on a steady, arterial flow of petroleum by tanker from the oil fields of the Southwest.

As soon as war broke out, the Axis concentrated submarine attacks on our coastwise tankers and sank many. The remainder of the fleet had to be withdrawn to supply oil for the European and Pacific theatres of war.

The only recourse was to improvise until the entire West-East overland transport system could be remodeled to make up for the loss of the tanker fleet.

The rapid mobilization of inland oil transport facilities, chiefly some 112,000 tank cars and fleets of tank trucks and barges, and the construction of new pipe-lines and barges, was one of our major home front victories.

In January 1942, the movement of petroleum and its products overland from the Southwest to the East Coast was slightly more than 200,000 barrels a day. Nearly a million and a half--or seven times as much--can be moved daily now. It is estimated that by March 1944, we will be able to transport between 1,600,000 and 1,700,000 barrels of petroleum products a day, providing supplies are available. Of the latter amount, 535,000 barrels a day will be provided by the 24" Big Inch pipe-line and the 20" line, when both are operating at capacity. An ultimate capacity of 735,000 barrels a day of petroleum is foreseen by PAW when all its pipeline projects are completed.

In the Southwest and Midwest there has never been a serious transportation shortage, even though more than 50,000 tank cars were shunted from areas to serve the East.

The Office of Defense Transportation states that by late spring, when pipelines to the Midwest had been completed, thousands of tank cars previously utilized for long hauls from the Southwest to the East Coast were freed for shorter and more frequent trips between Midwest pipeline terminals and the Eastern shortage area. Tank cars moving oil exclusively from the Midwest to the East can deliver one-third more petroleum products than if they operate half across the continent from the Southwestern oil fields.

However, according to the Petroleum Administration for War, by the time the problem of overland transportation had been brought under control, an entirely new problem had developed. Because of rapid growth of military needs, a shortage of gasoline itself had developed throughout the area east of the Rocky Mountains. If the severely curtailed East Coast were to receive a more equitable share of the gasoline available to civilians, rations of motorists in the Midwest and Southwest had to be reduced.

This plan, contemplated for months, faced a deep-rooted obstacle. Gasoline for the East had to be routed from Southwestern refineries through Midwestern Commercial channels. Traditionally, the oil industry in the Midwest and the East are in separate economic domains which, in normal times, have few or no dealings with each other. Consequently, Midwestern dealers, after purchasing gasoline from the Southwest, thought of supplying old customers in their own territory before considering resale and shipment to dealers in the East. And Midwestern markets could absorb practically all gasoline that could be brought in.

By midsummer this year, prevailing opinion among the nation's oil men was that gasoline crisis was near. They supported the government in advocating a better balance of supplies between the regions.

On August 15, the following measures were put into effect:

(1) PAW established quotas for the Midwest and Southwest, lowering available supplies by about 15 per cent.

(2) OPA made a corresponding cut in "A," "B," "C" rations in the two regions.

When this failed to provide the 75,000 barrels a day needed for the East, PAW requisitioned the necessary gasoline. The full amount is now reaching the East Coast.

In addition to petroleum shipped into the East by land, increasing amounts are now coming by the old coastal water route as more new tankers become available. During September, tanker shipments rose and reserve inventories of gasoline on the East Coast showed corresponding gains.

The second cut in "B" and "C" coupons in the Midwest and Southwest, the raising by ½ gallon a week of Eastern "A" rations, and the recent reduction of "A," "B," and "C" rations in the Rocky Mountains and West Coast areas were further steps in the planned "equalization" program.

C. SUPPLEMENTARY DATE ON THE RATIONING OPERATION

Coupon rationing has drastically reduced gasoline consumption throughout the country. In January 1943, according to state gasoline tax figures, civilian passenger car consumption was cut to about 61 per cent of normal. In the Eastern states, the decline in the same period was to 38 per cent of normal. The substantially greater decline in the East than for the country at large is accounted for by the fact that until August, only the East was being rationed to save gasoline. In the balance of the country, rationing was the means of reducing mileage in order to save rubber.

Severely reduced consumption in the East has had to be continued. Because of the need to keep commercial vehicles and non-highway equipment in operation, the cut in passenger car gasoline has been drastic. Currently Eastern passenger car consumption is about 68 per cent below 1941. Even this was not always reduction enough to keep within the quota. Where the quota is exceeded, the excess consumption reduced reserve stocks.

"Excess consumption" is a term often misunderstood. PAW provides a certain amount of gasoline per day, for both quota needs and to maintain or build up reserve stocks. There is no means for segregating reserve from current supplies. Excess consumption simply overdraws from the total amount in bulk storage, but it has reduced them to such a point that distribution became extremely difficult.

The oil industry estimates it must have a working capital of at least 7,000,000 barrels of gasoline for the Eastern area before there is freedom from distribution difficulties. A certain amount must be maintained in transit. Some stock must be maintained in storage. When stocks fall low, distribution troubles increase tremendously. An example of this principle is the "Big Inch" pipe which must have a line fill of 1,700,000 barrels before it can begin deliveries at its eastern terminal. That amount is, to all intents and purposes, a permanent loss to the consumer; it is as much a part of the machinery of transport as the pipe and pumps.

Until enlarged allocations were made on October 1, civilian gasoline consumers in the East had legally been using about 35,000 barrels a day more than the quotas allotted to them. This was due in part to over-issuance of gasoline coupons and in part to underestimation of probable needs when quotas were originally determined.

Both coupon issuance and quota figures had to be based on whatever estimates were available when the system was inaugurated. Since then surveys have shown that off-highway use (such as for farmers, mines, sawmills, roadbuilding, etc.) was considerably greater than anyone had reason to expect. Not until used coupons began flowing back to the ration boards was it possible to estimate how much gasoline was actually being used by each type of consumer. When these coupons were compared with state gasoline tax figures, quotas could be established on the basis of actual consumption.

Revised estimates of off-highway use, which were met in the October quotas for the East, Midwest, and Southwest, were about four times greater than for original allocations for this type of use.

For several weeks preceding May 20, military takings increased. Civilian consumption rose because of seasonal increases in farm and commercial transport use. These factors, plus operation of black markets and heavy demands for off-highway use, contributed to sending East Coast consumption 35,000 barrels a day above quota.

D. THE CAUSE OF "SPOT" SHORTAGES

It is entirely possible, perhaps probable, that "spot" local shortages, such as the East Coast has already experienced, will still occur occasionally because of unpredictable factors such as large-scale military demands determined by the progress of the war, submarine sinkings, disasters similar to the recent Gulf Coast hurricanes, and perhaps even mechanical breakdown of transportation facilities.

While it could not be revealed at the time, the sinking of 14 large tankers bound for North Africa was the cause of the fuel oil and gasoline crisis in the East last winter. The supplies that were lost were vital to the campaign in the Mediterranean during one of its most critical stages. Replacements had to be located and shipped in a hurry, so were literally lifted from the East Coast civilian supplies. The government was forced to choose between taking these stocks despite the fact that such action would cause a severe shortage for civilians - or to seek replacements from distant points within the interior states of the country and gamble with military failure in North Africa.

The military needs came first. A large proportion of the Eastern civilian gasoline and fuel oil was diverted. The very fuel which was sacrificed by eastern civilians was the fuel that arrived in time to aid the North African victory.

Similarly, in the first quarter of 1943, a Navy demand for a 600 per cent increase of its stocks on the East Coast complicated the gasoline supply program for civilians. The increased shipment had to be brought in by overland facilities that had been previously earmarked for transporting civilian gasoline.

Before the war is won, it may be necessary to withdraw large amounts of gasoline for military emergencies, from various parts of the country, probably without warning. It may be that the reasons for the sudden withdrawals of civilian gasoline cannot be announced, due to military necessity. With accentuation of war in the Pacific, the chances are that some of these gasoline diversions will take place on the West Coast - and the civilians there will be temporarily affected in a similar fashion to those cases which have already occurred. Supply cannot always be estimated accurately. Civilian motorists consequently have little reason to hope for riding "as usual" as long as the war continues.

E. THE DANGERS OF THE GASOLINE BLACK MARKET

Since coupon rationing went into effect, coupons representing more than 126,000,000 gallons of gasoline have been stolen from ration boards. Counterfeiting has been a serious problem in some metropolitan areas.

The gasoline black market involves, in many cases, experienced criminal rings, and is even drawing teen-age youngsters into its operations in dangerous numbers.

However, the black market in gasoline can operate only because some drivers, knowingly or unwittingly, are obtaining supplies through illegal channels, with the assistance of careless or dishonest retail gasoline dealers.

Large numbers of the stolen coupons have been recovered by OPA investigators, aided by other enforcement agencies, federal and local. The actual overthrow of the gasoline black market, however, can only be accomplished if the public cooperates and each individual buys his gasoline only through the proper surrender of valid coupons for each purchase he makes.

The OPA has required motorists to endorse their coupons by writing their license numbers on each ration coupon, as soon as the coupon book is received. Endorsement places a psychological barrier against the illegal use of these coupons as each coupon is thus credited to an individual person, and it provides the all important factor in tracing illegal operations at the service station level - through personal identification for each retail gasoline purchase.

Persons engaged in illegal coupon traffic are subject, under the Second War Powers Act, to maximum sentences of one year in jail and fines up to $10,000.

The combating of the gasoline black market thus has two principal phases. Vigilance and investigation on the part of OPA and law enforcement agencies, and cooperation by the public in using only valid, properly endorsed coupons in purchasing gasoline.

F. CAR-SHARING MAKES EVERY GALLON DO A BIGGER JOB

Hundreds of thousands of Americans, driving to and from war plants all over the country, are making their automobiles furnish two or three times as much transportation on a gallon by carrying 3 to 6 people where they formerly carried only one or two - and driving less often by alternating their cars. That's mileage conservation! This mileage conservation is known as car-sharing.

America depends on passenger cars for more than 80 per cent of our essential transportation. This makes car-sharing a vital necessity to war production. If car-sharing breaks down, production cannot be maintained. If car-sharing does not increase as the war continues, if we do not make the fullest utilization of every car on the road, car-sharing is breaking down - because every month sees more cars going off the road through sheer old age, while our gasoline situation remains critical.

Car-sharing makes one gallon do the work that several gallons used to do. It means that more cars will stay on the road for a longer period of time, consuming the least possible amount of gasoline.

Car-sharing does not mean only that several people owning cars should alternate in driving them to and from work. Non-car owners should also be invited to ride along wherever there is a vacant seat, thus relieving the abnormal overload on other critical vehicles, such as buses, trolleys, and taxi-cabs.

Car-sharing does not apply only to war production driving. It can be used just as effectively for shopping trips, school travel, church attendance, and other regular activities.

The average person who drives alone today feels conspicuous, and rightly so. Each automobile seat has a transportation job to do - when it's empty that job isn't being done. There is no more important job to do on the transportation front right now than to share the ride - together meeting the challenges of the fuel and automobile shortages. Encouraging organization of car-sharing clubs in greater numbers than ever is a primary war project that can help tremendously in meeting our gasoline problem.