

the
PLAIN TRUTH

a magazine of understanding

**OUR
ENERGY CRISIS
AND ITS
SOLUTION**

the PLAIN TRUTH

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WHY THIS SPECIAL ISSUE

Not since the explosion of the atomic bomb has an issue become of such grave concern to the whole world. Forty years before the energy crisis broke into the headlines, industrial study groups issued reports warning that an energy crunch would threaten an expanding industrial world by 1970. Their predictions were not heeded — neither by government, by the public nor by industry. This special issue of *The Plain Truth* takes us back to the real beginnings of the energy crisis and outlines the good news of the solution. It also spotlights the impending dangers to Western Europe and to the developing nations of the Third World.

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ABOUT OUR COVER

The white light of the sun and its radiant beams illustrate the paradox of the energy crisis. Daily the earth and its inhabitants are flooded with the sun's radiant energy, yet man has been able to tap only an infinitesimal part of this marvelous energy source.

Illustration — Charles Buschmann

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I AM RECEIVED in many world capitals as an ambassador for world peace. I can assure heads of state and world leaders that world peace is not only possible — it is definitely coming — and in our time, and this in spite of the fact that for six thousand years with world leaders striving desperately to achieve this peace, suffering humanity has never yet enjoyed it.

But why? It is my mission to answer that question. For every effect there has to be a cause.

That is to say that our human society has never yet found the way and put into motion the way that would cause world peace. Also, that is to say that humanity has failed for 6,000 years to discover the cause of the world's colossal evils — its wretchedness, unhappiness and suffering.

I repeat: There is of necessity a cause for every effect. How could that cause of so stupendous an effect have escaped all humanity for 6,000 long, agonizing years?

The answer has been available. Yet science has never discovered it. Education has never taught it. Religion has never stumbled onto it.

Yet the answer has been to them all as the absent-minded professor's spectacles. When he discovered they were missing, he searched every nook and cranny of his home and his study, but was unable to find them — until he finally looked into a mirror and discovered he had absent-mindedly pushed them up over his forehead.

I have not thought out any super-complex solution more difficult than any other minds have been able to reason through. I have merely been willing to see and accept what science, education and religion have either overlooked, or never recognized or neglected.

In a series of dinners, attended by between 50 and 100 of the leaders of nations, I have spoken and made clear this simple truth. I have shown them the way to world peace. I have shown them how that way, taught and put into living practice on three

Personal from



WORLD PEACE IS POSSIBLE— IS COMING: BUT WHY NO PEACE IN 6,000 YEARS?

college campuses, has demonstrated during more than a quarter of a century that it does indeed produce peace and happiness and the abundant life.

These dinners, revealing this practical, simple truth to a group of national leaders — people of understanding and discrimination — are now leading to public appearances before larger audiences of thousands in many world capitals. These leaders want their people to hear this simple message of super-tremendous importance.

These public appearance campaigns in world capitals are unique in that they result from the approval and endorsement from the very top of the governments of these nations. They are the direct result of the unusual favor I have been given in the eyes of the many kings, emperors, presidents, prime ministers and other leaders of many nations.

Public appearance meetings have been scheduled not only for Manila and Saigon but also for Addis Ababa, Ethiopia. Others are to follow through the year.

On this present trip, en route to Manila, I made a three-day stop-over in Tokyo. The eight leading members of the Japanese Diet who spent two weeks with us touring the Middle East (oil regions) on an offi-

cial government goodwill tour hosted a dinner in my honor, telling me they consider themselves my "Japanese sons." That adds another honor.

While in Tokyo, one afternoon, one of the biggest of the Japanese sumo wrestlers, known in Japan as Takamiyama, came to my hotel room to see me. He is actually an American citizen, Jesse Kuhaulua. He is from Hawaii and is the only non-Japanese ever to win a sumo tournament championship. He received a letter from the White House by President Richard Nixon, dated July 16, 1972, congratulating him on his championship victory.

When I went to open the door of my room to him, well, what I beheld in the doorway was an experience of a lifetime. His head almost touched the top of the door (he is 6 feet 4 inches or taller). But his mountainous frame just about filled the whole doorway. He is simply huge — stupendous — weighing some 385 pounds. One of my Japanese friends brought him up. He sat beside me on a wide sofa, and his huge frame took up a full two seats of a three-seat-wide sofa. I felt like a pigmy beside him. We chatted for about an hour, and he told us many things about this unique Japanese sport.

(Continued on page 32)

EUROPE'S SUPREME TEST



UNITY IN Western Europe is being weighed in the balance — and found wanting.

The ties that bind the nine-nation European Community together are proving to be little match against the powerful forces of national self-interest.

Every Man for Himself

Look at what has happened in the last few months. Little wonder that "Eurocrats" at Common Market headquarters in Brussels are deeply concerned over the powerful centrifugal forces that threaten to snap the tenuous threads of unity so carefully woven over two decades of painstaking work.

It began with the Arab oil boycott against the Netherlands. The tiny, but pivotally situated Dutch nation, possessing West Europe's chief petroleum port and refining facilities at Rotterdam, was left isolated by its Community partners when the Arabs singled it out as pro-Israeli.

Lip service was given to Community solidarity in the face of the Netherlands' position — but little else. It was not long afterward that the big three Common Market oil users — France, Britain and West Germany — struck out on their own as national governments to make their own private deals.

First, not unexpectedly, the French went to work. They had been least affected by the boycott because of their favorable position with the Arab world. But they became deeply concerned over the soaring price of oil and its effect on France's balance of payments.

French officials hustled off to Saudi Arabia, their portfolios bulging with offers. The result was a massive arms-for-oil swap, as yet unfinalized, that guaranteed significant future supplies of oil for France's industrial needs. In exchange for 900 million tons of oil to be delivered over a 20-year period, the Saudis, in turn, are to receive Mirage jet fighters, AMX tanks and a host of other weapons.

Now France has her oil — she

Will the Common Market survive the energy crisis intact? This is the big question the experts are asking as Western European nations scramble over each other's backs to arrange private deals for that most precious of all industrial commodities today — oil.

by Gene H. Hogberg

thinks. But, as one observer put it, "the very concept of the deal is ludicrous." The big assumption is that things will be so stable in the Middle East that, for two decades, oil will flow like honey to France without interruption by wars, overthrows of governments, or changes in political alliances or sentiments. The very arms offered in the swap could even play their own ironical part in unfortunate future results.

Follow the Leader

But something else happened as well — to Europe. Walter Laqueur of the Institute of Contemporary History in London put it most succinctly when he wrote: "Another nail has been put into the coffin of European unity. Britain and other European countries have been encouraged to look for similar bargains."

Indeed they have been.

The British, quick to follow the French lead, made their own pilgrimage to Saudi Arabia and came off with a contract involving thirty million tons of petroleum a year for the next ten years — again in exchange for weapons systems and machinery. Accords of a similar nature developed with Kuwait, Abu Dhabi and Qatar.

Seeking perhaps the biggest deal of all, British Chancellor of the Exchequer Anthony Barber packed off to visit the Shah of Iran to conclude a barter deal of British steel, cement, rubber, paper, fiber products and anything else the Iranians might want for oil. In a separate deal, the British Aircraft corpora-

tion concluded an agreement for part of the "anything else" — a \$140 million sale of air defense and anti-aircraft guided missile equipment for Iran's military forces.

Nail number two in the coffin of European unity was being hammered in. And the third spike was not long in coming.

West Germany felt it could not afford to let its "partners" get all of the action. Agents from Bonn arranged to sell "Leopard" tanks to the Iranian government and a complete oil refinery complex to the same party. The German government is reported to have sent negotiating teams to various Arab states, although Bonn prefers, for obvious historical reasons, to sell nonmilitary industrial goods to anyone directly involved in the Arab-Israeli dispute. (Moslem, but non-Arab, Iran is not involved.)

What then is the upshot of the frantic maneuverings upon Europe itself? Says the *New York Times'* C. L. Sulzberger: "Thus three bellwethers of the European Community flock have all struck off on their own, disregarding common obligations.... The result has been to rock the Community."

Another Blow Struck

But the above does not tell the whole story by any means. Earlier this year France abruptly decided to float the franc without consulting with or warning any of her Brussels partners except West Germany.

The action struck a heavy political and psychological blow. The move was a clear signal that France or any other Community member has the right to manipulate its currency into a better competitive position to pay for oil's increased cost. Critics say this competition will be at the expense of fellow Market members.

The unilateral French decision was even more profound from another view.

Both the British and Italians have been floating their currencies for quite some time. For these two "sick



men of Europe," such policies — a sign of economic weakness — were nothing new or unexpected. The French, on the other hand, have lectured the world ceaselessly, and fellow Common Market members in particular, about the importance of maintaining fixed exchange rates. The world "floatation" was absolute anathema. In addition, the French have always been the big force behind the push toward an eventual European monetary union.

Thus the abrupt French abandonment of what was presumed to be their fundamental European and monetary principles served to demonstrate once again that the principle of national self-interest is still of paramount importance and that every nation must fend for itself when economic storm clouds begin to gather on the horizon.

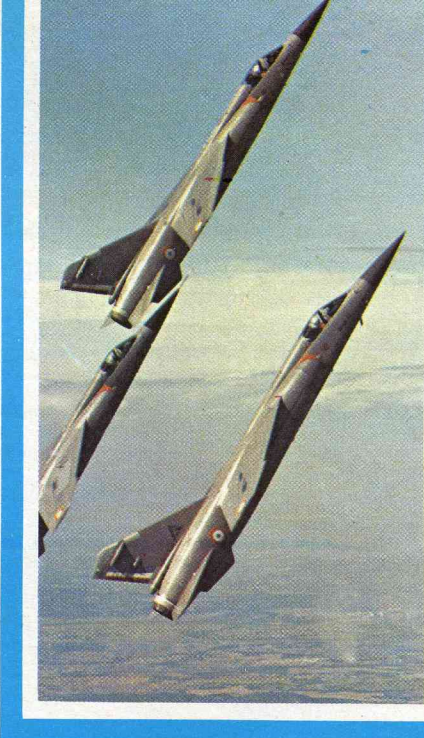
British, Germans Angered

The French actively pursued their new independent course at the February conference in Washington of the world's major oil producing nations. The meeting was highlighted by a wide-open political rift between Paris and her eight Common Market partners. French Foreign Minister Michel Jobert alone refused to accept most of the contents of the conference's joint communiqué.

Taken together, the French moves could have far-reaching implications for the future of the Common Market.

It is highly unlikely that France will be permitted to roll merrily along while the rest of Europe continues to buy cheaper French goods and support indefinitely the Community's Common Agricultural Policy (CAP) — a large farm price support program, the payments of which primarily benefit the still significant French farming population.

The British — faced with a \$5 billion balance-of-payments deficit in 1973, even before new oil prices and the toll of her own domestic difficulties is added up, certainly can't afford to go along without a whimper. It is no secret that many Britons have sour attitudes toward the Common Market they reluctantly joined. They embraced Brussels in the first place because there was precious little alternative in the world for a fading Britain, bereft of empire. The Common Market, moreover, provided a chancy device to get more money (mostly German marks) for redeveloping economically depressed British industrial areas than the British would have to give to keep the French *paysan* behind the plow. But it hasn't worked out this way yet, as any British housewife will tell you.



Still, it is not the British but the Germans who hold the trump card to the Community's future.

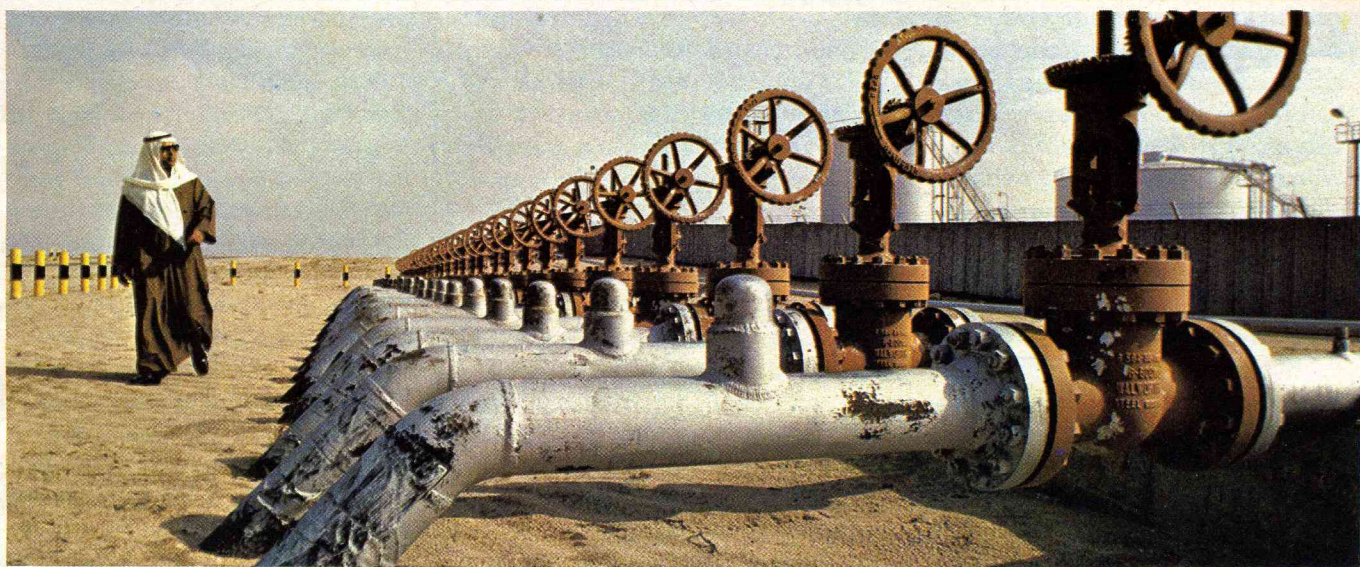
More than anyone else, the Germans have been angered by the Great Franc Float, which they view as nothing other than a Parisian gambit to sluff the burden of oil price increases off onto other European shoulders. The French would disagree.

Even before the oil situation, Bonn was becoming infuriated over being treated as nothing but a "milk cow" for the agricultural and regional development funds, all the while supplying most of the "offset" money to support U.S. military forces in Europe. To have to pick up a large share of the French oil tab would be unthinkable.

Should Bonn decide to follow the French example by floating its currency as well and by adopting a blocking posture in Brussels (which was the French policy during much of the De Gaulle era), then the Common Market would be in dire straits indeed.

Paris-based Don Cook, writing for the *Los Angeles Times*, summed up the Community's present plight in this way: "Europe, which has been sadly unable to speak with one political voice in meeting the situation, is now facing a deeply unsettling period of economic disunity as

Left: J. P. Laffont — Sygma: Center: Avions Marcel Dassault



HOW OIL HAS DIVIDED EUROPE —

Conference of world oil-consuming nations, far left, held in Washington, D.C. in February, highlighted the growing rift between France and her eight Common Market partners over the solution to common energy problems. France, Britain, West Germany and Italy have all made separate deals for oil with Middle East nations.

well. It is a dreary catalog of troubles ahead in every one of the Common Market capitals, and with it there is an almost complete breakdown of will or leadership to pull together in Brussels instead of hanging separately in different capitals."

Unity by Design Won't Come About

It is clear that the carefully engineered unity-by-degree-and-deadline progress in the European Community has ground to a virtual halt. Even if the French decide to repeg the value of their currency ("in about six months," they said), the goal of monetary union and eventually one currency for the entire Community has suffered almost irreparable harm.

Besides, the world outside the Community is so frightfully uncertain. Will there be a world recession? A depression? A "defensive" trade war among the world's industrial powers to gain access to crucial

energy sources and raw materials? What will the oil-producing states do with their rapidly mounting pile of oil revenues?

Dependent as they are upon outside energy sources, the Europeans, much more so than the United States and the Soviet Union, stand to be buffeted greatly by all the storms of international economics.

On top of it all, bad feelings, suspicions and accusations within the Community itself are now the rule rather than the exception. Every nation, it seems, wants to create Europe in its own image. West German Foreign Minister Walter Scheel remarked ruefully: "This objective [of a "European union" by 1980] will never be achieved if each of the interested parties says: 'L'Europe c'est moi' [Europe, it is I]."

What a difference the price of oil makes! How weak has been the economic glue which has cemented together Western Europe's unprecedented post-war prosperity! How close to the surface all along have been national feelings and interests, rather than the ideology of unity!

When "The Ten" Will Come

Eventually, the time will come when West Europeans will come to see where the road of national self-interest is taking them. When they

stand to lose all that they have patiently achieved through years of cooperation as well as compromise, there undoubtedly will be a call for someone, some power, to come to the rescue.

It will be in that day in the not too distant future when ten national leaders, in a time of prophesied great international stress, will divest themselves of their sovereign rights and "give their power and authority" (Revelation 17:12, Goodspeed translation) to a single individual.

This man will make lightning-quick decisions of enormous consequences for the entire world (read succeeding verses). He will not be a "faceless" individual occupying a position of limited authority, as is the case with European leaders today. That is for sure.

West Europe's current leadership crisis was put in graphic terms — perhaps exaggerated to prove a point — by contemporary historian Laqueur: "It is, in short, the fact that as the Continent faces its hour of truth, its key countries... are ruled by a group of small men who, by their... lack of foresight and imagination, are quite incapable of swift and bold action to cope with a task of historic magnitude.... Europe is leaderless."

Watch for a startling change in Europe just over the horizon. □

Developing nations stagger under sharply higher prices for oil. Coming on the heels of serious food shortages, skyrocketing energy costs could impel the less-developed nations into the final battle to avert worldwide starvation.

by Paul Knedel

A SECRET REPORT of the oil needs of 39 less-developed countries has been prepared by the World Bank. So serious are the implications of the World Bank study that its release has been withheld (for the time being) lest it spread panic among the poorer nations.

A high United States official has dared publicly to sum up the crisis

in the developing Third World in layman's terminology. "In the United States, it means we may have to ride the bus instead of drive," he said. "In Japan and Europe it could mean recession. In Asia, Africa and Latin America, it means disaster."

India's Dilemma

India is a case in point of what could happen. This vast nation has battled for many years to become self-sufficient and improve the lot of its 575 million people. Progress has been made in some areas — notably food production. The introduction of new, high-yield strains of seed allowed India to halt grain imports for a time. But the bounty from the "miracle" grains is completely de-

pendent upon heavy doses of fertilizer, herbicides and other chemical control products.

Now India faces a two-fold problem. First, the cost of these materials — nearly all of which are by-products of petroleum or natural gas — has skyrocketed. India has little in the way of currency reserves to meet the higher costs.

Secondly, there is a severe fertilizer shortage in the world as a consequence of the energy crisis. Japan, for example, initially announced a 30 percent cut in chemical fertilizer exports. The cut affects many Asian nations. Japan, of course, must import oil from the Middle East in order to manufacture the fertilizer. And Japan feels it must cut back on overseas sales of petro-

Ken Evans — Plain Truth

ENERGY AND



leum by-products — in this case fertilizers — in order to conserve enough oil for domestic industry.

The United States has also cut back on fertilizer exports. Edwin M. Martin, an American food expert, explains that "if crops are short because of a lack of fertilizer, normally the less-developed nations could turn to the United States. But our own stocks are very low. Even if we have a good harvest this year it will not be easy."

The result of this largely oil-produced problem, states India's Agriculture Minister Rakhuddin Ali Ahmed, is that his country could be short some 600,000 tons of fertilizer this year.

Domestic price increases, scattered food shortages and an in-

flation rate rising at a 24 percent clip led to riots in some sections of India in early 1974. These may well be the forerunner of more serious disruptions as the energy crisis bites severely into India.

India Is Not Alone

The problems of India serve as a prime example of the many difficulties facing the Third World — that vast segment of humanity which contains two thirds of the world's population.

The fact remains that there are more than 80 countries, many of them poorer than India, which have weak financial structures and have staked their hopes for a better future on imported oil and fertilizers.

India's eastern neighbor, Bangla-

desh, seems to be hopelessly enmeshed in a state of grinding poverty. Independence from Pakistan, won with great sacrifice in 1971, has promised more than it has delivered. With freak weather disorders a continuous threat (a monsoon tidal wave killed 500,000 in 1972), a farmer's life in Bangladesh seems to consist of simply one catastrophe after another.

And now comes the petroleum-fertilizer shortage. Government experts in Dacca have no answers as yet as to how to increase the nation's exports to pay for its petroleum needs. Should they raise the prices of its export items? Such a course seems out of the question since Bangladesh's major customers in the industrialized world might not be

FOOD

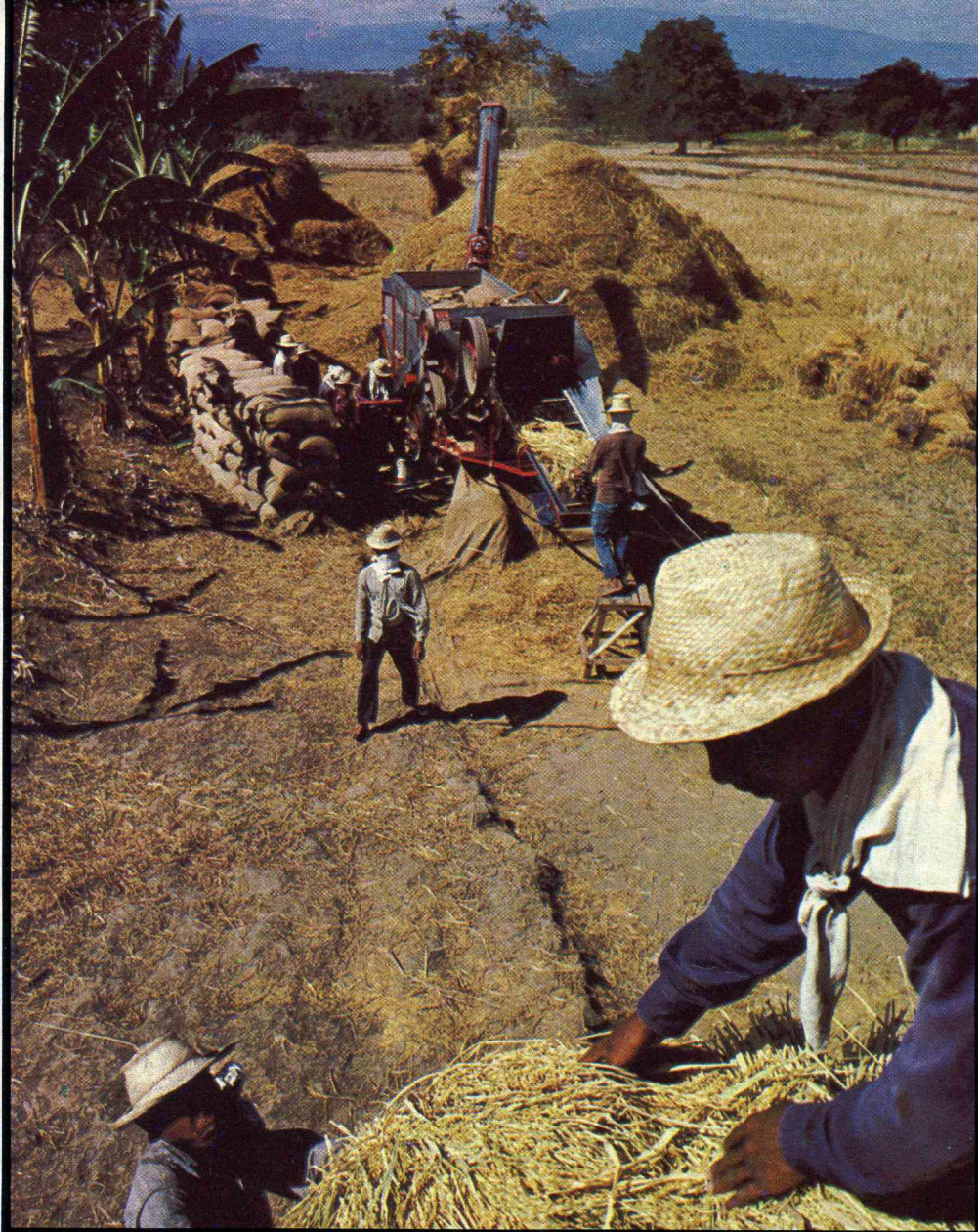
A DOUBLE DILEMMA THREATENS THE THIRD WORLD



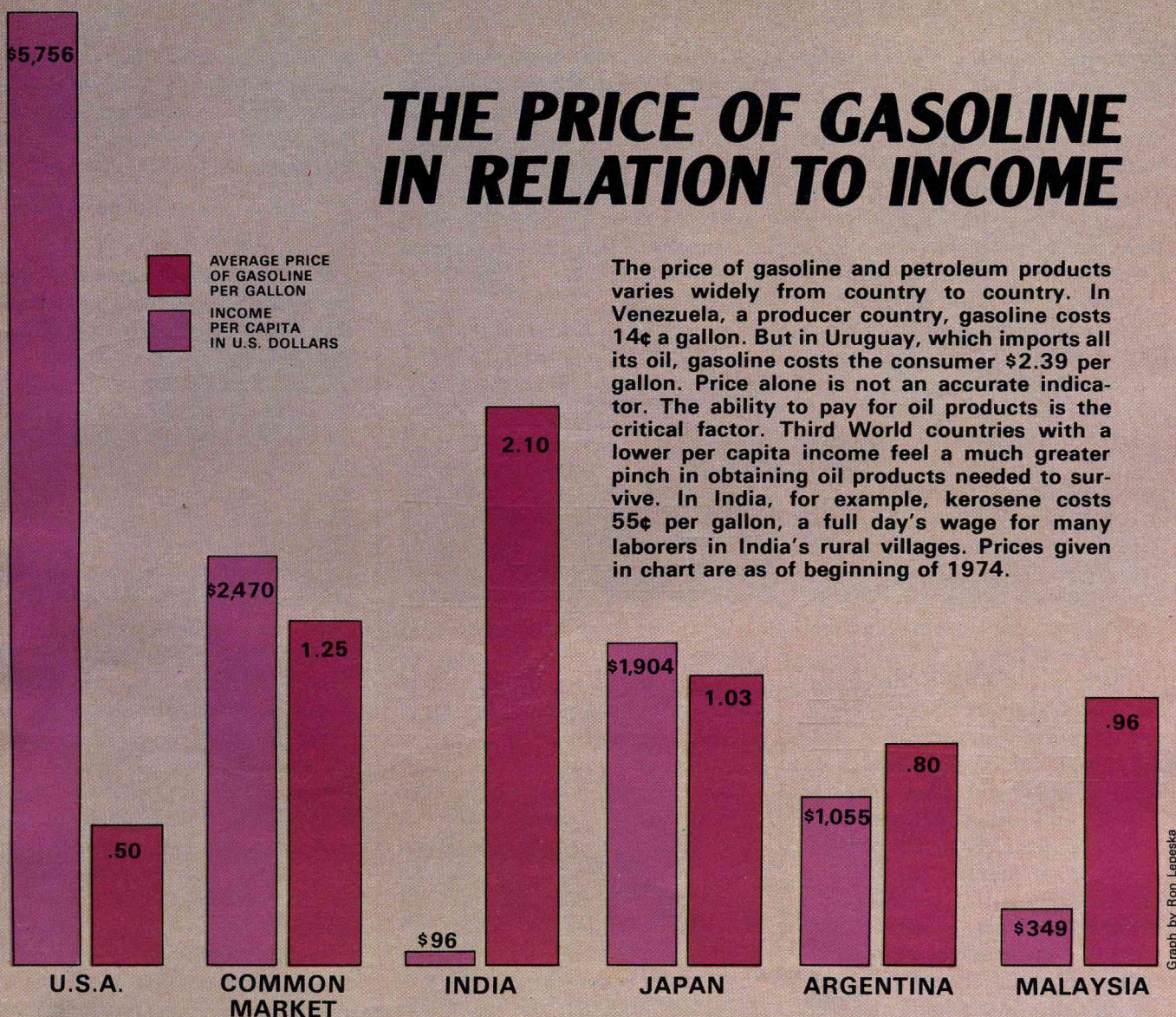
OIL AND AGRICULTURE —

Farmers of the Third World are having to meet head-on the sky-rocketing costs of fuels and petroleum-based fertilizers and sprays. Without continued access to petroleum and its by-products, agriculture in the developing world could suffer irreparable harm. To the right, rice harvesting on Luzon, the Philippines, is facilitated by modern threshing methods. Below left, spraying petroleum-based pesticides on citrus crop at Menzi Agricultural Cooperative, Davao, Mindanao, the Philippines. Below right, a young farmer in India receives advice on how to use modern irrigation pump supplied by agricultural cooperative.

*Bottom left and top: Ted Spiegel — Black Star
Bottom right: Ernst Herb — Plain Truth*



THE PRICE OF GASOLINE IN RELATION TO INCOME



able to afford them. They, like Bangladesh, must somehow meet the rising cost of oil.

Pakistan's economy is also heavily dependent on oil. Pakistan's economic planners speak in somber terms of the serious repercussions oil price hikes are having on their nation's economy. The possibility of economic recession in industrialized countries which give aid to Pakistan has generated alarm. Pakistan's annual import bill for crude oil and petroleum products has shot up from \$60 million to about \$350 million, amounting to one third of the nation's total export earnings.

And so it goes around the world. The story is the same. Economic

planners in the black republics of East Africa are as concerned and perplexed as their counterparts in Asia and on the Indian subcontinent about how to tackle their respective energy situations.

Sometimes the story takes on even more complex angles. The tiny East African nation of Uganda, for example, is getting hit from both sides in its energy dilemma. Rising fuel costs threaten to equal all of Uganda's foreign earnings — which in turn are suffering from a slump in tourism, especially since the expulsion of Asians who had made Uganda their home. Rising air fares due to increased fuel costs are cutting into Uganda's thriving "safari" business.

Effect on World Food Supply

The most serious impact of the energy crisis will be on the ability of the poor nations to feed their growing populations.

Today, government leaders, scientists and agricultural experts are warning the world that the threat of widespread famine is greater than it's been for many years. The energy shortage has accelerated the problem greatly. Global grain reserves have fallen to a 20-year low as the population explosion continues in many parts of the world.

Compounding the situation is the fact that over the past decade or so, many nations have become overly

dependent upon the United States for food shipments.

The danger of this overreliance on one food basket was brought out during the 1960's when the United States sent a major portion of its wheat reserve to India. U. S. wheat prevented a famine that could have killed up to 50 million people! According to Dr. Addeka Boerma, head of the United Nations Food and Agricultural Organization: "When there was a bad crop year like 1965 in India, the U. S. and Canada bailed the others out. But now the real question is: What would happen if we had another bad crop in India? In Indonesia? That is why I am giving the cry of alarm. Can we really, in this modern world, tolerate famine with perhaps millions of people dying and nobody able to help?"

The fact is that the United States and Canada are no longer able to aid the world with millions of tons of surplus food. Unprecedented sales of wheat and other grains to Russia and other nations have helped put the U. S. government out of the grain business for the first time in 25 years! America's once bountiful surpluses of wheat, corn and other grains are now gone.

Thus, as the full effect of the energy crunch settles on the world, the need of favorable weather for the 1974 grain crops becomes even more crucial. Now, rich and poor nations alike are dependent on a single year's good weather for food. But technology cannot produce good weather, and that fact has various officials more worried than they will admit.

The United States has been visited by drought that has been arriving with alarming regularity about every 19 or 20 years. If this statistic holds, America is about due for another drought period.

Dr. Irving Krick, noted meteorologist and weather engineer, is predicting a drought in the 1970's that will peak between 1975 and 1978. He and his forecasters were able to predict the weather for the Normandy invasion, and he was subsequently honored by the U. S.

and French governments. Dr. Krick feels that the dust bowl conditions of the 1930's could return and this time spread as far north as the Dakotas and southern Canada.

If the United States were to suffer two or three poor crop years, many nations, especially the poorer countries, would face unparalleled human disaster.

To know the magnitude of such an occurrence, one need only look at the incredible amount of farm exports expected from America this year. The United States is now exporting:

- Three fourths of all the wheat it grows,

- Two thirds of its rice,

- Half of its soybeans,

- One fourth of its feed grains.

Of all the food commodities that moved in world trade last year, the U. S. accounted for 89 percent of the soybeans, nearly three fourths of all the corn and more than half of all wheat and flour.

Undeveloped nations have been rapidly increasing purchases of U. S. food. Asia is becoming the largest single market, with Latin America and Africa more than doubling their purchases. Without a doubt, the United States along with neighboring Canada is now the greatest producer of food that the world has ever seen.

In paying the cost for petroleum and fertilizer, there looms an important question: How much money do nations in the Third World have available to pay for food imports from the United States, Canada and Australia?

And note this fact as well. Much of the developing world has been encouraged to jump on the "Green Revolution" bandwagon. High-yield, but disease-vulnerable "miracle grains" have supplanted lower yielding, but generally sturdier, native varieties in many parts of the world. The success of the Green Revolution — as is measured in increased crop yields — hinges completely upon ready and continuous access to the necessary fertilizers and disease-control agents. Again,

the energy crisis will have a remarkable impact upon Third World agriculture. (For more information on this subject, write for our free booklet *Famine... Can We Survive?*)

Does the Third World Have a Future?

It is not without understanding, therefore, that a growing number of observers are predicting human disaster for the Third World. Poor domestic crops, lack of fertilizer, shortage of petroleum for farm machinery and sharply reduced food imports — all in the face of increased population — may prove to be the combination of events that will push many developing nations over the cliff and bring an abrupt halt to two decades of world economic development. The comment by British author-statesman C. P. Snow that "many millions of people in the poor countries are going to starve to death before our eyes" may soon be a reality.

Sincere men are striving to bring the world peace, and equally sincere men are striving to help the poor and hungry. But the problems are simply becoming too big for humanity to handle.

As the months go on and food crises become more acute, men everywhere will begin to see the unfolding of a prediction made nearly two thousand years ago — a prediction that only now is coming into true focus for those who have eyes to see its significance. Asked by his students or disciples what would be some of the primary signs preceding his return to earth to establish his government — the government that will solve humanity's impossible plight — Jesus Christ replied: "For nation will make war upon nation, kingdom upon kingdom; *there will be famines* and earthquakes in many places. With all these things the birth-pangs of a new age begin" (Matthew 24:7-8, *The New English Bible*).

Happily, after the birth-pangs of the coming new world order, there will be abundant prosperity, a time in which the plowman overtakes the reaper (Amos 9:13). □

fuel & food

EXPERTS WARN WHAT COMING SHORTAGES MAY MEAN



Dexter Faulkner — Plain Truth

How will developing nations be able to pay for the sharply increased cost of fuel? How seriously affected is food production in the Third World? What about the political stability of the least developed countries?

John W. Sewell (right), vice-president of the Overseas Development Council, and James W. Howe, a Senior Fellow of the council, give their knowledgeable insight on these and other questions. A major purpose of the ODC is to keep the urgency of the challenges of world development before the public. The above two men were interviewed in ODC headquarters in Washington, D.C., by Plain Truth regional editor Dexter Faulkner.

QUESTION — PLAIN TRUTH: What do you see is likely to happen to the world economy as a result of the remarkable rise in the cost of petroleum?

ANSWER — HOWE: There are two separate impacts of the rising price of petroleum. First is the impact on the economies of the rich countries. There is some danger that the increasing costs of oil may cause recessions. But it's clear that the group of countries most adversely affected will be the poor countries.

Q. What is the monetary impact

likely to be upon the developing countries?

HOWE: Let's take up the question of the direct price rises first. We calculate that the cost to the oil-importing developing countries in 1974 will, if they continue to import oil at the rate they did in 1973, rise to nearly \$15 billion. Since the 1973 costs were somewhere between \$5 and \$6 billion, this represents an increase of between \$9 and \$10 billion for these countries.

Secondly, if there is a recession in the rich countries, it will have a very adverse effect on poor countries. It

"One could easily predict a real and world disaster situation in the least developed countries if things aren't done in the near future to alleviate it."

"... we can say safely that the countries hit hardest will be the poor countries."

is a truism in economics that whenever you get a recession the party that's hit earliest, hardest and longest is the party closest to the beginning of the production process — in other words, the producer of the raw materials.

So overall, we can say safely that the countries hit hardest will be the poor countries.

Q. Which countries would fare the worst?

HOWE: It will be those countries which are peculiarly dependent upon oil and which have no offsetting bonanza in the form of rises in the prices of their exports. I would say that India will probably be hit as hard as any country; Korea probably will be adversely hit; Sri Lanka will also be hit hard.

Q. What about African states?

HOWE: Probably the countries of poorest Africa will be hurt as well. Their import bill won't go up very much because they don't have a large, modern sector. Still, any adverse impact when you're living as close to the margin as they do will hurt. In Asia, Thailand will probably be hurt; the Philippines will be hurt; Vietnam will be hurt.

Q. It has been said that the increase in the cost of oil will more than wipe out the benefits of foreign aid that developing nations receive. Is this true? How can they afford to pay for the petroleum imports?

HOWE: The figures I gave you suggest a direct increase in their oil import bill of between \$9 and \$10 billion. Official development assistance from all 16 members of the European-Japanese-North American community of donors presently comes to a little over \$8 billion. If you add the Communist aid programs to that, you still don't get more than between \$9 and \$10 billion. Therefore it will just about wipe out the effect of total development assistance in the world. The problem here is that there is a group of countries of perhaps 30 or 40 of the poorest countries which are really very close to the margin. They have limited monetary reserves and

really don't have any way of paying for the increased oil prices in cash, under current terms, unless they're given some help by outsiders.

Q. Would the United States and other industrialized countries be affected by a recession in the developing world?

HOWE: They would be hurt if demand for their manufactures fell off in the developing countries. The United States, for example, sells one third of its imports to developing countries. So we'd be hurt if there were a total collapse over there, or if they had to make a choice between continuing to import some of the things that they get from Europe, Japan and the United States. It would not be a catastrophic blow to us or to Japan, but it would hurt.

SEWELL: There is one factor we should be aware of here. In many ways, the poor countries pay a number of penalties, the biggest and the most obvious is the increase in oil prices. But, in addition, they're also paying or will be paying a greatly increased amount for food and for fertilizer, most of which come from the rich countries. In the case of food, it comes predominantly and almost exclusively from North America — the United States and Canada. And I think our best figures indicate that the food bill next year for the least developed countries will be around \$3 to \$4 billion a year increase over what they paid the previous year. Most of that goes into the pockets of people working in the United States in related industries.

So, therefore, in many ways, the United States has gotten a windfall profit from increased higher food prices in much the same sense that the Arabs have gotten a windfall from increased oil prices. In both cases, the main victims in this particular set of circumstances have been the developing countries. They have had to pay vastly increased amounts for food and oil. Coming on stream now is a similar problem with fertilizer. Its cost is going up because petroleum is such a big input in its manufacture.

Q. The petroleum crisis then could lead to other crises in the developing countries — food specifically?

SEWELL: Assuming that oil prices stay at their current high level, which I think is a good assumption, something is going to have to be done on a rather massive scale, particularly for the poorest countries — India, Pakistan, Bangladesh and the 25 United Nations-designated least developed countries. They need serious help to get over this tremendous bind they're going to be facing, both because of need to import energy and food over the next several years. One way or another, something's going to have to be done so that people literally will not starve, and the whole system doesn't collapse.

Q. What about the future of the Green Revolution — with its high yield varieties so dependent upon fertilizers, herbicides and insecticides?

HOWE: The Green Revolution has been placed in jeopardy by the rise in oil prices. The rise in the cost of fertilizer has gone up remarkably. Urea, for example, has gone up per metric ton from \$70 or \$80 about a year ago to \$240. So there has been approximately a trebling in the cost of fertilizer. And that'll have a potentially very harmful effect on the Green Revolution.

The food problem was upon us long before the increase in oil prices. So it wasn't caused by oil price increases. Oil is merely another dimension to it. We calculate that if you take this group of 30 or 40 countries referred to earlier and try to figure out the adverse impact on them, in 1974, we're talking about a \$2 to \$4 billion problem. That's the size of the annual rescue operation that will be needed for that group of countries.

That, of course, just pays the increased cost. If you want to reduce that annual bill by increasing their production of food and fertilizer and developing their own alternatives to oil imports (India's coal resources, for example), that will take additional capital from the outside.

Other developing countries are also adversely affected, but they could probably squeak through this year. But if the problem drags on for a long time without offsetting factors, the ones that will be adversely hit will become more numerous. The size of the rescue operation bill in '75-'76 could go up if the rich nations start fighting among themselves and fall into an economic warfare that leads to a big recession.

Q. It doesn't look, then, as though the rich nations of the world — the United States, Canada, Western Europe, Japan — will be able to escape the consequences of a mounting crisis in the Third World?

SEWELL: Americans cannot live very long in a world which is increasingly poverty-struck, tension-ridden and disaster-prone. One could easily predict a real and world disaster situation in the least developed countries if things aren't done in the near future to alleviate it.

Q. Is there any chance of a roll-back in the price of petroleum and petroleum products — especially for the benefit of the developing countries?

HOWE: I have no special insights, except what I read that came out of Rome — that the United States has mounted a fairly vigorous diplomatic effort to roll the prices back. And I don't know where I'd put my money at this point.

Q. What effect would a recession have on political developments?

HOWE: India is already having widespread strikes and political instability. This would certainly add to it. If the game played itself out in the cruelest terms so that you got into a major famine — starvation of the kind that you had in the early '40s when bodies were carted off by the thousands every morning in India — why, I could see a demand rising for an authoritarian government. I would think the prospects for continuing the very hopeful Indian experiment in democracy under those circumstances would be materially reduced. □

"... it will just about wipe out the effect of total development assistance in the world."

"The size of the rescue operation bill in '75-'76 could go up if the rich nations start fighting among themselves and fall into an economic warfare that leads to a big recession."

"Some way or another, something's going to have to be done so that people literally will not starve and the whole system doesn't collapse."



BRITAIN— at the brink again

Britain has more than once stood on the brink of collapse — and survived against great odds. Pessimism that future crises may push the nation beyond the point of no return is rife.

by Tony Morrell

London

THE ARCHBISHOP'S voice crackled through the silence of the freezing February night. A grave nation huddled around its radio sets.

It was 1947. The Archbishop of Canterbury had come on the air to announce to the people that he may have found the answer to the biggest industrial and fuel crisis to beset the country up to that time.

"The answer is that we must pray," he solemnly declared, "and I have created what I call a prayer for survival."

Throughout the length and breadth of the British Isles, families listened in silence; heads bowed. The Primate continued, "...have regard we pray Thee, to this nation, oppressed at this time by many burdens."

The Bleakest Winter

The broadcast ended. Up and down the country lights flickered

GRAVESEND COKE-COMBERS — Forty people at a time were allowed, in late 1940's, to search Clinker Heap at Gravesend Gasworks, Kent, England, to find coke. They were permitted to take away 56 lbs. per person for one shilling. Today, a quarter century later, Britons are again facing a major fuel crisis.

out. The nation awaited the dawning of a new day.

The crisis had begun with a strike by transport workers. The snowballing chaos was to prove almost unstoppable.

"Conserve fuel or sink!" pleaded the government. They were serious. There simply were no reserves in 1947!

So the British people clustered around their tiny fires and, with a resolve born of the hardships and privations of war, determined not to give up.

In the meantime, the chaos continued. Striking railwaymen and dockers immobilized the country. Lancashire cotton mills closed as power dwindled to a trickle. South Wales steelworks shut down. Austin Motors instituted an unprecedented one-day working week. London-based industry had its supplies cut off altogether.

Unbelievable Hardship

As the number of unemployed people mounted to the sad figure of four million, the weather added to the misery. It snowed and froze and snowed and froze again. And the British people suffered.

Reported one newspaper: "After a couple of weeks of wondering how Albert Green was getting on in his farm at Tintown, Kent, a search party finally broke through the snow and found him in his kitchen. On the fire was his wife's last pair of shoes. He had burned all his furniture and a spare bed. Around him by the fire were Doody, the dog, Timmy the cat, 15 chickens, 8 ducks and a nanny goat."

Many similar incidents crowded the newspapers. Still, despite national and personal adversity, overwhelming odds and being hopelessly short of everything, the British people came through triumphantly.

Can Britain Still Cope?

This year, Britain is again reeling from an industrial and fuel crisis. The British people have once more

been asked to sacrifice for their nation. But the response may prove very different from that of 1947. Does today's Britain have the spirit of the 1940's? A generation accustomed to relative affluence has grown up untempered by hardship. Can it overcome the temptations and problems which currently beset the national character?

Industry was restricted earlier this year. Hundreds of thousands have been out of work. Altogether, about 15 million workers were hit by the restricted work-week, with a loss of earnings of up to 40 percent.

Breadwinners all over the country encountered impossible situations. For those heavily committed financially, mortgages and hire purchase (credit) agreements became major worries almost overnight. With the sudden fall in income, many suffered a parallel decline in living standards.

Into the Future

The long-term effects on the economy can only be guessed at. The impact on the individual is more easily identified. Diet, spending habits, and the very life-styles of the average Briton have all changed. Many worry that the changes will be permanent.

People all over Britain and in Europe are increasingly concerned about the security of their futures: How stable are their jobs? How well can they expect to provide for their families?

The present situation has caused an awareness that the sophisticated veneer of twentieth century living cannot hide.

Britain has been on the brink of disaster before. In 1947 she survived — against all odds. With Europe an anxious spectator, Britain will probably struggle through the present crisis. But many privately fear that further crises may push the nation beyond the point of no return — unless a total change in national character and a renewed dedication to self-sacrifice occur. □

what you can do...

timely tips and helpful suggestions for you and your family

• Energy: Making the Best of Less

The days of inexpensive, readily available energy sources are over. And new sources, when found, will hereafter cost much more. How best to use what we have must always be in our minds.

Doing our part to cut energy use in the home and on the road will not only help stretch available energy sources, but will also personally save us money. So seriously consider acting on the energy-saving principles that follow, as they apply to you.

• What to Cut and Where to Save

The average home air conditioner pulls 1,300 watts* of power when in operation. An electric toothbrush, by contrast, barely uses enough wattage to be measured. In a year's time of average use, an air conditioner consumes 1,389 kilowatt hours. An electric toothbrush, on the other hand, uses a mere one half of one kilowatt hour over the same length of time.

Statistics reveal that the real energy hogs are swimming pool filter pumps, frostless refrigerators, self-cleaning electric ovens, electric clothes dryers, dishwashers, color television sets and, as mentioned, air conditioners. A concerted effort to cut down on their use will result in real energy savings. The accompanying chart lists some common electric home appliances, beginning with those that use the most electricity. It gives a good indication of what to cut to save the most. Of course, eliminating the use of smaller appliances when possible helps as well. As far as cost is concerned, you can figure a kilowatt hour (KWH) anywhere from 2.36 cents to 5 cents, depending on where you live.

• How to Conserve

The approximate percentage breakdown of electricity use by major electric appliances in a modern home figures like this: lights, refrigerator and freezer combined, 43 percent; air conditioner, 15 percent; elec-

*Electric energy use is generally measured in *kilowatt hours* for meter-measuring and billing purposes. A kilowatt hour (KWH) is the consumption of 1,000 watts of power for an hour. Running a 1,000-watt appliance for an hour or burning a 100-watt light bulb for 10 hours consumes one KWH. The smaller the amount of wattage an appliance or light bulb requires, the more economical it is to use in terms of kilowatt hours consumed.

Appliance	Approx. Kilowatt Hour Use	Yearly Cost	
		Monthly	Yearly @ 3¢ a KWH
quick-recovery water heater	401	4,811	\$144.33
standard water heater	351	4,219	\$126.48
pump for a swimming pool filter	280	3,360	\$100.80
15-cubic-foot frostless refrigerator	150	1,800	\$54.00
room air conditioner	116	1,389	\$41.67
12-cubic-foot frostless refrigerator	101	1,217	\$36.51
15-cubic-foot standard freezer	100	1,195	\$35.85
electric range	98	1,175	\$35.25
self-cleaning electric oven	95	1,146	\$34.38
clothes dryer	83	993	\$29.79
12-cubic-foot standard refrigerator	61	728	\$21.84
color television set	42	502	\$15.06
dishwasher	30	363	\$10.89
black and white television set	30	363	\$10.89
microwave oven	25	300	\$9.00
roaster	17	205	\$6.15
frying pan	15	186	\$5.58
window fan	14	170	\$5.10
electric blanket	12	147	\$4.41
hand iron	12	147	\$4.41
radio-record player	9	108	\$3.24
coffee maker	9	108	\$3.24
automatic washing machine	9	108	\$3.24
broiler	8	100	\$3.00
hot plate	7	90	\$2.70
radio	7	86	\$2.58
non-automatic washing machine	6	76	\$2.28
trash compactor	4	50	\$1.50
vacuum cleaner	4	46	\$1.38
waste disposer	2	30	\$.90
waffle iron	2	22	\$.66
sun lamp	1	16	\$.48
hair dryer	1	14	\$.42
mixer	1	13	\$.39
sewing machine	1	11	\$.33
carving knife	-	8	\$.24
electric clock	-	6	\$.18
electric shaver	-	1	\$.03
electric toothbrush	-	½	\$.01½

tric space heater, 12.4 percent; kitchen and laundry appliances, not including the refrigerator or freezer, 10.6 percent; TV set, 9.9 percent; and all other sources, 9.1 percent. To conserve the most electricity, therefore, begin with those areas that use the most. Follow these suggestions:

LIGHTING

- Use lights only when and where needed. Make use of natural light as much as possible during the day. The last person leaving a lighted room should turn the lights off.
- Fit lighting to the task. Use adequate light for read-

ing, writing, sewing, and other close work. Use dimmer lighting elsewhere.

- Cut down on outdoor lighting, even eliminating lights when and where possible.
- Use fluorescent lamps in the bathroom, laundry, and work areas, say experts, if saving in the cost of energy is a prime consideration.
- Use reflective, lighter colors for walls, rugs, and draperies to reduce the amount of artificial lighting required.

REFRIGERATORS & FREEZERS

- Keep refrigerator temperature setting at 37 F. to 40 F. and freezer temperatures at zero.
- Defrost refrigerators and freezers regularly. Frost accumulation cuts down on efficiency. Ice should not be allowed to become more than ½ inch thick in freezers.
- Avoid unnecessary opening and closing. Cutting down on refrigerator raids will both save energy and help reduce the waistline!
- Make certain that air vents are not blocked. Refrigerator and freezer units should be installed in areas with adequate air flow and clearance from walls and cabinets. Keep cooling fins and coils clean. Dust accumulations impair cooling efficiency.
- Check door seals for leaks. To do this, close the door on the middle of a piece of paper. Pull the paper. This should produce a slight tug along with a squeaky sound. If it doesn't, the seals may either need replacing or the door should be adjusted to make a tighter fit.

AIR CONDITIONING & HEATING

- Proper home insulation will dramatically reduce the energy required for air conditioning and heating. Ceiling insulation is the first priority. A minimum recommendation is 4-inch batts or 6 inches of poured insulation.
- Glass windows lose heat or allow heat in 14 times faster than a plaster wall. Double thickness glass cuts this in half. Drapes, when drawn, help hold warm air in during winter and keep hot sun rays out in summer.
- Check for air leaks. Weather strip around windows and doors. Caulk small leaks around lighting and plumbing fixtures, as well as small openings in walls, ceilings and floors.
- Clean or replace air conditioning filters at recommended intervals. Clogged filters force air conditioners to work harder and less efficiently.
- In hot weather, use a ventilating fan in the attic to exhaust trapped heat and lower cooling requirements for an air conditioner.
- Avoid buying or using an air conditioner if you can do without it. This may save you as much as 15 percent of your electricity consumption.
- Heat or cool only those rooms in use.

IN GENERAL

- Swimming pool owners can save large amounts of electricity by running their filter pumps less. It's safe to run the filter pump of an unheated swimming pool four hours a day in winter and six hours a day in summer

instead of the 10 or 12 hours usually considered necessary. Some pools require even less. In any case, seek advice from pool manufacturers and health officials.

- Avoid building a swimming pool if possible.
- Fix leaking faucets. Hot water leaks waste energy as well as water. Insulate hot water pipes where possible.
- Wash dishes by hand rather than using a dishwasher.
- Minimize use of hot water for washing clothes. String up a clothesline in the yard, attic or cellar and forego using a clothes dryer. The exercise will do you good.
- Avoid leaving the iron on when it's not in use. Turn it off early and use stored heat to finish the ironing job.
- Reduce television viewing, and if your set has an "instant on" feature, unplug it when you're going to be away for long periods of time.
- Turn off appliances when not using them.
- Consider sacrificing small luxury appliances. Life was generally pleasant without them only a few short years ago. Go back to towel drying your hair indoors or sun drying your hair outdoors when possible. True, infinitesimally small amounts of electricity are used by any one of these smaller electric appliances, but combined, their electricity consumption adds up.
- If you have an electric oven, use the self-cleaning cycle only during cooler evening hours and only when absolutely necessary. Do not use the oven — whether gas or electric — purposely to heat the kitchen.
- Match the size of the cooking utensil to the electric surface unit of electric ranges, and likewise fit the flame to the utensil size on gas ranges.

• Easing the Gas Pinch

The best way to save on gasoline or petrol is simply to drive less and walk more. Studies show that half of all automobile trips are local trips less than five miles long. Walking and bicycle power could conceivably replace a considerable amount of driving, but obviously not all of it. In that case, there are a number of gas-saving considerations to keep in mind:

Keep your car well tuned and in top condition. A clean air filter is a must. Increasing tire pressure to maximum recommendations can increase gas mileage one or two miles a gallon. Remember too that car air conditioners reduce gasoline mileage from 10 percent under normal operating conditions to as much as 20 percent on exceptionally hot days.

When driving, avoid jackrabbit starts and sudden stops. Maintain constant speeds when possible. Obey lower speed limit laws. Car engines run most efficiently at around 50 miles per hour. Avoid idling the engine for prolonged periods of time. If possible, warm the engine up while driving because there will be no harm to the engine as long as it is not raced. Make every trip count, and combine them when possible. If you are not now in a car pool, consider either joining one or organizing one.

— Patrick A. Parnell

THE WORLD today stands at a crossroads, facing a momentous decision. That decision could ultimately determine *your* future prosperity and well-being.

The world is threatened with an unprecedented economic and political crisis, the like of which the world has never known.

Scenario for Disaster

The decision of Middle East oil-producing nations to curtail the production of crude petroleum and dramatically increase its cost in the wake of the October Mideast war will very possibly go down in history as one of the most significant events of the 20th century.

Its ramifications are only beginning to be felt.

Temporary oil production cutbacks and resultant shortages are being viewed as secondary in importance to a more serious threat — the *skyrocketing cost of crude oil*. Costs today stand at a level of three to four times the price of only a little over a year ago.

The result so far? Business slowdowns and steadily rising unemployment throughout Western Europe and the United States. An inflation rate that threatens to spiral out of control. And in the developing world, growing uncertainty over how to ration scarce export earnings to cover the import needs of oil, food, and fertilizer.

Many economic analysts agree that these are only samples of what may lie ahead.

In addition, there is the sobering question of what the oil-producing states will do with their enormously increased revenues.

The quadrupling of the price of oil by Arab producers is expected to result in their reaping an extra \$50 billion in gross income for 1974. Unless orderly and constructive ways are found to absorb these billions, the dramatic shift of world monetary stocks toward the Arab world could lead to disastrous *economic and monetary instability* throughout the industrial world.

A GLOBAL DEPRESSION AHEAD?

For many, the energy crisis has meant temporary shortages of gasoline, fuel oil, or electrical power. Few have grasped its full economic implications.

by Keith W. Stump

A mere shift of one billion dollars worth of currency from one central bank to another could, say some experts, be enough to cause dramatic runs on major currencies.

Another question centers on the poor nations of the world. These nations have received no answer as yet to their request for price concessions from Arab producers. For poor nations, in which thousands of our readers live, increased oil import costs will more than offset all the foreign aid they receive. They will have to either cut back their oil imports and suffer the consequences, or cut back imports of food, machinery, and other essential goods. Their economies could stagnate at best, or spin downward into depression.

Advanced nations are better equipped to handle the increased oil import bill, but not without severe consequences to their respective trade and payment balances. The United States, for example, could be faced with a 1974 oil import bill of some \$19 billion. That compares with a bill of about \$7 billion in 1973. In Western Europe, higher oil prices will add some \$17 to \$18 billion to the Continent's energy bill in 1974.

These increased oil bills will force the Western industrialized nations and Japan to begin cutting back aid to developing nations, erecting trade barriers to stem the outflow of funds from their borders, and possibly engaging in competitive currency devaluations.

We may, in short, be witnessing

the beginnings of a *renewed surge of protectionism*, as panicky nations begin adopting "every-man-for-himself" tactics in an attempt to safeguard their economies.

In essence, competing industrial nations could find themselves backing into a full-scale trade war — and global depression!

Former British Prime Minister Edward Heath has put it succinctly: "There is an acute danger that if we all independently resort to deflationary measures for the sake of our individual balances of payments, we shall set off a *disastrous slump in the level of world trade*."

Echoing Heath's sentiments, *Business Week* has predicted that world trade will very possibly "stagnate or even shrink in 1974."

Little wonder why most economic analysts consider the current energy situation the gravest threat facing the world's economy in over two decades!

Competition Heightened

Heightened competitive pressures are already becoming evident on the world scene.

In Western Europe, the "Community spirit" has fallen by the wayside in favor of separate bilateral oil deals with producing nations.

France, Britain, West Germany, and Italy have all concluded separate "sweetheart" deals with producing nations in an attempt to safeguard their respective oil supplies. In addition, France's decision to float the franc to save her dwindling foreign-exchange reserves gave a severe jolt to the whole Common Market ideal. The French had been the biggest proponents of a European monetary union, now shelved for the indefinite future.

Japan — totally dependent upon the outside world for most of her raw materials — has been busily engaged in obtaining guarantees of oil supplies through unilateral deals with producers.

Such independent policies of na-

tional self-interest, while understandable from the point of view of traditional human logic, are actually creating more problems than they are solving. In scrambling over one another's backs to line up oil supplies, nations are bidding up the price of the already-expensive commodity.

Warnings from Top Leaders

In a press conference in early January, U. S. Secretary of State Henry Kissinger warned of possible world economic ruin if oil producers and consumers fail to cooperate in solving the unprecedented problems of the energy crisis. "No single country or group of countries can solve the problem alone," he stressed.

Dr. Kissinger appealed to both oil consuming and producing nations to work together toward a long-term multinational agreement to solve the crisis. He warned consumer nations against seeking short-term, national advantages in self-defeating, country-by-country deals.

He also "expressed confidence" that the oil producers would eventually come to see that their long-term interests do not conflict with those of oil consumers. "It cannot be in their interest to bring about a worldwide depression," he observed.

In short, the energy situation has become a test of international goodwill and cooperation — "a test," as Dr. Kissinger put it, "of the proposition that the world has become truly interdependent and that isolation and selfish approaches must be destructive for all concerned."

To promote such a policy of international cooperation, President Nixon proposed a plan in early January to arrive at a long-term multinational solution to the energy crisis.

The plan called first for a meeting of major industrial nations to form a joint oil policy and stop the headlong rush for separate oil deals. That meeting was held in Washington on February 11. In attendance

were representatives of Canada, Britain, France, West Germany, Italy, Norway, the Netherlands, and Japan.

Despite Washington's good intentions, predictions were rampant prior to the conference that the meeting was doomed to failure before it convened. Some oil producing nations even openly urged major customers not to attend, claiming the meeting was merely a disguised attempt by the consuming nations to "gang up" on the producers.

Noted columnist C. L. Sulzberger observed: "The big question raised by President Nixon's proposed oil

"You can hardly take a casual look at today's headlines without wondering where the world is going. Look at its common problems and its narrow divisions. Listen to its leaders — and see what happens when men, institutions and nations put their selfish interests ahead of everything else."

— James Reston, *New York Times*

consumers conference is whether it will manage to close the barn door before the horses have fled into a nationalistic jungle."

From the response of some nations to the conference, these cautions against over-optimism seem to have been valid.

Chaos or Cooperation?

Subsequent months will tell whether nations decide on the road of cut-throat competition or the road of cooperation and selfless concern for the good of all nations.

If the warnings against competition fall on deaf ears, if the world fails to jump the nationalistic hurdles, if the "every-man-for-himself" approach wins out, the world will find itself speeding toward economic and political disaster.

Japanese ambassador to the United States, Takeshi Yasukawa, warned late last year that "future world stability and peace depend on wider and fairer sharing of the world's available resources and on freer access to each other's markets." He cautioned that a world which splits into hostile economic blocs will also be "a world of dangerous political hostilities."

Business Week also observed recently that "such economic warfare in the 1920s and 1930s intensified the Great Depression and exacerbated the national rivalries that led to World War II."

This lesson of the recent past has apparently already been forgotten.

In an editorial in the *New York Times*, columnist James Reston hit upon the crux of the entire situation: "When are the nations going to get beyond the energy crisis and the crisis of national interests and get down to some honest discussions about their common interests and a different world order?"

In the final analysis, a new world order — a world of cooperation and harmony among all nations — will be the only permanent solution to the energy crisis and to all the world's problems.

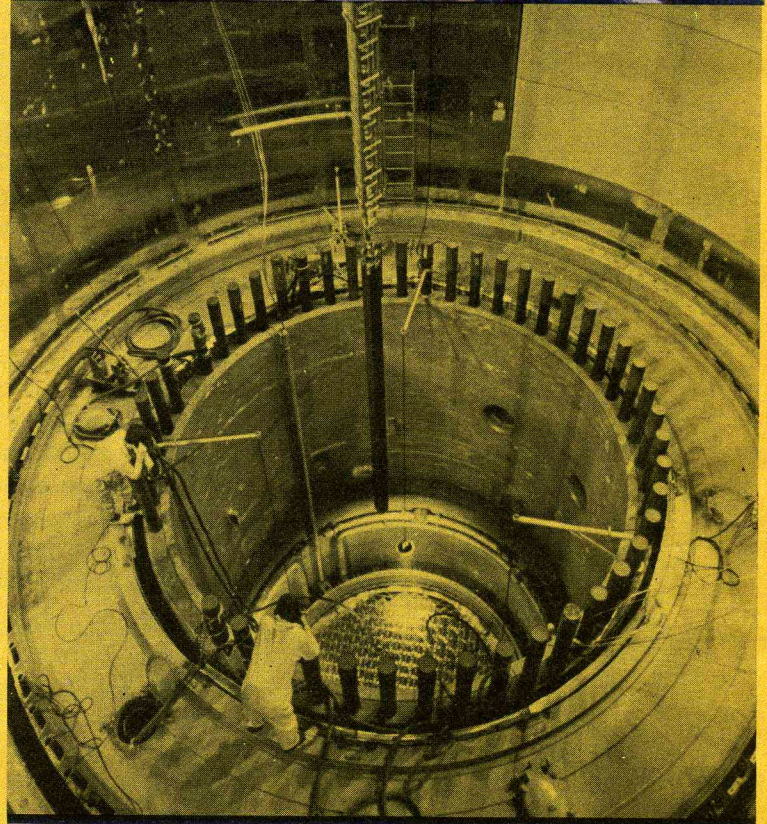
For over 38 years, the pages of this magazine have clearly announced the eventuality — the coming reality — of such a "new world order." It is called the Kingdom of God. (Please request our free booklet *Just What Do You Mean... Kingdom of God?* for further information on the subject.) The nations haven't wanted to hear the announcement from the Almighty. Yet it is the very heart and core of the message of the Bible. Under the guidance of this new divine order — a world-ruling government established for the good of all mankind — the nations will at last learn to cooperate for their mutual good.

But until that time comes, the nations will have to write painful lessons in selfishness and non-cooperation. □

The industrialized world has suddenly come under increasing pressure due to dwindling ready supplies of traditional energy sources. Science again has been called upon to look for new ways of solving the growing energy demands of the future.

The following pages illustrate what authorities view as some of the major potential energy alternatives to traditional fuels. Remarkably, though fledgling technology in these areas has been available from the close of World War II and before, only the current global energy trauma spurred more than a scattered, perfunctory interest in these abundantly available, "renewable" energy sources on the part of decision makers.

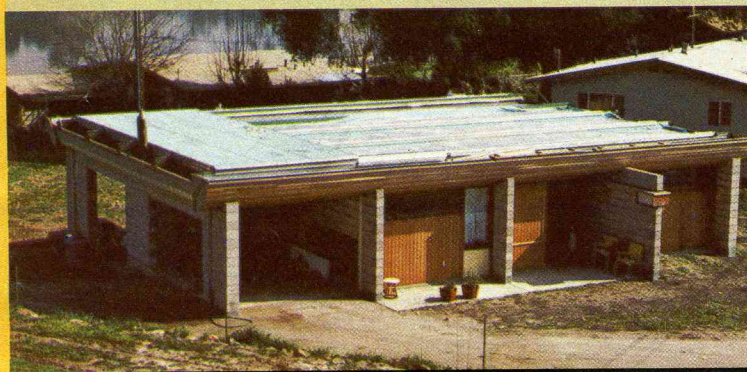
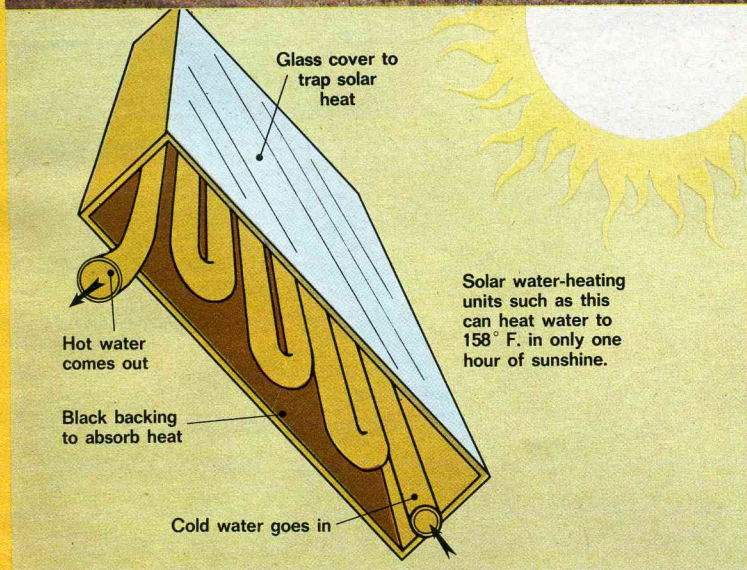
ENERGY ALTERNATIVES



ATOMIC FISSION

Nuclear power is the most highly developed alternative energy source. In France, for example, all future power plants will be nuclear. In the U.S., 163 nuclear reactors are in operation. Of these, 40 are commercial reactors for electrical power generation. Critics of nuclear power ask: What about the unresolved problem of nuclear waste? Nuclear energy, admitted an advocate of its use, represents "probably the greatest single risk any civilization has ever undertaken."

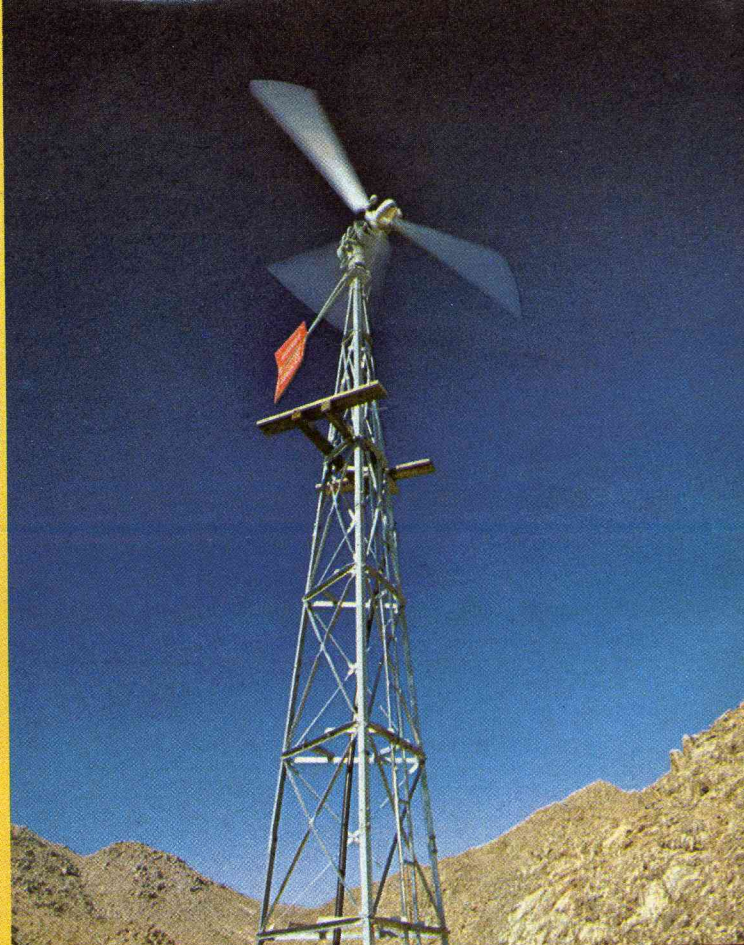
*Top: Keystone
Bottom: Dave Conn — Plain Truth*



SOLAR

The sun consistently shines down upon the earth with strength enough to supply the world's total energy needs more than 30,000 times over. Using roof-mounted collection systems and units for heat storage for night and cloudy day use, solar heating systems would be operated with thermostats and circulating fans, much as with conventional heating units. An obvious advantage of solar heating is that once the system is installed there are no further charges for fuel.

Top: London Daily Telegraph
Center: Diagram by Ron Lepeska
Bottom: Mike Hendrickson — Plain Truth



WIND

Government experts have estimated that there is enough wind in the American western plains, for example, to supply fully half the electrical power of the entire United States. The challenge, viewed as readily achievable, is to design a wind generating system — actually an updating of the time-honored windmill — efficient enough to capture maximum available energy at costs which are comparable to those of presently used energy forms.

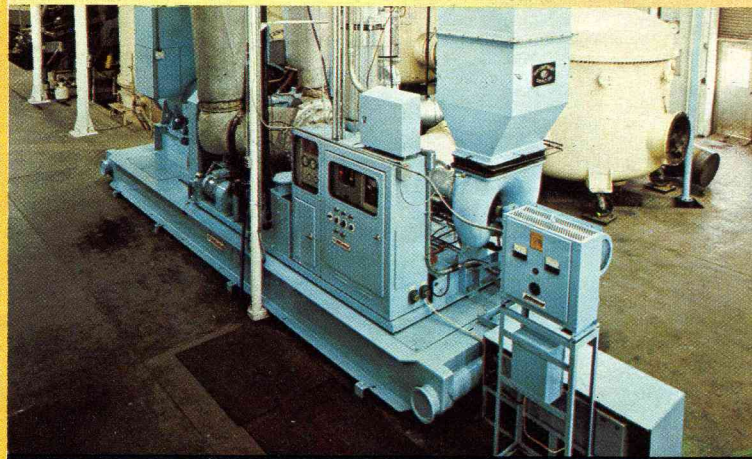
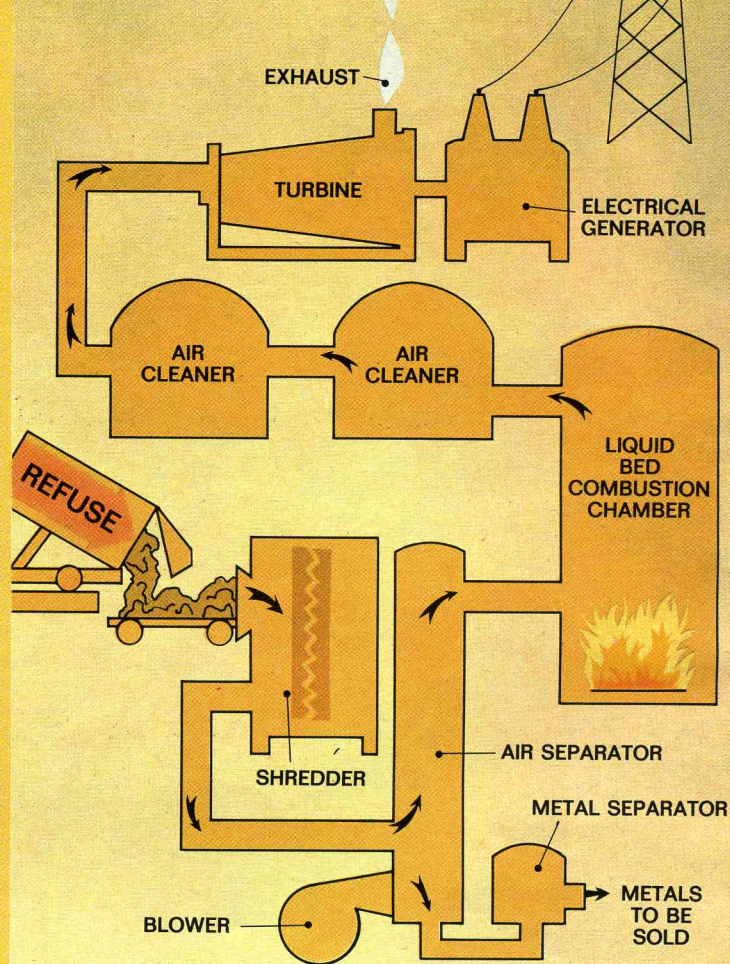
Mike Hendrickson — Plain Truth



GEO THERMAL

Important quantities of power can be generated by tapping the massive build-ups of superheated steam and water which lie beneath the earth's surface. The Geysers, a steam field in California, has an estimated potential of 4,000 megawatts — enough to satisfy peak electrical demand in a major population center. The heat energy stored beneath the surface of California's Imperial Valley could equal from 27% to as much as 65% of the heating capacity of the entire world's oil reserves.

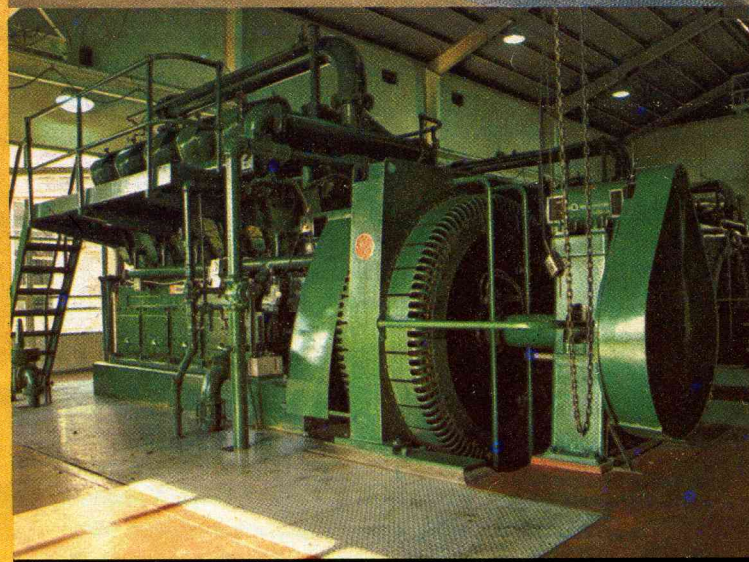
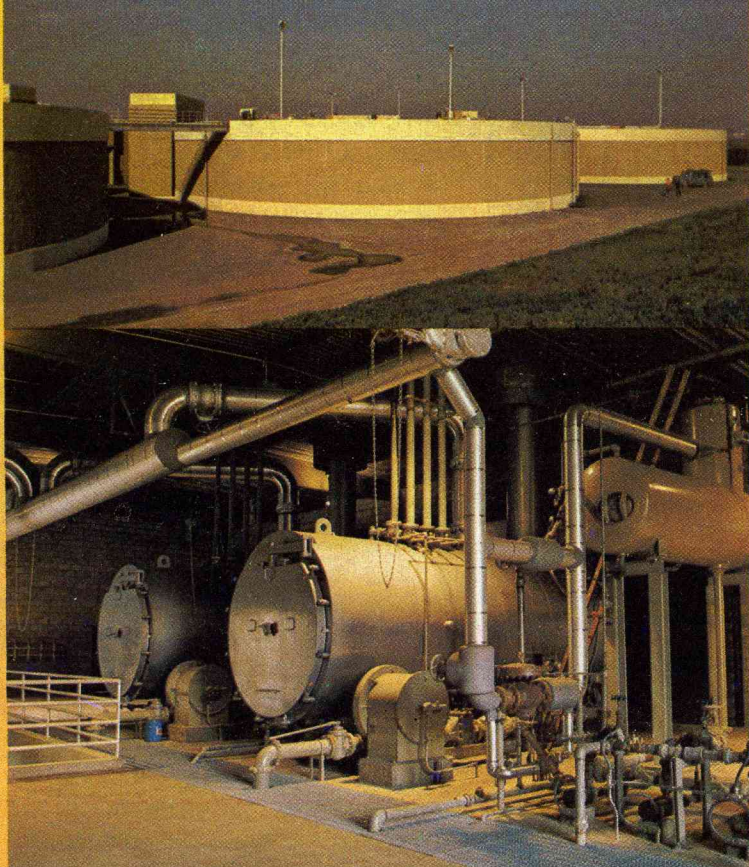
Top: Mike Hendrickson — Plain Truth
Bottom: Gary George — Plain Truth



TRASH COMBUSTION

Instead of essentially wasting the huge amounts of disposable material generated daily by communities around the world, why not put much of that waste material to profitable use by burning it off and producing useful amounts of heat in the process? Instead of incinerating wastes purely to get rid of them, the idea would be to incinerate otherwise useless materials and supply quantities of heat energy for useful purposes in so doing.

Top: Diagram by Ron Lepeska
Bottom: Combustion Power Co., Inc.



METHANE

Methane gas (CH_4) is produced when organic material decomposes without the presence of air. Though natural gas, which is mostly methane, has been a common energy source, it has remained for technology to develop satisfactory means of capturing large quantities of pure methane for home and transport use. Methane is generated in the abundantly recurring process of organic decomposition and can be utilized for cooking, refrigeration and even automobile needs.

Gary George — Plain Truth

Man has the technology, the money, and increasingly the will to develop means and methods of meeting both his short-term and long-term energy requirements. It is doubtful, however, whether the social, economic and environmental problems are being considered nearly as thoughtfully as they should be.

As the spokesmen of the Arab and Iranian world have reminded us, the age of cheap energy is over. We must be more sensible in the way we use the limited resources presently available to us. Man must develop power-generating systems in a way that will ensure future generations a clean, healthy environment in which to live. We must not in our insatiable demand for energy condemn our children to reap a bitter harvest due to our greed. In the power-short world of today, is mankind as a whole willing to consider the consequences of human actions? That is the big question we all face!

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It wasn't this way in the beginning

Who made the world the way it is — man or God? Why hunger, disease, famine, the energy crisis? What has happened to our world? What has gone wrong?

by Paul S. Royer

"IN THE beginning God created the heaven and the earth." He made the dry land, and, later, the magnificent oaks, the cedars, and the grass — and it was all very good we are told.

Other days of creation followed and, finally, God formed man from the dust of the earth and breathed into his nostrils the breath of life. Then he made a woman. And God blessed the first couple and said, "Be fruitful, and multiply, and replenish the earth, and subdue it" (Genesis 1:28). Thus God gave mankind dominion over every living thing.

He made for man a garden in Eden. That garden was paradise literally. It was a perfect creation, and there was no pollution and no energy crisis. God saw everything that he had made, and behold, it was very good.

Strange things have happened since the beginning. Good has been replaced by evil, peace by war, give by take, love by hate and abundance by scarcity. Our present world is riddled with pollution, poverty, crime, famine, death and now, the energy crisis. It's not a happy world.

Can God look on the earth today and say, "Behold — my creation is very good"? What went wrong? Why do we have so many problems climaxing now in the energy crisis?

It Happened in the Beginning

It all started in the garden, after God finished making a perfect society.

In the beginning Adam and Eve lived in the garden of Eden. They talked about God's perfect creation and the way he wanted them to live. Then one day Eve decided it would be intriguing to try out a different way of life, a life-style in which she would make up her own mind about what would be good and what would be evil.

It wasn't many years afterward that Adam and Eve found that their eldest son Cain had killed his brother Abel. But the world didn't come to an end just because one man was murdered.

Several generations later, a man named Nimrod appeared on the world scene. He disagreed with God and God's government. God's way is harsh and stern, he reasoned. So Nimrod talked to the people. He promised those who joined his government greater prosperity, more luxury, more leisure, greater happiness — and world dominion.

Over 4,000 years have elapsed since Nimrod's government in the Middle East. It's now the 20th century. In 4,000 years, we have "progressed" from a one-world society to a three-world society.

4,000 Years of "Progress"?

Our three worlds may be defined as the Free World, the Communist

World, and the Third World. Unfortunately, all three worlds are filled with immense trials and troubles. One of the more immediate problems, the energy crisis, serves to illustrate a point. Man, in all his wisdom and technology, has brought the world, not to perfection, but to near disaster.

Our free world is the one most affected by the energy crisis. Energy is its lifeblood. The industrialized free world is a Disneyland megalopolis of technology created through the lavish use of energy. Man in his quest for prosperity through technology and the extravagant use of energy has upset the balance of nature all around the world. Man's uncontrolled technology has given rise to great cities, millions of cars, refineries, factories, and a world of plastics and chemicals all accumulating waste in the wrong places. The more we prosper, the more the earth dies.

God created the earth and gave man dominion over it. What God had in mind was custodianship over nature's forces, not conversion into a global ghetto buried under pollution.

The United States is one of the most technologically advanced nations in the free world. It is the richest and consumes the greatest amount of energy, 11.1 metric tons per person, as opposed to a world average of 1.9 metric tons. Yet some of its people cannot live with each other. Its people suffer from high rates of divorce and suicide, from the highest crime rate in the world — and from boredom.

The automobile is the most obvious symbol of the American life-style. In a few short decades, it has become an object of affection. Americans can't live without it. It has become a god.

This god has drastically altered man's way of life. The auto is responsible for 80 to 90 percent of all air pollutants in major cities throughout the free world. In many industrially advanced countries, the

auto has spilled more blood than weapons of war.

In Tokyo, the home of 11.5 million people, 75,000 factory chimneys combine with auto exhaust fumes to make smog a greater threat than the pall hanging over Los Angeles, California. The car density in Tokyo is eight times that of the U.S.A. Smog is so heavy that nearby Mount Fuji can only be seen from downtown Tokyo about 40 days a year.

In one year in the U.S.A., people spend \$85-\$90 billion a year on recreation — or is it escapism? Americans spent most of it on mortgaged, motorized vehicles to get away from polluted, crime-ridden cities.

It's not that much different in the rest of the free world. West Germany's and Japan's air is thought to contain seven times the pollutants the U.S. air contains. The Rhine, the Tiber, and the Ural rivers have become channels of waste. The North Sea has been termed "the industrial cesspool of Europe."

We can't stand our world of technology, its noise pollution, or its tensions. In World Wars I and II, in Korea, and in Vietnam, most nations of the free world gave their money and their men for a world of peace through technology. But peace never came.

We want the good life *our way*. We want, but we don't have. We wish there wasn't so much evil, and we don't want to see people die. Yet it seems we just can't help ourselves.

We shake our heads as we look at what we've created, hoping against hope that government will find a way to save us.

All of us are sorry about what we see. None of us want it that way. We didn't plan it this way. We are not quite sure how we became the victims of our own genius.

Communism, the "Second World"

And what has the Communist world contributed? A little less pollution, a little less drain on energy, and a little less hope. But they, too, are confronted with war costs, smog,

and social ills which they have created.

One Soviet journalist, commenting on illegitimacy in the Soviet Union, has said the statistics reveal "a tremendous moral and ethical problem" which cannot be ignored. The Soviet Union is also plagued by divorce, with a rate second only to that of the United States. Alcoholism persists as a perennial Soviet problem. Clearly, something is missing in Soviet lives which Communism has been unable to supply. And other Communist countries are experiencing or will experience similar problems.

Their world is, for many, an unhappy world, frustrated, endlessly looking for peace through subversion and revolutions. A large proportion of the energy they consume (about twice the 1.9 metric ton world average per person) is spent on ways and means to overthrow the established order and to remake society their way!

Sorrows of the Third World

What about the Third World? It is generally the world of the "have nots" and it's the majority — 70 percent of the world's population. A large proportion of its people do not have enough food to eat or energy to use. They are the "living" who would fight for what many in the free world drop into electric garbage disposal units each day.

There is a crisis in human energy in many Third World nations. Not long ago I stood on a street in Calcutta. I saw an "old" 30-year-old man, with a twisted body, crawling along the street begging for food, just hanging on, looking for one more day of life.

Many nations of the Third World are stocked with poverty. The inhabitants are often only one short step away from death.

While we worry over the energy crisis, the crisis that stalls our boats, our cars and cuts down heat in winter for our homes, the Third World struggles for minimal subsistence.

The energy crisis to them is spelled "hunger," "starvation," and "death."

In their world, 417 people die every hour from starvation. A mere 500,000,000 are now suffering from hunger and malnutrition.

In the Third World, there are approximately 100 diverse have-not nations. Many of their peoples tell time, not by years but by famines. Income ranges from practically nothing to not enough. Sudan has an average per capita income of \$120. In Ethiopia, it's only \$70.

In one African city live 700,000 residents. All but a few live in squalor in their very own shanty town. One hundred thousand are prostitutes. The city can be smelled for miles around.

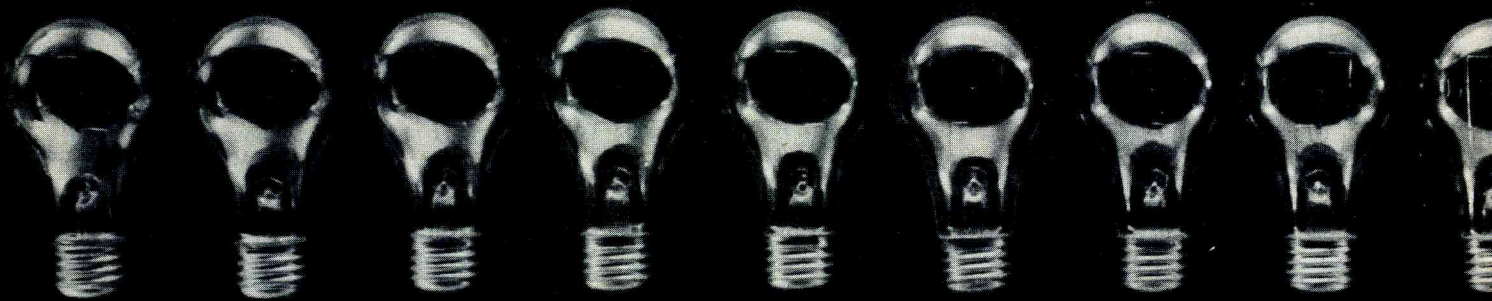
Who made the world the way it is? Man did! Man was given a beautiful world, and he traded it off for a world of his own making — a world of bargain hunters, a world based on "get it from your neighbor." All three worlds are worlds of sorrow.

The Holy Bible prophesied men would reach a time when the world would be filled with unbelievable technological developments and the capability to blast all life off the earth (Matthew 24:6, 22). It would be a time the like of which has never been since the beginning of the world and never will be again (verse 21).

God knew from the beginning that man's society would fail, that there would come a time when the restoration of all things as God originally created them would become necessary (Acts 3:21). He spoke of a great restoration that would bring all men back to a world under God, once again in balance, free from pollution, crime, and famine.

We need that kind of world. It's the only answer to real peace, happiness, and abundant living. Just such a world is coming, a world filled with the knowledge of God, even as the "waters cover the sea" (Isaiah 11:9).

That world is just around the corner, a short distance beyond the energy crisis. □



OUR ENERGY CRISIS...

An abundant supply of energy could be made readily available for all humanity — but only if we looked for it in the right direction.

by William R. Whitehart

A CRISIS OVER energy — whether real or imagined — does exist. In fact, over the past few months, it seems that more time has been spent in attempts to find solutions to this crisis than to most other problems combined.

Yet, if we stopped long enough to think about it, we would have to admit that most of the so-called solutions proposed thus far are not solutions at all. Most are merely short-term, stopgap measures which never permanently eliminate the underlying *causes* of the crisis.

Isn't it time we looked at the one lasting *solution* that, if implemented, would eliminate those causes permanently?

It involves radically different ways of thinking — and approaches to life — at every level of human endeavor.

It involves controlling the overall power demand by eradicating society's overdependence on problem-spawning energy systems.

It involves tapping appropriate energy sources for constructive purposes.

Why Society Is Overly Dependent on Energy

Our energy problems will never be solved as long as the selfish de-

mand for power remains uncontrolled.

The philosophy of "growth for growth's sake" and the creed of "make a buck, no matter what the cost" have created an addiction for ever-increasing amounts of fuel, electricity, and heat — the dimensions of which are difficult to grasp. Some one million barrels of oil are burned every hour for worldwide energy needs. Total global demand for petroleum is doubling about every ten years.

The whole selfishly motivated economic way of life of the industrialized world has created this seemingly endless spiral of demand for energy and raw materials.

Consider these facts. Few commodities of the modern age are made to be durable. Merchandise is often deliberately given a short life span. Many so-called consumable products are used once, then discarded. A whole range of goods and services is largely disposable.

In addition to this staggering waste, short-lived military endeavors use vast quantities of valuable energy. Jet fighters and bombers consume large volumes of high-grade kerosene. Military trucks, tanks, and other armored vehicles burn great quantities of gas and oil. And, of course, the impressive flotillas of warships the world over use petroleum at prodigious rates.

On the domestic scene, a major factor contributing to the current

energy drain is the very way in which the urban monstrosities we call cities are built. Construction and maintenance of urban structures alone consume enormous amounts of energy. Note this statement from the U.N. Center for Housing, Building, and Planning: "The demand for construction of all kinds during the last half of the 20th century will have exceeded the total volume of building throughout the whole of human history."

The never-ending urban struggles against crime, drugs, pollution, and poverty consume sizeable amounts of energy. So does the huge output of power required to build and maintain urban transit systems.

Studies show that about 25 percent of the total land areas of most cities in the industrialized Western world are strictly devoted to the automobile. In California's smog-shrouded Los Angeles, the figure is 55 percent.

Trucks and trains loaded with goods and foodstuffs for urban consumers voraciously burn fuel around the clock.

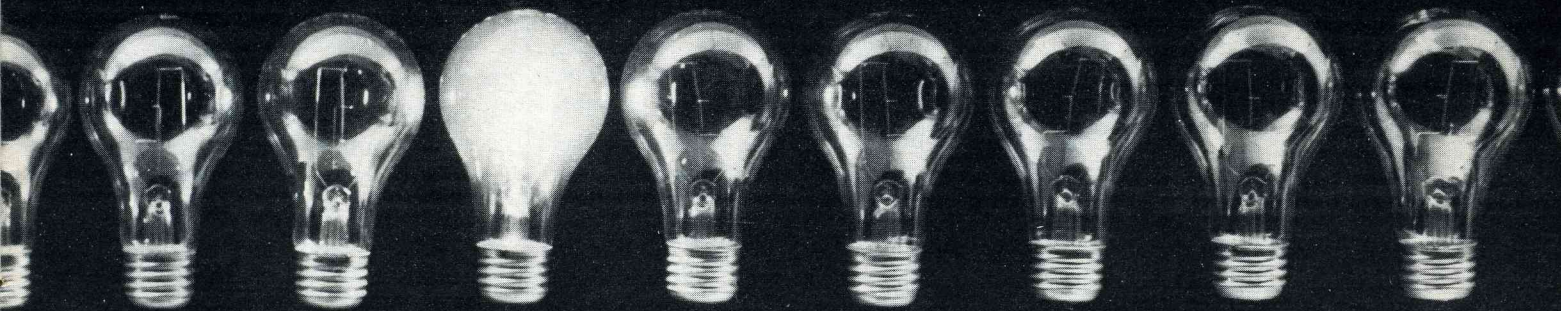
Even car production takes its toll. The U.S. auto industry alone consumes the following:

- One fifth of the nation's steel output.

- Three fifths of its rubber.

- One third of its glass.

Huge amounts of power are consumed each weekend by the vast armada of recreational vehicles and



AND THE ONE REAL SOLUTION

Illustration — Plain Truth Staff

autos used to escape dehumanized urban environments. Americans, for example, spend about \$90 billion a year on themselves for leisure-time activities, which is more than the annual U. S. defense budget.

And who could forget (although you might want to do just that) that the average U. S. citizen spends one eighth of his lifetime sitting in front of the television tube. As a society, Americans today are spending some 2,600,000,000 more man-hours each week before the TV set than they do in productive labor. Television usage consumes 3% of the nation's electrical energy budget.

After all of this, it is no wonder we have an energy crunch.

Whose Fault?

The most significant factor contributing to energy demand, however, is human nature. But we are unwilling to admit it. Just think of the scapegoats we create. It's the automaker's fault, or the government's fault, or the fault of the oil companies. It's always someone else's fault!

The auto makers have not forced us to buy huge, gas-guzzling, air-conditioned cars. The government certainly hasn't twisted our collective arms to continue fueling an energy-glutted economy addicted to oil and natural gas. Furthermore, is it anyone's fault that within the earth lies only so much available — and (at least until recently)

relatively inexpensive — petroleum?

This is not to say that these three groups are without fault. They certainly have their share of blame in the problem, as noted earlier. Yet we are willing to place the blame everywhere but where it should be primarily placed — on ourselves.

That means we need sweeping changes in practically every aspect of the individual's endeavor. It means replacing today's competitive social order with a balanced, harmonious society. It means a total renewal of the world order. And above all, it means changed human beings with new hearts and minds.

One major weekly news magazine described what is needed as being "more than a new way of consumption; it requires *a new way of thinking.*"

Nothing less will solve the energy crisis on a permanent basis.

Global Transformations Coming

Actually, such global transformations were predicted long ago in a source most people have chosen to ignore. This source is the Bible.

Contrary to what many people have been led to believe, the Bible discloses a coming worldwide solution to all of man's problems. It reveals new approaches to life, new ways of thinking, a new world government.

The Bible defines this coming government as the "kingdom of

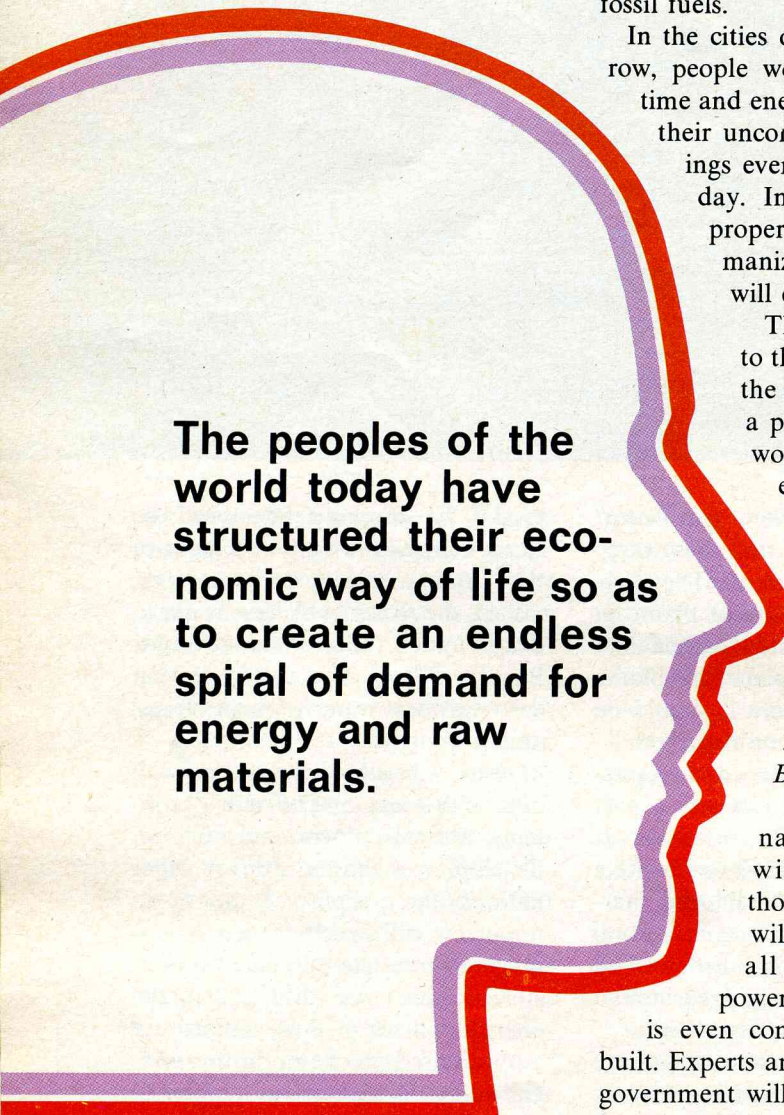
God." Its supreme head will be Jesus Christ. The announcement of that coming world government was, in fact, the reason why he was put to death under the Roman governor Pontius Pilate. The rulers of that day did not want to hear Jesus' announcement.

Jesus Christ's government will deal with every one of man's problems. Instead of concentrating on developing means to destroy other nations, the peoples of the world tomorrow will structure their economies to serve one another. Responsible leaders will insure that the energy policies of their nations are administered according to the principle that "it makes one happier to give than to be given to" (Acts 20:35, Goodspeed version).

Business and industry in the world tomorrow will execute policies according to the same principle. The profit-motive will no longer be the all-encompassing goal. Rather, profit will be considered in terms of everyone's benefit.

Today's "throw-away" philosophy will be altered so that goods are made to last — and be appreciated. Quality will again be stressed. The endless waste and squandering of practically everything will cease.

The Bible also makes clear that one of the first tasks of that government will be to insure world peace. Conflicts such as last year's October Mideast war will be virtually impossible, since there won't be any weap-



The peoples of the world today have structured their economic way of life so as to create an endless spiral of demand for energy and raw materials.

ons of war. At that time, "The Lord will settle international disputes; all the nations will convert their weapons of war into implements of peace. Then at last all wars will stop and all military training will end" (Isaiah 2:4, *The Living Bible*).

Also, limits will be placed on the kind of growth allowed cities. God's Word warns against property speculators, improper land usage and accompanying congestion: "Woe to those who join house to house... and join field to field, until there is no place for others..." (Isaiah 5:8, *The Amplified Bible*). In today's jammed cities, with structures many stories in height, there just isn't any logical alternative to the con-

sumption of voluminous amounts of fossil fuels.

In the cities of the world tomorrow, people won't waste valuable time and energy trying to escape their uncomfortable surroundings every weekend or holiday. In fact, with society properly managed and humanized cities, escapism will cease to exist!

The same will happen to the police force when the crime rate drops to a point where statistics won't even be bothered with. Those few who do begin to deviate will instantly be admonished with the words: "No, this is the way; walk here" (Isaiah 30:21, *The Living Bible*).

At that time, alternative energy plans will be carefully thought out. Leaders will carefully analyze all factors before a power system of any type is even considered, much less built. Experts and officials in God's government will head off problems long before they have a chance to come to an unpleasant fruition. Short-term "non-solutions" won't be utilized. Human needs of the next 1,000 years will be considered.

Society's overall power demand will be controlled from the outset. The very structure of society will make addition to spiraling problem-producing energy systems unnecessary. With the overwhelming majority of human beings pursuing character-building activities and with nations concerned for the welfare and needs of other countries, a substantially larger quantity of power will be available for the underdeveloped areas of the world than is now used.

And where is this energy going to come from?

The Many Sources Available

The earth is filled with a bountiful supply of potential energy sources. Not all sources are easily transformed to warm homes, power vehicles, or move machinery. Much of this potential energy is difficult to reach under current physical conditions.

Vast quantities of potential power sources are located too far below the earth's surface or in otherwise inaccessible areas — such as under the ocean floors. They are, if you please, in "the wrong places."

Interestingly enough, the Bible foretells that one of the first events to occur just prior to the establishment of God's government on earth will be massive earthquakes and other far-reaching geophysical disruptions (Isaiah 2:19; Revelation 16:18). The New Testament apostle John, while a prisoner on the isle of Patmos in the eastern Mediterranean, wrote down a number of these awesome occurrences after God supernaturally revealed them to him in vision. Among other striking events, John saw "every mountain and island... moved out of its place" (Revelation 6:14, Moffatt translation) and how "every island fled away, and the mountains were not found" (Revelation 16:20).

Such supernaturally initiated changes in the earth's surface could make mineral resources and additional power sources such as geothermal heat readily available.

Of course, there are numerous other energy resources that technology will be capable of harnessing once Almighty God provides the appropriate circumstances for their utilization.

What, for instance, could be more natural than harnessing the energy of the sun? Solar energy reaching the earth in the form of sun rays each year is equivalent to that released by burning 120 trillion tons of coal — about 25 times the total coal supply of the earth! What makes the use of solar energy attrac-

tive is that the supply is abundant and free of political strings.

Then there is hydrogen. Touted as an ideal future fuel, hydrogen is an extremely abundant gas which burns cleanly and is very efficient in both its gaseous and liquid forms. Under proper control and supervision, it can serve as a natural gas to heat homes and other types of buildings and as a fuel for motor vehicles. When lighted, it produces no air pollution, just steam, which eventually returns to the atmosphere where it is naturally recycled with other water vapor.

Of course, major considerations must be given to the drawbacks associated with the utilization of all energy resources. But the point is: God's government, which mankind has resisted for nearly 6,000 years, will have the wisdom to solve all related problems involved in the harnessing of such potential power. After all, God created the power sources — and the drawbacks — for a reason. Imagine how man would already have wasted these resources if God had not, at the time of creation, placed limitations on accessibility and drawbacks in utilization of energy resources.

The Wealth Down Under

Potential power resides in and under the waters of the oceans.

One major chemical firm has reported that one cubic mile of ocean water contains some 175 million tons of dissolved chemicals. According to the report, the chemicals from one cubic mile of ocean water are worth over \$5 billion. On this basis, the total value of the oceans amounts to over one quintillion, five hundred quadrillion dollars (\$1,500,000,000,000,000,000).

Such tremendous wealth down under will be tapped in the world tomorrow, as the Bible clearly indicates: "The riches of the sea shall be lavished upon you..." (Isaiah 60:5, *The New English Bible*).

Not only is ocean water valuable, but according to another study, a vast reservoir of wealth rests on the

ocean bottom as well. On the ocean floor lie fist-sized nodules containing a mixture of such metals as nickel, cobalt, copper, manganese, and molybdenum.

The abundance of these nodules is staggering. The Pacific Ocean alone contains several billion tons of these high-grade nodules. It is estimated that one year's harvest of a mere 100 million tons of these raw nodules would yield about 1.5 million tons of copper and nickel and about 240,000 tons of cobalt.

How long could these nodules support an advanced society, should harvesting them on a large scale become feasible? According to the *Los Angeles Times*, Dec. 2, 1973, "...the ocean floors would provide man with the metalliferous resources to last at least another 1,000 years, even at today's... rates of consumption."

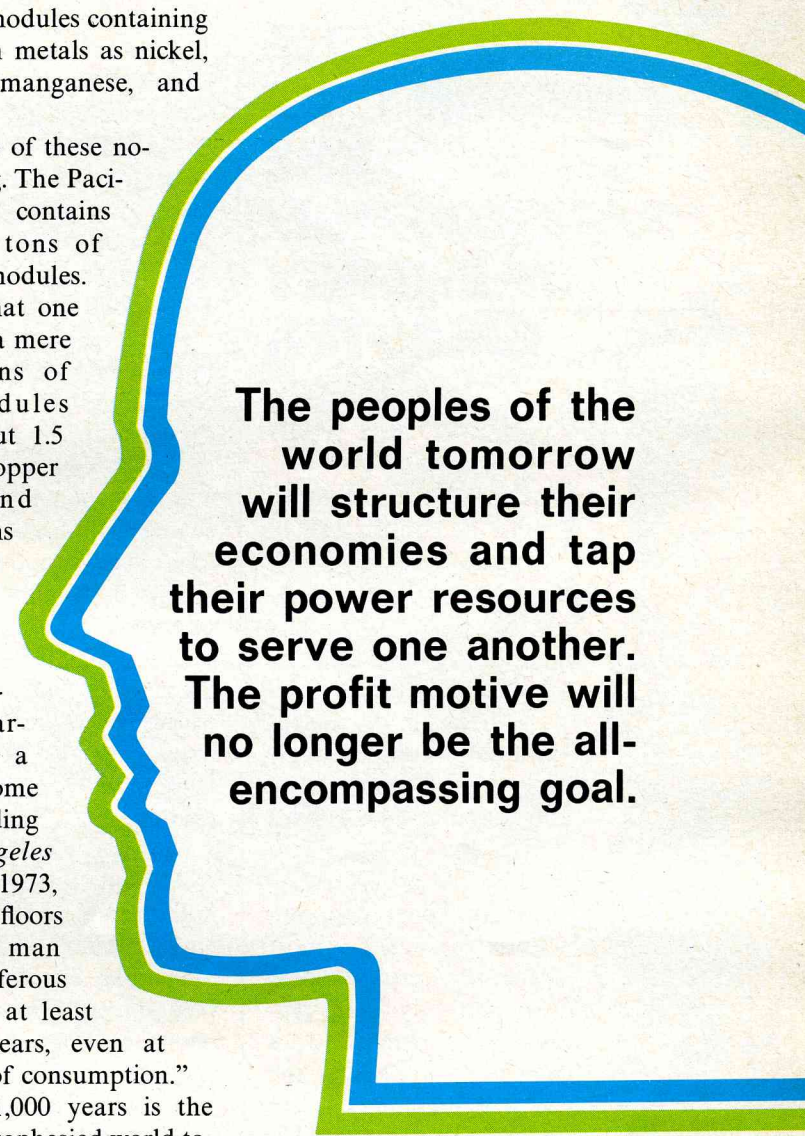
Interestingly, 1,000 years is the duration of the prophesied world tomorrow (Rev. 20:4).

Crisis of the Spirit

In the final analysis, the energy crisis is a crisis of the spirit because the ultimate causes involve the spiritual. Why?

Man is a physical being. He can comprehend physical things. But he cannot, of himself, comprehend spiritual principles (I Cor. 2:14).

God is spirit. He has set in motion spiritual laws which would bring man peace, happiness, and abundance — if only man would cease to ignore or reject them. God has also promised those who are willing to obey him a portion of his own divine spiritual nature, which would make us his very own sons and



The peoples of the world tomorrow will structure their economies and tap their power resources to serve one another. The profit motive will no longer be the all-encompassing goal.

daughters and which would make it possible for us to comprehend the spiritual principles that regulate our relationships with one another. God says, "I will give you a new heart... and put a new spirit within you" (Ezekiel 36:26, *The Living Bible*). In the world tomorrow, this spirit will motivate citizens and rulers to be unselfish.

Entire societies, from top to bottom, will be imbued with the spirit of God. Instead, there will be a world of peace, abundance, and joy.

As a result, no one will ever have to be left in the dark or out in the cold. Why? Because both the physical and the spiritual energy crisis will have been solved forever! □

HOW ONE MODERN CITY SKIRTED THE "RAGGED EDGE" OF ENERGY DISASTER

by Jerry Gentry

THE CITY of San Antonio, Texas, sits like a thousand sparkling jewels below the stars of the south central Texas sky. The city's nearly three quarters of a million inhabitants have lived amidst a plentiful supply of relatively cheap energy from rich oil and natural gas fields nearby.

But the era of cheap, plentiful energy for San Antonians, as for most of the developed world, is over. Recently, San Antonio experienced what newspapers called "the most serious energy crisis in the city's history."

Here is a step by step account of San Antonio's near disaster, which struck and then subsided within less than 48 hours.

Wednesday afternoon, December 19, 1973 — San Antonio's City Public Service, which supplies 45,000 customers with electricity and natural gas, was notified of a serious natural gas cutback. The expected 286 million cubic feet per day was reduced to 262 million cubic feet by San Antonio's supplier, to be effective immediately. This cutback coincided

with a cold weather front which had already plunged the temperature to 17 degrees — super-cold for San Antonio's normally moderate climate. The snap of cold weather brought San Antonio near the "ragged edge" of a serious natural gas crisis, as a local newspaper proclaimed. The worst was yet to come.

Midnight, December 20, 1973 — A further cutback to 221 million cubic feet of natural gas per day was put into effect. Officials had already complained that natural gas reserves supplying the city had been seriously depleted and that there was not enough gas to meet prior signed commitments to San Antonio. The supplier had previously admitted illegally selling off some reserves for higher prices and overselling the actual amounts of gas in the ground. This was an unfortunate example of human greed maximizing profits at public expense. Undoubtedly, it was not the only example.

One p.m., Thursday, December 20, 1973 — A further cutback to 167 million cubic feet per day reduced San Antonio's total gas supply by more than one third. The city was then shivering in sub-freezing temperatures. Some homes had barely enough gas pressure to produce a flame in gas stoves. Warnings were publicized through the radio, television and newspapers. Over 1,000 major industrial and commercial energy users were notified that massive energy conservation was mandatory and that the supply of natural gas might be cut off.

During the energy crunch, electric generators which normally whirl from steam pressure generated from burning natural gas were quickly converted to backup oil-fired systems. City officials were then busily stockpiling 2,250,000 barrels of oil for an emergency 30-day supply. One power plant was generating 400 megawatts of electricity from oil within hours of the surprise natural gas cutback. Citizens and industries responded to pleas for conservation with an estimated 20% reduction in

their use of natural gas and electricity.

Friday, December 21, 1973 — The crisis subsided almost as quickly as it had struck. Warm weather reduced the need for natural gas in "human need" areas — mostly homes, offices, hospitals and food processing plants. The crisis had passed. It was "business as usual." Utilities resumed normal operation as gas pressures rose back to normal. The feared "ragged edge" of disaster was postponed.

San Antonians now realize they live on one end of a delicate balance between energy supply and demand. Before, they simply took energy for granted, as did many other energy-rich areas. San Antonians — and city dwellers worldwide — are now beginning to pay dearly for the electricity, natural gas and oil which light and heat their homes, operate their offices and factories and propel their automobiles. They are realizing that the energy sources, once plentiful and cheap, are becoming extremely scarce and more precious as time goes on.

San Antonio's experience with near disaster points up the vulnerability of a modern city. San Antonio is no different from other modern cities in at least one very important respect: All depend on vast quantities of energy — usually from nonrenewable fuels. And the average person in San Antonio, as elsewhere, has little or no control over the actual sources of energy which support his affluent life-style.

San Antonio's recent energy crisis serves to point up the need for the development of energy alternatives, such as solar, wind, geothermal, garbage, etc. And most of all, it points up the need for a reconsideration of *how we use* so much energy per person and for a restructuring of lifestyles to far less dependence on ever-increasing amounts of non-renewable energy supplies. □

BRAUNIG POWER PLANT — Engineer stands at sophisticated control panel, San Antonio, Texas.



Personal from



(Continued from page 1)

Once he bent his arm back at the elbow and asked me to feel his forearm just below the elbow. I could hardly believe it. It was as hard as steel — harder than wood. When I shook hands with him, on arriving, and again when he left, his giant palm absolutely smothered my hand, and with his strength, he sure could have broken my knuckles had he just squeezed a little harder.

I think someone in the room took

our pictures together, and I may publish them in *The Plain Truth* — unless they make me look too little! I had seen these sumo matches a few times on television but never before had seen one of those wrestlers in person. It's unbelievable. Just thought this little personal incident might be of interest.

Also, in our brief stay in Tokyo, I visited the world-famous University of Tokyo and also had a personal visit with the president of this very distinguished institution. The president and his wife are planning to visit both the Big Sandy, Texas and Pasadena campuses of Ambassador College, arriving in Pasadena for

the opening night of the opening concert by the Vienna Symphony Orchestra in the new auditorium at Pasadena.

Also, our friends in the Japanese Diet (the Japanese Congress or Parliament) have decided to send two of their members to represent the Japanese Diet at this opening.

Then, friends have reported that the vice-premier of Egypt, Abdel Kader Hatten, arrived in Tokyo just after I left. He sends his regards to me, with the message that he will get word to me in Pasadena of the date for my meeting with President Sadat. Minister Hatten negotiated a \$280 million loan from Japan for Egypt. □

what our readers say

Year of Europe

For several months I have been receiving *The Plain Truth* and reading it with interest. I would like to commend you especially on the issue "The Year of Europe." There is so much distortion of facts and political propaganda in the newspapers, ours as well as the European, that I particularly appreciate your objectiveness and penetrating deeper into the problems. I was born in Europe and still have family in both East and West Germany. Obviously, I am not one of those 55% of Americans ignorant of the happenings in Europe. Frankly, I was shocked by this high percentage, although I have encountered many people who belong into this category. I am looking forward to the next issue.

Roswita N.,
Hillsborough, California

The October issue with articles about Europe was especially interesting to me, as I am from Germany. On the back of the front cover it said so many people are unaware what is going on in Europe. I am myself puzzled by the apathy I have experienced here. The people I personally got to know have so little interest in Europe or Germany, I myself simply cannot understand it! And of course it makes me feel sad.

Gisela S.,
Taylor, Texas

Can Russia and the U.S. Get Along?

In Vietnam, in Korea before that, in the Indian-Pakistani struggle, in the Middle East — everywhere in fact where trouble has appeared lately, most of Europe (and certainly all of Eastern Europe) is on the opposite side to America. I used to spring to

America's defense; however to a certain extent I have changed my mind and am forced to agree with most of the criticism, excepting only the Middle East question. I think America used to be so afraid of communism, many wrongs were committed in the name of "Democracy." However, I must add that if I had to make a choice between the American way and the Russian way of life, I should certainly choose the former. In America, freedom of the individual is still a reality and I feel always will be.

I wish those world figures, such as Jane Fonda, who so openly criticize their homeland, could see what effect their words have in the Eastern countries where people see only such criticisms. For them it is excellent propaganda. I agree with much of what Jane Fonda says, as a matter of fact, but I would never want to be quoted to that effect because in countries where only one side of any question is ever reported, it just isn't fair to come down heavily on the already weighted side. The Jane Fondas in America and elsewhere would be horrified if they ever had to live in the countries they seem to admire — for a start, gone would be the freedom of speech they think nothing of now.

Mrs. C. P.,
Yugoslavia

Personal from the Editor

Your November editorial on divorce is well taken, but we suggest that it is necessary to recognize that action on the nitty-gritty level needs to go hand-in-hand with moral suasion. As ones involved in family life action for a decade, we are coming to find that many Americans wouldn't have it any other way about divorce.

We sense that we have all been so nicely

brainwashed about divorce — like Pavlov's dog — that changing partners is as redundantly natural as changing cars. Much if not most of the moaning about family breakdown is empty talk, in the final analysis. The gist of it all is that any reversal on divorce would require that we start doing things a little differently. This is all right for the next fellow or as a general theory, but please let me be! The other crucial point is knowing how and where to start making some dents. The thrust of FAMILY CAUSE is on reducing *needless divorce*.

Les Kohut, Director,
FAMILY CAUSE,
Madison, Wisconsin

The Life You Live . . .

For about two years now, your magazine has provided me with an interesting and often thought-provoking perspective on national and world affairs, social problems, and the many facets of every day living. I appreciate this, and I'd like to thank you for sending me your magazine.

Paradoxically, I'd also like you to cancel my subscription. There are a number of reasons for this; the main one being that I feel I am depriving someone else from a subscription to your magazine, someone better-equipped to benefit from it. Unfortunately, I am perhaps what you would consider "not ready" for *The Plain Truth* just yet.

Gary T.,
Kailua, Hawaii

Mailmen, Take Note

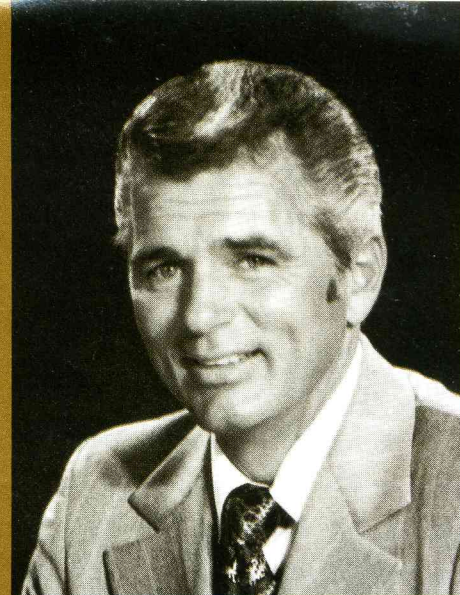
I am a mailman and have been delivering your magazine *The Plain Truth* to your subscribers. I couldn't help notice what great articles you write in your magazine. Just wondering if it is . . . possible to subscribe to *The Plain Truth*. It would be of great reading interest to me and also my wife.

Raymond H.,
Chicago, Illinois

• Yes, it is possible — and it's free!

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WRVA — Richmond, Va. — 1140 kc., 10 p.m. daily.

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WCKY — Cincinnati — 1530 kc., 5:05 a.m. daily, 1:05 a.m. Tues.-Sun., 1:05 a.m. Mon.
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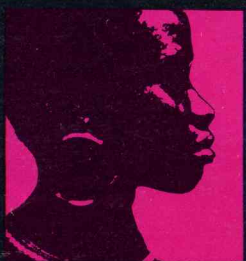
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What it will take to solve them.

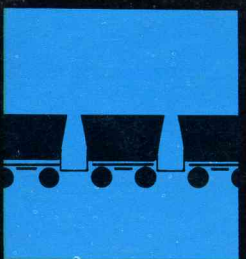


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