STORING OUR URBAN COMMUNITIES: MODEL FOR AN EMPOWERED AMERICA

*A Unique Partnership between
Urban Enterprise Fund and Argonne National Laboratory*

Argonne National Laboratory is a U.S. Department of Energy Laboratory

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Welcome to Chicago's West Garfield Park

Or its Lawndale. Or Cleveland's Hough district. Or New York's Bronx. Until recently, urban neighborhoods in decay. Blocks of vacant lots and empty buildings. Demographic decline. A 50% decrease in population between 1970 and 1990. 50% unemployment among male residents between the ages of 18 and 35. About 40% below the poverty line. Infant mortality rates higher than those of Madras, India. Gangs, drugs, and crime.

But in West Garfield Park, the numbers do not paint a total picture. There is a community development corporation here — *Bethel New Life* — that has brought some life back to the area. You can walk down some blocks and see restored apartment buildings and bungalows that have manicured yards and fresh paint on their shutters. You can find kids who are preparing for college, and adults who are retraining for jobs that actually exist within the community and

the city. Bethel's work. A new business that employs residents and that profits from the garbage on the street. Other new businesses that provide to the very old and the very young. Just a dent in the decay. A small glimmer and a new way of looking at something that some

Welcome to Argonne National Laboratory, about 20 miles from Chicago. 4,400 staff, 1,750 scientists, with a budget exceeding a half billion dollars in 1995, \$60 million of which is devoted to the development of new technologies that will help reduce

renew American industry. Partnerships with Ford and General Motors and IBM and Caterpillar that seek to develop new products and processes. Business provides its knowledge of the market—its economics, its present technology, and its sense of what the requirements are for success on an international scale. Argonne scientists fit their gadgets, their lasers and analytical instrumentation, and their computer science to these specifications. No miracles yet. Some dents in the decline; a small glimmer and upswing that brings a tad of something that smells like hope.

Two vectors on one geometric plane—Bethel and Argonne. One seeking a return of decency to an old city neighborhood through restoration of its economic base; a restoration that will mean jobs and a renaissance of business and housing and just plain old opportunities on its presently mean streets. The other seeking to maintain the nation's economic base by providing new technologies that will keep American industry competitive by restarting old industries like steel, reinventing stalled industries like automobiles, and inventing new ones based on biotechnology and software.

Through serendipity, the two vectors intersect: Argonne and Bethel. And their purposes mingle. Bethel becomes Argonne's partner; like industry, Bethel provides its knowledge of West Garfield's needs, its resources, its present economics, and its sense of what might be required for success. Argonne scientists take their gadgets and inventions and wherewithal

and begin to apply them to these specifications. New ways to decrease construction costs and increase energy efficiency in the restoration of West Garfield apartments. The possibilities of quickly defining the environmental status of abandoned commercial sites and of developing cleanup methods that can bring them back to use. Ideas on new technologies that can be used in the development of recycling businesses in the area. No miracles yet. Some dents in the decline; a small glimmer and upswing that brings a tad of something that smells like hope.

This booklet is about the Bethel-Argonne Partnership. An experiment in technology transfer and urban restoration which both partners think just might work. And be repeatable—in Chicago's Lawndale, Cleveland's Hough, or New York's Bronx. If this experiment does work, maybe, just maybe, we can turn dents into fenders, upswings into economic booms—and convert glimmers to realities. . . .

. . . Stranger things have been known to happen.

An amazing mix. A church-based, low-income, community-operated organization and a national technology laboratory. But the persistent poverty of a rust-belt industrial community like ours requires this kind of new partnership to bring about creative solutions.

Bethel New Life brings the reality base, the dogged determination born out of people who have struggled before, the energy fueled by the infinite hope of the experience of faith. Fifteen years in the trenches has brought national recognition for cutting-edge initiatives. Add to this the new awareness of the need for *sustainable* development that goes beyond housing rehabs and job creation.

Mary Nelson

President
Bethel New Life, Inc.

The strange and exciting synergism of the Bethel-Argonne Partnership creates practical attempts to turn garbage into jobs, problems into possibilities, and builds on the capacities of people at the grass roots; this mix fuels new approaches to old problems. But such a partnership also requires a kind of commitment to the *common good* on both sides, the conviction that there are solutions, and that it takes a participatory process to make it work.

It has been an exciting discovery for us at Bethel to find at Argonne such colleagues in conviction and commitment and true partnership that make it all work. The systems of society — finance, education, economics, health, judicial — just don't work very well in communities like ours. Thus, we are free to risk and forge ahead as we seek new solutions.

It is an exciting opportunity for discovery and breakthrough, and an opportunity to share with others, in similar circumstances, what we learn. This partnership attempts applied technology with soul.

Jewel Mandeville

Chair, Board of Directors
Bethel New Life, Inc.

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What is Sustainable Community Development?

"Sustainable development." It is a term with no real meaning. It rolls off the tongue easily, but it cannot be precisely defined.

City-based businesses move away, beyond suburbia, leaving behind abandoned buildings and empty lots. Roads are expanded and new transit systems are created so Chicagoans can get to jobs in places like rural DeKalb and Oregon; but public transportation decays. People move, abandoning homes, more empty lots. Meanwhile, open green fields become industrial sites; new sprawls of pipes, electrical lines, warehouses, and railyards replace croplands and wetlands; water consumption rises and supplies run dry.

No one can define this scenario as sustainable development. For Chicago. Or for the nation.

One group, the Center for Ethics and Economic Policy (Berkeley, California), defines a sustainable community as one that requires (1) economic security; (2) ecological integrity and environmental quality; (3) a high quality of life for all — measured by educational opportunities and attainments; health, personal safety, and security; and a sense of place, connection, and belonging; and (4) public participation in decision making — accountable and responsible.

What if we could define a set of needs and assets for an urban area, and balance them such that people could find, within their own communities, all the things they need for decent and rewarding lives — tools, education and training, and jobs?

Consider the ramifications. What if creating livable-wage jobs, in clean and safe industries, in an area like West Garfield Park could become a paying proposition? If 1,000 such jobs miraculously appeared, we estimate that the nation could save about 50,000 barrels of imported oil per year, improve its balance of payments by perhaps \$500,000 annually, and conserve the production of six to twelve new domestic oil wells. These benefits would certainly be accompanied by corresponding reductions in particulate emissions, unburned hydrocarbons, and carbon monoxide. And that's just a start!

The Bethel-Argonne Partnership may not define the model for sustainable development in all locales. But it might define sustainability for West Garfield Park and other areas in Chicago, and Newark, and Minneapolis. And maybe it will slow the sprawl; keep a few green fields green; and restore a few empty, brown, urban spaces to more lively shades.

Affordable housing — both in terms of capital and operating costs — strengthens a community's economy and health. The key to affordable housing is energy efficiency. But can we, together with community housing developers, achieve environmentally sound, energy-efficient, sustainable housing technologies at an affordable price?

This bar chart shows that super insulation could reduce annual energy costs by more than 40%.

"As we seek to enhance the inner city, it is critical that we address the issue of energy-efficient development. The Bethel-Argonne Partnership is an example of how communities and federal research institutions can work together to achieve solutions that bring housing and jobs back to our cities."

Charles H. Shaw
President, Urban Land Institute

"Affordable housing" — housing for which rent and utilities cost less than 30% of an occupant's income.

EXPLORING NEW APPROACHES TO "REHABBING"

Affordability, energy efficiency, and livability — these are the problems that afflict multifamily housing in urban areas. In West Garfield Park, the best solution may be rehabilitation, or "rehabbing." Rehabbing can spur local economic development, improve the environment, and save money by eliminating the costly demolition of buildings — thereby enhancing the neighborhood's rich cultural heritage.

Using a Team Approach to Improving Energy Efficiency

Building on the State of Illinois Department of Energy and Natural Resources Super Insulation Protocol, the Bethel-Argonne Partnership is creating a model that housing developers can use to rehabilitate multifamily buildings without demolishing the interior walls (that is, a "moderate" rather than a "gut" rehab).

The project involves a team of community leaders, local utilities (Peoples Gas Company, Commonwealth Edison Company, and Ameritech Corporation [Chicago, Illinois]), city housing and state energy office officials, and national laboratory researchers. The team will investigate

cost-effective ways of incorporating energy-conservation measures into moderate rehabs. The team will also consider ways to involve community firms in installing high levels of insulation and air sealing in moderate rehabs.

Implementing energy-conservation measures in the more extensive "gut" rehabs could reduce annual energy costs by about \$355 per unit. In Chicago alone, if energy conservation in moderate rehabs approximated that in gut rehabs, annual energy use could be reduced by 1.3 trillion Btu.

Gauging Impacts of Super Insulation on Energy Efficiency

The Partnership is focusing on rehabbing multifamily buildings through highly innovative, yet simple, energy-efficient techniques — like "super insulation." Super insulation encompasses installing increased amounts of wall and attic insulation, improving ventilation in bathrooms and kitchens, installing energy-efficient windows, and using high-efficiency space-heating systems.

Working with the State of Illinois, the University of Illinois at Chicago, and the Kenwood-Oakland Development Organization, the team showed how super insulation could benefit the community: lower energy costs, more affordable and comfortable housing, decreased property abandonment, increased employment, reduced landfill waste, and lower greenhouse-gas emissions (primarily carbon dioxide and methane). The benefits go beyond this project, because the team has created an energy-savings database that can be transferred to and used for other projects.

A typical wall section in a super-insulated rehab under development in West Garfield Park.

"Gut rehabs" — buildings in which exterior-wall inside faces must be demolished.
"Moderate rehabs" — unoccupied buildings in which the inside faces of the exterior walls do not need to be removed or replaced for reasons other than the inclusion of insulation or energy-conservation measures (i.e., the plaster and lath have not been subjected to severe damage from exposure to the elements, arson, or vandalism).
Moderate rehabs are much less expensive than gut rehabs, averaging around \$25,000–\$30,000 per unit, while gut rehabs generally cost \$55,000–\$70,000.

The Beth-Anne Life Center models adaptive reuse. In addition to housing the elderly, the campus will have a large regional primary health care center and a cultural and performing arts center. A small business center/job training institute and a day-care center are already in operation.

As a partner with Bethel New Life in the forefront of the community development movement, New Community Corporation affirms the need to bring science and technology into the city. Without such ventures, the alienation of our neighborhoods from the American economic mainstream will only get worse."

Monsignor William J. Linder
Founder
New Community Corporation
Newark, New Jersey

ADAPTING A HOSPITAL FOR COMMUNITY REUSE

Traditionally, when inner city hospitals close, they stand vacant — quickly becoming an eyesore and a liability for the community. But not so with St. Anne's, a 100-year-old hospital situated on a 9.2-acre campus on Chicago's West Side. Bethel purchased the hospital, now known as the Beth-Anne Life Center, shortly after it closed in 1988 and has been adapting it for community reuse ever since.

Together, Argonne and Bethel are tackling the problem of how to make both old buildings and new construction energy-efficient, financially viable, and affordable for the programs located at the Beth-Anne Life Center. The challenges range from identifying cost-effective capital improvements, such as replacing the high-pressure steam system with an energy-efficient hot-water-heating system, to exploring window systems that block the heat of summer sun and prevent heat from escaping in the winter.

The Partners are also exploring ways of retrofitting the hospital's industrial kitchen to supply meals not only to the seniors who will live in the building's 125 apartments, but to people in the area — thus bringing both jobs and a valuable service to the community.

DEVELOPING BETTER WAYS TO MONITOR ENERGY USE

The Partners are applying energy-efficient materials and construction techniques to develop apartments with annual operating costs under \$1,000. In particular, they are assessing building components (windows, doors, lighting fixtures, etc.) that can be fabricated and demonstrated in West Garfield Park, thereby creating local jobs. The components can then be sold in this market and broader ones as well.

The Partners are assembling an energy audit and diagnostic tool so that Argonne engineers can monitor energy use in each building and then evaluate the cost-effectiveness of proposed conservation measures. Results will provide a model for other U.S. cities. Bethel plans tours to convince community developers and potential financial backers that energy efficiency can be increased while rehabbing and improving the inner city.

Contrast the former grandeur and the enduring solidity of this graystone against the uselessness of its gutted multifamily units. The Partnership is demonstrating that inner-city rehabbing benefits residents, owners, workers, and the community.

FOR LIFE DEVELOPING HOUSING SERVICES, BRINGING NEW LIFE

There's lots more to housing than just incorporating energy-efficient windows, insulation, or what have you. You have to look at cost-benefit ratios. You have to see some return.

"The community doesn't want people coming in to try out a bunch of technologies, then leave us holding the bag if they don't work. So it's essential that this Partnership be a real, long-term commitment."

Turning high-volume wastes into pumpable insulation and other construction materials is one way to demonstrate environmentally conscious sustainable development. Equally important, the Partnership and community firms in West Garfield Park are undertaking unique activities to expedite site characterization and reclaim "brownfields" to rejuvenate existing communities.

Unlike the technique used to fill large voids, Argonne uses smaller applicators to demonstrate that cellulose can be blown into small air spaces and still achieve the high density needed to provide an air barrier.

BLOWING IN DENSE-PACKED CELLULOSE AS INSULATION

Converting recycled newspaper into cellulose insulation may help cut rehabbing costs in West Garfield Park. After the recycled newspapers have been shredded and treated with a fire retardant, rehabbers can add the shredded paper to attic insulation and blow it into voids between the outer shells of buildings and drywall or floorboards.

Blowing high-density cellulose into voids insulates and prevents outside, unconditioned air from entering the living space. Because this air-sealing function reduces the amount of cold, outside air that needs to be heated, the furnace or boiler requires less energy — and costs less to operate.

"I commend Bethel New Life and Argonne National Laboratory for their alliance to revitalize West Garfield Park. This public-private partnership brings together the best of both worlds for the betterment of the neighborhood. Their joint commitment defines an excellent way to do business."

Richard M. Daley
Mayor, City of Chicago

ADAPTING EXPEDITED SITE- CHARACTERIZATION TECHNIQUES

Seeking to develop more business and industrial facilities, Bethel is negotiating for a 6-acre site upon which a new facility might be built. Because this property has been used as an unauthorized dumping ground, it may contain construction rubble, oil-contaminated wastes, underground storage tanks, and other environmental hazards.

To characterize potential environmental hazards, Bethel contracted with a small, minority-owned business specializing in environmental services. Because of their experience at federally owned hazardous sites, Argonne staff served as technical advisors, providing site-characterization training, which enhanced the firm's technical capabilities. Argonne also helped the firm conduct a field investigation and

prepare the documentation required to finalize the sale of the property.

Through this project, Bethel and Argonne transferred unique site-characterization expertise to a small business. More important, the approach is a model for site characterization, one that is transferable to similar sites in other cities.

Soyini Walton enters data while Argonne's Mike Thompson assists Pamela Charleston in using an advanced characterization device to sample the soil at a 6-acre lot on Chicago's West Side.

SOYINI WALTON

PRESIDENT, ASSET ENVIRONMENTAL SERVICES

"Our first environmental site characterization project with Bethel and Argonne was a trial effort, but a great success. It was a great benefit, not only for the transfer of information and technology, but equally for the relationships established with Argonne people."

"Beyond any specific technologies, Argonne people can find new ways of doing things, see new aspects of problems — they should definitely stay involved!"

RECLAIMING URBAN INDUSTRIAL SITES: SITE REMEDIATION.

Buildings such as this one in West Garfield Park represent an opportunity for reclamation.

Abandoned industrial properties, or "brownfields," are both assets and liabilities in many of America's older neighborhoods, like West Garfield Park. Many brownfields cannot be sold because of real or suspected environmental contamination — a major obstacle to new investment. These properties demonstrate the interdependence of the urban economy and its environment.

To help West Garfield Park reclaim valuable land, Argonne scientists are identifying contaminants and appropriate cleanup methods. More important, Argonne is training community-based businesses to perform analyses, thereby equipping them with the skills to reclaim even more sites.

The Partnership is developing environmental screening criteria to select sites for redevelopment and perform environmental audits on selected sites. The Partnership will estimate cleanup costs and select restoration methods to assure environmental compliance for the new tenants.

LEARN FROM THE EXPERTS SENIOR VICE PRESIDENT, BENJAMIN NEW LINE

"One of the key barriers to industrial development in older areas is the problem of environmental concerns. We must learn to assess environmental conditions, clean them up, and make it a jobs opportunity."

"Argonne is a world leader in dealing with environmental issues. If they can't help us, who can? We deeply need their sound, impartial technical advice."

DEVELOPING CONSTRUCTION MATERIALS FROM WASTES

Argonne scientists have discovered an innovative technology for tapping unconventional resources — like nontoxic high-volume wastes — and converting them into inexpensive construction materials, including pumpable wall insulations, particle boards, sealants, and fibers.

Argonne and Bethel staff are bringing the technology to community residents and area businesses. Key objectives are to create entrepreneurial businesses that generate more environmentally related jobs in the area and to teach people how to manufacture products for rehabbing buildings by using the technology. Manufacturing these value-added products in West Garfield Park could help rejuvenate the community's economy and improve the quality of life for residents.

The technology is based on a novel phosphate binder developed at Argonne. Unlike commercial polymer binders, this binder is an inorganic paste. The paste is similar to conventional concrete and is therefore easily and inexpensively adapted for use in existing construction equipment. The typical setting time is only a few hours; complete hardening occurs in one day.

The resultant materials, which are strong, dense, and leach-resistant, make excellent thermal insulators. And, because the raw materials used for the binder are nontoxic, the occupational hazards associated with producing and installing the products are minimal.

Dileep Singh tests the strength of the phosphate binder developed at Argonne. This new material may influence the rehab industry and create environmentally related jobs in the area.

The success of the Bethel-Argonne Partnership will inspire urban and rural communities throughout Illinois. As this unique partnership shows, people dedicated to rebuilding their neighborhood can discover new tools and resources for that goal right in their own backyard."

Jim Edgar
Governor, State of Illinois

Partnership for . . .

Since 1979, Bethel New Life has been working with residents of Chicago's West Side to build a healthy, sustainable community. What began as a small, church-based volunteer organization has grown into a large, multifaceted community development corporation with more than 400 employees and a national reputation for cutting-edge initiatives and pioneering approaches to urban revitalization.

Bethel's initial focus on affordable housing has evolved into a holistic, dynamic community approach—one that encompasses livable wage jobs, affordable housing, healthy people bolstered by strengthened families, and seniors living out the fullness of life in community in a participatory setting. In its first 15 years, Bethel developed almost 1,000 housing units and placed more than 4,000 people in jobs.

Bethel New Life, founded by Bethel Lutheran Church, is now a separate entity, but it remains faith-based and rooted in its initial vision arising out of Isaiah 58:9-12:

If you put an end to oppression, to every gesture of contempt, and to every evil word, if you give food to the hungry and satisfy those who are in need, then the darkness around you will turn to the brightness of noon. And I will always guide you and satisfy you with good things. I will keep you strong and well. You will be like a garden that has plenty of water, like a spring of water that never goes dry. Your people will rebuild again on the old foundations. You will be known as the people who rebuilt the walls.

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For almost 50 years, Argonne National Laboratory has been a leading center for research and development related to energy and environmental issues and technologies. This focus has become more important as the nation continues to respond to worldwide events affecting energy supplies, national security, and international competitiveness.

Argonne employs approximately 4,400 persons, more than 1,750 of whom are scientists and engineers. Argonne is especially well known for its ability to assemble interdisciplinary teams of specialists for complex problems requiring focused study or evaluation.

Argonne's mission is basic research, technology development, and national goals in energy, technology, environment, quality, and industrial competitiveness. scientific leadership, and educational structure. Major thrusts are (1) energy and environmental technologies, (2) national research facilities, (3) basic research, (4) industrial and manufacturing technology, (5) technical evaluation, and (6) education.

A fundamental part of all its activities is the transfer of technology, particularly through R&D partnerships with industry, universities, and interested holders, such as community development corporations like Bethel New Enterprise. Argonne enhances its mission through partnerships with Bethel in sustainable community development. This logical expansion makes Argonne's core expertise even more accessible.

Liveable-Wage Jobs

RAINING

Training residents for livable-wage jobs in the community is a basic goal of the Bethel-Argonne Partnership — for today's office, for the evolving job market in environmental restoration and waste management, and for tomorrow's urban engineer.

Annette Wilson demonstrates her newly acquired word processing skills as Cheryl Williams, Gloria Hunter, and Pat Kulzer, Argonne's trainer, look on.

TRAINING WORKERS FOR REAL-WORLD OFFICE JOBS

Starting a career is difficult, especially when the skills demanded by the workplace must be learned on the job. Few companies can provide training to those who most need the skills.

Through the Partnership, Argonne offers internships in general office procedures and word processing skills. After training in Bethel's computer skills program, some interns are chosen to continue training in Argonne's state-of-the-art Document Processing and Control Center, where they learn how to master their skills and become certified. This experience helps successful interns compete for good office jobs and transfer what they have learned to the workplace.

MILKED WILLY
DIRECTOR OF YOUTH AND EDUCATION, BETHEL NEW LIFE

Bethel's educational programs emphasize collaboration with business and technical people as mentors, plus opportunities for students to work in the community. Argonne scientists contribute their expertise to Bethel's Urban Engineering Program, and the Laboratory is identifying critical skills and technologies for the Youth Enterprise Network."

"A coalition of community-based organizations and schools, the Network helps develop student-based businesses. Current ventures include a student-operated recycle clothing shop, a gift shop, a credit union, and an in-school café for teachers and community residents."

PREPARING RESIDENTS FOR ENVIRONMENTAL CAREERS

Employment is a powerful force for battling urban decay. Because Chicago's West Side has a high (20-30%) unemployment rate, creating jobs is the single most important issue. Bethel has identified the environmental field as a growing job market for minorities. The Partnership has therefore established a jobs training initiative, which is undertaking the following:

- Assisting residents who apply for training in a 3-day lead contractors/supervisors course offered by the Midwest Environmental and Industrial Health Training Center at the University of Illinois at Chicago.
- Offering a 40-hour basic training course that certifies residents as Occupational Safety and Health Administration- (OSHA-) approved hazardous-materials handlers or environmental assessment technicians.
- Teaming with the Chicago Manufacturing Center to canvass West Garfield Park's unemployment and technology needs, environmental and otherwise.
- Placing trained, job-ready residents through Bethel's comprehensive employment services.

Working with Argonne's Jennifer McHenry, environmental waste management interns and West Garfield Park residents Chris Garner and Kevin Hammock dig into sacks of trash as they characterize an Argonne solid-waste stream. Their findings will help West Garfield Park's recycling and reutilization efforts.

"We support Bethel New Life's efforts to encourage young people to pursue careers in science and technology. Their education and training efforts, supplemented by the expertise of partners like the University of Illinois at Chicago and Argonne National Laboratory, offer a model for other communities."

James J. Stukel, President
University of Illinois at Chicago

Argonne's Sam Bowen involves 4th–7th graders in a lively question-and-answer session at a monthly meeting of the West Garfield Park Explorers.

INSPIRING THE NEXT GENERATION OF ENGINEERS

Cultivating student interest in science and engineering and directing them to college is what the Partnership's Urban Engineering Program is all about. The program's purpose is to inspire disadvantaged urban students (grades 4–12) to pursue careers in science and engineering. More important, Bethel's dream is that these students will return to West Garfield Park as adults and apply their scientific and engineering expertise in rebuilding the community.

This multifaceted program teaches educators how to use real-world applications of mathematics and science in their classrooms. It also provides students, teachers, and parents with information on how to enter and successfully graduate from college with an engineering degree. For younger students, the program offers activities to spark student interest in math, science, and engineering through lectures, games, and colorful slides presented by Argonne scientists.

JOE ROBERTS ELECTRICAL ENGINEER ILLINOIS INSTITUTE OF TECHNOLOGY

"The Illinois Institute of Technology, the University of Illinois at Chicago, and the Chicago Urban League help support our Urban Engineering Program. The goal is to overcome the nerdy, lab-coat-and-glasses image by showing kids career scientists and engineers as role models and that math and science can be fun. Our first Explorers session drew 67 kids; we'd only expected about 30. We hope to place our students in local colleges and have them come back and work here, reinvesting in the community. Argonne's commitment to Bethel and West Garfield Park will help."

Expanding the number of livable-wage manufacturing jobs within the community brings new life and added sustainability to West Garfield Park. Efforts are under way to maintain what is — supporting area manufacturers in their business ventures — and to add value to new ventures — converting waste to value-added products.

PROMOTING MANUFACTURING JOBS THROUGH PARTNERSHIPS

West Garfield Park is home to approximately 40 small to medium-sized manufacturers, as well as Helene Curtis and Brach Candy. Because manufacturing jobs provided by companies such as these strengthen the area's economy, Bethel has formed a partnership with Argonne and the Chicago Manufacturing Center (CMC).

The three partners offer the expertise of their staffs to area manufacturers. Staff visit companies to identify specific services that could be helpful to them. For example, as one service, the partners identified specialized, on-site training programs for employees who want to upgrade their skills. By working with local manufacturers, Bethel can expand its existing training and job placement program.

The CMC augments Bethel's program by offering a variety of services to companies. "Benchmarking," for example, enables a company to compare its performance with that of similar companies. The CMC can also completely assess a company's operations and make detailed, tailored suggestions for improvements. By adopting these suggestions, the company may improve its operations or expand its sales into new markets. This partnership may be the first of its kind to survey a community to create a comprehensive inventory of needed skills.

In one effort to help expand local firms, Bethel spearheaded a visit to Plasticrest Products, Inc., where President Robert W. Pauly demonstrated a manufacturing step to Argonne's Joe Braun, Janielle Christian of the Chicago Manufacturing Center, and Bethel's Leshon Kimble-Brown.

Established in 1994, the Chicago Manufacturing Center is an affiliate of the National Manufacturing Extension Partnership, a program of the National Institute of Standards and Technology (U.S. Department of Commerce). The center is one of 44 around the country.

"At Helene Curtis we recognize our responsibility to support the communities where we live and work. We are proud of our partnership with Bethel and Argonne, whose values and philosophies about community involvement match ours. Collectively and individually, our three organizations care about giving something back to the communities."

Ron Gidwitz
Chief Executive Officer
Helene Curtis

Knee-deep in newspaper,

Argonne's Sam Jody discusses the potential of recycling with a worker at Bethel's former material recovery facility. Materials from suburban curb-side pickup are sent there for separation into component waste streams (paper, plastics, and aluminum). The products are bales, chips, and compressed metal ready for sale to materials wholesalers.

RECYCLING WASTE ADDS VALUE, CREATES JOBS

Argonne is helping Bethel find ways to increase the value of recycled materials. An underused steam facility, a ready labor force that could be trained to operate a demonstration facility, and the availability of industrial space in the neighborhood make the Bethel-Argonne collaboration especially attractive.

Potential projects are numerous. For example, Bethel and Argonne staff are exploring ways of converting waste plastics into new plastics suitable for molding into new products. They are also investigating new processes for recycling non-metallic automobile components.

Bringing the Partnership's resources and businesses together generates synergistic benefits: more jobs, greater involvement with industrial partners, construction and operation of a neighborhood "high-tech" facility, and potential for expansion. These benefits can develop lives of their own, generating new opportunities for West Garfield Park.

STEVE STEINHOF DIRECTOR OF INDUSTRIAL DEVELOPMENT, BETHEL NEW LIFE

"By applying Argonne's technology and resources, we can overcome barriers that hinder the fostering of new industry on the West Side. For instance, the potential of environmental contamination of abandoned properties scares off developers and investors. Bethel is working with Argonne and a minority-owned assessment firm to survey abandoned industrial properties. With the right information, we can clean up contaminated sites, speed up development, and create jobs."

There are some people, like me, who love cities! For years, I lived in the Pacific Northwest — beautiful scenery, plenty of fish, bears and rattlers, but no neighborhoods. You could walk down the streets any time of day or night. But no street vendors. No porches. No church picnics featuring Polish/Italian/Russian/African-American cuisine and festivities. I returned to Chicago rejoicing.

But I found a few disturbing things, affirmed in visits to Detroit and Newark and Cleveland. Large tracts of our cities are dying. Blocks of empty lots. Apartment buildings and bungalows abandoned. Windows and doors boarded up. Yards and parking lots gone to weeds and rodents. People dwell within this emptiness, but the media and my suburban-dwelling colleagues suggest they are beyond redemption.

Through a bit of serendipity, I visited one such "dying" tract and found that the media and the suburbanites are wrong. West Garfield Park contains life — vibrant life! And one agent nurturing that life is Bethel New Life. (How appropriate!) Bethel is not only more than aware of the problems, but is looking for solutions. They see recyclables not garbage, affordable housing awaiting reconstruction not abandoned hulks. Kids are kids, not neighborhood members; unwed mothers are single parents who can be trained in child-rearing care. Where others see debris, Bethel sees assets... and opportunity. And so after a little optical adjustment, do a new or use an old one.

But what can we do? National labs are accustomed to working on com-

problems for government and industry and designing cost-effective solutions. But the technical resource base of West Garfield Park is not that of a Monsanto or Dupont; its ability to support and develop new industries is not equivalent to the Japanese Ministry of Trade's.

Can a major research facility like Argonne work effectively with a city neighborhood for job creation and urban restoration? Yes, if the neighborhood association can define opportunities worth pursuing and issues requiring resolution, and if the Laboratory has both applicable technologies and the will to apply them.

We believe we have begun, together, to work toward the economic and environmental restoration of West Garfield Park. We see our efforts as partnerships in the social and hard sciences which may or may not work. We may find that our technical fixes do not match reality, that hard scientists have great difficulty understanding the community's perceptions of opportunities and needs.

This is no trivial undertaking. We agree, however, that this is an effort whose time has come. Can the hard sciences, as practiced by major research institutions, be applied to the problems of infrastructure, and environment and economy posed by the neighborhoods in the aging and ailing cities of the East and Midwest? If we do, we will have created new jobs and new jobs that can be environmentally

Harvey
Drucker

Associate Laboratory Director
Argonne National Laboratory

PARTNERS PROMOTING URBAN TECHNOLOGY TRANSFER

This booklet tells the story of how two very different types of organizations — Bethel New Life and Argonne National Laboratory — have forged a partnership to rebuild West Garfield Park. This unique Partnership blends Bethel's theological and sociological roots with Argonne's scientific and technological expertise. Together, they hope to offer the community fresh, transferable approaches to solving urban socio-economic and environmental problems.

As the story unfolds, the Partnership hopes to address and solve the inner city's technological problems through community participation and collaborative demonstrations — without losing sight of the community's social needs. In sum, the vision of the Partnership is to build upon Bethel's successes — to inspire and motivate the working people in the community — to give them new hope for a healing, sustainable community.

What will be the outcome? At the very least, West Garfield Park residents will be offered new ideas and renewed optimism; at best, the community will be uplifted by dynamic economic development powered by livable-wage jobs. To achieve their goals, the community and the Partnership must overcome seemingly insurmountable odds, like rebuilding an eroded job base. But with vision, even the greatest challenges can be met.

Bethel's vision for West Garfield Park is far-reaching. It calls for improving the community's overall health, not just fixing problems in bits and pieces. Bethel began restoring the community's health by focusing on housing. Since 1979, Bethel, working with community residents, has rehabbed almost 1,000 units of affordable housing. From the start, Bethel recognized that improved energy efficiency cuts overall housing costs for owners and renters, contributes to the local economy, and improves the environment.

But improved housing was not enough. Housing is only affordable if one has a job. So, Bethel and local residents began to focus on jobs — jobs right in the community. As Bethel's work shows, one hallmark of sustainable community development is giving those in need the resources — like tools, training, and jobs — to improve their own lives. Through hands-on participation, Bethel is helping residents rehab their homes, thereby empowering them with the resources to rebuild their environment. Bethel saw beyond the problem and involved the community in the solution.

Like Bethel's, Argonne's vision is far-reaching. Its scientists and engineers have applied their expertise across the nation and world. And like Bethel, Argonne is in an excellent position to empower people with the means to improve their lives. Argonne performs hundreds of research studies in various disciplines and technological areas for

DOE, other federal agencies, and private industry. The fundamental goal of this work is to solve problems by transferring technology and expertise.

And so, with parallel and complementary missions, the Partnership has a common bond. Together, Bethel and Argonne are committed to achieving concrete, self-sustaining improvements, especially in the following areas:

- Urban engineering
- Energy-efficient housing
- Industrial site characterization and cleanup
- Conservation and energy efficiency — waste recycling and materials reuse
- Business development and training

If the Bethel-Argonne Partnership model accomplishes its objectives, it will define sustainable community development for West Garfield Park — perhaps, too, for other areas in Chicago, Newark, Minneapolis, Cleveland, and Detroit.

The key themes throughout this booklet — *jobs, sustainable community development, energy efficiency, and environment* — highlight challenges the partners face. And from these challenges, discoveries will be made. By bringing people and technologies together, this Partnership will give West Garfield Park residents a better life — and, perhaps, offer other communities a successful model for urban renewal.

TRANSFERRING EMPOWERMENT ACROSS THE NATION

The U.S. Department of Housing and Urban Development (HUD) is "helping communities help themselves" through its Empowerment Zone and Enterprise Community program.

In the Midwest, HUD has designated Chicago, Detroit, and Cleveland as Empowerment Zones and ten other cities as Enterprise Communities. So designated, these cities meet specific poverty and geographic criteria for both programs.

In Chicago, approximately one million people (or 40% of the population) live in areas that meet the poverty criteria for an Empowerment Zone. Ninety-six census tracts in three areas of Chicago meet the geographic criteria — the South Cluster (which includes the Englewood area), the Pilsen/Little Village Cluster, and the West Cluster (which includes West Garfield Park). As an Empowerment Zone, Chicago presents the Bethel-Argonne Partnership with unique opportunities to not only expand its activities, but to transfer lessons learned.

Through the program, qualified cities like Chicago are eligible for benefits designed to help communities reestablish their resources — like jobs and housing. Federal agencies are expected to help designated cities overcome regulatory hurdles, use federal funds, and meet federal mandates. These and other provisions are based on interagency collaboration. Even more important, they are based on efforts within the local community to forge partnerships like the one between Bethel and Argonne.

Argonne's Capabilities in Sustainable Urban Development

- Expedited site characterization at abandoned urban locations
- Reclamation and restoration of vacant sites and abandoned buildings
- Novel and improved materials research and development for housing-related products
- New and expanded energy-efficiency applications in housing
- Recycling and reuse applications for new industries and ventures
- Cost engineering and economic analyses covering proposed community projects and businesses
- Legal and regulatory analysis related to energy and environmental issues
- Geographic information systems (GIS)
- Environmental impact statement (EIS) analysis

Bethel's Goals for a Healthy, Sustainable Community

- Livable-wage jobs in strong markets — recycling, industrial manufacturing, and environmental assessment and remediation
- Housing that is decent, affordable, and energy-efficient; housing that inspires community pride
- Healthy families built upon holistic health care, health education and outreach, and a clean environment
- Seniors living out the fullness of life in community, in part through in-home and adult day-care services
- Parks built by the community
- Reduced crime and safer streets
- People working together and taking responsibility for their own community; people building on personal and community assets

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