CONGRESSMAN'S REPORT

MORRIS K. UDALL • 2d District of Arizona

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Some Chickens Come Home to Roost

The Energy Binge Is Over

". . .at this moment in history we need to realize that: bigger is not better, slower may be faster, less may well mean more."

Stewart L. Udall (1967)
Man. . .An Endangered Species

President Kennedy, reeling in early 1961 from a series of disastrous setbacks, including the Bay of Pigs, was heard to remark: "all the chickens are coming home to roost, and we appear to have moved right into the chicken coop." A whole new flock came home during this 1972-73 winter, and here are some examples:

* An 18-month attack in the international market left that worldwide symbol of value and stability -- the U.S. dollar -- minus 30% of its purchasing power in foreign countries.

* A confident President, seeing light at the end of the tunnel, released the economy from the straightjacket of controls only to find, instead of light, another tunnel. Inflation is running amok and could reach the incredible total of 7% this year alone.

* Several Midwest states shivered through the months of January and February without sufficient heating oil for homes and even some hospitals. Ultimate disaster was avoided by a fortuitous turn of nature -- a mild winter.

* Coal, a sick industry for decades, found itself booming amidst heightened demand for energy supplies. At the same time, residents of Appalachia and conservationists came before the Congress demanding a ban on coal strip mining which has left a legacy of sagging mountains, gouged countryside, and polluted streams in some of the poorest states of the union.

You could argue that these four items are entirely unrelated, but you'd be dead wrong. For each is a symptom and outgrowth of something called "the energy crisis" -- a crisis whose implications don't begin and end at the gas station or furnace, but rather include the gyrations of the European gold markets, the stability of prices at home, and the quality of our land, air and water. It's something we'll be living with for a long time to come and unless I'm badly mistaken, it's going to drastically disrupt and change our lives.

That fantastic machine, the U.S. trillion dollar economy, and America's unprecedented living standard have largely been built on energy extracted from oil, gas, and coal. These "fossil fuels" heat our homes, cook our food, run our factories, mills and railroads. They gave us the auto age and the space age. For decades we have been led to believe that supplies of these fuels would last almost indefinitely at low cost.

Working on that assumption, national policy since World War II has discouraged imports of foreign oil so that production of our own "unlimited" reserves would not be stifled. In the 30 years we were locked into that policy, our country's population burgeoned by some 60 million -- as though we had immigrated all of Mexico -- and each American increased his energy intake by *three* times.

It is now clear that our assumptions were wrong, that we have in fact been on an energy binge, and, that the hangover could have a protracted and painful impact on the "American way of life." A few statistics shape the dimensions of the trouble:

* Americans, 6% of the people on this planet, last year consumed 40% of all the energy used in the entire world.

* Since 1950, a time when we led the world in wealth and energy consumption, we have doubled our intake, tripled our electrical demands and our appetite is continuing to grow.

* But by 1970, our production of energy supplies, chiefly gas and oil, began to peak out so that now we are using more gas than we find and more oil than we refine.

* If energy demand were to level off today, the story would be alarming enough; but every study and projection tells of an even more frightening future. The boys at Reddy Kilowatt are talking about doubling present output by 1980 -- quadrupling it by 1990. This year alone we'll have to find new energy for the 11,000,000 gas burning autos Detroit will produce and the 2,500,000 new homes constructed by the housing industry.

All of this will be happening in America, but we aren't the whole story. There are the undeveloped countries with rising expectations, the exploding Common Market, the inventive and ambitious Japanese, the Chinese looking for new trade relationships, and the development-minded Russians -- all of whom will be looking for more gas, oil, and coal, and some of it from the same markets we will seek to tap.

And when they compete with us it will be with fire in their eyes because they will know:

* much of the world's precious oil reserve is spent moving big American cars, sometimes three to a family, currently accounting for 48% of the world's autos and 55% of all the gas consumed;

* old friends like the British and Germans are getting along with a lot less energy, approximately half as much per capita, and their standards-of-living aren't so bad;

* the lion's share of the additional energy demanded by Americans will be for uses others view as outrageous luxuries like air conditioning, for which 210 million Americans consume as much energy as 800 million Chinese use for every purpose.

One additional piece of the foreboding energy puzzle is this: most of the world's remaining known petroleum reserves lie in the nations of the Mideast whose current demeanor towards the United States is less friendly than to many of our major energy competitors.

Most of us were asleep at the switch (at least the OFF switch!!) when all this happened and we're in for some tough adjustments. The Midwest oil shortage in a mild 1972 winter was not a one-shot accident, but rather, in all probability, a minor preview of the years just ahead. For unless I miss my guess, gasoline shortages and electrical blackouts will be our regular companions for the rest of the 1970's. These events, and the hard statistics I have cited, demand that we confront the "energy crisis" and devise a conservative, responsible strategy to bring our energy budget into balance in ways that are environmentally sound.

SOME NON-SOLUTIONS

Everyone in Washington has opinions on, and solutions for, the energy crisis. Two of them, the centerpieces of the President's recent Energy Message, I find highly questionable, and, when tied together as an exclusive package, totally unacceptable. They are non-solutions.

The first is to simply buy more oil from the Arabs. It won't work. The United States has been the world's greatest trader and producer of modern times. But in 1971 we sold fewer goods abroad than we bought -- the first time that happened since 1892. One big reason: we paid out $7 billion for foreign oil, a sum which almost exactly matched our trade deficit, itself a major culprit of inflation at home. Analysts claim that our 1971-72 dollar devaluations were in no small part due to the large dollar balances in the hands of oil-producing countries and were used to make a "run" on U.S. currency in international markets.

If we accept unbridled consumer demand for energy as a fact of life, we can count on buying $14 billion of Mideast oil by 1975 and some $30 billion a *year* by 1980. What will these kinds of purchases do to the dollar and where will we find the American exports to pay for them?

But if the economic implications of such a dependency are worrisome, the political considerations are downright frightening. How would it affect our commitment to Israel? Even if a political solution were found to current Mideast divisions, could we really plan on a constant supply of energy transfusions from countries whose policies can be reversed on a day's notice by a coup-de-etat or by a shiek who turns unfriendly?

A second non-solution is the all-out dig-dam-drill approach. As blackouts and gas station shortages begin to hit more and more, we'll hear advice whose effect, though tucked into nice euphemisms, will be this: forget all environmental and health considerations and get on with strip mining for coal, both on private and scenic public lands of the West. After all, coal is cheap and accessible. We'll also be advised to get more gas and oil by drilling from the fishing waters of Maine to the beaches of North Carolina and off the coast of California. And before this chorus

has ended, there will be persuasive arguments for building hydroelectric dams on every last river site, including two in the Grand Canyon.

For a few years we'll have no choice but to buy *some* Mideast oil. And there *is some* digging and drilling we should and can do without environmental damage. But neither solution is tolerable in the long run. For sooner or later (20-60 years depending on how pessimistic you are) mankind is out of gas and oil. In a few centuries or less, you can scratch coal.

The harsh truth is that eventually, if civilization is to remain on this planet, we need permanent, renewable, clean, large-scale energy sources that, like the windmill or the old waterwheel, *consume nothing and pollute nothing.* We have some cushions that will let us overdraw our energy bank account for a time, but we should aim right now at a balanced energy budget before the year 2000.

The question is how do we do it? Part of the answer lies in the experience of the 1960's when America spent $25 billion for a crash program that harnessed the brains and enthusiasm of the scientific community and put a man on the moon. We desperately need, right now, that kind of program for energy research and development, and we ought to give it that kind of money and that sense of urgency. Like the space program, it will need to integrate both short and long term goals with special task forces for the many elements and technologies involved.

NEXT YEAR AND THE NEXT CENTURY

While we search for long-range solutions, we can buy time in several ways. First, we should zero in on the incredible and wasteful way we use our fossil fuels. Even assuming -- as I do not -- that every kilowatt burned and every auto mile traveled is essential, we could find ways to provide those same kilowatts and miles with far less gas, oil, and coal:

* Conventional electric power stations extract only 30% of the potential energy in each unit of coal or oil they burn. We can make substantial improvements here and have more electricity from the same quantity of fuel.

* I think we have too many home appliances. But without reducing the number, we can better design appliances to do the same work using far less current.

* We waste immense quantities of heat and light in our homes, offices and factories. We can have nearly the same levels of comfort if we will design and insulate buildings and heating and cooling machinery to operate in less wasteful ways.

* Coal requires great energy to transport, and it is the worst polluter when it burns. With a crash development program, we can perfect promising new processes which may enable us to turn coal into pipeline gas, solving both problems at one stroke.

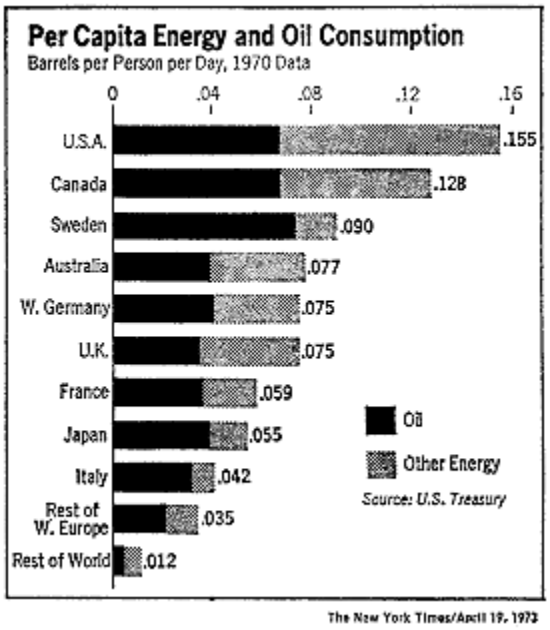
This short-range program, plus the energy conservation efforts discussed later, will help buy time. And time we need, for it may take two decades to prove out the permanent power sources needed for the long haul. Legislation now pending, and a new bill I will offer, will create

government-industry development corporations (along the lines of the Communications Satellite Corporation) to go to work on all of these possibilities:

* **The Fast Breeder Nuclear Reactor.** We are running out of nuclear fuel, uranium, but the breeder reactor creates more nuclear fuel than it burns. The Nixon Administration is already fully committed to its development. However, there are serious health, safety, and environmental hazards that have yet to be solved.

* **Nuclear fusion.** This is a much more complicated and, hence, dubious source of electricity directly converted from atomic energy. It is held out by respected scientists as the ultimate answer, with none of the environmental demerits of the breeder, but it is in the embryonic stage and its mysteries may not be worked out for decades, if ever.

* **Geothermal power.** This is the heat of the earth (which) man has always seen in volcanoes and geysers. In Mexico this year I saw an operating geothermal electric plant with one-third the power of Hoover Dam. The U.S. is far behind in this technology.



* Ocean tides and currents. There is power here if we can learn to harness it. The windmill is the cleanest form of mass-produced energy ever known to man; like methods lending themselves to more dependable and universal use must be pursued.

* Solar energy. Harnessing and transmitting the heat of the sun into everyday energy production by using massive reflectors and other devices. A brilliant husband and wife team at the University of Arizona has provided world leadership in solar power research and technology.

* Long shots. While we're at it, we ought to look at every other possible lead. One German scientist makes an impressive case for large, 400-foot high windmill farms as a supplement to other power systems.

NEW HABITS, NEW ATTITUDES

These programs will take time. But while the scientists and engineers are at work, there are things we can do right now in 1973. They involve new attitudes and habits of energy thrift and conservation. For the fact is Americans have been energy glutton champions. The fact is the age of cheap energy is past. The fact is we could keep most of the comforts and conveniences of our present high living standards and "the American way of life" and still cut home and personal energy consumption by one-third. Such an energy diet would be good for us all; let's take a look at some items on this regimen:

* Higher gasoline prices and/or rationing are just over the horizon. We could help head them off by cutting back on our extravagant use of the motor vehicle. Does your family really need that third car, the new snowmobile, or motor home? Can you cut your monthly driving miles by 15-25%?

* I believe we can get commuters out of cars and into mass transit or car pools or neighborhood bus pools, if we just put our minds to the job. Government can give this effort a big boost by opening up the Highway Trust Fund to help cities pay for subways, new buses and so on. The Senate approved such a plan this year, but once again the House, under pressure from established highway construction and automobile interests, turned it down.

* We have to find ways to encourage commuters to live in, or closer to, the places where they work, and we have to discourage urban sprawl. The kind of national land use planning legislation I have long sponsored may finally be approved by the Congress this year, and it will be a good first step.

* But while we are cutting down on auto miles, we have to recognize that under the best of circumstances, our living patterns will always require millions of private autos for point-to-point travel. Thus we must insist on government policies which encourage *smaller cars with smaller engines* so that we can get more passenger miles out of the same amount of gas.

* Public attitudes and lifestyles are affected by our friends in communications and advertising. With industry and government, they did their part to get us into this mess and they can help get us out. The electric industry should spread the message of energy thrift with the same vigor they taught us energy gluttony.

Things like turning down the thermostat by 5 degrees in the winter and up 5 in the summer, buying smaller cars and fewer gadgets aren't all that wrenching or dramatic sacrifices. But if each of us takes some of these kinds of steps so that personal per capita energy consumption declines by one-third, we'd jointly be striking a blow for a sounder dollar, a cleaner environment, and a stronger, self-sufficient America. And lest we pity ourselves, we should know that even on the 30% energy diet, we'll be using one and one-half as much energy as we consumed in 1950, and nearly twice what the average Frenchman uses today.

In this energy conservation effort, government leadership can play a crucial role. President Nixon has suggested a new office of energy conservation to spark voluntary programs in the

private sector and, more importantly, coordinate and direct the efforts of the disparate and far-reaching federal government, the most gluttonous energy user of them all. We need a hard-boiled energy conservationist leading this office who will show us the way toward:

* Requiring the kind of insulation and heating and cooling units in new homes that are efficient in saving energy.

* Informing Americans on what appliances burn what quantities of electricity, and placing stiff luxury taxes on the wasteful ones.

* Making war on loud, garish neon signs. They contribute nothing to our country and they burn enough energy to bring on some shortages we can avoid.

* Reforming our cockeyed electrical rate structures, a crazy system that rewards waste. If my home and your home are the same size and I burn twice as much electricity, the local utility company will penalize your thrift and reward my extravagance. The same is true of industry. Rate structures now decrease charges as use goes up -- it ought to be the reverse.

While Congress and the American people begin to live and cope with the energy crisis in the months and years ahead, we will come across at least two traps I hope we'll avoid.

1. I've spoken and written much about another crisis: the environment. There'll be temptations to retreat from our commitment to clean water and air, temptations to dam wild rivers, and desecrate wilderness and national parks. Some non-damaging tradeoffs may be necessary, but when the tough decisions come, the environment cannot be sold out. If we are sensible, we can both balance the energy budget and make our peace with nature's eternal laws.

2. These thirty golden years of the energy age have been fabulous ones for those of us lucky enough to have shared the burgeoning middle and upper income wealth of this historic time. As we shift to a period marked more by energy scarcity, we should avoid the temptation of lecturing our less fortunate countrymen and those in poorer lands about the virtues of poverty, and the psychic damage of too many autos and air conditioners. The needs of those at the bottom of the economic ladder ought to come first.

I'm struck, as I come to the end, at the perhaps too pessimistic tone of this report. I do hold very deep concerns about the dimensions of the approaching crisis. But I learned long ago not to sell Americans short. As a people, we've faced many discouraging times and somehow we always get through them stronger and wiser. So, I hope we'll get up and get going. One of my old coaches had a saying that seems appropriate for all of us today: "When the going gets tough, the tough get going."

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In the next issue of this newsletter, I'll offer a specific plan suggesting how each of us might pitch in.