

# Developing an Economic Development Policy: The Evolution and Impact of a New DOE Mission

by

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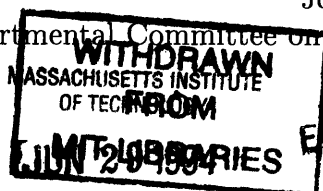
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## **Abstract**

One of the primary missions of the Department of Energy (DOE) has been the production of the United States's nuclear weapons. The end of the cold war has led to a shift of DOE's focus from nuclear weapons production to environmental restoration activities. As a result, many facilities throughout the DOE weapons complex have become surplus to the defense mission and a significant number of DOE contract personnel are being laid off, causing serious economic impacts to the local communities.

This thesis analyzes the economic development policy-making process at the Department of Energy and is based on a framework developed from the Department of Defense experience in the reuse of former military bases. Six DOE defense sites that are expecting the loss of over 7,000 employees by the end of next year, are pursuing economic development activities and were selected for the analysis. Concurrent with these site activities, DOE is working to address economic development on a complex-wide basis and thus, has created a Task Force to guide and fund economic development activities and work with community leaders and site managers to develop policy guidelines.

The Department of Defense economic development experience shows that two fundamental issues determine the success or failure of economic development by a government agency: (1) developing a strategic plan that clearly and realistically sets forth the actions needed to accomplish the economic development mission, and (2) allowing all affected parties to participate in the planning and decision-making process. The Department of Energy has begun to take steps towards addressing these issues, and through the leadership of DOE upper-level management stands poised to assist communities in mitigating the economic impacts of defense downsizing through its economic development program.

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# Chapter 1

## Introduction to Economic Development

One of the primary missions of the Department of Energy (DOE) that it inherited from its predecessor, the Atomic Energy Commission, has been the production of the nuclear weapons for the U.S. arsenal. The end of the cold war has led to a shift of DOE's focus from nuclear weapons production to environmental restoration activities. As a result, many of DOE's production facilities operated by contractors have become surplus to the defense mission and a significant portion of their highly-skilled workforce is being laid off, negatively affecting local communities. DOE is currently assisting communities in their efforts to counter the expected job losses through a two-pronged approach. The first approach is to deal with the immediate impact of downsizing on the workforce through workforce restructuring plans. These plans reassign some of the workers to new positions that are being created within the Department and provide severance packages to those employees who are losing their jobs. The second, more long-term approach, is to promote community economic development activities, both on- and off-site, in order to mitigate the negative economic impacts on the local communities' economies.

### 1.1 The Community's Economy

The strength of a community's economy is based upon its economic structure and the relationship of this structure with external economic forces. The economic structure of a community depends upon the available factors of production, land, labor, capital, and



	<b>Actual Employment (1980)</b>	<b>Predicted Employment (1990)</b>
Basic employment	20,000	predicted 30,000
Nonbasic employment	40,000	2 X 30,000 = 60,000
Total employment	60,000	3 X 30,000 = 90,000
Ratio of nonbasic to basic	2	2
Ratio of total to basic	3	3

Table 1.1: Example application of the basic-nonbasic theory for a hypothetical community (Heilburn, 1981, p.155).

entrepreneurship, and the relationships between them. External forces also influence the economic structure of a community because a community does not consume everything that it produces, nor does it produce everything that it consumes. Thus, the level, stability, and growth of local income and output of a community depend upon the interaction of the economic structure with external forces (Heilburn, 1981, p.153).

One of the common ways to describe the interaction of the community's economy with external forces is through the comparison of a community's *basic* and *nonbasic jobs*. Basic jobs are jobs created by export industries. These industries determine the growth or decline of a community and thus, are the economic foundation, or "base," of a community. Nonbasic jobs are created by the local activities that service these basic industries. The basic-nonbasic theory asserts that if there is a change of activity in the basic sector, there will automatically be a change of activity in the same direction in the nonbasic sector. This change can be predicted by measuring the ratio of nonbasic to basic employment, a ratio that is assumed to be relatively stable (Heilburn, 1981, pp.154-155). For example, in Table 1.1, the hypothetical community has a basic employment of 20,000 and a nonbasic employment of 40,000. The community predicts that the number of basic jobs will increase to 30,000 in 1990. The number of nonbasic jobs can be predicted by multiplying 30,000 with the ratio of nonbasic to basic jobs, 2, determined in 1980. Total employment can then be predicted by summing the basic and nonbasic jobs, or by multiplying 30,000 by the ratio of total to basic jobs, 3, determined in 1990 (Heilburn, 1981, pp.155-156). Communities commonly use the estimation that one basic job generates enough cash flow to support ten people — the basic and nonbasic employees and their non-working family members,

— thus, the population of the hypothetical city would be predicted to be at least 300,000 (IDD, 1989, p.2).

The income generated by the basic and nonbasic jobs is multiplied within a community. Money enters the community in the form of basic sector income and passes hands several times before exiting the community. As a person spends a portion of their income, it becomes income for the person receiving the payment, and so on. However, only a fraction of the income is passed on, or multiplied, every time that the money changes hands because a fraction of the income “leaks” out of the community. Income that is not multiplied may be placed in savings, used to purchase imports, or used to pay taxes. (Local taxes are paid to the local public sector and thus generate additional income that may be spent within the community). If 60% of the income is spent in the community for each round, then the fraction of base income that is not multiplied, or the *leakage fraction*, is 40%. For example, if the income generated is at a rate of \$100 per week, \$60 would be spent in the first round. Then 60% of the \$60, or \$36, would be spent in the next round, and then 60% of the \$36, or \$22, would be spent in the next round, and so on. The total income generated within the community from the original \$100 would actually be \$250, the sum of the money spent in all of the rounds. This value can be estimated by the *income multiplier*, which is the reciprocal of the leakage fraction. Thus, by knowing that the leakage fraction is 40%, the income multiplied within the region from \$100 is calculated to be 2.5 times the \$100, or, \$250 (Bendavid-Val, 1991, pp.4-6).

A model of the flow of money through a community is shown in Figure 1-1. In this simple conceptual model, the basic, nonbasic, and public sectors are represented by accumulations, or stocks, of capital dollars. (The dollars can also represent employees within a community since the number of people employed by the sectors is related to the amount of money accumulated by the sectors.) Money flows from outside the community into the basic sector at a rate determined by the export revenue rate. This money can either be spent within the community, paid to the local government through taxes, or leaked to areas outside the community (i.e. through the purchase of imports). The rate at which income is leaked and spent within the community can be represented by an average leakage fraction. The nonbasic sector is the recipient of the money spent by the basic sector within the community. The nonbasic sector’s income can also be spent within the community, paid to the local government through taxes, or leaked to areas outside the community. The local public

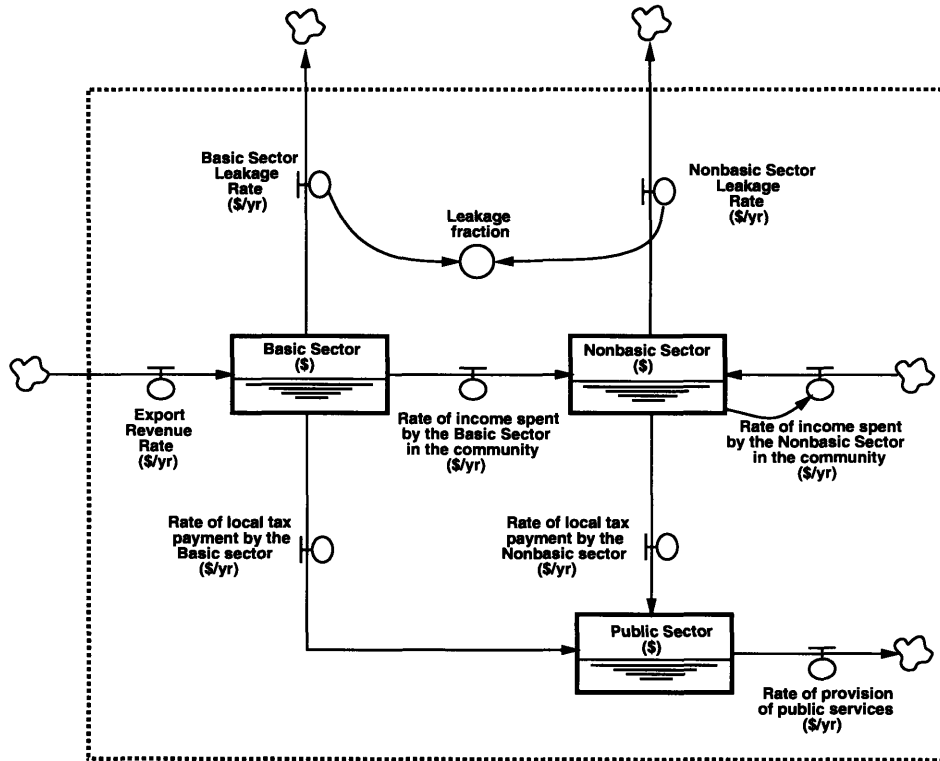


Figure 1-1: Flow of money through a community.

sector receives tax revenue from the basic and nonbasic sectors and these funds are spent on community services, such as fire and police protection, sewer and water infrastructure, and the maintenance of schools and road.

Based on this model, a community's strategy for strengthening its economy should focus primarily on creating jobs within the basic sector and encouraging income multiplication. For example, an outside investor may propose to establish a bicycle assembly factory that will create basic jobs for the community. The leakage fraction for the factory will depend on the number of bicycle parts that are brought in from outside the region and the amount of profits that the investor takes to an outside community. A restaurant located in the neighborhood of the bicycle factory may experience an increase in the number of lunch-time customers when the bicycle factory begins operations. As a result, the restaurant may hire new employees to meet the increase in demand. These nonbasic jobs that are created depend directly on the new basic jobs; if the factory closes in the future, the restaurant will have to decrease its workforce unless it is able to attract other new customers.

## 1.2 Community Economic Development

Given this model, economic development can be defined as the actions taken by a community to promote the economic stability or growth of a community. Planning and implementing an economic development strategy is a long-term process that involves many different community interests. The process includes determining the assets and economic structure of the community, determining what the community wants in terms of economic development (growth, maintaining the present state, or mitigating basic job losses), designing a strategic plan to achieve these objectives, and finally, implementing the strategic plan.

In this context, “community” refers to the area from which an employer can expect to draw a labor force, an area approximately the size of a county. Political leaders and private sector representatives from the community create an organization that leads economic development planning, usually representing:

- Private industry - to gain the perspective of new and existing companies,
- Various levels of government - to help answer prospective companies’ requests and provide knowledge of local procedures and regulations,
- Utility companies - can offer special rates to companies and possibly fund economic development activities,
- Unions - are often a powerful political influence and their presence indicates a trained, experienced, and disciplined work force,
- Universities - can offer unique technology and information resources,
- Community colleges - provide general and specific job skills to the communities and are able to adapt to local needs, and
- Banks - help finance business creation and expansion (IDD, 1989, pp.3-5).

Led by at least one professional planner, this organization assesses the economic structure of the community through various studies to determine what indicators will be used to evaluate possible economic development projects. These studies include an economic base analysis to determine the growth or decline of the basic sector industries and their composition. Other regional economic analyses include income measures, income and product accounts, balance of payment statements, production linkage investigations, commodity flow studies, friction analysis, mix-and-share analysis, location quotient and related indicators, basic statistical compendium, and input-output analysis (Bendavid-Val, 1991, pp.10-19).

Also, the community should assess what aspects are valued the most by its citizens (such as growth versus stability, the natural environment, etc.) and what aspects would be valued most by prospective new companies (such as the economic geography relative to suppliers and markets, the transportation facilities, the availability of land and facilities, etc.) (IDD, 1989, pp.6-12).

The economic development organization then determines its strategy according to the assets and economic structure of the community and what its citizens desire from an economic development program. Depending upon the community's objectives, the strategy can be a combination of the following four: (1) retain existing firms, (2) expand existing industries, (3) attract new firms, and (4) create new local enterprises. Within each of these strategies, the community must also decide whether to specialize in a particular industry or whether to diversify (Schwartz, 1983, pp.403-404). If a particular industry is thriving, a community may want to expand that industry and encourage new firms producing the same goods, but that also increases the risk for a community if and when that industry declines. If a community desires to grow, it will seek companies that will bring new people to the area, but if it does not want to grow, it will seek companies that are stable or slow-growing or focus on retaining existing firms (IDD, 1989, pp.12-13). In each of these strategies, the community is working to improve its comparative advantages in its export products and improving the opportunities for income multiplication (Bendavid-Val, 1991, pp.15-16).

If the community's objective is growth, the economic development organization defines a marketing campaign to inform companies about the benefits of locating in a particular community and solicit economic development proposals. Communities narrow their marketing efforts based on what the community wants, working closely with firms that are interested in moving to the area, or firms already in the area, if the objective is to retain existing firms (IDD, 1989, pp.13-16). Communities can increase incentives for locating within their boundaries through tax incentives, industrial revenue bonds, obtaining federal or state funds, and improving the quality of the labor-force through training programs (Schwartz, 1983, p.395).

Proposed economic development projects are then evaluated individually, comparatively, and then in combination. First, a community develops a list of project ideas and evaluates each of them based upon the criteria defined in the economic strategic plan. The list is given to topical committees that will evaluate the projects on the basis of their expected

abilities to increase the short-term economic options of the community and improve the fundamental economic dynamics of a region of the community. Second, the prospective projects are evaluated relative to each other. Avrom Bendavid-Val, a researcher at Virginia Polytechnic Institute who has experience with economic development projects in Western countries and the developing world, suggests using questions such as the following:

- “Does this project contribute directly and significantly to one or several of the principal current objectives or strategic thrusts of the development effort?”
- Can this project be fully and effectively implemented in a relatively short time?
- Does this project build on known resource strengths and comparative advantages of the region?
- Will this project be environmentally sustainable over the long run?
- Will this project result in permanent improvement in the basic intraregional growth dynamics, the diversity of economic opportunity, and the resiliency of the regional economy?
- Will the benefits of this project accrue to a large number of people in the region, either directly or indirectly?
- Does, or can, this project have a mutually reinforcing link with another proposed project? (Bendavid-Val, 1991, p.186).”

Third, the community can evaluate the potential projects in combination with each other, determining which ones conflict, which ones are complementary, and which ones are compatible (Bendavid-Val, 1991, pp.186-188).

Economic development planning is an art. It is a public, collective decision-making process that complements the private decision-making process in order to promote the economic structure desired by a community. Thus, a community will determine its economic development strategy based upon the future self-image of a community, the community’s qualitative and quantitative analyses and experience, and the community’s objectives (Bendavid-Val, 1991, pp.8, 201).

### **1.3 Purpose**

The Secretary of Energy, Hazel O’Leary, declared economic development as a major mission of the Department of Energy in November 1993, in order to mitigate the negative economic

impacts of defense downsizing. Lacking the expertise in economic development, DOE is looking towards other federal agencies that have experience in community economic development, particularly the Department of Defense (DOD). DOD has experience with economic development based on the reuse of former military bases. As a large government agency, DOD has already faced many of the challenges that DOE is likely to encounter. Although the details of economic development at each agency may be different, DOD and DOE are trying to influence the community's economy in a similar manner. DOE may have a more successful economic development program if it incorporates DOD's lessons into its planning. Therefore, the purpose of this thesis is to answer the following questions:

- What is the present state of DOE economic development?
- What lessons can be learned from DOD efforts to promote the reuse of closed military bases?
- How can these lessons be applied to the on-going DOE economic development effort?

Chapter 2 reviews the lessons that have been learned from the reuse of closed military bases. DOD has created the Office of Economic Adjustment (OEA) to assist communities in the reuse of military bases in order to mitigate the economic impact of base closure. Over the last thirty-three years, at 97 of the closed military bases, community reuse replaced the loss of 87,557 former civilian DOD and contractor jobs with 171,177 new jobs.

Chapter 3 describes the problems caused by the downsizing of the DOE defense complex, where over 7,000 contractor jobs are expected to be eliminated by the end of next year, and the current DOE solutions. At least six sites are developing economic development strategies in response to these expected losses. Currently, DOE policies are being developed on a complex-wide basis to promote the economic development initiatives at the site level. The influence of key participants from the site and headquarters level on the design of DOE's economic development strategies is also discussed.

With an overview of DOD's economic development experience and an understanding of the status of DOE's economic development efforts, Chapter 4 analyzes how the lessons from DOD should be applied to DOE. Given the present state of DOE economic development, the path that DOE should continue on to ensure a successful economic development program is also presented.

## Chapter 2

# Department of Defense Economic Development: Reuse of Closed Military Bases

### 2.1 Decision to Close

A community usually loses one of its major employers when a military base is closed. Unlike the Department of Energy, which has had an on-going mission throughout its fifty-year history, base closures are not a recent phenomenon for the Department of Defense (DOD). In 1961, under the direction of Robert McNamara, the Secretary of Defense for the Kennedy Administration, DOD instituted a cost reduction program. McNamara determined that many of the U.S. bases were superfluous and proposed converting them to civilian use. Under this program, DOD closed or reduced the activities at 954 military bases and industrial sites, releasing nearly two million acres of land and eliminating 217,602 DOD jobs (Daicoff, 1973).

The decision to close a base is a difficult one, both for the military and the community affected by the closure. In response to constituents concerned about the economic impacts, Congress passed legislation in 1977 that was designed essentially to prevent further base closure decisions. The legislation mandated that Congress must approve a base closure decision when it affects 300 or more civilian employees (LM, 1992, p.25). The legislation also required DOD to meet the procedural requirements of the National Environmental Policy



Act (NEPA), requiring studies under 10 USC 2687 on the fiscal, budgetary, environmental, and local economic effects of defense realignments for installations that employ 300 or more civilian employees (Adjustment, 1985, pp.20-21). As a result, no more bases were closed until the most recent closure decisions that began in 1988 (LM, 1992, p.25).

By 1988, the U.S. armed forces operated over 871 military installations within the U.S. and 375 overseas, at an estimated total operating cost of approximately \$17 billion per year. Because the budget deficit continued to grow and the Gramm-Rudman-Hollings law mandated a balanced budget within six years, then Secretary of Defense, Frank Carlucci, proposed establishing a Base Closing Commission to determine what military installations should be closed. Representative Richard K. Armey suggested that the Base Closing Commission be an independent, bipartisan presidential commission mandated to make decisions based solely on the military value of the bases, in order to mitigate political battles and abuse of power. The recommendation of the commission would then have to be accepted in its entirety by Congress and the President, effective in 45 legislative days of approval, unless Congress overturned it by a Resolution of Disapproval (LM, 1992, pp.23-26). Congress agreed to this concept and enacted the Base Closure and Realignment Act, establishing the Commission and requiring that the bases that it recommends for closure be closed no later than September 30, 1995 (Hackworth, 1992, p.38).

On December 29, 1988, the commission recommended to close 86 military facilities and properties (including a dozen major bases), to partially close five, and to realign 54 (increasing or decreasing their activities). These downsizing activities were estimated to save the military \$694 million. The President and Congress accepted and approved these recommendations (LM, 1992, p.25). Responding to the major changes in Europe and the Soviet Union in the late 1980's, then Secretary of Defense, Dick Cheney, recommended further reductions in the U.S. military establishment in 1990 (LM, 1992, p.27). Congress responded by ordering a second round of base closures and realignments in the 1990 Defense Closure and Realignment Act. This Act defines the criteria for the decision-making process to include the environmental impact (land and air uses, wetlands, presence of hazardous material, threatened or endangered species, historic or archeological sites, and programmed environmental costs or cost avoidance), the return on investment, and the economic impact on the communities (Parks, 1991, p.14) (Ifill, 1991). According to this Act, each service recommends the bases to close, the Secretary of Defense reviews and modifies this list, making

it public, then the Base Closure Commission holds hearings on the proposed closures. The final list is then forwarded to the President and Congress, who then must accept or reject the entire list (GF, 1993, p.8). The closures occur within the two to six years following the decision (Shafroth, 1991, p.5).

As a result of this Act, the 1991 round of base closures included the closure of 35 military bases and the realignment of 42, affecting 60,000 military and civilian jobs with an estimated military savings of nearly \$8 billion. A third round of base closure announcements occurred in 1993, and another one is scheduled for 1995 (Shafroth, 1991, p.5).

## **2.2 Economic Impact**

Communities surrounding military bases often depend on the operation of the base for their economic survival. The story of George Patton III, Commander of Fort Hood in Killeen, Texas, illustrates the impact that military bases have on the economies of host communities. In response to army-bashing in the communities surrounding Fort Hood, Patton paid the troops with \$2 bills. These bills filtered through the local economy for weeks and when members of the communities saw the bills, they knew where the money originated. The army-bashing ceased for a long time thereafter (Hackworth, 1992, p.38). The impact that closures can have on communities can be tremendous because of the dependence that communities have developed over the years on the military installations as major basic sector employers. Military bases provide not only jobs, but they also generate tax revenue for the maintenance of schools, roads, police protection, and sanitation facilities (LM, 1992, p.23).

In the studies regarding the economic recovery of communities through the reuse of military bases, the most widely used indicator of success was the number of jobs created relative to the number of civilian jobs lost due to closure. The creation of jobs is an important indicator because local communities are usually losing a major basic sector employer and a source of income to the community, and when a community loses a major employer, the focus is often on the most directly measurable effect, the number of jobs lost (SR, 1993, p.1). The comparison is made with civilian jobs because they are often more valuable to the local economy than the military positions. Military personnel tend to buy their supplies at a commissary or base exchange, they often live in military housing, and may pay income

taxes in another state, whereas civilians are more likely to buy their supplies from local businesses and pay local property taxes. Thus, the multiplier effect from the loss of civilian employment is higher (SR, 1993, p.7). Also, base closures usually include the transfer of military personnel to other bases (Daicoff, 1973).

The extent of the impact of a base closure on a particular community depends upon several factors. First, as stated above, the number of civilian jobs versus military jobs at a military base affects the economic impact on a community because of the varying multiplier effects. The proportion of the two types of positions depends upon the type of military installation. For example, if an Air Force base is used as a Strategic Air Command headquarters, the number of military personnel will be much larger than the number of civilian personnel. However, a naval shipyard employs a much higher proportion of civilian personnel for its production and maintenance activities (Daicoff, 1973).

Second, the impact of a base closure will be magnified when the local economy lacks diversity. In particular, rural communities tend to have less-diversified economies and rely on the military as their major employer. For example, in an 83-county study conducted by the U.S. Department of Agriculture, rural counties surrounding closed bases lost, on average, a higher proportion of total county employment (3.25% to 10% due to lost civilian jobs) when compared with metropolitan counties (1.32% to 3.9% due to lost civilian jobs). In the extreme cases, the rural and metropolitan counties each lost roughly 34% of their county employment. In terms of recovery, even though rural areas face greater challenges, the study also found that rural counties averaged a net employment gain of 300% of the original lost civilian jobs (with 70% of them gaining as many or more jobs than were lost) whereas metropolitan communities averaged a net employment gain of 168% (with 68% of them gaining as many or more jobs than were lost). Thus, the distinction does not seem to preclude rural counties from recovering as successfully as metropolitan counties, despite the difference in initial impact (SR, 1993, pp.12-15).

An example of successful rural economic recovery is Mineral Wells, Texas, where Fort Wolters, an Army helicopter school, was closed in 1973. Mineral Wells, a community of 15,000, is 48 miles west of Fort Worth, in the North Central Prairies. The school, sometimes training over 7,000 soldiers at a time, had 690 permanent military personnel, 570 civilians, and 650 contractors (Committee, 1991a, p.24). Fort Wolters is now an industrial complex (producing everything from mobile-radio antennas to burial caskets), an educational center

(housing Weatherford College's West Campus, a Headstart school, and a National Guard Training Center), and provider of social services (through a youth home, health and welfare programs) and recreational facilities (a gym, tennis courts, swimming pool, playground, and activities center). The more than 20 industrial tenants that provide additional tax revenue to the city include Century Flight Systems, a producer of autopilots, and Mepco/Centralab Inc., an electronics manufacturer and the area's leading employer (Bacon, 1989, pp.9-12). Approximately 700 people are now employed by over 60 organizations on Fort Wolters (Committee, 1991a, p.24).

Third, the reaction of a community's citizens and businesses following the announcement of a military base closure is important. Many of them may choose to migrate when the base closes, affecting the health and stability of the economy (GF, 1993, p.8).

## **2.3 Strategies for Successful Reuse**

The closure of a base is often the stimulus needed to prompt long-term planning for economic growth in a community. The four major principles for the reuse activities to result in successful economic recovery for the communities affected by the military downsizing are that: the community be directly involved in the reuse activities; there be open communication and coordination between the community and other organizations relating to base closure activities, including federal and state agencies; the developmental strategy for reuse should take into account the particular assets and resources of the community; and, the community should clearly identify its objectives when evaluating potential reuse alternatives.

### **Examples of successful reuse**

The reuse of closed bases provides an opportunity to offset the economic impacts of closure on the communities. For example, the head of the citizen committee that searched for new industry uses of Brookley Air Force Bases believes that Mobile, Alabama, is in a better economic position without the base. When Brookley closed in 1969, Mobile paid \$1 for runways, aviation buildings, and 1,312 acres for conversion to a general aviation airport, obtained 392 acres at fair market value for use as an industrial park, and acquired many buildings at no cost for use by the University of South Alabama. New uses included a crime laboratory in the military chapel and fraternities in the former generals' houses. Teledyne

Continental Motors located on the former base due to low startup costs, drawing a large number of related industries to the base. Now an industrial landlord, the city government has a major new source of revenue and a more diverse and independent economic base (Herbers, 1979, p.A1,B9).

Another example of a community that was successful in mitigating the economic impacts of a closed military base is Albany, Georgia, the former site of Albany Naval Air Station, closed in 1974. After an aggressive seven-year campaign to solicit business, a Miller beer brewery and a Kroger peanut butter processing plant opened up on the former base. The 341 civilian jobs lost after the closure were replaced by 2,000 new ones (Achs, 1991). This case also illustrates the time constants for a community to recover from a military base closure. The transition period for conversion to civilian uses is typically three to five years, although some bases take up to twenty years (Adjustment, 1993, p.6).

A third example is Greenville, South Carolina, where the Donaldson Air Force Base closing was announced in 1962 and finalized in 1964. The base employed 4,100 military personnel, many of whom lived off-base, and 600 civilians. Greenville County had a reverter clause in its lease agreement with the military, stating that if the base was abandoned, the title would be returned to the city and to Greenville County. The Greenville Planning Commission studied alternatives for the reuse of the land and facilities at Donaldson and decided to establish the Donaldson Center, a business and industrial park that included an industrial and warehouse area, an air park, a research and engineering area, a commercial area, a retail area, and an educational and training area. Within four months of the closure, the initial investment made by the city of Greenville and the county (even though the land automatically reverted back to the community, payment had been required for the improvements made by the Government) was repaid through proceeds of leases and sales of the base property. Within ten years, more than 70% of the total area (2,465 acres) was occupied by 115 private and public tenants, using 131 of the 149 original buildings and 25 new buildings. New uses included a vocational-technical training center, serving approximately 600 students, an Army Reserve engineering training center, a National Guard training center, and industrial activities of companies such as Norwich Pharmaceuticals, Union Carbide, LTV, Tuck, and Michelin. 3,200 new jobs were created through the reuse of the base and the economic adjustment efforts by the community resulted in another 2,400 jobs being created off-base (Committee, 1991a, pp.39-40).

The Office of Economic Adjustment (OEA), established within the Department of Defense in 1961 to aid communities in planning for the reuse of surplus military property, conducted the most comprehensive study of 97 military bases closed between 1961 and 1993. OEA found that 171,177 jobs, excluding secondary and off-base jobs, replaced the loss of 87,557 former civilian DOD and contractor jobs. The comparison is with civilian jobs because most of the 136,225 military personnel were transferred to other sites (Daicoff, 1973, pp.5-6).

### **Community involvement**

Community involvement is a key ingredient of a successful base conversion strategy. The leaders of the community must identify their need to participate fully in the economic recovery of their region, including the decisions and actions regarding the conversion of a base from military to civilian uses. Participation by the community helps to mitigate the economic impacts that follow the closing of a military base, including the loss of civilian jobs, the panic that may follow a closure announcement, and the migration of the population. One study of the reuse of military bases concluded that the “single most important factor in whether a conversion succeeds...is local initiative.” Robert Rauner, head of the Pentagon’s Office of Economic Adjustment, was quoted as saying “the better programs were the ones in which there was a more vigorous local endeavor (Sylvester, 1993).”

However, communities facing a possible base closure often do not immediately act to mitigate the impacts. The reaction usually occurs in five stages, beginning with disbelief that the closure will actually occur, then the community fights the closure decision, local community members and businesses often panic because of the impending job and income loss, then the community finally accepts that the military base will close and realizes that the closure is probably advantageous to the local economy if diversification of the local economic base occurs (Daicoff, 1973).

The community of Mobile, Alabama, followed this pattern. When the decision was made to close the base, the Alabama Congressional representative, and almost every other political, business, and civic leader in southern Alabama, fought the decision. After the decision was final, the community turned its energy towards the reuse of the base. There was a political fight that lasted several years to determine what to do with the facility, but the reuse committee eventually decided on the mixed industrial-aviation-industrial complex

(Herbers, 1979, p.B9).

This pattern of communities fighting the base closure decision and then harnessing that energy into reuse commissions is the pattern followed by most communities, although not always in quite the same way. Alexandria, Louisiana, near the England Air Force Base that closed in December of 1992, put its own twist to this pattern with successful results. The rural community of 49,188 was notified in 1989 that its base was being considered as an alternate for closure. Members and leaders of the community, historically split on many issues, immediately joined forces into consensus-building actions. The Chamber of Commerce formed an ad-hoc group to fight the closure, producing a 200-page document that described the economic impact on the community and why the base should not close. The economic impact study projected a 5.4% drop in regional income by 1994 and a 7.4% drop in 1997, as well as a loss of 6,393 jobs (Louisiana already had one of the highest unemployment rates in the United States). The massive community effort successfully deterred the closure decision. This respite provided an opportunity for the community to prepare for possible base closure in the future. The ad-hoc organization converted into a coalition of representatives of the city, county, and Chamber of Commerce, with a two-fold mission. If the base appeared again on a closure list, this coalition would fight to save it. Meanwhile, a smaller group of this coalition, England 2000, developed a "community transition survival plan" in preparation for possible closure. England 2000 developed a survival plan to establish an England Transition Authority that would share the control of the reuse of the base between political subdivisions. England 2000 also educated the community on the impacts of a base closure through many presentations to civic organizations, mass media, and other organizations (GF, 1993, p.8).

The earlier scare in the life of England Air Force Base provided an opportunity for the community to plan before it was faced with an economic blow. Thus, as soon as the announcement to close the base was made after Desert Storm, the city was prepared to revise its budgeting policies to reflect the expected decline in fiscal resources. Within a week, the city was able to turn its focus from fighting the closure to fighting for recovery from the economic impact of the closure. Within 90 days, the transition authority authored state legislation to establish a political subdivision to control base reuse activities, receiving a \$500,000 operating fund from the state. The united community enabled the authority to more clearly communicate the community's position to the military in order to ensure

a smooth transition process. Within a year, a mixed-use base revitalization plan had been drafted, economic development materials had been distributed to thousands of prospective reuse organizations, private lease negotiations had already begun, and one company was already operating on the base prior to the December 1992 closure (GF, 1993, pp.9-10).

This example shows the importance of a community to act quickly and become involved in developing the reuse strategy. A community should take advantage of the time prior to the actual closure to establish a broad-based reuse organization to develop its strategy and determine the reuse plan. Local citizens must feel that they have a voice in assisting their community. The organization should try to include citizens, those who are losing their jobs, educational institutions, special interest groups, the private sector, and civic leaders. Early public involvement in the reuse plan allows for the varying interests to be represented and for competing ideas for recovery to be considered (Lynch, 1970, p.233).

A review of the military base closure studies also revealed the importance of a united community. Once the alternatives are considered, if a community is not united in the reuse plan, major delays may occur, slowing the economic recovery of the community. For instance, in the reuse of Hamilton Air Force Base in California that was closed in 1974, the community could not agree on the future use and as of 1992 it was still not effectively developed (Hackworth, 1992, p.39). Other communities that were not able to recover as quickly as Alexandria due to delays in the community involvement process included Mobile, Alabama (as explained earlier) and Edgmont, South Dakota, that faced the closure of Black Hills Army Depot (Lynch, 1970, pp.134,146). With a united front, a community also gains leverage when negotiating for the equipment on-site. Much of the appeal for industry in locating on a former military base is due to the buildings, infrastructure, and equipment that is already on site. For instance, the Mare Island Naval Shipyard in northern California is scheduled to close in 1995. The reuse commission that has been established will not make a final decision on its plan until July 1994, but one of the many alternatives being considered is to preserve it as an industrial complex, in which case, the equipment on-site, such as the lathes, presses, mills, refueling cranes, and rail trackage, would be needed by the community. But the Navy was considering moving some of that equipment, including the cranes, to other naval shipyards (Kim, 1993b, p.A1). If the reuse commission decides to maintain Mare Island as an industrial park and the community is united behind the plan, it will have greater leverage when negotiating with the military over whether the cranes



should stay at Mare Island (Achs, 1991, p.53).

It may not always be possible to represent all community interests or have a community that is united behind the reuse plan. According to Paul Peterson, a leading theorist in city planning, the politics in communities that are undertaking developmental activities tend to be driven by consensus, thus supporting the idea that a united community is something attainable. Peterson claims that because economic development activities contribute to the economic well-being of a community, members of the community can be expected to support the activity (Peterson, 1981, p.143). However, alternative theories, best expressed by John Logan and Harvey Molotch, warn that developmental activities cannot always be expected to encourage consensus-building. Logan and Molotch are primarily sociologists, who are reacting to the neo-classical economist view and do not see developmental activities as value-free. They challenge the idea that growth is good for the city, and are concerned that in undertaking developmental activities there is often a potential victim and a perpetrator, thus supporting the idea that a united community may be difficult to attain (LM, 1987, pp.1-2).

### **Coordination with government organizations**

In addition to the communication that must occur among community members during the transition period, there must also be communication and coordination with organizations and officials at the federal and state level, and with the management of the military base. To facilitate this communication, DOD's Office of Economic Adjustment (OEA) was created to assist communities in their recovery from the economic impacts of military downsizing and budget cuts. OEA has accumulated many years of experience in overseeing the reuse of closed military bases and can participate with the community in planning for the transfer of military properties to civilian uses. One of OEA's functions is to act as executive secretariat of the President's Economic Adjustment Committee (EAC), an inter-agency committee created by President Nixon in 1970, to coordinate federal assistance in helping communities adjust to dislocations caused by changes in defense spending (Daicoff, 1973). The members of the EAC are a broad representation of federal departments and agencies, as listed in Table 2.1. Thus, OEA is familiar with other federal assistance programs available to help a community and can act as a facilitator in working with these other organizations (Commission, 1992, p.47).

**The President's  
Economic Adjustment Committee**

Secretary of Defense, Chairman	Secretary of Agriculture
Secretary of Commerce	Secretary of Education
Secretary of Energy	Secretary of Health & Human Services
Secretary of Housing & Urban Development	Secretary of the Interior
Secretary of Labor	Secretary of State
Secretary of Transportation	Secretary of the Treasury
Secretary of Veteran Affairs	The Attorney General
Chairman, Council of Economic Advisors	Director, Office of Management & Budget
Director, U.S. Arms Control & Disarmament Agency	Administrator, Environmental Protection Agency
Director, Federal Emergency Management Agency	Administrator, General Services Administration
Administrator, Small Business Administration	Director, Office of Personnel Management
Postmaster General	

Table 2.1: Members of the Economic Adjustment Committee (Adjustment, 1993, p.3).

As an example of the financial assistance available from federal agencies, EAC granted an average of \$85 million a year between the years of 1973 and 1980 to communities for planning, building infrastructure, and providing municipal services. Another example is the Economic Development Administration (EDA) of the Commerce Department. Created to finance public works projects for economic development, EDA has provided \$57.5 million to 31 base redevelopment projects between 1975 and 1980 (LM, 1992, p.27). Under its Title IX program, EDA has responsibility for addressing sudden and severe economic dislocations. Its grants must be used by state or local government to develop economic plans, establish revolving loan funds, build or rehabilitate public facilities, improve public services, and support other activities designed to aid a community in its economic recovery (Commission, 1992, p.48). President Clinton also recently announced in his conversion plan for military base closures that an average planning grant of \$1 million will be given to each community affected by a major base closing (Five-Point Plan, 1993). The Department of Labor also has funds to assist personnel losing jobs as a result of the base closure process (LM, 1992, p.30). Other federal programs include the National Institute of Standards and Technology, the Department of Commerce's advanced technology program, designed to aid affected communities in transferring technology to small and medium-sized businesses and in helping commercial interests to move onto the base (Five-Point Plan, 1993).

Another important government organization with which there must be open commu-

nication and coordination is the Environmental Protection Agency (EPA). Virtually every military installation has been contaminated by hazardous byproducts and military officials estimate that it will cost more than \$1 billion to restore the environment at the 86 bases that were selected in 1988 for closing by the year 2000 (Schneider, 1991). EPA has recognized the need for cooperation, and as part of Clinton's conversion plan, EPA will assign a senior-level official to every site that is in need of cleanup. This official will have the authority to make decisions so that base reuse activities can move quickly, with an emphasis placed on using innovative cleanup technologies and allowing the public to become involved earlier in the process than it has in the past (Five-Point Plan, 1993).

Major communities facing base closures can now work with the various federal agencies and departments through a single point of contact who has been trained in the programs available at the federal level. Also a part of Clinton's conversion plan, this single point of contact is an attempt to alleviate communication problems experienced by communities in the past. Communities often lacked experience in working with federal agencies and frequently received different answers for the same question from different agencies (Five-Point Plan, 1993).

Identifying the need for state involvement can also be an important factor in the successful reuse of a base. State governments are interested in the economic well-being of its communities and many have created organizations or appointed leaders to help facilitate the recovery of communities as a result of downsizing. One of the ways in which state governments can help is through legislation. For instance, even though the Donaldson Air Force Base title reverted back to the city and county of Greenville, South Carolina, it did not include existing government improvements and it was necessary for the state to legislatively authorize the city and county to buy the base with its improvements (Committee, 1991a, p.39). Other ways in which a state can help is through planning grants. The local transition authority in Alexandria, Louisiana, near England Air Force Base, actively pursued the involvement of the state and received a state planning grant, as well as increased political power through the creation of the England Economic and Industrial Development Authority to control the reuse of the base (GF, 1993, p.10).

Some state governments, usually those with several communities affected by military downsizing, are more closely involved in the reuse of bases. In California, the twenty-two base closures that have been announced, including the Alameda Naval Air Station, Alameda

Naval Aviation Depot, Oak Knoll Naval Hospital, and the Mare Island Naval Shipyard, prompted Governor Pete Wilson to create a special task force in 1993 to speed the process for redeveloping bases by eliminating barriers at all levels of government (Stone, 1994, Kim, 1993a). The California Military Base Reuse Task Force has representatives from local government, organized labor, industrial development organizations, banking industry, and one public member with expertise in toxic cleanup issues (Carrier, 1993). The closure of Westover Air Force Base in Massachusetts, near Chicopee and Ludlow, prompted the state to establish a Massachusetts Joint Commission on Federal Base Conversion. This commission facilitated the interaction of communities with the state and federal government, providing a leverage point for the local communities (Committee, 1991a, p.37).

Open and consistent communication, that facilitates the planning and implementation of a reuse plan, should be solicited from other organizations as well, such as state and local education officials, state or local historic preservation office, and transportation agencies (Committee, 1991b, pp.B20-21).

Communication with the base management is also very important because they are the link between the community and the facility itself, possible reuse alternatives, and military officials further up the chain-of-command. This communication helps the community to perform an on-site inventory of the facilities and more efficiently address difficulties encountered in the transition process (Lynch, 1970, p.243). If the disposal agent is the General Services Administration (GSA), open and consistent communication with the GSA representative is also important.

## **Reuse planning**

The first step in reuse planning is to identify the type of property that is available and assess the strengths and weaknesses of the surplus property, the available workforce, and the community, in order to develop criteria for reviewing reuse alternatives. The community needs this information to give to potential reuse organizations making locational decisions and to learn more about its own needs and objectives. The community can then use this information to determine the criteria for evaluating reuse alternatives.

The community reuse organization, usually the organization that will have control of the land when it is transferred, often includes representatives from both the private sector and public sector (such as the city council, mayor, representatives from the civic departments

of Transportation, Public Works, Recreation, Economic Development, and Environment), similar to the economic development organizations discussed in Chapter 1. At key points in the decision process, this reuse committee publicly reports on the progress of the reuse planning activities and solicits community input. The final plan usually requires review and approval from both the Planning Commission and the elected city or county council (Committee, 1991b, p.B20).

The land, buildings, and physical equipment, often received by the community at little or no cost, can provide a community with very valuable assets for redeveloping a base. Many of the military installations are basically small cities, with much of the infrastructure already in place, so that industry can reach new markets with little start-up time and investment. The private and public sector is attracted to military bases because the new owners, usually some level of government, can offer better deals than owners of private property (Herbers, 1979, p.B9). For example, the Justice Department's Bureau of Prisons was in desperate need for space after a change was made in sentencing procedures in 1987 that imposed mandatory minimum terms for drug offenders. The Pentagon and the U.S. Bureau of Prisons negotiated to convert five barracks of Fort Dix, in Burlington County, to a low-security prison complex. The total cost of the conversion is estimated to be \$9 million, much less than the \$150 million estimate for a new facility because of the buildings already in place (Katz, 1993).

Suggested information to gather regarding the condition of the facilities is shown in Table 2.2. Knowing the condition, quality, and reuse potential of on-base facilities, the quality of the utility system and other infrastructure systems, and the land use character within the base and adjacent to the community, can help a community realistically determine what type of reuse activities can occur. This data helps a community to determine potential reuse activities that will not entail the potentially high cost of renovation or rehabilitation, as well as show what areas of the base need improvement before they will be attractive to potential clients. Communities can also use this information to make decisions on the zoning requirements for the land (Committee, 1991b, pp.B10,12). Examples of the most common reuses for military base facilities include:

- Administrative facilities - business offices, classrooms, administrative and government offices;

Base Amenities	Inventory Data to Collect
<i>Undeveloped Land Areas</i>	Location Present use Physical development suitability Archeological resources Critical wildlife habitats Environmental constraints (floodplains, slope, soils, etc.)
<i>Facilities</i>	Location Physical condition and age Structural design Electrical, telephone service HVAC system Architectural style Historic status (if applicable) Presence/condition of asbestos used in construction (if applicable)
<i>Utility Systems - Water, Sewage, Gas, Heating, Electrical, Telephone</i>	Location Physical condition and age Capacity Recent and planned upgrades
<i>Transportation Systems - Vehicular, Pedestrian</i>	Location Dimensions Road classifications Existing access Planned upgrades and improvements Surface parking lot capacities Structured parking lot capacities Paved pedestrian sidewalks Unpaved pedestrian paths Bicycle paths
<i>Airfield</i>	Layout and dimensions Clear zones, safety restrictions, approach surfaces Navigational Aids (NAVAIDS) Aircraft parking areas Fuel storage and distribution systems Lighting

Table 2.2: On-site inventory data to collect (Committee, 1991b, p.B11).

- Airfields - commercial and general aviation airports, aircraft rehabilitation and maintenance centers, aviation flight and mechanic training facilities;
- Enlisted quarters - dormitories, health care facilities, and housing;
- Public work facilities - automobile and truck maintenance facility, and light industry (such as manufacturing, assembly, and packaging);
- Recreation facilities - parks and gymnasiums;
- Schools - K-12 schools, colleges, and vocational-technical schools; and,
- Warehouses - warehouse and distribution facilities and light industry (Adjustment, 1993, p.35).

In the OEA study of 97 military bases, 46 of the former bases established educational institutions such as four-year colleges, post-secondary vocational-technical institutes, community colleges, and high school vocational-technical programs. OEA estimated that the number of students at these institutions was 124,045 college and post-secondary students, 20,344 secondary vocational-technical students, and 37,593 trainees. Of the former bases, 66 established industrial parks, 37 established office buildings, and 43 opened municipal or general aviation airports (Adjustment, 1993, p.4). Table 2.3 summarizes the various reuse activities for different military facilities, with most of the sites having several different uses.

OEA's study also detailed particularly creative reuse proposals on some former military bases. A former parachute loft in Nebraska is now a pipe-organ production facility. An earth-covered ammunition bunker in Kansas houses a municipal zoo support facility and animal quarantine station and former airplane hangars are used for the manufacture of city buses and for the storage of pleasure boats. A building that was once used to wash B-52 bombers is now used for producing and packaging cans, while farmers grow mushrooms in the basement. Many private and public sector organizations located on former bases, including General Electric, Beech Aircraft, Purdue University, Federal Express, the U.S. Postal Service, and Proctor & Gamble (Adjustment, 1993, p.36).

The communities should also become familiar with environmental contamination at the base because potential reuse organizations may be unable or unwilling to locate there, due to environmental contamination and liability (Schneider, 1991). For instance, in 1990, Lockheed Corporations leased an old hangar from Norton Air Force Base in California while reuse plans were being made for the base's closure. Soon after, Lockheed decided to replace the floor of the hangar. It needed a floor with enough structural support for

Type of Military Base	Ag.	Aviation	Commercial/Retail	Correctional	Educ.	Health	Indust.	Museum/Conser.	Office	Recreation	Religious	Resid.	Transp.	Total Number of Facilities
Air Force Station		4		3	4	3	5	1	4	2		5	2	13
Air Force Base		32	1	5	23	1	30		15	12	1	15	4	37
Army Base					1		1		1					1
Army Terminal						2	6		3			1	1	2
Arsenal			1		3	1	7		1	2				6
Depot					2	1	3		1				2	8
Fort or Camp	2	2		1	5	1	1		1	2		1		6
Hospital			1		1	1	4		1			1		6
Naval Air Station		3	1	1	4	1	4		1				1	3
Naval Base			1				1		1					1
Plant		1	2		1	1	5	1	1				1	1
Shipyards						1	1		1	1	1		1	5
Other		1	1	1	2	1	3	1	6	2	1	1	1	10
Total	2	43	7	11	46	14	66	3	37	23	3	23	13	97

Table 2.3: Number of former military bases with each type of reuse activity (Adjustment, 1993, pp.7-25).



the maintenance of Boeing 747 jetliners and Lockheed received permission from the Air Force to dig up three feet of soil. When EPA learned of the project, it claimed that the action violated an agreement that it had with the Air Force regarding the cleanup of the site. EPA required Lockheed to develop a more thorough plan for the disposal of the contaminated soil. The delays, contracts to design a program, construction, and other activities, added \$6 million to the \$40 million project. "It's been an unbelievable process, a nightmare really," said Richard Crail, vice-president and general manager of Lockheed Commercial Aircraft Center. "Unless the rules change, I would be surprised if Lockheed pursues another operation on a closed base" (Schneider, 1991).

A similar situation occurred at Pease Air Force Base, near Portsmouth, New Hampshire, where more than 4,000 military and 1,000 civilian jobs were eliminated in April 1991. Firefighting teams formerly trained at this 4,255-acre base where they dumped jet fuel on the ground, allowing unburned fuel to seep into the soil. Roughly 100 acres are now contaminated with solvents, fuel, and other toxic waste and the Pentagon has spent more than \$10 million investigating the polluted sites. These environmental problems are preventing the Pease Development Authority from selling, and possibly leasing, the property to Deutsche Airbus, the German subsidiary of Airbus Industries, that wants to use the base for maintenance operations and employ more than 1,000 people (Schneider, 1991).

An example of a military property with environmental contamination that has already been transferred is the Watertown Arsenal, or Army Material Technology Laboratory, in Watertown, Massachusetts, that closed more than half of its property in 1966. The Watertown Arsenal has tested materials for everything that the Army produces, and the Atomic Energy Commission also conducted extensive nuclear-weapons research on the property. Most of the surplus property for the 1966 closure was acquired by a consortium led by New England Development that later constructed a shopping mall on the site. Between 1980 and 1983, the Department of Energy conducted a radiological survey of the land that was transferred in 1966, including the area that is now the shopping center's front parking lot. DOE found that this area had "significant levels of contamination" in excess of Nuclear Regulatory Commission guidelines. This contamination is most likely not harmful to Arsenal Mall shoppers, but it may become a problem if the land is put to another use or if the buried foundations of an old uranium foundry is exposed (SG, 1989).

No one knows how many other former military bases will be found to be environmentally

contaminated. The attention that DOD is now receiving for contamination on the sites that are closing in the near future may trigger a concern for the former military bases that are now already put to civilian uses. The Army Corps of Engineers now leads a program to begin cleanup activity at 7,000 formerly used defense sites around the U.S. that may have some form of environmental contamination. By 1991, only 2,639 formerly used defense sites had preliminary inspections and more than three-quarters of those will require some kind of cleanup action. It is unclear how many of these sites are privately owned and how many the federal government still owns (Shulman, 1992, pp.105-107).

The only thing that can be done to prevent such problems in the future is to ensure that the sites currently undergoing plans for reuse plans are properly treated and restored. The Department of Defense has said that it will accept liability for its environmental problems and clean the contaminated portions before allowing reuse on the contaminated areas, with over \$5 billion committed for the next five years. DOD and EPA are developing a system to allow the reuse of portions of the bases that do not need cleanup, so that reuse will occur in parallel with the cleanup (Five-Point Plan, 1993). Despite these promises, communities must continue to demand full information regarding environmental contamination and planned cleanup procedures in order to properly assess reuse potential.

The community must also gather information about its labor-force, such as the skills and availability of its labor-force, and include historical, demographic, and weather information. The community should compile information about costs related to the operation of business, such as transportation costs, wages, utility rates, natural resource costs, and tax rates. Other useful information includes housing conditions, distance to other markets, local buying power, crime rates, and schools and similar public services (Lynch, 1970, pp.235-236).

Through the assessment of these local resources and assets, a community must look for its unique economic advantages, or niche. For instance, the community of Bangor, Maine, when faced with the closure of Dow Air Force Base in 1968, found that its location could serve as a jumping-off point to Europe in air travel because the 11,800-ft. runway is of sufficient size to handle the larger aircraft that fly the polar route to Europe. The community created the Bangor International Airport, moving 800,000 passengers a year through customs and immigration more efficiently than the Boston or New York airports (Warner, 1993).

A community should also identify the qualities that make it unattractive to industry and determine potential obstacles for reuse (Lynch, 1970, p.235). For instance, some communities are concerned that businesses may not be attracted to a base because of its image as a military installation. Actions that can help enhance the image of a closed base include developing new entrances to the facility and changing its name (Committee, 1991b, p.A7).

There are many organizations and resources that deal with how communities can properly assess its particular resources. One of these is the National League of Cities (NLC), an organization that has worked as an advocate for the needs of cities, often in the form of lobbying for special legislation. Many of NLC's member communities have been affected by military downsizing and NLC has worked closely with OEA in the past. Together, these organizations published the "Local Officials Guide to Defense Economic Adjustment," containing advice for communities faced with the economic impacts of defense downsizing, including how to determine a community's economic niche and how to understand industry's view of the community relative to other communities (Mayer, 1992).

All of the information gathered regarding the strengths and weaknesses of the area is used to determine a developmental strategy for the reuse of the military base. Economic consulting firms can be a valuable resource at this point, acting in an advisory role to aid in the assessment of a particular community's skills and assets and how the results of the assessment should fit into developing criteria for reuse alternatives. A consulting firm can also help determine the current regional economic setting and trends. A market demand analysis is an important part of the developmental strategy in order to identify realistic development opportunities. A typical approach for conducting a market study is to define the market area, evaluate the economic trends of that area, and analyze current and future demand and competition (Committee, 1991b, pp.B4-8).

The community must then develop a plan for communicating all of this information in an effective manner to potential reuse organizations. For example, city officials in Albany, Georgia, worked very aggressively to solicit businesses through letter-writing, knocking on doors, making phone calls, and encouraging businesses to look at the available facilities. A city official in Myrtle Beach, who has observed advertising done by other cities, said that it is possible to even "...sell refrigerators to Eskimos if you make enough calls" (Achs, 1991, p.53).

Local communities can reach possible reuse entities through organizations such as the

National Association of Installation Developers (NAID), an organization of communities that have been directly affected by base closings. NAID, originally organized to share the experiences of airport managers on former military air bases, now often serves as the liaison between bases and their new end users. One of its publications is a booklet for companies that are considering new sites. This booklet lists bases around the country that are undergoing conversion and provides brief descriptions on the facilities available. The information includes locational data, types of facilities available, population data, local development incentives, regional economic climate and focus, and possible reuse alternatives (AID, 1993). Other ways to reach potential reuse organizations include advertising in trade journals, real estate journals and other publications, through direct mail of brochures or pamphlets, exhibitions at trade shows and other conventions, or events held on-base (Committee, 1991b, pp.B30-34).

In developing a strategy, communities should be prepared to overcome at least one unexpected problem or major complication, for as case studies of previous base closures have found, difficulties do occur no matter how well a community is organized or prepared (Lynch, 1970, p.242). The strategy should also be flexible to allow for response to unexpected changes in the market conditions, since it is very difficult to accurately forecast market demand (de Neufville, 1990, p.273). Thus, the strategy should incorporate a method for periodic evaluation and revision.

### **Criteria for evaluating reuse alternatives**

Determining the criteria for evaluating potential reuse activities is a difficult task and one that involves considering many different interests. The DOD has developed a basic set of criteria and by looking at DOD's experiences, it is possible to learn the common themes and how they can best be implemented.

The most common concern is the creation of new basic jobs, to replace the jobs lost by the base closure. Communities should select uses that have the ability to create new basic jobs, mitigate migration, and offer growth over the long-term (20 to 30 years). John Lynch, formerly with the OEA, conducted an in-depth study of twelve communities facing base closures and confirmed this point (Lynch, 1970, p.261).

In order to increase the income multiplication factor, communities should seek firms that will support new or existing local firms and subcontractors, due to their demands for

services and products. For instance, at the Donaldson Center (formerly Donaldson Air Force Base) in Greenville, South Carolina, Hughes Tool Company located at the site in order to be closer to LTV Electronics. Another method to encourage job creation is to connect the rental value of a facility to the number of people employed. This method was used at Presque Isle Air Force Base in Maine. The community also encouraged growth of new jobs in the region by giving preferential treatment to firms locating in the area for the first time (Lynch, 1970, p.238). The Dow Air Force Base Reuse Committee in Bangor, Maine, gave preference to new businesses, using some of the facilities as incubators for the startup of small businesses (Sylvester, 1993). Communities should avoid industries that require large community investments for a small number of employees involved (Lynch, 1970, p.238).

Economic development proposals are evaluated on their ability to create jobs that match the skills, as much as possible, of the community's workforce. Data that has been collected regarding the workforce skills of the community can help determine what type of industry would be most successful at creating jobs that match the skills available. For example, the expertise of those who had served at Dow Air Force Base was tapped for the operation of the new Bangor International Airport (Warner, 1993). As another example, the local leaders of Neosho, Missouri, assisted by the OEA, identified the skills of the employees of the closed Air Force Plant and determined that machinists with their skills were in short supply in the United States. Neosho created an industrial park and the availability of the skilled workforce helped attract industry. Within a year, private sector employment had completely replaced the jobs that had been lost (Committee, 1991a, p.12).

Another community that was successful at matching the skills of the displaced workers was York, Pennsylvania. In the early 1960's, York faced the closure of York Naval Ordnance, the employer of 1,092 civilians with an annual payroll of \$7 million. The Navy negotiated directly with potential reuse firms and the successful bidder was American Machine and Foundry Company (now AMF, Inc.). AMF offered to hire the dislocated workers at their present salaries, determine their vacation time based on their prior length of service to the government, apply their Social Security coverage towards the retirement credit accrued under government employment, and maintain the seniority that had already been established among the workforce. Thus, 90% of Naval Ordnance Plant former employees stayed with AMF. AMF was able to provide these employment opportunities for the dislocated workers because it received a Navy contract for the manufacture of \$30 million worth of

rocket launchers. In 1965, 60% of AMF's total production involved government contracts. However, within the next ten years the company diversified its activities to include manufacturing bakery machinery and other equipment, as well as assembling Harley-Davidson motorcycles, so that the level of production work funded by the government dropped to less than 10%. By 1975, AMF had added 90,000 square feet to the manufacturing and warehouse space, paying \$93,000 in annual property taxes to the city of York, and was the third largest employer in the area with 1,850 employees and an annual payroll of \$20.5 million (Committee, 1991a, p.36).

The initial success of the reuse in York was obviously a result of the government contract, although fortunately for the community, and the company, the production activities diversified away from defense contracts. Lynch suggests that communities should consider their new economic role to be one that is separate from defense-oriented activities because it generates the same type of problems that resulted in the need for reuse activities in the first place (Lynch, 1970, p.237). Most case studies show that the community's success depends largely on its ability to grow and diversify without the inflow of military dollars (Daicoff, 1973). The communities that have taken the greatest strides towards economic recovery and a more diversified economic base, are those communities that have secured the greatest amount of reuse of base facilities.

Communities also consider educational institutions as reuse alternatives as an indirect way to create jobs. Using data collected during the community's assessments of its workforce and needs, an analysis can be conducted to determine the current deficits of national and regional job skills. The community can then support an educational program that would help meet that need and industry may be attracted to the region because of the supply of skilled labor. For example, Universal Atlas Cement Division of U.S. Steel located in Waco, Texas, after the community established the James Connally Technical Institute at a former Air Force Base (Lynch, 1970, p.241).

In developing the criteria for planning reuse activities, a community identifies its existing problems and objectives in areas such as recreation, health, historical or cultural attractions, and transportation, and work towards meeting those needs (Lynch, 1970, p.236). For instance, in the 1970's, the Army Presidio in San Francisco, California, estimated to be worth \$1 billion if developed as condominiums or a mixed-use luxury project, except for a 36.5-acre hospital campus, was converted into a historical landmark (Reier, 1989, p.20). In

Comparative Operating and Maintenance Costs For Former Military Bases		
Base and Location	Costs (in 1976 dollars)	
	Military	Civilian
Amarillo AFB (Amarillo, Texas)	\$9,744,900	\$2,360,000
Lincoln AFB (Lincoln, Nebraska)	6,130,800	1,000,000
Perrin AFB (Grayson County, Texas)	5,298,100	363,000
Rossford Army Depot* (Toledo, Ohio)	4,636,900	300,000
Schenectady Army Depot (Voorhesville, New York)	6,657,500	1,700,000
Schilling AFB (Salina, Kansas)	8,586,800	3,720,000
Westover AFB * (Chicopee, Massachusetts)	8,447,400	1,990,000
*Where joint use occurred during the final year of operations prior military costs have been pro-rated for comparability purposes.		

Table 2.4: Comparison of military and civilian operating and maintenance costs (Committee, 1991b, p.A15).

this case, the value of preserving the character and environment of the surrounding area, Golden Gate Park, was considered the community's main objective.

Another concern for the community in evaluating potential reuse activities is the cost of development once ownership is transferred to the community. A positive cash flow during the early reuse period with minimum development costs is preferred. Past experiences show that the cost of operating a former Defense facility under civilian ownership may be less than the operating cost under military ownership. (Refer to Table 2.4 for a comparison of 1976 sites.) This is because civilian tenants sometimes provide their own maintenance and conversion improvements to the facilities and military standards for maintenance are usually higher than civilian standards (Committee, 1991b).

Communities can often formulate a multi-purpose solution using a broad spectrum of criteria. Exceptions to this case have included AMF at the York Naval Ordnance and

Presque Isle Air Force Base in Maine, that was entirely converted into the Skyway Industrial Park (Daicoff, 1973).

The planning process for developing the criteria includes understanding the community's vision for the future, the economic health and direction of the region and nation, the potential reuse possibilities based on the types of facilities that are available, and the preference of the community for the criteria described above. When planned carefully, base closures can offer an unprecedented opportunity to restore economic health to a community, to prompt new industrial development, to provide improved public services, and encourage long-term planning for economic growth.

In summary, the economic development experience of the Department of Defense, based on the reuse of former military bases, provides a framework for the analysis of the Department of Energy economic development experience. DOD has created the Office of Economic Adjustment to address economic development issues and assist communities in mitigating the economic impacts of downsizing through the creation of basic sector jobs. The strategies for successful reuse include extensive community involvement, coordination with local, state, and federal organizations, an effective development strategy, and carefully developed criteria to evaluate reuse proposals.



## Chapter 3

# Department of Energy Economic Development

### 3.1 Defining the Problem: Defense Complex Downsizing

The demand for weapons production in the U.S. has decreased significantly with the end of the cold war, prompting the Department of Energy (DOE) to downsize its defense complex. DOE has terminated the production of nuclear weapons and is consolidating all non-nuclear weapon production activities to one site (Nicks, 1993). Many of the DOE sites previously supporting the defense mission are now undergoing a mission change to environmental cleanup, with a goal of completing the cleanup within thirty years (Energy, 1993, p.i). Because environmental cleanup requires different technical qualifications than defense production, only a part of the displaced defense workers can be retrained or reassigned to this new mission. A significant portion of the DOE workforce is being displaced through attrition or lay-offs and many facilities have become surplus to the defense mission.

Congress recognized the adverse impacts that defense downsizing has on workers in the communities and, through Section 3161 of the 1993 National Defense Authorization Act, mandated that the DOE mitigate the negative impacts of its mission change. The DOE initiated this effort by developing “workforce restructuring plans” for affected sites. Workforce restructuring plans are designed to reduce the immediate impact of job losses on the defense workforce by offering retraining programs, severance pay packages, relocation options, and voluntary and involuntary layoffs (Review, 1994). However, implementation

of this strategy eventually expanded to include economic development activities in order to reduce the long-term economic effects on the communities. Thus, in November 1993, Secretary O'Leary declared economic development to be a major mission of the Department (O'Leary, 1993).

Some of the defense sites undergoing workforce restructuring and economic development include:

- Hanford - a plutonium production facility in southeastern Washington,
- Mound Plant - a manufacturing plant of non-nuclear and tritium-containing components for weapons in Miamisburg, Ohio,
- Oak Ridge - an enriched uranium hexafluoride production facility and a plant used to separate uranium isotopes in Oak Ridge, Tennessee,
- Pinellas Plant - a manufacturing plant of electronic and mechanical equipment for weapons applications near St. Petersburg, Florida,
- Rocky Flats Plant - a manufacturing plant of nuclear weapons components near Denver, Colorado, and
- Savannah River - a nuclear material production facility in south-central South Carolina near the Georgia border (Energy, 1993).

The estimated job losses for the sites are shown in Table 3.1. Personnel at DOE sites includes both DOE and contractor employees (most sites are managed by a Management and Operations (M & O) Contractor), but all of the estimated job losses are contractor employees because federal employees are reassigned elsewhere. The sites determine how many people will be laid off according to the decreases in their annual budgets, and the estimates given are based on current budget predictions. The population and labor-force statistics of the region surrounding the sites are given in order to understand the impact on the communities. As shown, the dependence of regions on DOE as an employer varies from 25% at Hanford and 11% at Savannah River, to less than 0.5% at the Pinellas and Mound Plants. From this data, it appears that the communities surrounding Hanford and Savannah River will be most affected by DOE downsizing due to their less-diversified economies. The actual dependence of the communities on DOE extends beyond the numbers indicated because DOE is a basic sector employer, and, as discussed in Chapter 1, the flow of money in the communities is directly dependent on their basic sectors.

DOE Site/ Metropolitan Statistical Area	Number of Employees	Expected Loss This Year	Regional Pop. <sup>(1)</sup>	Total Labor- Force <sup>(1)</sup>	Percentage of Labor at DOE
Hanford Richland-Kennewick-Pasco, WA	17,000 <sup>(2)</sup>	500-1,000 <sup>(3)</sup>	129,900	67,279	25%
Mound Plant Dayton-Springfield, OH	1,650 <sup>(4)</sup>	825 <sup>(5)</sup>	930,096	444,000	<0.5%
Oak Ridge Knoxville-Maryville-Oak Ridge, TN	16,000 <sup>(6)</sup>	2,300 <sup>(6)</sup>	515,600	281,310	6%
Pinellas Plant Tampa-St. Petersburg-Clearwater, FL	1,100 <sup>(7)</sup>	600 to 800 <sup>(7)</sup>	1,810,925	312,000 <sup>(11)</sup>	<0.5%
Rocky Flats Plant Boulder-Lagmont, CO	8,000 <sup>(8)</sup>	800 <sup>(8)</sup>	178,695	121,842	7%
Savannah River August GA, Aiken SC	20,000 <sup>(9)</sup>	2,600 <sup>(10)</sup>	286,800	183,517	11%

Sources:

<sup>(1)</sup> Department of Commerce, 1990 Census Data,

<sup>(2)</sup> (Hanford, 1994), <sup>(3)</sup> (Sours, 1994), <sup>(4)</sup> (Mound, 1994), <sup>(5)</sup> (Sprankle, 1994),

<sup>(6)</sup> (Galde, 1994), <sup>(7)</sup> (Pinellas, 1994), <sup>(8)</sup> (Press, 1993), <sup>(9)</sup> (SRRDI, 1993), <sup>(10)</sup> (Patterson, 1994),

<sup>(11)</sup> For the St. Petersburg-Clearwater area only (Organization, 1993, p.10).

Table 3.1: Estimated job losses at DOE defense sites.

## 3.2 Designing a Solution: Site-Specific Strategies

The six DOE sites described above are undergoing a fundamental mission change and are facing a new set of challenges. Each site is designing an economic development strategy to mitigate the longer-term effects of this transition. The details of their efforts are presented below.

### Community involvement

Most DOE defense sites work directly with a single community organization when considering economic development proposals. Depending on the economic development strategy of the particular site, some sites work with their community organization on regional economic development activities, whereas others work with their community organizations on economic development projects at the site.

Community involvement at Oak Ridge and Savannah River focuses on regional economic development. Oak Ridge community involvement is based on the East Tennessee Economic Council. Created nearly 20 years ago as the Roane-Anderson Economic Council to represent the business needs of the two counties surrounding the DOE site, the Council eventually grew to represent all 34 counties of the Oak Ridge employees. The Council focuses on the economic growth of the region and submits economic development proposals for the region

to DOE for funding and for the transfer of its technologies (Bagwell, 1994). Savannah River community involvement is based on the Savannah River Regional Diversification Initiative (SRRDI), created by South Carolina Congressman Butler Derrick in response to DOE and Department of Defense (DOD) downsizing. Its members are local community leaders from business, government agencies, public organizations, and educational institutions from 5 counties in two states (30% of the employees at the South Carolina site live in Georgia). SRRDI promotes new regional business opportunities to ensure economic diversification and submits economic development proposals for the region to DOE for funding (SRRDI, 1993).

Community involvement at the Mound and Pinellas Plants focus on economic development activities at the sites. Pinellas Plant community involvement is based on the Community Stakeholder Organization, a three-member organization of Martin Marietta Specialty Components, Inc. (the M & O Contractor for the site), a Pinellas Plant employee organization, and the Tampa Bay Defense Transition Task Force. The Tampa Bay Defense Transition Task Force is a 100-member organization that represents academia, economic development organizations, federal, state, and local agencies, Martin Marietta, local communities, and labor organizations. The Community Stakeholder Organization helped prepare the Future Use Plan for the Pinellas Plant. Three subcommittees focus on economic impact, business development, and workforce and training issues. The DOE area office at Pinellas also holds meetings with other stakeholders on a weekly basis (Pinellas, 1994).

In a manner similar to many DOD communities, the local community reacted strongly to plans to close the Mound Plant; however, they were unable to prevent it. When DOE made its final decision to close the facility — based on recommendations of an independent panel appointed by Secretary O’Leary, — the Mayor of Miamisburg and other political leaders refocused their energy from trying to prevent the closure to planning for future alternative uses (Mound, 1994). Miamisburg leaders saw an opportunity to capitalize on Mound’s technologies for the benefit of the community and quickly created the Mound Transition Office to develop strategies. The first task of the Transition Office was to develop a community involvement process by which the community could participate in planning for reuse of the site. Three working groups were formed to consider human resource, economic development, and environmental management issues (Mound, 1993, p.6). With the community now united to pursue economic development, DOE established a three-way partnership with the Mound Transition Office and the site M & O contractor, to coordinate the reuse of facilities

surplus to the defense mission. Presently, each of these organizations plays an integral role in reviewing proposals from the private sector for reuse of the sites (Sprankle, 1994).

### **Coordination with government organizations**

The DOE recognizes that, to be successful, it should seek the advice of organizations more experienced in economic development to avoid reinventing the wheel, and, in the case of regulatory entities, to ensure compliance with all federal and state regulation. An effort has been made at the site level to involve all relevant government organizations in the design of economic development strategies.

One example of this coordination effort is found at the Rocky Flats Plant. The Rocky Flats Office is working closely with organizations such as the Colorado Department of Health, the regional office of the Environmental Protection Agency, and the Governor's Office of Business Development, an office that has worked closely with communities facing base closures. These organizations form part of a steering committee that now oversees the National Conversion Pilot Project, one of the economic development projects at Rocky Flats (Contacts, 1993).

At the Hanford site, DOE site representatives have worked closely with the Washington State Department of Fisheries for one of its economic development projects. In cooperation with two private fish producers, DOE and the Department of Fisheries utilized water basins that formerly supplied clean water for cooling a defense-production reactor, to restock salmon. The project obtained an investment of \$107,000 from DOE and \$90,000 from the private sector (Hanford, 1993). Initial success was realized in June 1993 when 150,000 chinook salmon fingerlings were released into the Columbia River (Richland, 1993).

DOE has required that each site appoint a single point of contact for economic development in order to have open and consistent communication with the community and other organizations. Most sites have designated a single point of contact for economic development within the last year. For example, the representative from Oak Ridge who was participating in the initial complex-wide policy-making activities was in the Procurement and Contracts Division, although many of the economic development activities were originating in the Technology Transfer Office, and community involvement was handled by yet another office. Oak Ridge only recently designated one person as the coordinator for economic development activities (Galde, 1994).

## **Economic development strategy**

The economic development strategies at the sites differ according to their assets, the availability of their facilities, and the resources of their communities. Economic development at the Department of Energy can occur through the following mechanisms:

- Leasing of government property for commercial use,
- Funding for regional economic development planning,
- Transfer of technology to the private sector,
- Encouragement of other federal activities at the site,
- Diversification of local industry base to include support of DOE activities, and
- Provide technical training.

Most sites pursue a combination of these mechanisms, and examples of each are given below.

The Pinellas Plant Future Use Plan focuses on the reuse of government property and the transfer of technology. The Plant has more than 750,000 square feet of manufacturing space that was used to design, develop, and produce special electronic and mechanical equipment, such as neutron generators, specialty capacitors, thermal batteries, and clocks, for nuclear weapons applications (Energy, 1993, p.II-43). The Plant will lease facilities to an economic development entity in a phased approach, with one-third of the Plant expected to be available for commercial business in 1994. The plan proposes to create the following technology-related centers:

- Center for International Enterprise Development — to assist firms in competing on a global scale by establishing alliances with international partners,
- Small Business Development Center and Small Business Incubator - to promote local small businesses and train entrepreneurs,
- Proposal Center — to evaluate proposals for Plant tenants,
- Technology Training Center — to train workers to meet the needs of advanced manufacturers,
- Technology Deployment Center — to focus on innovative product and manufacturing process development in an applied research laboratory, in collaboration with the University of South Florida, and

- Manufacturing Technology Center — to house one or more anchor tenants and several smaller firms (Organization, 1993, pp.1-3).

These centers are to exploit the Plant's capabilities in areas such as thin films and coating applications and substrate analysis, and to encourage the commercialization of the Plant's products. The goal is to create 50 to 400 new jobs by 1995, then up to 650 by 1998, and upwards of 1,400 to 2,600 jobs when fully implemented. Negotiations with two tenants began in early 1994, and 30 new jobs are expected to be created by July (Pinellas, 1994). To support these activities, DOE, along with the Stakeholder Organization, established funding programs to provide seed grants, capital grants, and other funds needed for attracting and sustaining tenants. Some of the money will come from the Department of Defense, the State of Florida, the private sector, the Economic Development Administration, and DOE (Pinellas, 1994).

The Rocky Flats Plant has provided a grant to the community for planning economic development activities. The recipient of the grant was the Rocky Flats Local Impacts Initiative, the single community organization working to mitigate the effects of defense downsizing (RFLII, 1993).

DOE sites working to promote local economic growth are now also looking towards technology transfer programs. DOE has conducted technology transfer programs for several years with the objective of enhancing U.S. competitiveness. These programs include:

- Personnel exchanges — with industries and academic institutions,
- Use of specialized facilities — university and industrial scientists can use DOE unique expertise and equipment for experiments at no charge,
- Cooperative agreements — cost-shared research and development with private industry,
- Patent and software licensing — licensing of government-owned patents to industry,
- Reimbursable work for others — performing work for industry or other federal agencies, and
- Technical assistance — advisory committees provide guidance for research and development to private industry (Tech Transfer, 1993, pp.3-10).

Economic development activities at Oak Ridge focus on technology transfer, rather than the reuse of facilities, because even though Oak Ridge is downsizing, there are not

many facilities available to lease to the private sector. The technology transfer mechanism most often used by Oak Ridge is “user facilities” where customers can use the equipment and staff expertise at these facilities to conduct research and testing. These user facilities become small business incubators, and over 600 small businesses have been involved in the program. Oak Ridge is also supporting an East Tennessee Economic Council regional economic development initiative that commercializes technologies developed at the Oak Ridge site. In 1993, the Council proposed Technology 2020 as an “interchange on the information superhighway” to coincide with Tennessee’s commitment to convert the state to fiber-optics within the next three years. As a telecommunications and business incubator center, Technology 2020 will provide unique technologies to utilities and to businesses in areas such as teleconferencing, satellite uplinks, data processing, and virtual reality. This proposal has obtained an investment of \$1.5 million from DOE and \$2.9 million from the private sector (Oak Ridge, 1994, Bagwell, 1993).

The East Tennessee Economic Council has submitted other economic development proposals to Oak Ridge that also focus on regional economic growth through technology transfer. These proposals are to exploit the technologies at Oak Ridge for regional economic growth through industrial relocation, new business startups, expansion of existing businesses, and new institutional alliances. Funding for these proposals are pending DOE headquarters approval (Bagwell, 1994).

The Savannah River Site is looking to other federal programs as a mechanism for economic development, as well as technology transfer programs and promoting the use of local industries and services to support ongoing DOE activities. The primary nuclear materials produced by Savannah River are plutonium and tritium, and Savannah River is the only DOE site that is experienced in handling large quantities of tritium. Thus, fusion research programs at the Princeton Laboratories may work with Savannah River to develop expertise in material and waste management of tritium (Patterson, 1994).

The Hanford Site is diversifying its local industry base to include support of DOE activities through a proposed off-site 500-acre industrial park in the city of Richland. DOE will house two of its major laboratories inside this industrial park, Batelle Pacific-Northwest Laboratory’s Environmental and the Molecular Sciences Laboratory (Richland, 1993). The goal is to attract science and technology entrepreneurs to locate at the industrial park that will initially support the cleanup activities at Hanford, but have plans to diversify their



customer bases to the regional, national, and international level (Sours, 1994).

Some of the sites also provide a training ground for higher education. The Rocky Flats Plant has joined with the American Welding Society to offer classes in precision-joining, such as electron-beam welding of Tungsten alloy (Reeves, 1993). Aiken County has proposed the development of a Savannah River Research Campus for graduate study, in partnership with two universities. The first building should be constructed by the end of 1994 on land donated by Westinghouse adjacent to the Savannah River Site, and DOE will support the roads that lead to the Campus from the site. This project will initially be funded by a \$1 million grant from the Economic Development Administration and \$3 million raised from the private sector (Savannah, 1994).

The strategy for attracting companies to most of the sites is three-fold. It includes placing a public notice through one of the government's nationwide publications, such as the Commerce Business Daily — a listing of proposed government actions, contract awards, and sales of government property, — organizing tours of the site for interested parties, and relying on local initiative to bring proposals forward. For instance, the Mound Plant placed a notice in the Commerce Business Daily to alert interested organizations that it is planning for private sector reuse of its facilities. On two occasions in 1993, Mound also opened its doors to representatives of interested organizations. DOE gave bus tours of the site, allowing the representatives to walk through some of the buildings, observe the technologies and facilities available, and speak with employees familiar with the equipment. A total of 300 representatives participated. Because of these tours, approximately one-hundred companies have expressed interest in working with the Plant. Mound also relies on local initiative for advertising its capabilities, such as Chambers of Commerce and word-of-mouth within the private sector (Sprankle, 1994).

DOD experience shows the importance of identifying facilities available for reuse, determining their reuse potential, and identifying the capabilities of the workforce. Determining what facilities are available for economic development is one of the challenges facing DOE sites. For instance, four of the buildings that are surplus to the DOE defense mission at Rocky Flats, now identified for economic development, were originally designated as waste storage facilities. Changing their designation means that Rocky Flats will have to negotiate with regulatory agencies for other facilities to use for waste storage. Also, some buildings may need physical modification in order to allow reuse, and DOE does not yet have a

budget for refurbishment (Review, 1994). The skills of the dislocated workforce have been categorized by DOE and the community through the workforce restructuring plans.

### **Evaluating economic development proposals**

Each of the sites have developed a set of criteria for evaluating economic development proposals. They all have similar overall objectives of job creation, reuse of facilities and technologies, and the mitigation of economic impacts due to downsizing on communities, though the exact criteria and methodologies vary from site to site.

The Pinellas Plant — expected to eventually be transferred over to the community after the cleanup is completed — has established four objectives:

1. Minimize the displacement of jobs lost by DOE contractors, subcontractors, and the 3 to 5 jobs that are predicted to be lost in the community for every DOE job lost,
2. Minimize the economic impact from the loss of high-wage defense job by promoting proposals that would create comparable salaried private sector jobs,
3. Prevent the loss of public investment in the technologies by transferring technologies to the private sector, and
4. Utilize the facilities at the Plant (Patenande, 1994).

The proposal evaluation process, based on these objectives, is shown in Figure 3-1. The Tampa Bay Defense Transition Task Force helped the DOE develop this evaluation process through several public hearings. The Tampa Bay Defense Transition Task Force recommends economic development proposals to DOE, and DOE will then evaluate the proposals according to the flowchart. The criteria include the creation of jobs (particularly technology-related jobs at higher-wage levels), meeting environmental, safety and health requirements, using Plant technologies, bringing benefit to the community, increasing employment opportunities for dislocated Plant workers, and short-term and long-term return on investment (Organization, 1993, pp.19-21).

The evaluation process at the Mound Plant is a two-step process. First, the City of Miamisburg, the M&O contractor, and DOE each individually evaluate the proposals according to their particular set of criteria. The city is charged with evaluating the financial health of the firm and determining how many employees will be needed. The M&O contractor determines whether the proposal matches well with the technologies available and

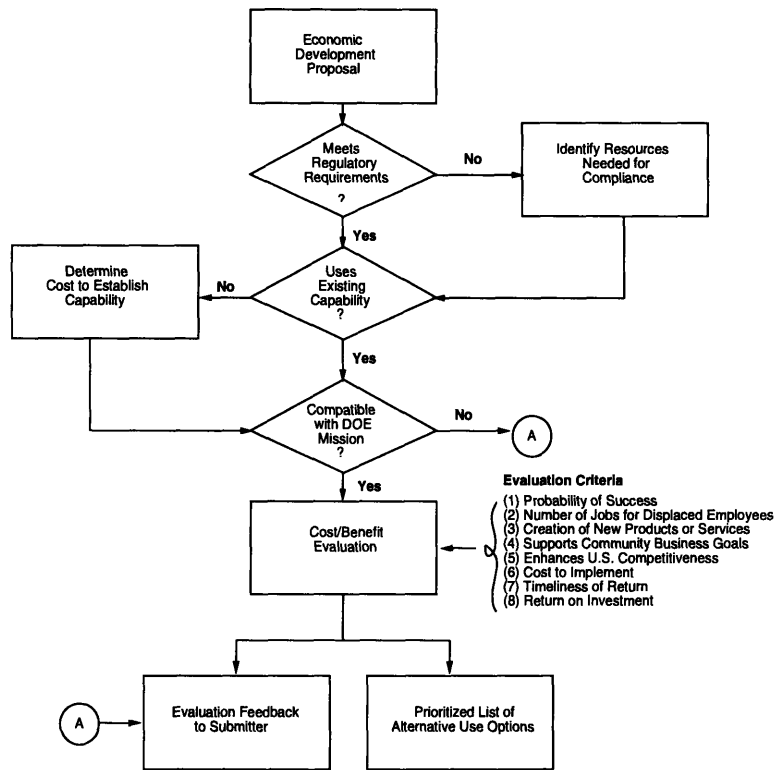


Figure 3-1: The Pinellas Plant proposal evaluation process (Organization, 1993, p.21).

addresses infrastructure concerns, such as utility hookups. DOE ensures that the environmental regulations and permits required by the firm and the Plant will be met and addresses other issues, such as the terms of the lease (Sprankle, 1994). Second, the three organizations evaluate the business proposals together, considering the following issues:

- Safety and health hazards to the workers,
- Probability of success,
- Technology base of the company,
- Solvency of the company,
- Compatability with the skills of the workforce and technologies at the site,
- Legal liabilities, and
- Whether the company is owned by existing employees (Sprankle, 1994).

The Office of Economic Transition at the Hanford Site evaluates proposals using the following criteria:

- Probability of success,
- Return on investment,
- Diversification of job base,
- Consistency with the community vision, and
- Economic impacts in the near-, mid-, and long-term (Hanford, 1994).

The Hanford Site has also established metrics for evaluating economic development projects once they have already been implemented. These metrics include: the size of the new customer base, the number of new companies and entrepreneurial businesses, the amount of private and venture capital investment, the amount of government matching funds, and the number of Hanford employees that moved to non-DOE jobs (Hanford, 1994).

Most of the sites have only recently developed their evaluation processes because economic development was not declared a DOE mission until November 1993. The themes of the evaluations processes at the different sites are similar, though their criteria and methods vary. These differences show the unique characteristics of the sites and their communities, but they also reflect the lack of consistency among the defense complex. Later in this chapter, the process by which DOE is beginning to develop complex-wide policies regarding economic development will be presented.

### **Economic development case study: the National Conversion Pilot Project**

Studying a particular economic development project will illuminate the process of pursuing economic development at the sites. The Rocky Flats National Conversion Pilot Project exemplifies the challenges that DOE sites face when implementing a project. The Rocky Flats project also played a major role in bringing economic development to the attention of upper-level management and the designation of it as a mission of the Department of Energy.

On June 12, 1992, at the Department of Energy Rocky Flats Plant in Golden, Colorado, former Secretary of Energy, Admiral James D. Watkins, announced a new direction for the future of the plant. Since 1952, the Rocky Flats Plant, located 16 miles northwest of Denver, Colorado, manufactured nuclear weapon components from plutonium, beryllium, uranium, and various stainless steel alloys (Energy, 1993, p.II-198). Employing about 8,000 people, its main product was plutonium bomb triggers (Roberts, 1992). In December of the previous year, Secretary Watkins announced plans to move the non-nuclear manufacturing

work from the Rocky Flats Plant to the DOE facility in Kansas City, Missouri, and in January 1992, President Bush decided to terminate the production of nuclear components for the W-88 warhead. These events led to the Rocky Flats Plant's change in mission to environmental restoration, waste management, and plutonium reclamation, and many of the defense production facilities were shut down (Tech Transfer, 1993, p.42). As a result, 800 workers, are expected to lose their jobs during fiscal year 1994, with 2,000 or more layoffs anticipated in the future (Press, 1993).

The loss of these skilled workers and the surplus resources prompted Watkins to compare Rocky Flats' potential to DOE's National Laboratories, where a key goal is making government technology available to businesses. In his speech, he said that,

Instead of planning for decontamination and decommissioning at Rocky Flats, we're looking ahead to decontamination and economic development of the site. This facility offers tremendous private sector possibilities because of its highly trained workforce and unique scientific and engineering capabilities. Through continued application of the plant's unique manufacturing capabilities and related technologies, the local communities would continue to benefit from the taxpayer's investment in this facility... Hopefully, it will be a template for the rest of the nation to follow as we change our country's thinking into the so-called New World Order, still undefined, but we believe the battle field will be economic and not military in the years to come (Todd, 1992b, Press Release, 1992).

Secretary Watkins and Leo Duffy, then Assistant Secretary for Environmental Restoration and Waste Management, both applied pressure on the Rocky Flats Office to showcase the technology and capabilities of the Plant's facilities for the private sector. During President Bush's re-election campaign, the two political appointees wanted to demonstrate the Administration's desire to mitigate the economic impacts of defense downsizing and its dedication to conversion (Gaudet, 1993). Despite the political pressure to initiate an economic development project, DOE had not yet established an office at headquarters to address the complex-wide issues regarding economic development. The Rocky Flats Office was left to explore the opportunities on its own, without any direction from DOE headquarters, and attempted to resolve the major issues regarding economic development. As a result, the Rocky Flats Economic Development Office was established as an extension of its Communications Office to explore economic development opportunities (Press Release, 1992). Once a proposal was chosen for economic development, the responsibilities for overseeing it would transfer outside of the Communications Office to a DOE Project Manager, who

would oversee the planning and implementation aspects of the proposal.

The Economic Development Office placed a notice in the Federal Register to alert interested organizations that it was looking for reuse alternatives (Tarlton, 1993). Also, DOE held two technology showcases at which businesses were given a bus tour to see some of the technologies available at one of the on-site buildings. As a result, the Rocky Flats Office received proposals for a DOE Training Center, an Environmental Education and Research Center, an analytical laboratory, a recycling center for contaminated metals, an atmospheric modeling and advisory capability, a microfabrication laboratory, an optical media transfer laboratory, and a windsite development center (Brainard, 1993).

As part of its community involvement plan, the Rocky Flats Office worked closely with the Rocky Flats Local Impacts Initiative (RFLII) in its advertising and selection process. The Economic Development Office recognized this organization as the voice of the local community in regards to economic development and thus, provided a grant to RFLII in support of its activities. RFLII is a coalition of local governments, unions, community-based public interest groups, and private sector interests, that was created when the change in mission for the Rocky Flats Plant was announced. RFLII has helped define the impacts on the local communities and identify possible opportunities for easing the impact of the transition (RFLII, 1993).

The primary goal of economic development at Rocky Flats is to develop a process to use as a template for other DOE sites interested in engaging in similar conversion activities. Though other sites are already involved in economic development activities as described above, Rocky Flats saw the opportunity to be the first site with facilities converted to stand-alone private use operating within the private sector regulatory environment. Thus, Rocky Flats labelled its first economic development project as the "National Conversion Pilot Project," or NCPP (Rocky Flats, 1993a). The Rocky Flats Office also saw economic development as an opportunity to improve its image because unlike weapons production, conversion activities are conducted for the direct benefit of the local community.

Other goals included the creation of jobs for dislocated DOE workers, enhancement of the local economy by preserving national assets (the equipment and facilities) that would otherwise be idle, and encouraging growth of the private sector. Rocky Flats also wanted to implement an economic development project quickly in order to create jobs for DOE workers expected to lose their positions within the next year. As shown in the Department

of Defense experience, the sooner a private company can take over the facilities, the smaller the impact on the community (Rocky Flats, 1993a).

In order for the conversion of these facilities to be a “true” conversion from public to private use, the Economic Development Office also had a goal to transfer the oversight of the facilities from DOE and its Orders, regulations, and standards, to commercial standards and regulations. The private company would then operate within the same regulatory environment as its competitors. By placing oversight into the hands of commercial regulators, the public would also have more of an opportunity to participate in the oversight process (Rocky Flats, 1993a). This would allow DOE to work together with regulators and stakeholders and thus develop trust among the community in its actions.

The production facilities identified by Rocky Flats for economic development are four manufacturing buildings that contain specialized metallurgical and materials processing and equipment. These facilities are on the southern side of Rocky Flats, where radioactive materials were seldom handled (no economic development activities are expected to occur on the northern side of the Plant, the major focus of cleanup activities) (Todd, 1992a). The industrial equipment in these buildings include rolling mills and supporting operations, casting equipment, such as a vacuum arc melt furnace, machinery that was used for the extrusion of uranium, and equipment for processing beryllium (Reeves, 1993, Tarlton, 1993).

The proposal that the Rocky Flats Office chose to support was from the Manufacturing Sciences Corporation (MSC), based out of Oak Ridge, Tennessee. MSC had submitted a proposal to convert the four buildings to a recycling center for contaminated scrap metal. The rolling mills and other metallurgical and metals processing equipment were suited for such activities, and the current Rocky Flats workers who had experience in using the machinery would provide a skilled workforce. MSC proposed that it would retrain the Rocky Flats workers, refurbish the four buildings, and use the equipment to manufacture DOE and commercial products. Details of the commercial products being considered are not known due to proprietary reasons, though the primary product would be waste containers for DOE, made from DOE contaminated scrap metal. The contaminated metal could be cast, rolled, and reshaped so that clean metal would not have to be contaminated in the manufacturing of waste containers (Rocky Flats, 1993a).

Rocky Flats favored this proposal because it would employ a large number of Rocky Flats Plant workers immediately, reuse idle facilities, recycle waste materials into useful

products for DOE as well as industry, help with the decontamination of the facilities and reducing waste management costs, is supported by the community, and because MSC had previous experience with this type of work, especially with Beryllium metals. MSC proposed to employ 200 workers immediately, to begin training and refurbishing the facilities, with the potential of employing several hundred more over the course of the next few years.

Rocky Flats will implement the project in three stages. Decision points placed at the end of each of these three stages would provide DOE, or the private company, the opportunity to terminate the project if the goals are not met, including maintaining community support (Rocky Flats, 1993a). The first stage of the process is a planning stage in which regulatory agencies, stakeholders, DOE and M & O contractor personnel will participate, along with MSC, to set criteria for a cleanup plan of the facilities, determine the operational condition of the equipment, evaluate the private sector potential of the facilities, estimate the workforce skills and numbers needed for cleanup and future manufacturing activities. The second stage involves MSC hiring workers to clean the facility (this includes the melting of beryllium scrap metal that is currently in the form of classified shapes) and working through issues for entry into the third stage, such as the transferring of regulatory oversight responsibility from DOE to industrial commercial regulators and the preparation of NEPA evaluations for the third stage. DOE's estimated financial commitment for these two stages, estimated for a two-year time period, is \$43 million, provided by the newly-created Task Force on Worker and Community Transition (Grumbly, 1993). The third stage is the actual conversion of the facility to a private enterprise. Because of government procurement guidelines to provide fairness, DOE will open the selection process, and thus, the private company involved in this stage will not necessarily be MSC. The financial commitment for this stage is unknown (Grumbly, 1993). The private company is expected to submit regular reports on its activities, accomplishments, and interactions with regulatory agencies and brief DOE and stakeholders on its progress in meeting the goals of this third stage (Grumbly, 1993).

This economic development case study exemplifies some of the challenges that are being faced by DOE sites. The initial delay in implementing the project was because economic development was a new concept for DOE and DOE did not know how to conduct economic development. Rocky Flats drafted a Secretarial Action Memorandum to submit to DOE headquarters in August 1993 to authorize the implementation of the NCPP, and it was



approved in December 1993, more than two months later than typical memorandums. Most of the approximately twenty different offices needing to concur on the project were not previously aware of the economic development activities at the sites, and as a result, the approval of the Secretarial Action Memorandum became a lengthy learning process for the headquarters offices and was a major driving force for developing complex-wide strategies (Intern, 1993).

There will probably also be delays in the implementation process because Rocky Flats is trying to conduct a conversion process that meets the needs of the community. As part of the plan to involve the public in oversight of the project, a steering committee and a "Sounding Board" were created, and DOE stipulated that it will not proceed with the conversion project if the steering committee or the Sounding Board disapprove of the activity (Rocky Flats, 1994). The steering committee provides oversight for the details of the conversion plan through subcommittees focusing on environmental restoration, waste management, private sector opportunities, human resource, and public outreach issues (Contacts, 1993). The following organizations are represented on the Steering Committee: DOE, the regional EPA office, the Colorado Department of Health (CDH), RFLII, the Colorado Governor's Office of Business Development, the M & O contractor, the United Steelworkers of America, the Colorado Building and Construction Trades Council, the United Government Security Officers of America (the organization that represents the security personnel of Rocky Flats), and Manufacturing Sciences Corporation (Contacts, 1993, Butterfield, 1993). The Sounding Board, made up of representatives from nineteen community organizations, will be consulted at key points in the conversion process regarding the details of the project, to ensure that a broad range of interests are being considered (Rocky Flats, 1994). It is possible that DOE will not reach the third stage of the project until long after the scheduled time.

Other examples of the challenges that Rocky Flats will be facing include issues such as the following: liability of the private company for environmental cleanup (Rocky Flats is on EPA's National Priorities List), ability of the DOE to lease facilities on the site, details of the infrastructure and services provided for the facilities, liability for worker health, comparison of alternative uses for the facilities, integration of economic development activities into the site-wide Environmental Impact Statement, the role and authority of EPA, CDH, and other federal regulatory agencies, the financial investments made by DOE and the private

company, the current market targeted by the private company, the source of material used in the production processes of the private company, the commitment by the company to hire dislocated Rocky Flats workers, and integration of the use of the buildings with the site-wide mixed-waste storage plan (Rocky Flats, 1993b).

Many Colorado residents also believe that Rocky Flats should be shut down entirely and not considered for alternate uses (Tarlton, 1993). Although there is community support for the project, and there is an extensive community involvement process, the DOE may have difficulty convincing some of the public that economic development activities will not jeopardize the cleanup program.

Initiating the NCPP at Rocky Flats was difficult because of the lack of a complex-wide strategy, and planning and implementation will also be a challenging task. However, the project became instrumental in bringing site economic development to the attention of upper-level management, as will be discussed in the following section.

### **3.3 Designing a Solution: Complex-wide Strategies**

DOE is developing a complex-wide strategy to conduct economic development, concurrent with the economic development projects at the sites. The process of formulating complex-wide economic development policy for the defense complex will be presented in terms of the participants involved in the process and to what extent they were involved. It is important to know when and to what extent each participant influenced the policy design process because each participants has a unique and important position that influences the design and implementation of the policy. The key participants in the DOE economic development policy-making process are:

- Community leaders — representatives of governmental organizations, special interest groups, private sector, and other local organizations from the communities of the DOE sites;
- Site offices — DOE management at the various sites;
- Middle-management advocate — the management office at headquarters that recognized economic development as an issue to be addressed by DOE;
- Senior-level management — top management within the different Secretarial Program Offices that report directly to Secretarial-level personnel, considered to be upper-level management; and

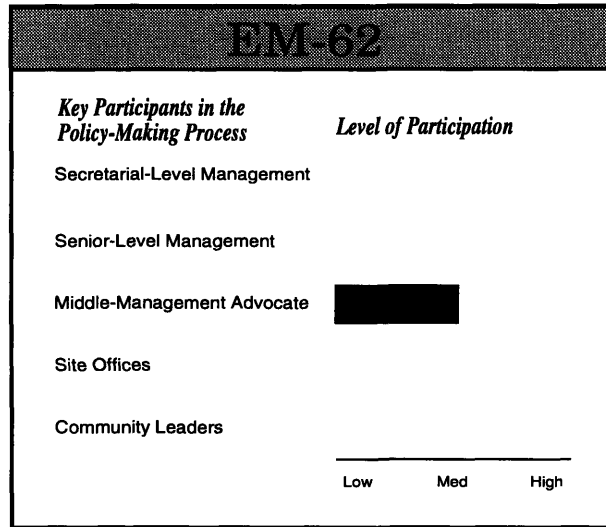


Figure 3-2: Level of participation in the first organization to address economic development.

- Secretarial-level personnel — the Secretary of Energy and DOE personnel that report directly to the Secretary, including Assistant Secretaries of the different Secretarial Program Offices, and other political appointees, considered to be upper-level management.

The DOE economic development policy-making process will be discussed based on when the participants entered into the process. (A timeline of the process is shown in Figure 3-3.) In order to understand the participation of each of the policy-makers in the steps of the process, their level of participation will be described in rough terms as *low*, *medium*, or *high*. For community leaders, the higher the representation of the different communities near DOE sites and their interests, the higher their level of participation will be. For the site offices, the higher the representation of the different offices and their upper-level management, the higher their level of participation will be. For DOE management personnel, the higher that economic development is a priority for that particular project management level, the higher their level of participation will be. For example, initially, economic development was only one of the many tasks for the middle management organization, known as EM-62, that has played the role of advocate for economic development at DOE headquarters, therefore, its level of participation can be described as *medium* (as represented in Figure 3-2).

### Middle-management enters the process

The Office of Facility Transition and Management (EM-60), within the Office of Environmental Restoration and Waste Management (EM), was the first headquarters office to

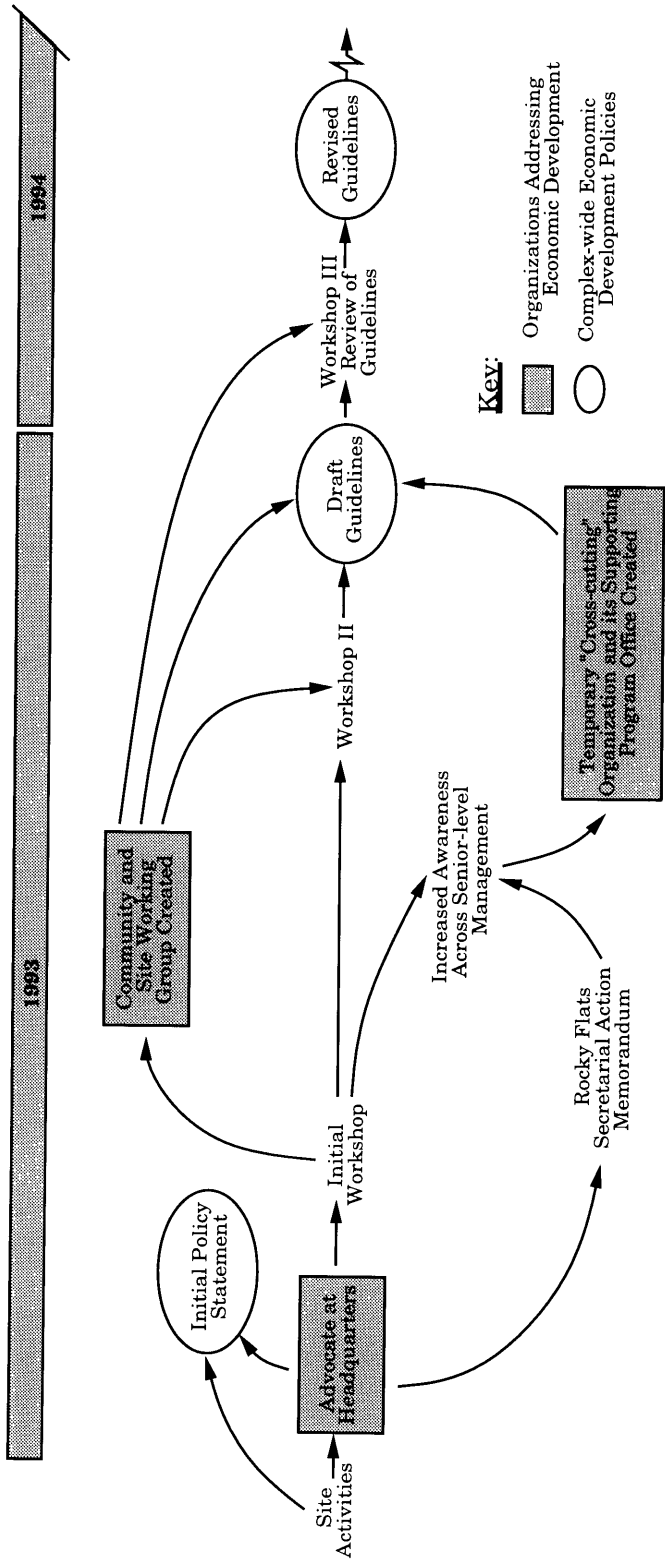


Figure 3-3: Timeline of the DOE economic development policy-making process.

recognize DOE's inability to respond to economic development opportunities. This office was closely following the activities at the sites and had begun to act as their advocate at headquarters, including the sponsorship of the Rocky Flats Secretarial Action Memorandum.

EM-60 is the office that oversees the transition of DOE surplus contaminated facilities from other Secretarial Offices (or "landlords") within EM for the purpose of putting the "facilities to sleep so they're cheap to keep," that is, preparing the facilities for deactivation, decontamination, and dismantlement (Transition, 1993). The transfer of a facility from one landlord to another occurs when a particular site determines that it no longer needs a facility to carry out its mission. The end of the cold war resulted in a large number of facilities being closed down, causing EM to create a new office, EM-60, to handle the workload and set priorities for the cleanup of these facilities.

The transition process for a facility can take several years to complete and involves several steps. The steps in the transition process are: (1) notification to EM and acceptance by EM to transfer the building, (2) identification of personnel and financial resources for the transition process, (3) formal transfer of responsibility, (4) elimination or stabilization of environmental safety risks, (5) surveillance and maintenance of the facility until final disposition, and (6) transfer of facility to the Office of Environmental Restoration (EM-40) for decontamination and dismantlement (Transition, 1993). The Office of Facility Transition and Management recognized that the transition process was a natural place for economic development activities to occur. Step four of the above process could include the task of exploring alternate uses for the facility and steps five and six could include the option of transferring the facility for alternate uses to the public or private sector.

Within EM-60, the office that began to designate contractor personnel to work specifically on economic development issues was the Office of Facility Policy, Planning, and Acceptance (EM-62). EM-62 establishes the requirements and procedures for the transition process and provides the regulatory and technical oversight of the process. Between the summer of 1992 and the first half of 1993, the number of EM-62 personnel working on economic development issues slowly increased as communication with the sites began to reveal that a more organized effort in the Department was needed (Gandee, 1994a).

A brief introductory visit was made by EM-62 staff in May and June, 1993, to sites undergoing downsizing to properly assess their economic development activities and needs.

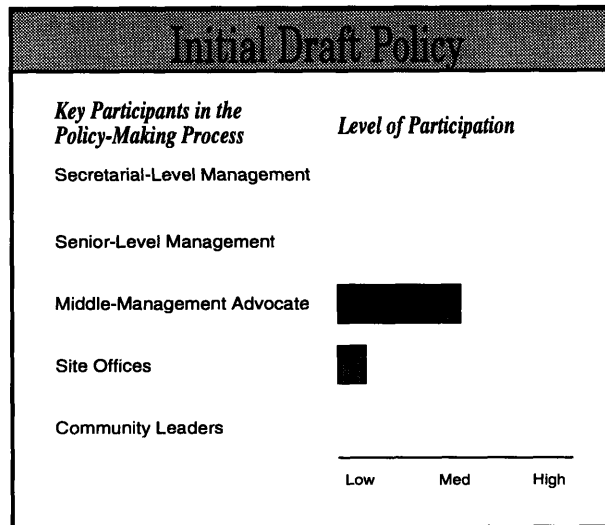


Figure 3-4: Level of participation in writing the initial draft policy.

These visits provided EM-62 the opportunity to develop a network of people at the sites who were involved or interested in the opportunities of economic development. Representatives from the sites expressed their concern over the lack of guidance from headquarters regarding economic development. Several of the sites were facing challenges that had to be addressed at the headquarters level. As a result, EM-62 drafted an initial draft policy statement and made preparations for a DOE-wide workshop to begin identifying and addressing economic development issues.

The initial draft policy statement was a working guidance document written by EM-62 for sites considering economic development activities and provided a benchmark for future policy statements. The policy statement was based upon the economic development experiences of the Rocky Flats and Richland Offices. Thus, the participants included only the middle-management advocate and a few of the site offices (refer to Figure 3-4). The goal of the policy was to promote the reuse of sites and to re-employ the workforce at production facilities undergoing downsizing or closure. The policy can be summarized as follows:

Site Office Managers for sites where EM-60 has landlord responsibility were directed to appoint an Economic Development Coordinator responsible for implementing this program. Responsibilities included characterizing the economic development potential of surplus (and potentially surplus) resources, informing businesses of the available resources, and evaluating the feasibility of the economic development proposals. The Site Office was also given the responsibility of determining the feasibility of economic development project proposals,

to provide support for resolving barriers to acquiring the surplus resources, and to ensure that the program was conducted in compliance with applicable laws and regulations.

The formation of a senior management steering committee was suggested in order to develop economic policies, to examine institutional barriers to economic development, and to ensure that economic development received attention from senior-level management. Also included in the draft policy statement were plans to form a working group within EM-62 to support the steering committee. The working group would help identify problems in implementing economic development programs, develop an implementation plan, and provide guidance to field managers on the methods, procedures, and information resources needed to conduct economic development programs (Policy, 1993).

By mid-1993, only a portion of the DOE sites had designated economic development contacts and the senior management steering committee and the working group had not yet formed. Thus, the participants at this point in the policy-making process were limited to EM-62 and a few of the sites. However, a complex-wide workshop in July 1993 established communication between the communities, DOE sites, headquarters, and other federal agencies, thus expanding the list of participants in the policy-making process. Workshop participants were able to participate in the policy-making process and help prioritize the issues to be resolved. Site representatives and community leaders were able to learn about the successes and challenges at other sites. Relationships with organizations outside of DOE were strengthened.

The DOE secretarial-level management was represented at the workshop by the Chair of the Secretary's Task Force on Worker and Community Transition. Originally, the Task Force was charged with distributing \$200 million appropriated to DOE for working with sites to develop their workforce restructuring plans (O'Leary, 1993). However, when EM-62 recognized the similarities in the goals of economic development and the Task Force (both sought to minimize the impact of transition on the local communities) the Chair of the Task Force was invited to the workshop to give a summary of the Task Force's activities.

Representatives from many sites attended the workshop but because economic development was a new concept at most of the sites, site representatives were primarily lower-level managers who had become interested in economic development after EM-62's visits to the sites. The sites were directed to invite representatives of local community organizations that were interested in minimizing the impact of DOE transition on the community and

who would contribute to the dialogue of the workshop (EDW, 1993c). This limited community representation to organizations that had already been communicating with DOE sites regarding economic development activities and that could afford to travel to San Francisco. The leaders that did attend included private and public sector interests of several of the sites, including the mayors of several communities near DOE sites.

Many of the speakers at the workshop were from agencies and organizations outside of DOE and helped establish a relationship with their organizations. Speakers included officials from the U.S. Air Force Base Disposal Agency, the Department of Defense's Office of Economic Adjustment, the Economic Development Administration, the House Subcommittee on Energy of the Science, Space, and Technology Committee, the EPA, the U.S. Small Business Administration, the Colorado Governor's Office of Job Training, two aides of Congressman Ronald V. Dellums (D-CA), and several community leaders, including Rocky Flats Local Impacts Initiative's Director of Governmental Relations and Economic Development. As an example of the advice that DOE was able to receive as a result of the workshop, the representative of the U.S. Air Force Base Disposal Agency became a valuable resource for the EM-62 staff because the U.S. Air Force had much experience to share from their work on the environmental issues of the reuse of Air Force Bases. The representative from the Economic Development Administration provided information on financial assistance available from other agencies for economic development. The representative from the Office of Economic Adjustment eventually joined the DOE economic development staff in January 1994 to provide DOD's perspective to DOE activities.

Senior-level management was not represented at the workshop, but economic development was brought to their attention through the workshop. Because the variety of speakers seemed to indicate that it would be a major meeting of federal agencies, the workshop received some resistance from senior-level management. Other federal agencies are rarely brought into DOE meetings, especially when DOE itself does not yet fully understand the situation. But the goal of the workshop was to improve communication with outside organizations and to identify the most pressing issues regarding economic development so that DOE could begin to understand the situation. EM-62 was able to convince senior-level management that the workshop should be held as scheduled (Intern, 1993).

During the final portion of the workshop, discussion groups were held in which the participants expressed their concerns. The issues determined to be of highest priority for



DOE to resolve were:

- Developing a departmental mission for economic development that includes an organization, policies, procedures, goals, resources, funds, and a single point of contact to serve as a clearinghouse for the Field Offices;
- Finding a way to synchronize downsizing and transition activities;
- Developing a department-wide economic development strategy; and
- Resolving indemnification issues.

There was also consensus that subsequent workshops should be held in order to continue communication between the participants and provide an opportunity for reevaluation of the progress. The final suggestion made by workshop participants was to establish a community and site working group. Participants realized that these complex issues could not be addressed by EM-62 alone, particularly because of the lack of staff in EM-62 and its placement within middle-management of only one of the many Secretarial Offices (EDW, 1993a).

### **Communities and sites enter the process**

Following the workshop, DOE created the Economic Development Working Group (EDWG) to allow the sites and communities to become directly involved in the policy-making process. In forming the EDWG, the Director of EM-62 developed a requirement that the membership include one DOE representative and two community representatives from each site that wanted to participate. The 2-to-1 ratio of community members to DOE members ensured that the focus of the EDWG was on the communities and their needs. The community members represented local businesses, contractors, labor organizations, and state and local government organizations. Energy Communities Alliance (ECA), a coalition of ten communities near DOE sites, was made a non-voting member of the working group and the Chair of the Task Force on Worker and Community Transition was designated *ex-officio*. (Figure 3-5(a) shows the levels of participation for the working group.)

Through the EDWG, DOE and the communities could identify economic development issues and provide recommendations for addressing those issues. The EDWG's charter stated that it was created as "An organization which directly involves communities affected by DOE mission changes in planning and achieving economic stability and future growth. Its output leads to the utilization and preservation of national and community assets -

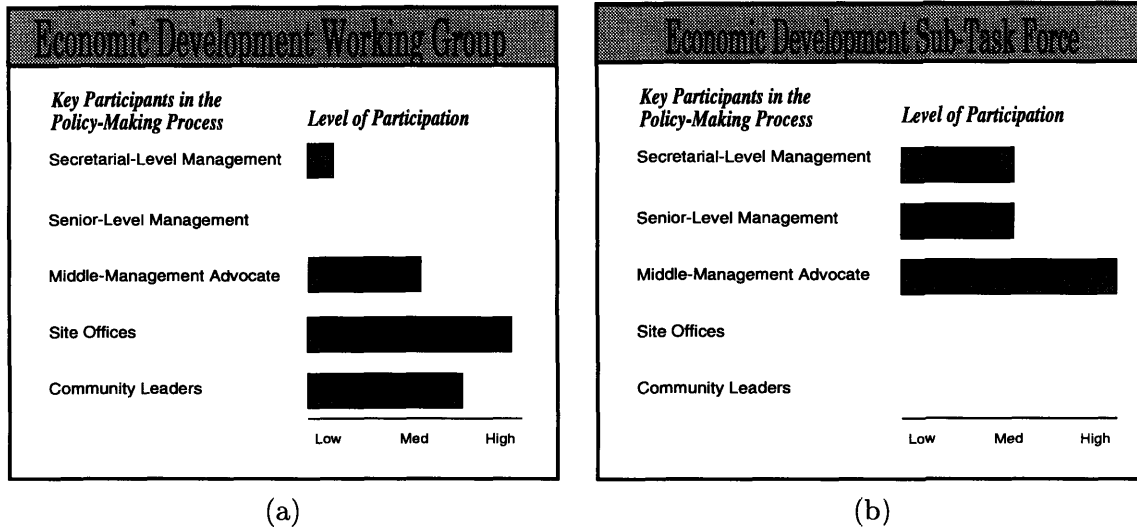


Figure 3-5: Level of participation in the temporary organizations addressing economic development: (a) the Economic Development Working Group, and (b) the Economic Development Sub-Task Force.

including land, labor, technology, and capital resources - in a cost-effective manner, while complying with regulatory requirements.” Also, communities and sites could learn about the activities at headquarters and other DOE sites. The first of its monthly conference call meetings was held in September 1993. Topics discussed at that meeting and ensuing meetings included funding resources, property transfer guidelines, Worker and Community Transition Task Force involvement, technology transfer options, and for quarterly workshops and review sessions.

This working group, although similar to the working group that was proposed in the initial draft policy, was not created until the sites had recognized the need for it. The draft policy had not led the activities, but rather, the sites and their communities were the driving force behind the formation of the working group.

### Senior- and secretarial-level management enter the process

EM-62 and the EDWG were not in the position to develop new policy for the DOE to resolve the issues regarding economic development. The participation of senior-level management was still lacking in the policy-making process (as shown in Figures 3-4 and 3-5(a)). An organization was needed that included senior-level management and had the support of the Secretary.

Senior- and secretarial-level management became involved in the policy-making process primarily as a result of the Rocky Flats Secretarial Action Memorandum submitted to headquarters in early August 1993. The lengthy approval process, almost five months, became a warning flag that the bureaucratic process in place was unable to respond in a timely manner to economic development proposals, thus, prompting the design of a streamlined organization to respond more quickly. The delay also provided an opportunity for upper-level management to become more involved in the discussion regarding economic development and eventually participate in the policy-making process.

The delay in the approval of the memorandum was caused by three factors and is an example of an organization resistant to change. The first factor was the approval process itself. Many upper-level managers had to concur on the project because it involved a new concept with many different implications. The concurrence "chain," as it is called, assures the Secretary that the appropriate DOE offices are aware of and support the project. The Assistant Secretary for Human Resources and Administration, who handles procurement and personnel issues, needs to be privy to this project because the NCPP involves a contract and the possible re-hiring of DOE employees. The landlord of Rocky Flats was Defense Programs, thus, the Assistant Secretary for Defense Programs needed to concur. The Technology Utilization Office had to concur because the project involves manufacturing technology. Also needed was the concurrence of General Counsel and Environmental Safety and Health, because of the legal ramifications involving environmental regulatory requirements and other issues. Facility Management had to concur because it sets policies on the management of facilities and Public Affairs must be aware of all activities approved by the Secretary. Because the memorandum originated from EM-62, other EM Deputy Assistant Secretaries and the Assistant Secretary of EM also needed to concur (Intern, 1993).

The second factor in the delay was the lack of understanding by the Secretarial Offices regarding the proposed project. Without an upper-level management organization to address economic development, upper-level organizations were not yet aware of economic development activities. During this time, EM-62 was able to brief upper-level management about the NCPP, and thus, introduce the economic development activities taking place at the sites and their unresolved issues (Intern, 1993).

A third factor in the delay was purely institutional resistance. An agency that has traditionally operated in isolation from its communities, with the primary customer of its

defense complex being the Department of Defense, was forced to shift its focus onto its new “customers,” — the communities. The risk involved in working with the private sector, such as market fluctuations, liability problems, etc., caused DOE officials to hesitate; there was no DOE precedent with which to compare the project (Intern, 1993). In order to overcome this institutional resistance and answer these concerns, Rocky Flats was asked to implement the project in a phased approach. The three-stage process was designed to bring these concerns to the forefront, allow community and regulatory involvement in answering the questions, and provide decision points by which DOE and/or the private company could terminate the project. This modified process would allow the policy formulation to continue in parallel with implementation.

Formal lines of communication between the middle-management advocate and secretarial- and senior-level management were established through the NCPP approval process. EM-62 answered questions, clarified details, and consulted with upper-level managers to determine changes that needed to be made in the proposal before it was approved. The Chair of the Task Force on Community and Worker Transition, as a close advisor to the Secretary, offered suggestions and support to help push the memorandum through the approval process. The Chair became a supporter of the proposal because it met the goals of the Task Force; the Clinton Administration’s conversion efforts, via the Task Force, allowed secretarial- and senior-level management to be in direct line with the middle-management’s efforts. The memorandum was signed by the Secretary on December 15, 1993 (Grumbly, 1993).

Many at the senior management level, including members of the Task Force on Community and Worker Transition, had now learned of the need to address economic development issues. In the fall of 1993, the Task Force was scheduled for a reevaluation and the Director of EM-62 took this opportunity to draw Task Force members into the policy-making process regarding economic development. Through this now formal communication link with upper-level management, it was possible to deal with the important strategic issues that had previously hindered the economic development efforts. These issues included:

- Timely headquarters response,
- Funding,
- Decision-making in DOE,
- Regulatory compliance,

- Stakeholder participation,
- Liability and indemnification,
- Measurements of success, and
- Conditions for making resources available (Task Force, 1993).

Several organizational alternatives were considered by the Task Force to address these issues. They included creating a cross-cutting organization under the Secretary, establishing an organization in the Secretarial, Field Management, or Human Resources Offices, or creating a line organization. The Task Force agreed that the organization must be:

- Close to the Secretary,
- Cross-cutting,
- Able to respond quickly,
- Have sufficient power to respond,
- Willing to take risks, and
- Act as an incubator for one year (Task Force, 1993).

The Task Force decided that the best alternative was to expand its own mission to include economic development and the Secretary agreed. In November 1993, the Task Force was split into two Sub-Task groups, Workforce Restructuring and Economic Development, with a reevaluation scheduled for July 1994. In the memorandum regarding the Task Force, Secretary O’Leary designated that “A major new focus of the task force will be on the economic development mission of the Department as it applies to converting surplus resources at defense nuclear facilities for commercial purposes. Our goal is to make Departmental resources available to community partnerships for local business development that supports the President’s broader objective of stimulating economic growth” (O’Leary, 1993). With this statement, the Secretary declared economic development to be a major mission of the Department.

The responsibilities of the Sub-Task Force are to review recommendations given from the sites, such as those made by the EDWG, provide guidance and planning assistance from the headquarters level, and allocate funding to the sites. Members of the Sub-Task Force represent the following DOE Secretarial Offices: Procurement, Field Management, General

Counsel, Technology Transfer, Defense Programs, Economic Policy and Strategic Planning, Environmental Restoration and Waste Management, and Environment, Safety and Health. The Director of EM-62 was relieved of other EM-62 duties and designated as Chair of the Economic Development Sub-Task and Director of the Economic Development Program Office, a small office established to support the Sub-Task Force. Economic development now had full-time headquarters employees and a secretarial- and senior-level management organization with which to address economic development. With this shift in the level of participation by the policy-makers (refer to Figure 3-5(b)), all the participants needed for developing a complex-wide strategy were now in place.

### **Developing policy guidelines**

DOE now had three organizations to conduct economic development complex-wide, the Economic Development Working Group (now known as the Working Group on Economic Development), the Economic Development Sub-Task Force, and the Economic Development Program Office, but no policy guidelines. As a result of these organizations and two additional workshops, DOE developed complex-wide economic development policy guidelines.

At a Working Group meeting held in November 1993, members expressed frustration with the lack of secretarial attention to economic development; no decisions were being made on many of the most important issues. Their concerns focused on property release issues, NEPA requirements, criteria for receiving funding, and community involvement (Working Group, 1993). In response, the Working Group and the Economic Development Program Office created focus groups to draft policy guidelines for each of these topics. The policies drafted by the focus groups would then be reviewed by offices at headquarters, the sites, and the communities.

A second DOE complex-wide workshop was held in November to facilitate continued communication between key participants and to more clearly define the issues. A senior-level manager of DOE's Office of Facilities Management and a member of the property focus group stated that "Before DOE can improve the internal processes needed to facilitate economic development, the needs must be clearly defined and acknowledged by the parties involved." And the Chair of the Task Force on Worker and Community Transition reiterated that "The key to successful economic conversion is creating a partnership with the local communities to better understand each site's unique concerns and development

goals” (Press Release, 1993). Thus, the objectives of the workshop were to receive expert commentary and advice, review the success stories and the lessons learned, and identify and discuss the issues and challenges not yet addressed (EDW, 1993b).

Attendance at this workshop reflected the greater awareness of economic development both inside and outside of the Department. Senior-level management from the DOE areas of NEPA oversight, technology utilization, facilities planning and acquisition, procurement and assistance management, and environmental safety and health, attended the workshop, and several of them spoke about the role of their particular programs in economic development. Representatives of Small Business Development Centers, EPA’s Office of Federal Facilities Enforcement, Congress, and the White House National Economic Council provided their perspective of economic development. As a result of this meeting, new communication links were established on a broader government-wide basis. In one instance, a representative from EPA, who had worked with base closures, offered to help DOE. In another, a White House representative who had been instrumental in developing President Clinton’s initiatives to aid communities with base closures became aware of DOE’s unique problems and also offered assistance to DOE.

Community participation included leaders from communities such as Idaho Falls, Idaho; Aiken, South Carolina; Miamisburg, Ohio; Pasco, Benton County, and Richland, Washington; Los Alamos County, New Mexico; and Anderson County, Roane County, and Oak Ridge, Tennessee. Also, the Energy Communities Alliance co-hosted the workshop in an effort to “enhance the information exchange between DOE and local communities on economic issues.”

At the workshop, the Working Group on Economic Development held its monthly meeting, identifying the following barriers to economic development:

- Identification and availability of funding sources,
- Allocation of DOE funding,
- Lack of urgency and accountability in DOE,
- Lack of policy guidelines,
- Restrictive contracting procedures,
- Difficulty in assuring fair competition,

- Lack of integration with technology transfer (technology transfer activities focus on benefits to the U.S. economy, not the local economy),
- The difficult “artsy” quality of economic development,
- Rapid change of market conditions, and
- Ensuring a clear division between DOE headquarters and sites, allowing the sites to have the most authority (EDW, 1993b).

After learning of these issues, each of the focus groups met and drafted economic development policy guidelines. These drafts were then reviewed and comments by community leaders, representatives of DOE sites, and personnel from headquarters were addressed at a third complex-wide workshop, the Economic Development Guidelines Review Meeting, held in February 1994. A cross-section of the participants was similar to the previous workshops, except that there were no representatives from other federal agencies. The meeting provided an open forum for participants to voice their concerns before finalizing the guidelines. The review meeting was led by the Chair of the Task Force, representing secretarial-level management, helping to legitimize the event because secretarial-level participation had so far been minimal.

The guidelines presented for review at the meeting can be summarized as follows:

- *Funding:* The draft funding guideline specifies the procedures for distributing the Task Force’s economic development funds (approximately \$75 to \$100 million) to the sites. The sites are expected to create an economic development plan in partnership with a community reuse organization. The Economic Development Program Office will review the plans and prioritize them by their ability to reuse existing facilities and workers, create new jobs, and stimulate local economic growth. Other criteria for evaluating the projects, that were not stated in the guidelines but mentioned by the Chair at the workshop, included the urgency of the situation, the extent of the impact on the community, the potential for success, and the quality of jobs created. The Economic Development Program Office then selects projects to recommend to the Chair of the Task Force. The partnerships between DOE and the community reuse organization are responsible for managing the funds, developing performance indicators, measuring progress, and providing periodic reports to the Task Force.
- *Community Involvement:* The guideline regarding community involvement focuses on the creation of a community reuse organization (CRO) at each of the sites. This organization is similar in function to the organizations created during base closures; CRO’s are designed to give the community access to DOE resources and responsibility in minimizing the impact of defense downsizing on their community. The membership



is expected to be broad-based, reflecting the various community interests. Regular communication between DOE and the CRO is also expected.

The community involvement process is designed to prevent DOE from telling a community how to do its work. The guideline does not dictate the specific functions of a CRO because at one site, the CRO may only focus on *attracting* businesses to DOE and the area, whereas at another, the CRO may *lease* property from DOE and work directly with businesses as subleasees. According to the guideline, the purpose of a CRO precludes the use of a Site-Specific Advisory Board (SSAB, a community organization to provide oversight for DOE cleanup activities) as the community voice for economic development, but integration and communication with them is encouraged.

- *NEPA Process:* The National Environmental Policy Act (NEPA) process guideline focuses on how to expedite the process and integrate it with on-going environmental compliance activities. Suggestions include gathering necessary environmental data early in the process, encouraging the community to develop a suitable reuse plan as early as possible, re-prioritizing site funding for the NEPA review process, conducting parallel reviews, and supporting site-wide NEPA reviews to allow individual projects to be more efficiently conducted.
- *Leasing Property:* The guideline regarding leasing DOE real and related personal property supplements current DOE leasing guidelines since they do not consider economic development as an option. Leasing in a non-competitive manner to community reuse organizations is permitted, with the site deciding whether to charge full or partial fair market value for rent. The CRO will be required to comply with local zoning laws and other appropriate ordinances, as if the tenant were in a privately-owned facility, adjacent to the DOE site. The site is given responsibility to determine the facility use when proposed missions are conflicting, using the following order of precedence: (1) missions that are not related to economic development, (2) mission of economic development, (3) federal, state, and local agency uses that are not related to economic development, and (4) private uses that are not related to economic development (Policy, 1994a).

Although the general form of the guidelines were agreed to at the review meeting, several details remained outstanding. First, several community and DOE representatives reiterated the concern about DOE's lack of expertise in economic development. They suggested that it "plug into" the organizations already found in many communities, rather than create a bureaucratic organization that requires heavy headquarters involvement. Several participants mentioned the need for communities to be able to develop trust in DOE and for the DOE to be able to have confidence in the community reuse organization.

Second, participants suggested that a CRO should only be considered as representing the community if local elected leaders endorse the organization, for the CRO is to be

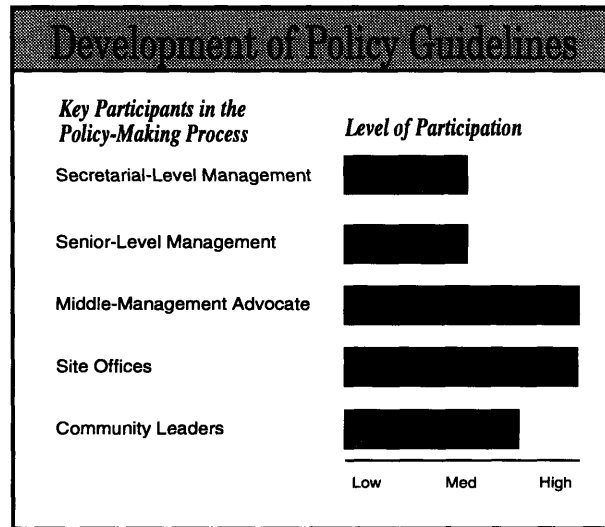


Figure 3-6: Level of participation in the development of complex-wide policy guidelines.

a community-established organization, not a DOE-established organization. Also, it was pointed out that the availability of financial grants can give DOE leverage and act as a motivation for the establishment of a CRO that meets DOE’s criteria.

Third, there was concern that economic development be integrated with other related DOE activities, such as the workforce restructuring plans. Participants also requested clarification on the relationship between technology transfer and economic development. Without coordination, these various activities may potentially conflict with each other.

Fourth, the guidelines do not specify exactly what activities could be supported by economic development funds, such as facility modifications and construction, and several DOE participants requested clarification in the final version of the guidelines.

Fifth, the tension between fairness of opportunity and economic development was a key concern of the participants. There was discussion over whether CROs properly ensure fairness of opportunity if they select economic development proposals. For instance, the secrecy that often accompanies business negotiations may make it difficult for DOE to ensure that the community’s objectives are being met. There was also concern that the objective of quickly creating jobs compromises the objective to provide fairness of opportunity.

Sixth, environmental concerns expressed during the review process included environmental justice and time pressure issues. Participants agreed that economic development activities should not negatively affect a particular group of people. Suggestions for changes in DOE’s NEPA policies were to: (1) delegate NEPA authority to the site offices, and (2)

eliminate the NEPA review process when there are already actions being taken because it is a Superfund site (DOE is not required to follow the NEPA process when a Superfund site is involved, but its policy has been to add the redundancy of the NEPA regulatory process to the process associated with a Superfund site).

The dialogue at the review meeting allowed a variety of stakeholders to voice their concerns and provide input into the policy-making process. The level of participation by key participants in the process was markedly different than when the original draft policy was written. (Compare Figure 3-6 with the participation shown in Figure 3-4). As a result of the review process, the draft economic development guidelines were modified in the following areas:

- *Funding:* The guideline adds a specification to integrate the economic development plan with the workforce restructuring plan, though it does allow for special consideration of economic development plans separately when there are time constraints. The plan should also be integrated with existing local economic development efforts and infrastructure. Along with the plan, sites are requested to give performance indicators to measure the plan's effectiveness. Headquarters will review plans within 30 days, using the following criteria: (1) creation of jobs for displaced DOE personnel, (2) stimulation of local economic growth, (3) commercialization of site-developed technology, and (4) reuse of DOE facilities in a way that is compatible with the site's mission and consistent with environmental requirements. Sites are to alert the public of economic development opportunities in other areas of DOE, such as technology transfer, using widespread notices, such as a Notice of Intent. The guideline specifies that requests for equipment transfer and facility consolidation will be evaluated on a case-by-case basis and does not encourage construction activities.
- *Community Involvement:* The revised guideline specifies that the primary function of the community reuse organization (CRO) is to determine actions that will be taken by local communities to offset the effects of DOE downsizing. The CRO will submit proposals to the site office for review, receive DOE funding if appropriate, and participate in the management of the economic development projects. Although the guideline does not specify the exact criteria DOE will use to recognize an organization as the CRO, such as requiring the support of the local governmental leaders, the guideline does require the site to ensure that CRO activities follow DOE policies and guidelines regarding open access, broad community involvement, fairness of opportunity, and conflict of interest.
- *NEPA Process:* The revised guideline for the NEPA process is not yet developed, pending the outcome of the first stage of the National Conversion Pilot Project at Rocky Flats (as recommended by the Environmental Protection Agency). One action

being taken at headquarters is the delegation of authority to the site offices to manage the preparation and approval of environmental assessments.

- *Leasing Property:* Added to the guideline is the specification that DOE can lease to an entity recommended by the CRO, as well as the CRO itself. DOE Orders can be waived if there is potential conflict between them and commercial standards in the effort to convert to private use. The site must ensure that the CRO's selection of tenants meets DOE criteria, and that a physical condition report and an occupational safety and health survey be completed. Also, DOE and the tenant must agree to the environmental baseline survey results. Other leasing specifications are given, such as a ten-year limit on leases and the requirement of an agreement between the tenant and DOE as to what entities will be responsible for maintenance, inspections, etc. (Policy, 1994b).

Through the policy-making process, shown in Figure 3-3, the affected communities had direct input on the policies, in order to overcome the barriers to economic development. Furthermore, all organizational levels of DOE were involved in the process, temporary organizations were created, funding was allotted, and policy guidelines have been developed that take into account the needs of the communities and sites. Through these actions, many of the concerns and issues that were raised in the workshops were addressed in the revised guidelines, resulting in the DOE now actively involving both management personnel and affected public in the implementation of the economic development mission.

One of the issues not discussed openly during the policy-making process was exactly how the Task Force would judge project proposals and allocate funding. Though economic development is a new area for DOE, and DOE lacks expertise in the area, the Task Force will be making decisions on the distribution of economic development funds. The four priorities expressed in the guidelines will be used, but how that will be implemented is somewhat unclear. For instance, the primary criteria is the number of jobs created, but it is the sites — knowing that the amount of money they receive is probably dependent on the magnitude of these numbers — that give the estimates for the number of jobs expected to be created to be used in the evaluation process. The issue of whether economic development is a successful undertaking for the Department has also not yet been answered, though DOE recently hired a contractor to analyze the current economic development projects (Gandee, 1994a). Creating jobs and enhancing local economies is a process that takes several years to show results, therefore, success may be difficult to measure for several years.

In summary, the Department of Energy expects to lay off over 7,000 contractor employ-

ees at six of its defense complex sites over the next year, with a potential of losing several thousand more jobs in the future. These sites have only recently identified economic development as a mission, and each have developed their own approach to mitigate the economic impacts of downsizing on the local communities. To mitigate the long-term effects of downsizing, the six mechanisms for economic development within the Department are: leasing of government property for commercialization, funding for regional economic development planning, transfer of technology to the private sector, encouragement of other federal activities at the site, diversification of local industry base to include support of DOE activities, and providing technical training. Community involvement in the decision-making process at each site is based on one community organization. The process of evaluating economic development proposals at each of the sites varies, although the sites share the common objectives of job creation, the reuse of facilities and technologies, and the mitigation of economic impacts due to downsizing on the communities.

The complex-wide policy-making process began when a core of site representatives and a middle-management organization identified the need to address and resolve economic development issues. The Rocky Flats National Conversion Pilot Project provided a mechanism to increase upper-level management awareness to the lack of policy guidance and facilitated a senior-level management discussion regarding possible organizational alternatives. As a result, DOE created the Working Group on Economic Development, with membership from the sites and communities; the Economic Development Sub-Task Force, with membership from senior-level management; and the supporting Economic Development Program Office. These temporary organizations developed policy guidelines through a series of complex-wide meetings and allowed interested parties to comment on the guidelines. The complex-wide policy-making process has been successful thus far because it has allowed the input of key participants and has addressed many of the concerns voiced by the participants. DOE needs to develop long-term economic development strategy, continue to revise and assess its policies, and establish an organizational structure at a high level of visibility to demonstrate its commitment and measure the success of the economic development program.

## Chapter 4

# Department of Energy Economic Development: Application of the Lessons Learned

The lessons learned from the Department of Defense's economic development experience can be applied to economic development at the Department of Energy. DOE economic development extends beyond the reuse of facilities and the support of regional economic development planning to also include the transfer of technology to the private sector, the encouragement of other federal activities at these sites, the diversification of the local industry base to include the support of DOE activities, and technical training. The purpose of DOE economic development is the same as DOD economic development: to mitigate the long-term economic impact of defense downsizing on communities. The Department of Defense discovered in its pursuit of economic development, that two fundamental issues determine the success or failure of economic development by a government agency: (1) developing a strategic plan that clearly and realistically sets forth the actions needed to accomplish the economic development mission, and (2) allowing all affected parties to participate in the planning and decision-making process. Figure 4-1 illustrates the basic strategic planning process and highlights that community and government involvement is essential at each stage of the process.

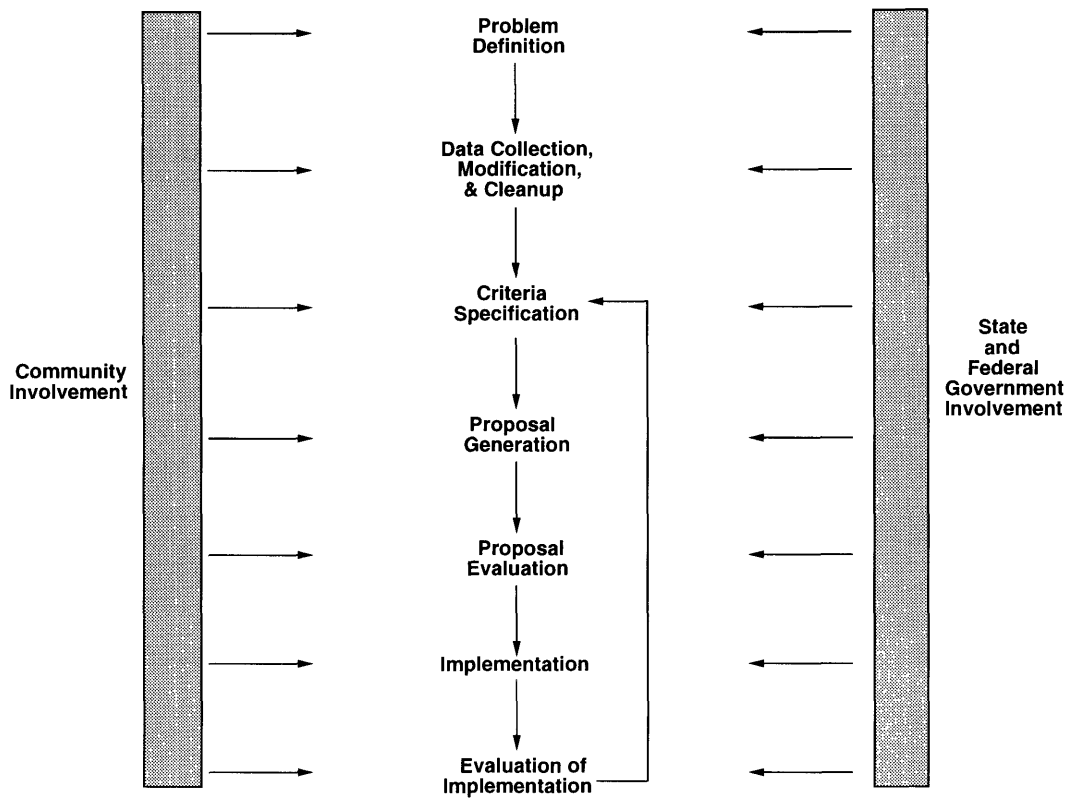


Figure 4-1: Key elements of a strategic economic development planning process.

## 4.1 Steps in the Planning Process

In order to develop successful solutions, the first step in the planning process is to define the problem that needs to be addressed. The problem definition describes the scope and impact of the problem and helps to determine who should be involved in developing the solution. In the Department of Defense experience, the problem was that communities were losing basic sector jobs. In order to create new jobs to replace those lost and to promote economic stability in the community, the communities would be allowed to benefit from the reuse of the military bases. As a result of this definition, various community interests were allowed to participate in determining a solution to the base closure issue. In the end, the solution provided by DOD was to offer planning assistance to the communities and to allow the community to purchase its property, sometimes at minimal costs.

Community involvement was based on one organization that acted as the single voice for the community's various interests, though not all communities were able to present one united voice, often resulting in delays. Learning this lesson from the DOD, DOE has encouraged its communities to develop a united voice that will take responsibility for developing, evaluating, and implementing community economic development plans. Also, DOE has actively included community leaders in its efforts to form a complex-wide economic development strategy through workshops and the Working Group on Economic Development. Through its different economic development mechanisms, DOE is working to provide the communities access to its facilities, technologies, and workforce.

Also as a result of this problem definition, DOD discovered that economic recovery following a base closure will be most successful when community planning begins early. Thus, DOD urged communities to plan early for the closure of military bases, and communities usually have at least two years prior to the actual closure to develop a plan. The DOE sites and their communities may not have the luxury of time, for congressional budget cuts of DOE programs often affect DOE facilities within one year and there is very little time for planning new missions at these sites. Therefore, DOE should include strategic economic development planning in the future use planning of all sites, in preparation for such rapid changes in congressional funding.

DOD's solution to provide planning assistance included working with other government organizations experienced in economic development. There are many organizations at the



federal and state levels that were established to aid communities through the various steps of the economic development planning process. The DOD's Office of Economic Adjustment facilitated communication between these organizations but currently, DOE does not have a similar organization. However, DOE is beginning to work with these other organizations. For instance, at the site level, DOE has designated single points of contacts to work with such organizations. At the federal level, DOE has begun communication with the Economic Development Administration of the Department of Commerce, the Department of Defense's Office of Economic Adjustment, and the White House National Economic Council. Representatives of these and other organizations have also attended the DOE economic development workshops to facilitate DOE's learning process and relationships with these organizations.

After the problem definition, the next step in the strategic planning process is to identify and assess the strengths and weaknesses of the surplus property, the available workforce, and the community, and plan for necessary facility modifications and environmental cleanup. This step helps to determine what economic development activities should be pursued in order to most efficiently make use of the available resources. DOD identification of surplus property was relatively straightforward. DOE continues to collect data regarding its inventory of surplus property but the inventory is not yet completed. Identification of available DOE facilities and technologies is sometimes difficult because of the other missions on the sites, for instance, waste management plans at a site may include using buildings that would otherwise be beneficial to economic development. Therefore, economic development planning must be integrated with other planning activities at the site. Also, many federal acquisition regulations may have to be waived, or modified, by legislative authority in order to make reuse possible because current regulations often do not include economic development as a possible use for government facilities. The skills of the DOE displaced workforce have been determined through the workforce restructuring plans and this data should be made available for the community to determine what industries to target for economic development.

Once the available property is identified, the strengths and weaknesses of the property should be assessed, in order to determine what modifications need to be made. DOD is currently experiencing difficulties at reusing some of the bases because of environmental contamination and as a result, the Environmental Protection Agency (EPA) has recently

assigned senior-level officials to major bases that are closing to support DOD in its cleanup effort. DOE should also work closely with EPA, and state regulatory agencies, in the decision-making process to ensure that the reuse of facilities will comply with regulatory requirements and not conflict with cleanup priorities. DOE may find that not all of the buildings that have potential for private sector reuse will be available for economic development. Some buildings may need physical modifications in order to allow reuse and DOE will have to include a budget for refurbishment to facilitate economic development.

After identifying and assessing the resources that are available to a community for economic development, the next step in the planning process is to establish criteria for evaluating proposals. The Department of Defense, in cooperation with its communities, has developed a basic set of criteria for evaluating reuse alternatives. The most common criteria for evaluating DOD economic development proposals is the number of jobs created. To facilitate the creation of jobs, DOD selects firms that are new to the community and firms that will support new or existing local firms, in order to increase income multiplication. DOD's criteria also includes firms that will diversify the community's economy away from defense-based jobs. DOE's criteria, based on input from community leaders, reflects DOD's experience, including the primary criteria of job creation. For instance, although one of DOE's economic development mechanisms is to promote the diversification of local industry base to include the support of DOE activities, DOE expects those companies to diversify their customer base beyond that of DOE. In addition to this criteria, DOE is also including the reuse of its technologies because they are a public investment and have potential for increasing economic competitiveness and for attracting firms to the communities. DOE should continue working with other government organizations that are experienced with economic development in developing and reevaluating this criteria.

The next step in the process is the generation of economic development proposals. DOD relied on the community to solicit and develop economic development proposals. Learning from this, DOE is also relying on the community reuse organizations to generate economic development proposals. In order to generate proposals for the reuse of its facilities, DOE must advertise its facilities that are available but DOE's security restrictions are restrictive, sometimes limiting its advertising capabilities. The facilities that can be toured by private sector representatives during on-site "open houses" often remain restricted for security purposes related to the previous defense mission, and therefore, the open houses may not

include all of the buildings that would be beneficial for economic development purposes. Thus, DOE should take steps to consolidate all defense-related activities on-site, thereby allowing greater opportunity for economic development. In addition to the public notices that DOE has placed in government publications, DOE should explore the possibility of advertising through organizations that have experience in the reuse of military base closures, such as the National Association of Installation Developers. There have been many creative alternatives suggested when generating reuse proposals for closed military bases. The reuse of DOE production facilities will primarily be industrial, though it should consider other uses as well for appropriate buildings. For instance, DOE is considering educational reuse because of DOE's unique technologies and knowledge. It does not appear practical at this time for DOE to consider reuse activities such as recreational, health, historical, and cultural.

After the proposals are generated, the next step is to evaluate them based on the criteria. The DOD's community reuse organization is the organization that evaluated economic development proposals for closed military bases. Typically, DOE's community reuse organizations evaluate the proposals and then submit them to DOE for approval and funding. The DOD experience shows that market studies are important for evaluating proposals and DOE should work with the community to conduct market analyses in order to determine the most promising economic development alternatives. Also, DOE should determine what proposals may be complementary or conflicting to the existing mission. The proposals should also be evaluated based on DOE's required investment, as well as the community's commitment to the proposals. DOE's goal is not to encourage dependency on government dollars, but rather, to facilitate a community to develop its own plans for its future.

The cornerstone to the economic development planning process is the feedback loop used to continually modify the proposal evaluation criteria. After DOE implements its economic development proposals, it should work with the community and other government organizations to evaluate the projects on a regular basis. This evaluation should take place complex-wide, through workshops similar to those presently held, as well as at each site. The creation of jobs as well as any savings in maintenance and operating costs should be assessed. Through this iterative process, DOE may find that one of the economic development mechanisms is not beneficial to the community or to DOE and requires modification. There may also be changes in the market that will require DOE and the community to

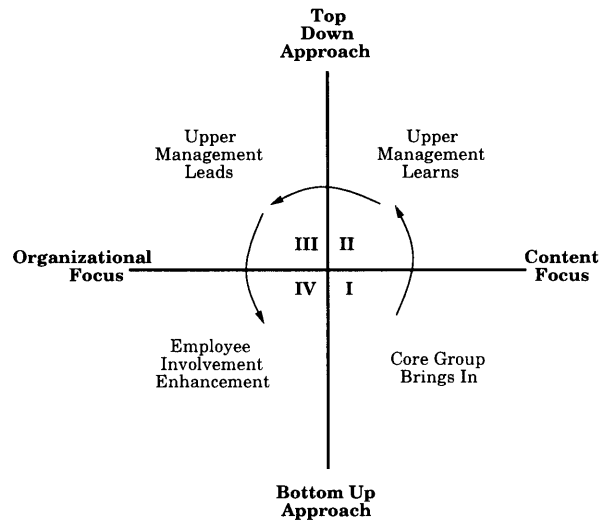


Figure 4-2: The Four Quadrant Implementation Process (Clausing, 1993, p.265).

target other industries or economic development activities. Based on the results of this evaluation, the criteria developed by DOE and the community should be reevaluated to ensure that future economic development projects will achieve the objectives of the program. The Department of Defense economic development experience showed that the mitigation of defense downsizing is a long-term process — the reuse of former military bases can take up to three to five years to complete, with the process sometimes continuing for twenty years, — thus, DOE may not be able to measure the results of its economic development projects for several years.

## 4.2 The Future of Economic Development

In order for DOE to develop and codify economic development plans that will be beneficial to the sites and their communities, it must have a complex-wide policy and organization with which to conduct economic development. The economic development policy-making process until now has represented a new approach for DOE policy-making because the driving force has been the DOE site offices and their local community leaders, not upper-level management (Gandee, 1994b). According to Dr. Don Clausing, a professor and researcher in product development organizations, a large organization that faces a change will most successfully implement that change if it follows the “Four Quadrant Implementation Process” (Clausing, 1993, pp.263-269). Shown in Figure 4-2, the Four Quadrant Implementa-

tion Process begins in Quadrant I when a core group, usually middle management, learns about the change that must be made. The core group then introduces the change to upper-level management in Quadrant II. After gaining a clear understanding of the content of the change, upper-level management leads the organization into Quadrant III, where the focus is on creating an implementation plan for organizational development. DOE is currently in Quadrant III. The core group has brought economic development to the attention of upper-level management, upper-level management has learned about economic development through the workshops, the National Conversion Pilot Project, and the temporary organizations that have been created, and the Secretary of Energy has declared economic development as a mission of the Department.

In July 1994, the Secretary will decide how best to address economic development on a complex-wide basis. According to the Clausing framework, upper-level management leadership in Quadrant III is critical to the success of the proposed institutional change because the policy framework at this point is fragile and uncertain until major successes have been achieved. Therefore, upper-level management must take the lead to complete the Quadrant III stage, and move the organization into Quadrant IV to implement its plan. The economic development organization that is created should take into account the lessons that have been learned from the Department of Defense and DOE's brief economic development experience.

The DOE experience of the Task Force on Worker and Community Transition clearly demonstrates the benefit of having a senior-level organization that can assist the sites and communities on a complex-wide basis, as well as to facilitate communication and partnerships with other organizations needed for successful economic development. Representation from the different Secretarial Program Offices, such as Environmental Restoration and Waste Management, Procurement, Field Management, and Economic Policy and Strategic Planning, was shown to be successful because issues that arise in economic development cut across the organizational boundaries. Also, economic development proposals require timely response and the organization that is created should be able to respond quickly to proposals. However, the drawback of a Task Force is its ad-hoc, temporary nature. As mentioned earlier, the success of the economic development program at DOD is difficult to measure within a short time period, and DOE should take this as a lesson learned. If DOE wants to demonstrate its commitment to economic development and be able to measure progress,

a long-term strategy must be developed through a more stable, permanent organization at a high visibility level (eg. reporting directly to the Secretary), to take prompt action in economic development proposals and issue resolution.

Within this organization, communication and coordination with the economic development contacts at the sites and their community leaders is essential to conduct successful economic development. The Working Group on Economic Development played a significant role in identifying the issues that DOE must address and resolve and allowed the communities to have access to the highest level of DOE management. The community representatives, more experienced in economic development than DOE, were able to provide specific recommendations to the Department as to how it should approach economic development to best benefit the community. Also, the site representatives that are dedicated to economic development played an important role because they were the critical link between economic development and other on-going missions at the sites. Consistent organizational structures should be developed that will ensure upper-level management at the sites is more closely involved in the process. Through the Working Group and the workshops, the communication between site representatives, was very important in learning the lessons that the other sites had already experienced, and to share ideas for economic development proposals, and their criteria and proposal evaluation processes. This communication should be continued and will assist the DOE sites in evaluating and improving their particular strategic economic development planning processes.

DOE faces many obstacles in creating a successful economic development program. The coordination that is required between the various Secretarial Program Offices will be difficult to conduct because they are designed to work on their particular programs rather than to coordinate together on major initiatives such as economic development. Also, strong Secretarial support is needed in order to establish an organization that facilitates this coordination between the Secretarial Program Offices, to provide high visibility to economic development, to allocate sufficient funding for the program, and to empower the organization to conduct economic development and respond to proposals in a timely manner. In order for DOE to successfully pursue economic development, the Secretary of Energy must be convinced that economic development provides a way for DOE to meet the Secretary's objective to support DOE communities and the U.S. economy.

DOE will also face obstacles at the sites. A challenge to open communication among

the sites will be that the sites are inherently competing with each other for economic development funding. This will encourage the sites to develop high-quality proposals but it also may inhibit open communication between the sites regarding the specifics of their activities. As such, DOE headquarters should demonstrate leadership by considering what is the best use of taxpayers money in the interest of this country's economy, and develop criteria to balance site needs versus community needs. Also, DOE may have difficulty incorporating economic development planning into the usual site planning activities because economic development is a new mission and site managers may not consider it a high priority.

This organization may be created during a time of downsizing for the Department, but as a large government agency DOE should be prepared for future fluctuations in its size and mission. For instance, the Administration at some point in the future may decide to reestablish the defense mission at the sites, or environmental restoration activities at the sites may suddenly be accelerated to create new basic jobs in the community, and if so, the Department will be faced with an entire set of challenging new issues. Thus, this organization must prepare for responding to possible future scenarios.

DOE economic development can be a beneficial activity for both the community and the Department of Energy for a variety of reasons, including:

- Creation of jobs for the community,
- Reduce costs of startup for businesses,
- Savings of maintenance and operations costs for DOE,
- Provide technical training to the community,
- Encourage long-term economic planning in the community, and
- Retain DOE skill base and commercialize its unique technologies.

One suggestion for the name of the new organization is "Program for Economic Assistance and Conversion Efforts," (PEACE) in order to emphasize the objectives of assistance to the community and the conversion of DOE assets to civilian uses. Acronyms are a virtue of government work and this would conjure up visual images that relate to the purpose of the Department economic development activities — to promote economic security in DOE communities as part of the conversion process following the cold war.

The Department of Energy is engaging in a new activity and there are many lessons to be learned from other organizations and agencies that have experience with economic development, particularly the Department of Defense. The Department of Defense has discovered that two fundamental issues determine the success or failure of economic development by a government agency: (1) developing a strategic plan that clearly and realistically sets forth the actions needed to accomplish the economic development mission, and (2) allowing all affected parties to participate in the planning and decision-making process. The Department of Energy has begun to pursue economic development by taking steps, both at the sites and complex-wide, towards addressing these issues. Through the leadership of upper-level management, DOE stands poised to continue assisting communities in mitigating the economic impacts of defense downsizing through its economic development program if it successfully applies the lessons that can be learned from others' experience in economic development.



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