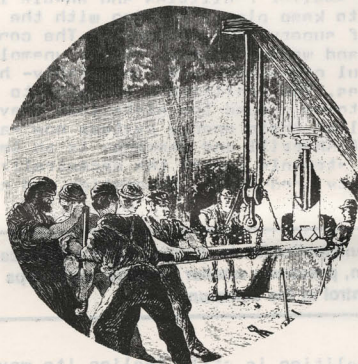


Creating Jobs through Energy Self-Reliance

Americans have long been told that ever-increasing energy production is the key to national economic well-being and jobs. Corporate energy interests in and outside government always note that, as energy production has expanded over the years, so has economic growth and total employment. Many in government and industry are therefore advising that unemployment can be ended only by stepping-up energy development to the greatest degree possible and with the largest systems possible.

This argument deserves careful analysis since we hear it so often and since the correlation between energy consumption and employment benefits does not seem so readily apparent at a time when energy consumption is at an all-time high and unemployment is at its highest level since the Depression. If more energy and larger systems did lead to more jobs, the phenomenal increase in American energy consumption since 1960 should be reflected in a lowering of the rate of unemployment; but the exact opposite has been the case. The tenet, "More energy leads to more jobs," is, in fact, a myth.



What has kept the myth alive is the fact that, accompanying a growing population, there has been a very large increase in the use of goods and services per person. Since energy use has also increased significantly, it has appeared as if energy expansion has been causing economic expansion and increases in jobs. Actually, it is constantly-expanding demand which has led to constantly expanding production and employment. As Louisiana State University's Professor Herman Daly has concluded:

Clearly, what is responsible for increasing total employment is the increase in total (goods and services), not the increase in inanimate power production, which by itself must decrease employment.

Were demand for goods and services to contract, no amount of increased energy consumption would lead to significant increases in employment.

THE REALITY OF JOB DISPLACEMENT

The trend in industry has been to substitute machines-and therefore energy-for labor. In the steel industry from 1959-1969, employment declined from 450,000 to 100,000 as production increased 45% and energy use increased. According to the Bonneville Power Administration, the aluminum industry in the Pacific Northwest consumes 25% of the region's electricity and provides but one-half of one percent of the total jobs in that region.

In all, the major energy-producing and energy-using industries consume 1/3 of the nation's energy. Yet they directly provide only about 10% of the nation's jobs. Energy companies claim that indirect employment created by energy is substantial. But, as Professor Daly points out, any investment—even in welfare and unemployment—leads to indirect job creation. And, as noted above, energy, once available, generally ends up replacing jobs.

Some of the industries which provide the fewest new jobs for the amount of energy expended are the energy-producing industries. Between 1950 and 1971, total national employment increased 41%; during that time, jobs in the energy-producing industries increased only 5.5%. From 1961-1973, electric utilities increased their kilowatt output about 130%, their revenues about 260%, their construction costs about 340%; but employment in electric utilities increased only 21%.

This trend is disturbing, given the calculation of ERDA that "the nation's single greatest investment in energy in the future will be in the area of electricity generation, transmission, and distribution." Estimates of the total amount of money needed for energy development through 1985 range from \$900 billion to one trillion dollars, as much as three-fourths of all private investment capital in the United States. The President of Exxon Nuclear Corporation stated last year that at least half a trillion dollars would be needed to build the 500 nuclear power plants he would like to see completed by the year 2000. Another \$100 billion, he added, would be required to construct the necessary fuel cycle facilities. The development of a commercially-usable nuclear breeder reactor will cost, by the latest estimate, over \$10 billion. The cost of each coal-conversion facility is currently thought to be around \$1 billion each. And the price tag for nuclear fusion electric systems, assuming they can be made commercially available, will also be in the billions of dollars.

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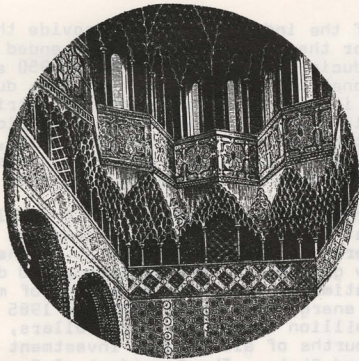
The large capital investments result in small numbers of very expensive jobs. The capital investment per employee in the petroleum industry is \$108,000, in the utility industry \$105,000; in contrast, the capital investment needed to create a job in the service sector is only \$9,500. As sizeable sums of capital are being committed to expanding energy production, less money is available for investments in other areas which serve people's needs, provide more jobs per dollar, consume less energy, and create fewer environmental and public health hazards. We can look forward to higher rates and taxes to bail out failed energy systems and to higher interest rates caused by the diversion of so much capital to the energy area.

The myths which the energy industry and its supporters put forth in order to justify continued pursuit of this costly future are many. Waste is the consumer's fault, they claim, forgetting that electricity production involves the waste of two-thirds of the energy in the primary fuel used. The commercialization of solar energy will not be feasible until the next century, they contend, ignoring the evidence to the contrary and lobbying so that federal research and development funds continue to favor nuclear and other centralized energy options. They explain that they alone can deal with the complexities and technology of energy production. They even threaten the American consumer with the specter of the "loss of freedom of choice" if energy growth does not continue and expand. These myths are advanced for a reason—to keep Americans from the realization that, as Lord Keynes put it, "There is no evidence from experience that the investment policy which is socially advantageous coincides with that which is most profitable."

THE POTENTIAL FOR JOB CREATION

Across the country though, people are beginning to see through the myths and to question why they must pay more, why they must be captives of a centralized system of energy generation, why more energy is not leading to more jobs. And the evidence supports their instinctual feeling that the myths are not true. There are many potential jobs in the energy industry; but these jobs are associated with conservation, with solar, and with other alternative energy sources—not with nuclear and other centralizing technologies.

Fred Dubin, president of an engineering, planning, and management firm which has conducted comprehensive energy analyses for many parts of the country, found that two billion dollars invested in energy conservation and solar power



privately-owned utilities more than it does the municipal systems it was directed, by law, to serve.

The Labor Action Coalition is also concerned with jobs and with the positive effect that municipalization can have on job creation. In New York State today, there are forty-seven municipal utility companies. Efforts are under way in other cities and towns to take over utilities which are presently privately owned. At the same time, Con Ed and the six other private utilities in New York have plans to set-up a private, jointly owned company which would build huge new plants and a vast network of high-voltage power lines in the state and which would then provide power to the companies. Since the conglomerate, Empire State Power Resources, Incorporated (ESPRI), would be wholly-owned by the companies to which it would be supplying power, it would not be carefully regulated by the federal government. With industries already leaving New York, many because of high energy costs, the threat of further profit-taking by the private utilities at the expense of both consumers and workers has become one of the Labor Action Coalition's major concerns.

provides four times as many jobs as it would were it invested in nuclear reactors (64,000 to 15,000). Skip Laitner has shown that about 2½ more jobs are required for solar-developed energy than for the same amount of energy produced by nuclear fission.

The job mix for the various technologies is different. Nuclear energy utilizes fewer tradespeople per professional scientist or technician than does solar energy: for nuclear, the ratio is about 2 to 1; for solar, it is 9 to 1. In addition, a broader array of skills are necessary for building and maintaining nuclear plants. And, as ERDA itself has stated:

Solar systems provide much more room for small businesses and geographically dispersed businesses and workers than do some of the more complex systems.

Many labor unions are beginning to realize this. The President of the Sheet Metal Workers has estimated that energy-saving modification work and expanded use of solar energy could put all unemployed sheet metal workers back to work. The President of the International Association of Machinists and Aerospace Workers (IAM), Floyd Smith, has noted that if the government launched a program tomorrow to equip each home in America with a rooftop solar water heater, "scores of factories would be retooled and reopened. Thousands of jobs would be created for unemployed machinists and auto workers."

A full-scale solar program would provide new jobs for carpenters, cement masons, electricians, plumbers, sheet metal workers, air conditioning and heating technicians, welders, glaziers, insulation workers, and crane operators. New jobs would be created and new ground broken in engineering, architecture, law, real estate, appraisal, sales, zoning, assessment, and consumer protection. The Massachusetts Energy Policy Office has estimated that if, by 1985, one-half of all buildings in the state were to use solar energy for hot water production, 32,000 jobs would be created. "It's safe to say," their report concluded, "that by 1985 more jobs could be available from solar power (directly and indirectly) than from offshore oil and new nuclear construction combined."

THE CASE OF NEW YORK STATE

In New York State, where so much energy is produced and used yet where the unemployment rate is above the national average, the case for decentralized energy production and distribution is being advanced by a coalition of nineteen labor unions known as the Labor Action Coalition (LAC). Any city, county, or town in New York has the legal right to condemn the facilities of the private utility monopoly and to run its own utility system. Founded in late 1975, the Coalition is actively campaigning for labor support for the municipalization of electric utilities by New York communities. The Coalition sees municipalization as the first step toward a democratic and state-wide decentralized public power system.

In part, the Coalition's concern is with high utility bills. LAC argues that in 1974 customers of private electric monopolies paid 60% more for electricity than did customers of public and municipal systems. The Coalition also notes that in 1975 the seven private electric monopolies in New York charged customers for \$92 million in federal taxes which they never paid. A major target of LAC's campaign is PASNY, the Power Authority of the State of New York, which, though publicly-owned, is accountable to no one and benefits

Increased size and concentration of energy systems diminish the chances of communities ever obtaining control of their own energy production and distribution. The Labor Action Coalition argues that, without municipalization, decentralization and control of existing energy systems will be next to impossible, and decentralization is necessary for job creation and maintenance. Centralization and automation lead to the closing of existing smaller facilities and enable industry management to keep plants running with the use of a handful of supervisory personnel. The consequence is smaller and weaker unions, higher unemployment, more powerful companies, and -inevitably- higher utility rates. The Coalition's campaign to convince cities and towns around the state that they can gain control of their energy systems now - as have the towns of Sherrill and Massena - is an important part of the struggle toward the decentralization of electricity production, generation, and control.

Municipalization is cheaper, halts centralization, preserves smaller systems, and keeps control at the community level

The Coalition is still feeling its way alone, trying to deal with the many ramifications of its motto, "public power...full employment...safe energy." Presently, the group mainly organizes around municipalization. Their interest in municipalization, though, leads inevitably to a broader discussion of the impact of energy policy on employment. Municipalization is crucial not only because it is cheaper, but also because it halts centralization, because it preserves smaller systems (thereby preserving less complex and less dangerous jobs), and because it keeps control at the community level. The argument focuses on questions of power, of jobs, of community development. It is not hard to imagine groups like the Labor Action Coalition broadening the debate to include a discussion of the job creation potential of conservation and of alternative sources of energy. And when the unions put their weight decisively on the side of community-owned and decentralized power, they will be a force with which to reckon.

-Richard Grossman



Sources for this article: next page

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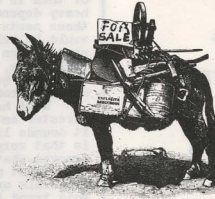
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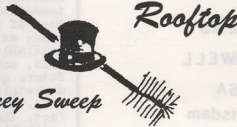
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