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Energy Requirements in Food Marketing

by
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Energy needs of the various sectors of the food industry are outlined. Also, potential problems in meeting these needs are discussed.

I am going to divide my topic into four general subdivisions. One I will call background, the other will be requirements; that is, the subject of the discussion before us, but in requirements I don't think you are as interested in absolute amounts as you may be in other aspects. Then we will talk about priorities under the existing petroleum allocation regulations and the general area of these problems. We will look back just a bit to some of these things that I will say you already know, but just to bring the whole picture into perspective we know that petroleum fuels in shortage areas through most of 1973 up until approximately the time of the Arab oil embargo, were moving along with about 3 to 4 percent shortages for most of the petroleum products. That is not very short, just enough to be real troublesome. You probably know better than I some of the troubles that it can create, roughly for the first three quarters, about 3 to 4 percent shortages overall in the petroleum area. The last quarter of last year was about a 7 percent overall shortage, part of it was without the embargo and part of it with the embargo. These are figures from the Federal Energy Office. If I call it FEO a few times you will know what I am talking about. That office when the Arab ambargo came along, as you probably will remember so well, projected that there would be about a 17 percent petroleum product shortage for the first quarter of this year, but a little of the oil leaked through and the last figures available to us said that there would be about a 14 percent shortage for the first quarter of this year unless the leaks are plugged and we get less, or also unless there is some kind of resolving of the situation that would permit oil to begin to flow to us again from Arab countries. That was through the first quarter.

The EFO also projected that the second and third quarter shortages would be a little greater than 14 percent again if the embargo continued. That is a quick look back at where we have been; that is, the projection of where we might be in the first quarter that we are now in, the second and third quarters if the embargo continues.

Let's take a look at the petroleum production during the last few weeks and see how it looks as compared with this projection. Let's back up before December 7, to about the first part to the middle of November, before the Arab boycott came into effect and at that time the U.S. refineries were operating at approximately 100 percent of capacity. That is their rated capacity and you know as well as we do that if it gets 100, 101 or 99 percent that it is about the maximum we can expect. With the embargo beginning, the crude runs to refineries gradually, decreased until the last weeks work of January 11. It is a little less than 90 percent of what it was a few weeks ago. Now, we said earlier that we had been getting along at a 3 or 4 percent shortage for the first three quarters, and if we add that 3 or 4 percent

shortage to a little less than 90 percent, this would indicate that the overall petroleum products now would be close to 14 percent short of what had been projected. Output was higher than last year until we get to the last two weeks and at that point it just about equals last June.

Gasolines - you will notice that this year's charts are lower than last year in all instances and it had been that way for quite some time. That is output.

Let's take a brief look at stocks of distant fuel oil and gasoline. I will just lift this at the top and there you can see that these are weekend stocks for this period and for some time before that the stocks were considerably higher this year than last year. Perhaps I should have said these are primary stocks, there is no reasonable way to get them at all levels. I also should have said that these are industry figures. We have all been reading in the papers in recent weeks about the government having to depend upon industry for its source of information. There are some hearings beginning on the Hill today on this very thing, but it is the best government has, so we are using them. For gasoline, you will notice, the reverse is true, that the stocks throughout this period and for somewhat earlier are a bit lower than a year ago. We have the third and last chart which is residual fuel oil. These, as you know, are the heavier fuel oil used primarily in food processing of industries and as a bunker fuel for ships. We say that production of residuals were higher during this period than they were a year ago. All I really know about natural gas stocks is what I read in the paper and that is stocks production. If you read that too, it says this year about the same as last, 1973 about the same as 1972. Neither do we have information readily available on electric energy. Even though this subject is energy wide we will just use the information we have readily at hand. We have this because we have been so deeply involved in the petroleum fuels area during the past year or so.

The next area is requirements, and we will spend only a brief period on them because as I said I don't think you want absolute amounts. But to start with let's all recognize that food is a very energy intensive industry. We have been reading in the papers, that the country as a whole is a very energy intensive country. We have about 6 percent of the world population but we use about a third of the energy that is consumed in the world. Agricultural production is no different from that and your food industry is no different, very energy intensive. What does it really look like? On an overall basis out of the 1972 census as compared with censuses on earlier years let's look at natural gas, coal, fuel oil, electric energy and then take a look at the overall energy.

For natural gas - the food processing industry - now this is food processing, not your whole marketing system. Natural gas consumption has just about doubled what it was 20 years ago. Today it is about 480 billion cubic feet per year. The reverse is true for coal. Today the food processing industry is using just about a third of 20 years ago. The use of fuel oil during the 20 years has fluctuated, where now it is just about the same as it was 20 years ago, 20 to 21 million barrels a year. We can say that the food industry, food processing industry, probably uses about 1 percent of the total residual fuel oil in this country.

For electric energy purchased - this does not fully include what you generate, I am not sure what that is, but with electric energy purchased today it is just about triple what it was 20 years ago. If you like figures - today it would be about 35 to 36 billion kw-hr per year. As you get a common denominator for these different kinds of energy you have an overall increase of about 30 percent in energy consumed by the food processing industry, during this 20 year period. As we have mentioned, we do not have readily available those kind of figures for the transportation part of food marketing. You know

better than we do that there has been a substantial shift in food transportation in the trucking industry for the past 30 years according to a panel of experts that put some of this into writing. They figure that the energy consumed by trucks moving food products has increased about fourfold over the last 30 years. In the wholesale and retail trades, again, we do not have very good information, but that which is available to us says that about one half as much energy is used in the wholesale and retail trade as there is in processing and transportation combined. For a rough estimate of the amount used in transportation - divide that by half and you would get approximately the energy requirement for the wholesale and retail trade together. This is further broken down by the retails being about twice as great as the wholesales. I do not know how nearly these figures fit your own individual situations or a situation for the geographic area that you are representing but at least say that they are the best that is available to us at the time. On the part of shipping we might say just a word. We do not have any information on quantities consumed but it is obvious to all of us that there would be some fairly direct relationship between quantities of exports and imports and quantities of energy necessary.

Moving from requirements to the new regulations that are in effect - we would do that under the general heading of what we call priorities in the four breakdowns that we gave you in the beginning. As you probably know, these regulations appeared in the Federal Register January 15, 1974. They were effective that day but we also know that it is going to take several weeks, I'd say a month or longer in order for them to become implemented at the place where the food industry and farmers actually obtain their fuels. We know that we have been through quite a period of turmoil during the past several months with different kinds of petroleum fuel programs. Secretary Butz has worked rather hard with people at his level, he said just the other day in a meeting at which I was present, that the President was working with them in trying to establish the need for the production and marketing of food throughout the United States as well as in the World. Primarily through those efforts we were able to obtain what we consider a very high priority for the production and marketing of food. That priority is set out as you might know as being 100 percent of current requirements, for gasoline, middle distillates, residual fuel oil, propane and butane. We are wondering what difficulties might be encountered in the practical application of that priority. Incidentally, food is the only one that has 100 percent without any reduction factor in it in the event that there is not enough fuel to go around. A few categories are sectors of the economy and can have 100 percent of your requirements if there is enough to go around but if there is not enough then all of you are scaled down in the same proportion. You might get 95 percent of your requirements. We are wondering just how practical this is going to be to administer. Let's take food processing for example, we think that when the program is really fully implemented that the food processing industry should be in reasonably good shape in obtaining its fuels. That is because we believe that you purchase fairly directly, that you use it for food processing purposes, and some related services, like the production of containers in some instances - so we cannot see where you should be encountering a great big problem in the application of this regulation.

We will move from food processing to transportation. We do not think it is going to be quite that easy. We know what the news says about some trucks in the area today, trying to bring some problems to the attention of certain people. Take a truck transporting food from the midwest to the northeast. Where does it get its fuels? Especially the nonregulated or the independent. It is our understanding that they have to depend upon truck stops. He might be carrying food in one direction, but different cargo in another direction. We simply do not know how well this 100 percent priority is going to function in those cases. It takes

many different kinds of carriers, such as rail that might have mixed cargoes. We are not sure how it will function there. Incidentally, maybe I should have said that for nonfood cargoes, allocation is 100 percent of what was used in 1972 by months. Maybe it will be in effect in February of 1974 and the allocation to the general rail and similar freight modes of transportation would be 110% over all of February 1972. That might be about adequate, I do not know. From what I read it seems that the transportation requirements now exceed those of two years ago by more than 10 percent. Those modes of transportation fall into the category that if there is not enough fuel to go around they will be scaled down.

Wholesale and retail trades - I don't think I will try to say how this might apply. Certainly, we think about as good as food processing, better than transportation.

Ocean shipping - for the exports that are food, again we are supposed to get 100% of requirements. But we have been reading about some of the difficulties there especially on return trips, foreign countries that will permit ships to be refueled are charging higher prices, some are providing only enough fuel to get from one port to another port in another country. We understand that there is a real effort now to try to work out some of those problems. As far as the United States is concerned, the priority is 100 percent of requirement, Whether it is our own flag or that of another country. But in order to get a 100 percent of requirement every such user might certify to his supplier that he has a conservation program in effect. Someone, this morning, if I heard correctly, said that we only needed half the energy we are now using in some part or all of the food marketing system. If that is true, it seems that there is real room for conservation practices to be put into effect. I am not trying to say what conservation practices the whole food marketing industry should try to use but there is a requirement, as I have already said, that you must have a conservation practice in effect. If we had any suggestions, whatsoever, it would be to take that seriously and not just sign a statement that you do have it.

Just a brief word about some of the activities we have been involved in. You might know that our agency now for nearly a year has been monitoring the fuel situation in the rural areas, that is where we have people, at the local level. We do not have the capability to monitor the fuel situation in the nonrural areas. I say that because you can get some idea about ability or inability to monitor the marketing industry problem, but at least in the rural area we have been and we expect to continue monitoring. In that process we pick up primarily former problems, but we also pick up industry problems to the extent that they come to our attention there. Fortunately, thus far, as many foreign problems as we have had with petroleum products the past year, we have not had lots of food industry problems to come to our attention. In the food processing there are more scattered cases where they have had shortages that could not be resolved for one reason or another, not wide spread at all.

In transportation it is primarily availability of cars and not fuels. The rail industry does tell us that their stocks of diesel fuels are now roughly half of their normal level but not low enough yet to cause some genuine problems. Price might be even more of a problem there than quantity of fuels available. We have more problems in the trucking industry than we have in any other part of the transportation industry. We are not in a very good position to pick up problems in the wholesale and retail trade. Concerning ocean shipping, I think I will just merely say that you read about those and you probably know just as much about them as we do. It is primarily the availability of bunker fuels and of course price across the board in all of these cases.