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Letter from America

The Real Energy Crisis

Saddam Hussein's imperial adventure into Kuwait has resurrected the Energy Wars scenario. For the third time in 16 years, the people of industrial nations are being told by their leaders that the future of their civilization must be secured against the vagaries of Middle East politics. This time, though, we are closer than ever to waging war over oil. The positioning of 150,000 American troops, 60 warships and 500 combat planes in and around Saudi Arabia, and the participation of British, French, Italian, Dutch, Belgian, West German, Egyptian, Syrian, and Moroccan navies and troops, has awakened all the world to the possibility of crisis.

There are, of course, many reasons for massing such military power in the Persian Gulf. President Bush has been absolutely clear about one central justification: war is being risked to preserve order in the world energy system. We depend upon oil for our 'way of life', the President declared in his August 6 address to the American people on the Iraqi invasion. He spoke the truth. The question which President Bush and the leaders of other nations prepared to wage war over oil have avoided is why this truth remains ingrained in industrial societies after the experience of the last two decades.

What is stunning about the current situation is not merely that earlier energy and economic events are being repeated with little evidence of public learning, but that the commitment against learning remains so strong. We are not now, and were not in the last decade, without peaceful energy alternatives. Indeed, our options are so numerous that it has been necessary to heavily subsidize the existing energy order so that it could stave off the competition. The most important subsidy, in this regard, has been to actively disregard the environmental costs and the health

and safety risks of the global fossil fuel (and nuclear) economy. We have even gone so far as to alter the atmosphere's chemistry in order *not* to change the energy system.

In this respect, the roots of the present energy crisis, like the roots of previous energy crises, do *not* lie in the Middle East, but, rather, in the industrial order itself. Social complacency has been substituted for responsible action, despite overwhelming evidence of the instability of the world energy system and the growing costs of protecting this system against self-contradiction. Throughout the 1980s, it was fashionable to regard the oil price shocks of the previous decade as short-term, aberrant events, freak storms that eventually would be weathered, permitting us to resume an era of energy abundance. This view gained credibility among government leaders of the industrial nations as oil prices dropped and world markets exhibited excess capacity, despite the fact that only a few years earlier these freak storms had resulted in an estimated \$1.2 trillion economic loss among the industrial nations. The Reagan Administration 'led' the way (if you can call it that) in rejoicing over the apparent good news about oil prices and declaring that, left free from governmental interference, energy markets would restore world energy and economic stability. The Administration denied the existence of an energy crisis, rejected the need for a national (much less an international) energy policy, virtually eliminated support for conservation and renewable alternatives, and dismantled much of the energy planning infrastructure established during the previous decade.

Of course, the industrial view of energy and economic stability was hardly descriptive of the Latin, African and Asian (excluding Japan) experience in the 1980s. The supposedly good news about

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the 'economic adjustment' of the industrial economies to the energy crises of the 1970s contained a sobering message for the Third World. Many Third World countries saw decades of economic progress (modest to begin with) reversed as energy-induced debt ballooned and per capita income fell. One gauge of the cost to the Third World of energy stability for the industrial world has been the tripling of trade deficits between rich and poor nations, a situation the World Bank characterises as 'unsustainable'. It was the good news of economic adjustment in the industrial world which reduced demand for Third World goods and brought on staggering debts and shrinking trade opportunities. It was also this good news which sustained an attitude of complacency about the industrial world's energy future.

Complacency did not eliminate the mounting costs of maintaining the energy status quo; it merely enabled the wealthiest members of the global community to ignore them. Neither did complacency overcome the political geology of oil. OPEC nations control two-thirds of the world's proven oil reserves and this proportion will inevitably increase. US domestic oil resources, for example, continue to decline and projections of future domestic oil production indicate a steep downward curve, continuing the trend since 1970. James MacKenzie of the World Resources Institute has estimated that by the year 2004 the US will have consumed 90 percent of all the crude oil to be extracted from the lower-48 states. The apparent surplus of oil on the world market in the 1980s masked the fact that the US and several non-OPEC countries are on the exhaustion part of their oil production curves (that is, less than half of their proven reserves remain for use). Moreover, the apparent surplus oil capacity of the 1980s is destined to disappear. MacKenzie estimates that a two percent annual growth in world demand for oil will exhaust the

surplus in a decade and a three percent annual growth rate would erase the surplus in seven years. The abundant energy machine on which the industrial economies depend is breaking down.

There is a distinctly American dimension to the real energy crisis. Because the US is the largest and most wasteful energy user in the world community, its actions and, especially, its policy *inaction* of the past decade, have had a disproportionate impact on the world's energy, economic and environmental conditions. On a per capita basis, America burns twice as much carbon as members of any other industrial economy; each American also emits 2.5 times the greenhouse gases which trigger global warming and generates twice as much garbage as their counterparts in other industrial societies. At the same time, America ranks at the bottom of industrial nations in waste recycling (with the paradoxical result that there is more recoverable oil in its annual waste than, for example, is pumped from Prudhoe Bay). Transportation in the least energy-intensive American city (New York) consumes 26 times as much energy as the typical European city. With transport accounting for the majority of oil use in the US, this last index of energy extravagance has special importance. The Reagan and Bush Administrations have rationalised American energy waste as the necessary price of progress, but surely no one believes that garbage-strewn streets, sulphurous air, and carbon-grit coating of buildings, trees and people are emblems of a more civilized way of life.

The energy and environmental habits of industrial societies and their energy/pollution dependence are the roots of a social crisis that Americans in particular seem adamantly opposed to facing. The existing world energy system masks this crisis in numerous ways. The market price we pay at the gasoline pump does not reflect the full social costs of our

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continued petroleum dependency. It does not reflect the environmental costs of reliance on fossil fuels that pollute the air and water and that threaten to alter global climate. It does not include the losses in economic productivity and standard of living that result from our failure to institute energy-efficiency improvements. It does not reflect the inequality created by the heavier burdens that rising energy prices place on the poor as compared to the rich. It does not reflect the costs of dislocations to communities, regions and nations that were yesterday's winners in the oil sweepstakes and are tomorrow's depressed economies. And, it does not reflect the cost of having to rely on military force as the ultimate instrument of energy security. It may be difficult to place a precise figure on these costs, but it is not difficult to recognise that they are already high and that they will mount even more steeply in the years ahead.

In the wake of the current aggression by Saddam Hussein, government and corporate leaders throughout the industrial tier are feverishly working once again to sell their societies the same recipes that failed in the past. The oil industry justifies windfall profits, price gouging, and government subsidies on the premise that with more money it can reverse the political geology of oil. Lobbyists of the nuclear industry urge us to ignore history, economics and common sense, to reduce regulations on nuclear safety, to disregard the problems of nuclear waste disposal and nuclear proliferation, and once again to place blind faith in the same experts who assured us forty years (and billion of dollars of subsidies) ago that we would now have an endless supply of electricity that was safe, secure, and too cheap to meter. And, in the US we hear once again that America is the Saudi Arabia of coal and that with sufficient subsidies to the coal industry and a closed eye to air pollution, despoil-

ation of the landscape, and the threat of global warming, we can make a headlong rush back to the energy system of the nineteenth century.

Experience should teach us that we cannot buy our way out of the real energy crisis by subsidizing failure. Throughout most of the 1980s, the US government spent an average of \$44 billion annually in energy-related subsidies – virtually all of which went to conventional energy sources – with no perceptible improvement in energy security. There is no quick-fix for the failure of the industrial energy system. It took the latter part of the nineteenth and all of the twentieth centuries to construct that system, and it will take decades to create a stable sustainable alternative. In the period of transition, the US and much of the rest of the world will remain vulnerable to the instabilities that result from petroleum and nuclear dependence. But, energy wars and Chernobyl catastrophes are avoidable if we are prepared to change the existing system of energy production, distribution and use.

The starting points for a productive and sustainable environmental and energy future are already clear. First, major investments in energy efficiency improvements are needed. Throughout the 1980s, the Reagan Administration exhibited a hostile attitude towards energy efficiency, treating it as a threat to economic prosperity. On this basis, the objective of national policy was, in the words of former energy secretary Edwards, 'produce, produce, produce'. But, energy efficiency does not mean a lower standard of living or reduced economic growth. It means finding the most energy efficient way to achieve the same goals and ends that previously were achieved through high levels of energy use. William Chandler of Worldwatch Institute points out that, since 1973, US energy use per unit of output has been cut by 30 percent, and total US energy

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use in the mid-1980s was slightly below 1973 levels even though the economy expanded by one-third during this period. Despite these gains, and despite all the talk about improving America's productivity, the US still wastes energy resources at an historically unparalleled rate. The problem is not America's alone. Other industrial nations, such as Japan and West Germany, may have levels of energy use per capita that are half that of the US, but inefficiency and pollution still prevail as primary products of their energy regimes.

Precisely because of industrialism's chronic energy wastefulness, small steps can have dramatic results. Chandler points out that a single decision in the US to raise auto fuel economy to 40 miles per gallon would save as much energy as Brazil now consumes. Using the most efficient lights in the US would save a third of US coal-fired electricity energy. Efficiency improvements can be made in every sector of the industrial economy with no loss in performance and comfort, frequently with the added benefit of improving productivity, and almost always with environmental gains. Typical household appliances for space heating, water heating and air conditioning in industrialised countries are substantially less energy efficient than the best models now available. The energy required to heat buildings can be reduced by half with existing methods of weatherisation. Energy productivity in manufacturing, in the chemical industry for example, can be improved by 20 to 40 percent by the end of the century with existing methods. At a global level, Chandler estimates that simply by slowly adopting existing conservation measures, the world could cut the projected energy demand growth rate virtually in half.

Beyond energy-efficiency improvements, a programme of investments and incentives is needed for renewable energy options, including passive solar design of buildings, solar thermal applications, photovoltaics (solar cells), wind power, geothermal power, fuels from biomass and shortage devices for solar power. Because the market price for fossil and nuclear fuel alternatives does not include the social and environmental costs of their use, renewables are not now judged to be competitive with conventional energy options for a wide range of uses. Even so, the economics of renewables continues to improve, while the economics of all conventional sources (especially oil and nuclear power) continues to worsen. This difference only becomes more pronounced when we begin to evaluate the social and environmental costs of energy choices.

For the moment, Saddam Hussein has shocked the US and its industrial allies out of their collective energy stupor. Once again, energy policy is important news. But given past experience, there is reason to expect that the sense of urgency will dissipate once the new storm front in the Middle East has been weathered. Will the industrialised nations finally face up to the failures of the world energy system and seek to build a sustainable environmental and energy future? Or, will they once again stick their heads in the oil sands of the Persian Gulf, rejoicing when the news comes that the pipelines feeding their oil addiction are again flowing freely?

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