Boom Towns May Hinder Energy Resource Development
Isolated rural communities cannot handle sudden industrialization and growth without help.

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The energy boom town in western United States is apt to be a bad place to do business. This is a problem for more than the simple boom town. It also affects federal agencies seeking to increase energy production in the Rocky Mountain West as well as the firms building and operating energy resource extraction and transmission facilities. The situation can be confusing for local and state governments trying to promote the health, safety, and welfare of their populations. The problem results from the traditional, business-as-usual growth is cumulative rather than discrete, corporate-government, and individual involves, mostly made in total isolation from each other. "Business-as-usual," a characteristic applicable to all levels of government, as well as to industry. The result of such unmanaged growth is probably the leading source of our population's problems, which can be seen as ameliorated in the process of western energy resource development. The boom town is a major source of social tension in an area or region, provoking both litigation and legislation. It is a major contributor to the potential confrontation between state and federal governments and to the government's ability to make effective decisions affecting western energy resources. Besides fostering individual development, this growth almost inevitably generates a situation that crosses over in both the time and the money required to get projects built and operating.

Pistol Shot, U.S.A.

The best way to explain these effects is to describe the typical business-as-usual boom town. Therefore, let us consider the very real situation in the imaginary town of Pistol Shot in some state in the West. Potential problems are typical of those encountered by a small, isolated western community that is being impacted or is about to be impacted by the development of coal, oil shale, uranium, or even geo-thermal resources.

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Pistol Shot is 100 miles from a town of as many as 10,000 or 15,000 people, it is more than 200 miles from a metropolitan area. Thus it has to depend on its own resources and cannot borrow consumer services from other places. Pistol Shot is a county seat in sparsely settled ranching country, although it has some mining in the past. Its population in 1970 was 1200, down from two or three times that number in the mining days.

Suddenly, this has changed. Coal mining started up again in 1973 and the industry will probably continue to grow. Construction began four months ago on the first 700-megawatt unit of an electric power plant. Plans were announced last year for a $900 million coal gasification plant, but the starting date for construction has already been postponed twice. Confusion about the future as well as about dealing with present growth problems is widespread. It is the name use of coal that exists in the Powder River basin, the Four Corners, central Utah, northwest Colorado, western North Dakota, and much of the rest of the West. Population in Pistol Shot has nearly tripled since 1970 and is accommodating by mobile homes sprung up over the countryside. The rapid influx of people has generated a rapid growth rate. In the past decade, the town has experienced a population explosion, which is reflected in the high cost of living.

The local elected officials and a good deal of the public have already experienced the four common phases of attitude toward this boom development. The first phase was enthusiasm, with anticipation of economic growth satisfying a classic ambition of a small town—sweeping the young folks at home. The second phase was uncertainty, particularly among the elected officials as to the demands for public services to meet the growth might be. The third phase was near panic over the gap between prospective revenues and prospective expenditures, coupled with the realization that Pistol Shot and its school district have nowhere near the bonding capacity to build the facilities needed to accommodate the growth. Finally, there evolves a problem-solving attitude as the officials and the public start trying to understand what the problems are and how to find help for them. This information is that is available on prospective changes, the sooner the fourth phase comes.

One of the problems that have neither the knowledge nor the resources to deal with the town's problems, decision-makers in Pistol Shot first turned to the state and federal governments for help. The response was unsatisfactory, so money grants from the industry generating the growth was sought. This led to competition and confusion among towns, school district, and county, all the different governmental agencies seeking support. This created uncertainty among the firms, which wondered what the priorities should be and who should set them.

The local officials are ambivalent about land use planning and zoning. Their ranching and landownership constituents are strongly opposed to any intervention with their sole control of their property. State planning legislation is weak (safes statement to make about any of these underdeveloped western states). Many of the tail leaders in government, business, and banking are wistfully doubtful about the continuity of Pistol Shot's boom.

All are bewildered by the varied new business interests to community development and decision-making. They include mining companies, land speculators, developers, banks, and contractors. Those who may not even identify their clients, and those who do not have the expertise and federal agencies whose existing programs do not quite fit the local needs.

A hundred years ago people flocked to western boom towns and stayed as long as they could. The attraction was the slight chance of striking it rich. Since then, those who lived in the rural and a progressive income tax has been adopted. The only person in Pistol Shot with a reasonably substantial personal fortune is a well-flushed real estate speculator.

Pistol Shot is an imaginary town, by the situations described in it do exist in many or most of the western energy to source communities facing boom-type growth. The situations are presented by those who have been involved in them and feared by others who think they may face such things.

These are not random problems. Many of them are interrelated, and they tend to mutually self-destruction.

The Problem Triangle

A problem triangle is shown in Fig. 1. As population grows at boom rates, existing local services fall short of need. School classrooms, retailing, residences, housing, and the number of physicians in the community do not grow as rapidly as the number of people increases. Many people's recreational requirements are not satisfied by the available opportunities. The quality of life in the community is degraded.

As a result, it is difficult to attract people to this isolated community which has no institutions of supply, which is unstable and dissatisfied at best. Workers and their families do not want to stay in the community and some of those who do stay are planned back and forth among employers. Industrial employee turnover rates and absenteeism go up rapidly. It is difficult to attract and retain a satisfactory work force, whether it is a work force for building and operating a power plant or gasification plant, for operating a restaurant, or for maintaining the country's roads and bridges. Industrial productivity and profits drop.

Because of declining productivity, or at least the absence of expected increases in productivity and profits, there is less money coming in to support public sector activities. In addition, social malaise or chaotic causes private investments to be skeptical and unwilling to invest in commercial facilities, housing, or the other private sector needs. Insufficient housing towns are often among the most university services and facilities finding it even harder to keep up with increasing population and demand.
The Model of the Community

The essential problems are illustrated in Fig. 2 (b). Before the boom-type growth started, Pistol Shot's economy was roughly in balance. Capital was invested in the basic sector of the economy. The material inputs—land, farming, grass, water, cattle—were assembled, labor was furnished by ranchers themselves or hired, and the classic factors of production—land, labor, and capital—were brought together. As a result, livestock was exported and purchasing power was imported to support the local economy. This purchasing power largely supported the entire population, including people and families whose income came from providing consumer goods and services in the local services sector.

The local services sector furnishes utilities, schools, public safety, and government and health services in the local sector. Its private subsector furnishes other utilities, retailing, housing, doctors, and other services. In a stable or slowly growing situation, the basic sector and the public services sector are more or less in balance. Whether or not the local services are adequate is a matter of taste or values, but at least they are what people in the community are willing to pay for.

Some intangible aspects of quality of life are also important to the model. They are primarily those that may be unmeasurable to some managerial effort in the public and private sectors, and not necessarily those that are the most important. They include the responsiveness of government, a sense of community, and an acceptable amount of leisure activity enjoyed by the residents of the community.

In Pistol Shot, all of this has now changed as described above. The basic and local service sectors are out of balance (Fig. 2b). First, decisions were made, somewhere, to invest money in coal mining; new capital investment was added to that already on the basic side of the model. More capital is being added to build a power plant and still more is contemplated for a gasification plant. This brings in more material inputs, also, more labor must be attracted and hired. The purpose of the new capital investment is to produce new outputs of coal, electricity, or synthetic gas to be exported outside the community.

The population must increase in order to fill the new jobs. For this newly increased population to be adequately served, the local services sector must also be expanded in order to furnish the tangible components of quality of life such as the goods and services needed to accommodate the newcomers.

The intangible aspects of quality of life also must change to accommodate the growth. As the community grows, doubling or tripling its population, one intangible aspect of quality of life takes on special significance. The newcomers feel left out, yet as growth continues, they become a majority of the population. Integrating the newcomers into the community without driving out the old-timers becomes a key problem. It requires serious attention by the part of growth management that is concerned with trying to maintain the quality of life.

Growth Management

Growth management as conceived here does not mean central control of economic activity and growth either by the government agency or an industrial firm or group. Growth management does involve generating enough cooperation among the groups and persons involved to develop the economic, political, and social tools needed to use them to implement solutions to these questions. Where should growth be located? What should be the rate of growth? How should the benefits of growth be shared? How should the costs of growth be paid for, and who should pay for them? How can the potential stresses to growth be brought together to manage growth?
The private-interest to community growth management include at least the following (i) industry; (ii) state, local, and federal government; (iii) commercial interest; and (iv) the general public (including both the old-timers and the newcomers).

The following are four basic functions of growth management: (i) balancing basic and local service capital investments; (ii) affecting resource use and conservation; (iii) developing labor force; and (iv) accommodating and retaining population. The applicability of these functions to the community growth model is shown in Fig. 2C.

The first function, balancing investment, does not mean dollar for dollar investment in the local services sector to match new basic investment. Instead, balancing these different types of capital investment means finding enough capital to build up the local services sector to accommodate the growth. It is hard to generalize as to how much is needed, but the amount of new capital needed by local services is probably 5-20 percent of the new capital invested in the basic sector of the community.

Many tools are available to help carry out this balancing function. Legislation to control plant sizes may be used to hold down the basic investment to an amount that can be matched on the local service side. Alternatively, local service investment may be facilitated by such tools as state legislation (for example, the Wisconsin Community Development Authority Act), federal mineral lease stipulations requiring off-site effort by lessees to assure provision of mining services needed in the community they are impacting, or a federal policy of subsidizing communities impacted by resource energy development just as it may subsidize industry in developing energy resources. Regardless of which tools are used, better communication than that now existing under the business-as-usual approach will be essential between industry, state and local government, and the federal government. Property information, forestry state policies, and lack of expertise in state and local government are all obstacles to communication.

For the second function, that of affecting resource use and conservation, zoning is the traditional means of using legislative authority to shape community development. Although zoning is occasionally a useful tool, its use is not politically feasible in many western counties or states, at least until after an unmanaged boom has occurred. It may not be feasible even then, since opposition is so culturally embedded that zoning may not be implemented until political control has completely shifted away from the old-timers. Zoning concepts that are applied in the use of sparse western water supplies and give local official control over changes in use or the point of diversion of appropriated water may possibly be easier to legislate into effective existence than land zoning. The creation of public land management regions may also affect resource use.

One of the most useful changes that might be made in existing institutions affecting resource use would be reinstatement of the Public Lands Sales Act of 1964. This would permit the sale of currently available federal lands for housing in boom communities, and might place some restraints on the inflation of housing prices caused by land speculation and speculative pricing. This has been done in several western states.

The third function, developing the labor force, may be accomplished in several ways. A formal-action programs can encourage the hiring and training of residents of the community or the region. Training programs can facilitate this by preparing these residents to handle the jobs and by aiding them and their families to adjust to a culture of industrial employment. Active equal opportunity programs might in addition reduce the number of new households to be accommodated in the community.

Accommodating and retaining the population, the fourth growth management function, depends heavily on the quality of life—both tangible and intangible factors. Good wages furnish a necessary but insufficient condition for attracting and retaining the new employees and new housing.
For so far, I have described the boom town problematics and the need to accommodate a concept of four functions of growth management. These are the necessary and sufficient conditions for economic development to avoid social costs and environmental degradation.

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The Federal Government

Primarily, of course, specific federal energy policy is needed. This should include as precise a set of policies and planning as possible. This is a policy which is evidently not yet understood. Nor has anyone described, much less designed, the subsystem needed to make the development both economically and environmentally sustainable.
The Energy Resource Industry

A major problem seems to be one of consent. Some firms are leaders in communicating themselves to community preservation and development and in other ways carrying the community development costs sustained by their energy resource development. The need is for industry-wide acceptance of such standards and willingness to cooperate as the states create new institutions, rules, and implementation programs for dealing with the problems created by western energy resource developments.

The Media

The mass communications media, particularly the local and regional press, could do far more to inform readers, viewers, and listeners of the prospects for and consequences of energy resource development. Illustrating feature stories are done after change happens. It is necessary to anticipate prospective and current change in the energy resource development field, which certainly affects the public as much as action in the courtroom, emergency room, and state capitol. Since Pilot Shuttle-type development so evidently affects the public interest, I suggest that the press should inquire vigorously and should push its doctrine of fair comment more and more into the industrial activity involved in energy resource development.

The Public

The people need to seek out information on what is happening and demand more information and innovative responses by its various governments. Otherwise, the only advice one can give to the public is "look out." The business-as-usual approach certainly won't handle western energy boom town problems.

Summary and Conclusions

Accelerated development of energy resources is apt to cause very rapid population increases in isolated rural communities in the Rocky Mountain West. Most of these communities are unable to furnish adequate services and facilities to accommodate this growth or to maintain the amenities of life. Where that happens and growth is not adequately accommodated, productivity declines, projects overrun time and money schedules, and operating outputs fail to be realized.

Such communities need help in managing their growth. The major assistance--often involving institutional change--should come from the states. Until each state can modify its laws, towns, regions, and sometimes its constitution, substantial federal government help will be needed. Current ways of doing things also need to be modified by the energy industry, local governments, and the mass media.