



**GENERAL ELECTRIC**  
**Monogram**  
JULY-AUGUST 1974

**THE BIG HQ SHIFT**  
Plus: GE-Europe's shift, new 'atrium' home,  
exorcising an economic ghost

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VOLUME 51, NUMBER 4

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Contents: a special summer issue of short, easy-to-read features

THE COMPANY . . . . . Pages 2-11  
 The big HQ shift • GE-Europe also shifts • Monographs

THE BUSINESSES . . . . . 12-15  
 Batteries: Birth of an SBU • Analysts and jet engines • Three GE ways to propel a ship

SPECIAL: Calendar artist rediscovered . . . . . 16-17

MONOGRAM SERIES . . . . . 18-21  
 'Atrium' home dramatizes electric heat's future

PEOPLE . . . . . 22-27  
 Retiring to work abroad • Our men in state capitols

PERSPECTIVES . . . . . 28-30  
 Exorcising an economic ghost

LETTERS . . . . . 31

THE COMPANY

THE BIG HQ SHIFT

On the weekend of August 10-11 an historic transition will take place for General Electric: corporate headquarters will shift from New York City to Fairfield, Connecticut.

As of August 12, 1974, the official new headquarters address will be simply

General Electric Company  
 Fairfield, Connecticut 06431

The zip code applies solely to General Electric. If a more specific address is required for visitors or deliveries, the street address may be added: 3135 Easton Turnpike.

Some 700 GE people will work in their New York offices on Friday, August 9. Then on Monday, August 12 they will report to their new quarters in Fairfield.

They will find "a quality structure of contemporary design that is highly functional in providing an optimum working environment, but it's no Taj Mahal in terms of plushness or avant-garde architecture."

The words are those of Robert W. Lewis, VP—Corporate Facilities Services, the man directly in charge of the project since its early days.

GE's new HQ facility tops a rise south of the Merritt Parkway at Exit 46. It consists of two structures—the East and West Buildings, each three stories high and connected by underground corridors, with the West Building approximately twice the size of the East. The total area is 510,000 square feet, including the lobby and service areas of 106,000 square feet and an overhang of 50,000 square feet that is cleverly designed both to shield against sunlight and house air handlers for the GE air conditioning.

Façades of the buildings are formed of 6½-foot-deep structural steel girders, painted a matte white, and tinted insulated glass.

"It's not a case of one building for the Chiefs and another for the Indians," Lewis points out. "Positioning of people wasn't dictated by protocol, but rather by the best utilization of space and recognition of day-to-day working relationships. For example, the East Building will house the members of the Corporate Policy Committee—and the Corporate Executive Staff and Executive Manpower staff with whom the CPC works closely. Group Executives at Fairfield will be in the West Building, as well as the Corporate Administrative Staff."



**On-budget and on-time completion of GE's new headquarters has been achieved by Corporate Facilities Services VP Robert W. Lewis, foreground, and a team of associates including, left to right, Lowell F. Kindinger and his assistant, Ms. Chat Gizondi, Alfred E. Schuman, D. Laurie MacCuaig and Richard W. Young.**

**Why two buildings?** The question was put to the man in charge of the architectural design: Roy Allen, General Partner of Skidmore, Owings and Merrill. "In large part the plan for two structures reflects the particular needs of the people who will work there," he explained. "For one thing, there is an unusually high proportion of people for whom private office space is desirable in relation to normal clerical space. The two buildings, together with their three inner courts, provide for a large number of perimeter offices."

The buildings' design was also influenced by the desire of GE management to make effective use of interior space. Allen: "It was apparent to us that GE considers those not in perimeter of-

fices to be 'important people,' too. The 'open space concept' utilized by GE did away with the lack of acoustical and visual privacy associated with 'office landscaping' and the isolated windowless cubicles found in other contemporary buildings."

This concept makes use of specially designed free-standing modular furniture and gives special attention to personal privacy. Glass doors and side panels on perimeter offices provide vistas of outside surroundings. Says Allen: "For interior offices it's a new balance between privacy and contact with the outside world."

Bob Lewis makes it clear that this concern for people has received primary emphasis in all phases of the HQ project since it was first or-

*(continued next page)*



ganized under Hershner Cross, CAS Senior VP.

"We began with concern for our neighbors in the Fairfield and Bridgeport communities. Some other companies had aroused such powerful opposition in the communities they wanted to move into that they've either shelved or abandoned their projects. Our aim was to do everything we could to make the GE facility welcome in Fairfield. To achieve this, we practiced what we called 'anticipative management.' Instead of just putting out fires, GE people led by Laurie MacCuaig and Frank Donovan worked hard to surface the real concerns of the community before they became aggravated problems. The Company conducted a series of meetings with our site neighbors, community leaders, the Fairfield Town Plan and Zoning Commission and other groups, and these discussions guided us in developing real, positive, substantive responses rather than just rhetoric."

Specifics? "To make the facility more attractive to our neighbors as well as convenient to employees, we put employees' parking underground. The Merritt Parkway ramps on either side of Exit 46 have been widened, to ease the traffic flow and keep GE employees' cars from backing up onto the Parkway. Of our original hundred acres, we've donated the choicest thirty acres—the stream and ponds known as the Cascades area—to the community to add to its Open Spaces program. As for the land on which we built the new facility, it had been stripped of its top soil and was a wasteland—we've transformed it with a truly massive landscaping pro-

gram. Supported by this kind of thorough homework, the Headquarters project has enjoyed widespread community support, including that of First Selectman John Sullivan and his associates."

The GE team worked hard at making the HQ project a good example of affirmative action for minority people. "Minority leaders in Bridgeport and Fairfield helped us evolve strong action plans. Our general contractor on the project cooperated fully. The result was that minorities filled some 13% of the jobs—a very high percentage for the construction trades. Also, RECO (GE Real Estate and Construction Operation) made a special 'outreach' effort to extend opportunities to minority subcontractors. In this respect, too, ours has been a very well accepted program in the community."

As to GE employees, Bob Lewis ticks off a number of ways in which "people considerations" were emphasized:

**Easing the transfer.** "We started with the premise that we wanted everyone to move with us and established transfer programs that would encourage them to do so. A Relocation and Information Center, set up at 570, has been very active in helping employees with their household moves and other problems associated with relocating. The result has been that a much higher percentage of people are transferring with us than would be expected from other corporate shifts—almost all exempt employees and over one-third of the non-exempt people."

**Relocating New Yorkers.** "Of 125 employees choosing not to go to Fairfield, over 90 have already been helped by our placement assistance to find new jobs—nearly all within GE components remaining in New York City."

**Options for employees.** "It was found that in some of the other corporate facilities we studied, virtually all decisions were made in detail by top management. Employees were given no say in shaping their new environment. We've changed that because we wanted our associates to be involved. For example, we set up model offices at 570 and had GE people try them out and give us their reactions—and on the basis of these inputs we revised such things as our plans on the arrangement of interior offices. In terms of types of furniture, office arrangement and colors, employees made their own choice from a range of possibilities. The variety of choices may not have been wide but at least everybody was able to help select the details of his new surroundings. Also, when we move in, we'll have individual room control of air conditioning and lighting.

(Continued on page 6)



Previews of Fairfield: Top, reception area being readied for influx of visitors; left, vanguard of employees includes, foreground, Frances Tilghman and Cynthia Scanlon, with Ramsey Alberson in background; above, underground parking—considered an essential in winning community acceptance for the Company's new headquarters.

## HQ SHIFT (continued)

And three different types of dining services will be offered—a cafeteria, buffet service and reserved dining in both open and private areas.”

**Swiftly available medical aid.** “The medical facilities at Fairfield were designed to occupy a central location. Medical aid can be provided to any location in either building within three minutes.”

**Safety and security emphasized.** “In place at Fairfield is a sophisticated central monitoring system for smoke, water and fire detection, with instantaneous readout on the operative status of lighting, air conditioning and so on. Additionally, there will be closed-circuit video equipment for round-the-clock security surveillance.”

**Esthetic planning included.** “In addition to the landscaping, we’re adding to the quality of life at Fairfield by looking after the esthetic side. With the aid of a team of experts under Dave Burke of CPRO, we’ve commissioned Charles Perry to do, for the entrance courtyard, a steel sculpture reminiscent of turbines and electrical technology, and we are planning to have other art works and exhibits on loan.”

One of the greatest satisfactions for VP Lewis and his associates is that when the new HQ goes into full operation on August 12 it will be “on time and on budget.” This is in contrast with most other headquarters projects, which experienced delays and cost overruns.

If there’s a one-word explanation of how GE’s on-time and on-budget performance has been achieved, it’s “delegation,” says Lewis. “With most of the other corporate projects we looked at, the chief executive officer himself tried to make the decisions—in addition to everything else he was doing—and this inevitably led to delays and costly changes of mind. But Fred Borch, first, and Reg Jones, afterwards, fully delegated the responsibility to me and my associates. I haven’t had to go to a committee for decisions. I’m sure that everyone won’t agree with all those decisions, but that’s to be expected.”

Lewis cites several other contributions to this on-time on-budget performance:

**GE’s “team concept.”** He gives first recognition to the role of GE Real Estate and Construction Operation: “RECO provided a strong in-

**Fairfield features:** Below: extensive use of glass keeps inner offices in touch with out-of-doors; right, Guard Steve Danzer mans security console; lower right, three types of dining services available to employees.



house base of expertise. They'd never handled a corporate headquarters before, but they'd handled countless other large construction projects and had the experienced people—most particularly Dick Young, manager of the Corporate Headquarters Project, and Al Schuman, the resident Project Manager—who could form the first line of contact with other key members of the team, including Turner Construction, as General Contractor, Subcontractors C. N. Flagg on Mechanical and Fischbach and Moore, Electrical, and Skidmore, Owings and Merrill, architects. RECO specialists on the site have been fully supported by the RECO headquarters staff and have been able to call upon their know-how as needed. An important pair to me have been Kit Kindinger, manager of the Fairfield Planning Operation, and his assistant, Chat Gizondi—they've done a fabulous job in handling the details of the transfer. And I've already mentioned the fine relations work under Laurie MacCuaig. I don't mean to imply this has all been a bed of roses, but the cooperation by all members of the team has been outstanding and

the problems have been overcome."

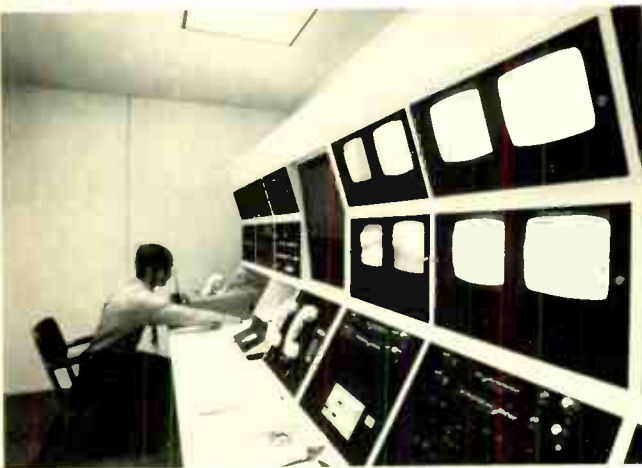
**"Positive tensioning"**—this is a term applied by Lewis and his team to the procedures developed to complete the HQ project on the tight schedule set in the original planning. Essentially it's a procedure by which every item of work is started at the earliest possible date. Construction was started, for example, when only 15% of the architectural plans were drawn. As soon as construction was final on a particular floor, crews moved in to lay the carpet and bring in the furniture. "With this sort of planned overlap," Lewis comments, "we were able to adjust to, and stay on schedule in spite of, a nine-week carpenters' strike and flooding resulting from two summers of record rainfall."

**GE components' participation.** A strong source of help to his team, Lewis observes, was the group of 27 coordinators appointed by the various GE components involved in the transfer. "Each coordinator worked out the details for his component's move and kept track of the multitudinous changes. They did a great job."

GE components were involved in another way: General Electric equipment and technology have been used extensively in the HQ project. "It's an all-electric structure, based on the 'light conditioning' concepts developed by the Lamp Division, by which warmth from the lamps is recycled as the primary source of heat for the building. To do this, our team has developed unique lighting modules that combine lighting and air handling equipment into ceiling units. To line up these modules, we applied laser-beam techniques similar to those used in aligning steam turbines. So it goes throughout the facility—literally miles of GE Textolite surfaces, GE commercial cooking equipment and so on—a real synthesis of GE products and ideas to add to the quality and functional excellence of our new headquarters."

Future plans for the HQ include a GE Family Day for Fairfield employees on Saturday, September 28, a Community Neighbors Open House on Sunday, September 29, and the formal dedication on Friday, October 4.

What is happening to the present New York headquarters building? "Components now scattered all over New York City will move in, to keep it a GE-occupied structure," Lewis notes. "570 will house people from the International and Canadian Group, Treasury Operations, GE Credit, Northeastern Regional Relations and so on." In fact, Bob Lewis observes, the New York tower will end up housing more GE people after the transition than it did before. **W**



## For GE-Europe, also an HQ shift

**Brussels**—With Board Chairman Reginald H. Jones on hand to cut the ribbon, General Electric's new European headquarters was opened on May 31 at 150 Chaussée de la Hulpe, a tree-lined avenue south of downtown Brussels. Previously GE's principal European offices had been in Geneva, Switzerland.

"The main objective of this move," Richard W. Foxen, VP— Europe Business Division, told the *Monogram*, "is to further strengthen GE's European operations. Brussels is becoming more and more the important center of business activity in Europe. It's the headquarters for both the Common Market and NATO—and at least partially for this reason many international companies have established their headquarters here. Also, Brussels is centrally located on the continent, has excellent transportation and communication facilities and offers plentiful office space as well as good housing and schools. Finally, there's the attitude of the Belgians—they're eager to have foreign business in their country."

**In Reg Jones' view**, there's an additional reason to welcome the move: he called his ribbon cutting "an omen witnessing a new beginning for GE in Europe." To the gathering of GE people newly located in Brussels, plus managers of EBD offices and other GE components in Europe, he expressed the hope that the new headquarters "would symbolize the progress of General Electric toward becoming a truly multinational Company in the best sense of the word."

Reflecting on GE's record in Europe, Jones commented: "Historically, General Electric has had a strong position in the Europe area. In the early part of this century we were one of the first U.S. companies to have significant operations in Europe. We lost some of that position in the post-World War II years and then tried—a little too fast, a little splashily—to make up for lost time in the early 60's. You might say we lurched into Europe again, unfortunately making some disappointing mistakes. But we've now recovered from those mistakes and are



carefully and thoughtfully proceeding again to expand our business here."

He added that "GE may go slowly at times but we don't ignore the lessons we've learned. Hopefully our future expansion in Europe, symbolized by these new offices, will proceed only through careful, measured steps which take into consideration the lessons we've learned in the past. I certainly pledge more and more support and understanding to your efforts to achieve this goal."

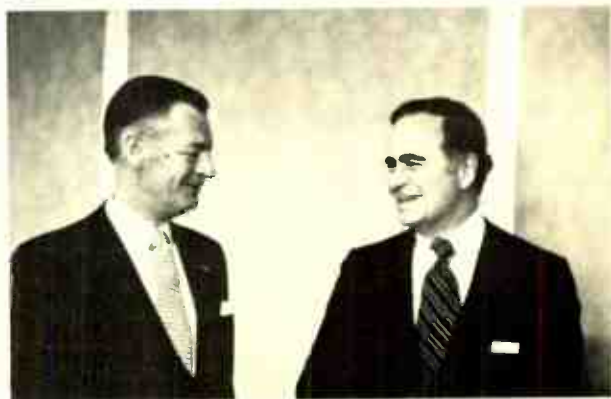
**To Dick Foxen, too**, the move means more than just shifting offices from one location to another. "We're establishing a new center of gravity for GE in Europe," he said in an interview. "Until now, GE offices with Europe-wide responsibilities in various product categories have been scattered across Western Europe. Many of these will now be consolidated in Brussels."

Foxen is also taking a new approach to organizing GE's European business. "We're developing an organization based on dual reporting





Dedication of new GE HQ, occupying space in new Brussels office building, gave chairman Reginald H. Jones opportunity to meet with Belgian Premier Leo Tindemans, left, address GE-Europe managers and discuss plans with EBD VP Richard W. Foxen (below).



relationships. We want to put in place a number of strong managers, each of whom is capable of integrating the activities of a major business on a Europe-wide basis."

What's an example? "Allan Matlick. He's been designated as manager of Europe Power Generation Operation. His reporting responsibilities are to Ed Hood, the Group Executive in New York, and to my office here. I suppose you could call Al the 'power generation czar' for Europe. He'll bring together the planning, coordinating and strategizing for nuclear sales, steam turbine-generators, gas turbines and marine propulsion—all the major sectors of the Power Generation Group. We expect to have people like Al also representing the other business areas with major opportunities in Europe."

Sounds complicated? "The business itself is complicated. Probably no other company faces the complexity that GE does in Europe—the number and diversity of businesses, the number of different countries and languages, the different political situations, the different cul-

tures and ways of doing business."

An additional element, Foxen says, is that "there's a clear and accelerating trend in Europe toward 'cross-border' rationalization in many businesses—tying together the particular strengths of operations in several different countries."

It's a trend that, in his view, "makes it inevitable that what General Electric does in one area may very quickly and dramatically affect our relationships—and our business—in other areas. This is especially true now that GE's level of activity in Europe has reached the significant proportions of 1973, with an increasing percentage of the Company's sales accounted for in the Europe-Middle East-North African region which we pull together as the Europe Business Division. By following up on the new beginning that Reg Jones talked about at our office dedication, we are planning to keep GE a major factor in this vital part of the world—for the good of our host countries and the U.S., as well as of General Electric." ■

# MONOGRAPHS

**Honors for GE-ers.** Recent weeks have seen a number of honors and awards going to General Electric people. Among them:

- Two awards for social responsibility in advertising messages have been won by CPRO's Corporate Educational Communications under E. James Clark. An ad telling minority college graduates to "Go back where you came from" and help other minority youth prepare for college was one of a GE series that won the Saturday Review Award for Distinguished Advertising in the Public Interest. GE's educational ads also won the ANDY award given for outstanding advertising by the Advertising Club of New York.

- The Television Academy's Emmy Awards found GE projects among the front runners. "Tell Me Where It Hurts," a GE Theater presentation, won its author, Kay Kanin, two awards—for the best writer of an original screen play and best writer of the year. The



show will be rebroadcast on August 27 at 9:30 p.m. EDT over CBS-TV. Another GE Theater presentation, "It's Good To Be Alive," the story of Roy Campanella, won Ted Voightlander the Emmy for cinematography. Biggest winner of all: "The Autobiography of Miss Jane Pittman," produced by GE's entertainment subsidiary, Tomorrow Entertainment, Inc. It walked off with nine awards, including that for Outstanding Special of the Year, plus Actress of the Year for its star, Cicely Tyson.

- The Governor's Merit Award for Service has been presented by the Commonwealth of Kentucky to General Electric's Major Appliance Group in recognition of GE's contributions toward the recovery and reconstruction of areas devastated by tornadoes April 3 (May-June *Monogram*). Governor Wendell H. Ford, left, shown presenting the award to Major Appliances' Group Executive Stanley C. Gault, commented: "While the tornadoes did terrible



damage to the Commonwealth, they did bring out the best in people. They created a bond of understanding that has been inspiring to all of us." He added that the award represents "a genuine feeling of appreciation for what General Electric and GE people have done." Ford noted that this was only the third such award he has made during the 2½ years he has been governor.

- The James H. McGraw Medal for Cooperation has been presented by the Edison Electric Institute to Vernon A. Rydbeck, GE's Manager-Electric Utility Market Development, right. Presenting the award: The EEI's Clarence C. Keller. The medal recognizes his leadership



and initiative "in developing and presenting a nationwide campaign for information and publicity about advances of electric energy applications."

- Further national recognition has come to GE's Chairman, Reginald H. Jones. He was one of a number of business leaders and economists asked by President Nixon to attend a White House meeting to explore ways to stem inflation. He was also appointed by Federal Energy Chief John Sawhill to the committee helping to draft "Project Independence"—the national goal of making the U.S. self-sufficient in energy supplies in the 1980's

**Comparative shopping.** Forty-six employees of GE's Audio Electronics Product Department in Decatur, Ill. went shopping in mid-June—but not with money. They were attending the eighth annual Consumer Electronics Trade Show held in Chicago's mammoth McCormick Place,



where they compared the resulting products of their own specific jobs at AEPD with items of the other 400 exhibitors attending the show.

"I never realized how much competition we have," exclaimed one AEPD'er, "but I noticed that our products were of better quality with better workmanship."

GE's own colorful booth was highlighted with 24 new products being introduced by AEPD and featured a four-channel broadcast demonstration.

**Uncommon titles** were recently claimed by two Pittsfield, Mass. GE'ers: one is a 100-year-old pensioner; the other, one of the last half-century GE employees.



As a centenarian, Horace W. Sexton (second from right in photo) is Pittsfield's oldest living retiree and the fourth oldest of GE's 40,000 pensioners. In 1944 at the age of 71 he retired from GE as a foreman in the Power Transformer Department's copper shop. To celebrate his milestone, PTD invited Sexton to revisit the shop where he worked for 27 years.

In turning the 50-year landmark of service with GE, Louis Lombardi (shown with Massachusetts Governor Francis Sargent) joins a

select circle of GE employees. He is an operational planner in the Power Transformer Department where he has worked for the last 23 years. Lombardi is among the few remaining



persons who can achieve the 50-year anniversary mark. The higher hiring age required by law and GE's mandatory retirement age of 65 prevent employees joining the Company since the late 1940's from reaching 50 years service. PTD also celebrated Lombardi's achievement with letters from GE Board Chairman Reg Jones and Pittsfield's Congressman and Mayor.

**More U.S. attention to technology transfer** from defense and space work into civilian areas was the fervent plea voiced June 25 by Daniel J. Fink, VP-Space Division, in his role as President of the American Institute of Aeronautics and Astronautics. "It is time we faced the hard facts about technology utilization and our place in the world," he told his audience in Washington's National Press Club. "The Council of Economic Advisors says that over half of our nation's growth has been based on our technological leadership. Our Gross National Product level varies directly with the level of our R&D expenditures, according to *Harvard Business Review*." Thus, in Fink's view, technology utilization is tied "directly to our national economic health." Yet he sees the bridges available to convey federally sponsored R&D to the commercial and social marketplace, the "institutional arrangements by which transfer takes place, as woefully inadequate. As an indicator, "out of the entire \$17 billion Federal Government research and development budget, according to a recent NAE study, only \$43 million, or about one-quarter of one percent, is provided to stimulate the utilization of technology." Fink outlined a four-point program to achieve a more effective balance. ▢

## Batteries: the birth of an SBU

For over 2000 GE people in Gainesville, Florida, the strategic planning concept has become less academic. Effective July 1st, they ceased working for the Battery Operation and began work for the Battery Business Department.

More importantly, they began participating in a whole new environment—as part of a business singled out by Components and Materials Group as a high growth opportunity. The move involved simultaneous elevation of the business to Department status and to recognition as a Strategic Business Unit.

“Something like this always causes a tremendous boost in morale,” says newly arrived Department general manager Donald K. Grierson, in from Cincinnati, where he headed the Aviation Service Department, to take charge of the newly created battery Strategic Business Unit. “Many of our talented people here in Gainesville worked to make GE nickel cadmium batteries the technological leader. It is on that foundation that we’re ready to build.”

**Grierson pointed to several factors** that caused the battery business to be “given its independence” for strategic planning purposes:

- a unique set of customers and applications broadening almost daily;
- a substantial market share for GE nickel cadmium batteries across the whole product line; and
- a world-wide market growing at high rates.

For the business really to take off now, Grierson believes, requires aggressive market development—leadership that accelerates development of markets rather than just responding to demand. Key examples: “The European market for nickel-cadmium batteries built into fluorescent light fixtures to meet emergency lighting requirements is much more developed than in the U.S.,” says Grierson. “Then, overseas, our unique technology with the 15-minute rechargeables is going to lead us to Europe and Asia, for some heavy market development work.”

**GE batteries have been** on a fast track. Developments in two market areas—electronics




*New Battery Business Department general manager Donald K. Grierson: “there’s a revolution arriving in reliable portability of energy.”*

technology and the portability explosion—really marked the beginning of high growth. The appearance of electronic “chips,” for instance, at three dollars apiece instead of \$100 started the explosive portable calculator market that is using hundreds of thousands of batteries. Power tools—from power screwdrivers to hedgetrimmers—blossomed and GE became the most important factor in batteries for this market.

Now, says Grierson, the U.S. consumer market is ripe for expanded use of rechargeables. “A realization about the long run economy of a battery that can be recharged 1000 times—a realization prevalent in Europe for some time—is about to reach our disposable-oriented consumers.”

**World developments in electronics, portability, security devices, medical instrumentation, toys and many other areas** have borne out the projections of the GE people in the capacitor business who first licensed the unique nickel-cadmium technology in 1961. They began operation as a sideline in a small shop near the Hudson Falls, New York capacitor plant. The Gainesville plant was built in 1963.

Grierson feels the challenge directly and personally. “It’s up to us now,” he says. “Now we have the ability to select markets for growth and penetration and allocate our resources accordingly, which is what strategic planning does best. Over the next two or three years. I believe this decision to ‘SBU’ the battery business will really pay off.” 

# GE JETS: KEEPING STEADY IN BUMPY AIR

When 139 financial analysts gathered in Evendale, Ohio, on May 29 to meet with top managers of GE's Aircraft Engine Group, they heard a confident, growth-oriented report—many of those main points have been previously reported to *Monogram* readers (Sept.-Oct. 1973). But there were interesting additions and new slants.

One of these: a capsule history of jet flight in the U.S., by VP and Group Executive Gerhard Neumann, that brings the story up-to-date and into-the-future with admirable speed and conciseness:

"The aircraft gas turbine in the U.S. started in 1941, at the GE plant in Lynn, Mass. At the request of the U.S. government, General Electric, based on its years of turbosupercharger work, was judged to be the most qualified manufacturer to quickly convert the English Whittle engine into a military weapon system for this country. For the remainder of the 40's, the government was the sponsor of all aircraft gas turbine work in this country, and the period was characterized by a proliferation of weapon systems. It was an experiment of sorts. We tried putting the aircraft gas turbine on almost every kind of airplane.

"This predominantly military sponsorship continued in the 1950's and brought a number of technological breakthroughs which made the aircraft gas turbine even better as a weapon system. The 50's also brought the

birth of viable commercial engine derivatives from these military systems, based in part on the breakthroughs, and in part on having worked with the product long enough to know what could and could not be done with it.

"The 1960's saw a rapid growth of commercial systems and a relative decline in the dominance of military applications. There were continuing technological breakthroughs, and one of the most outstanding was the high bypass ratio turbofan, sponsored by the U.S. Government for the C-5 military cargo airplane. The GE TF39 was that engine.

"The 60's also saw the beginning of marine and industrial applications for aircraft gas turbines—powering Navy hydrofoils and gas pipeline pumps.

"In the 70's, we are seeing the commercial and military sponsorship influence reaching a balance, where both markets have the potential to ask for a product for their own use. Marine and industrial use of these aircraft gas turbines is growing...

"As we look forward into the 80's, we see the military use of aircraft gas turbines continuing to be one of expanding the boundaries of what the aircraft gas turbine can do. The commercial use of our product will be of major importance and we believe that the 80's will also bring the emergence of more marine derivatives. It will be a decade of new tech-

*(continued next page)*

*Aircraft Engine Group Exec Gerhard Neumann to financial analysts: "full throttle for profitable growth."*



## Analysts learn about: countering the “bite and digest”

nology breakthroughs derived from the exploratory work we're doing right now.”

**Turning more directly to the business situation,** Neumann acknowledged that the challenge of AEG's strategic planning is to hold a steady growth course despite bumpy air: “We face some interesting market pressures and facts of life in this business. The United States' worldwide strategy is highly variable, constantly shifting the amount of support the Government gives our product. The commercial market is essentially a ‘bite and digest’ buying cycle. Airlines buy the airplanes, and they digest all of that capacity until they're ready to buy again... and then they digest that capacity, thus giving an up-and-down characteristic to the market... The result is that each segment of our served market, as we view it, is somewhat cyclical. Even though, at times, our U.S. military market is counter-cyclical, we still must accommodate the fact that we have these ups and downs.”

How does GE propose to remain “positioned for profitable growth” despite these market cycles? The answer in brief, Neumann said, has three parts:

- A priority emphasis on realistic planning;
- Participation in many segments of the market “so that we can be up in one, in case we're down in another”; and
- Continued participation in the worldwide jet market, relying on a multiple approach—“We license, co-produce and co-venture.”

**Analysts heard the case histories** of several specific market opportunities which offer high growth potential in highly competitive situations:

- The Air Force Advanced Airborne Command Post, actually a modified Boeing 747, will carry a military version of the CF6-50; Note: Since the analysts meeting, KLM Royal Dutch airlines has ordered two Boeing 747B airliners powered by GE's CF6-50E engines—a breakthrough for GE's commercial engine business.

- GE is involved in the drama of an important Air Force fly-off competition. The YF-17 lightweight fighter from Northrop, powered by two GE J101's, is given a good chance to win that fly-off;

- The T700 turboshaft will be the U.S. Army's helicopter engine of tomorrow; it was

selected for both airframes being evaluated for the Utility Tactical Transport Aircraft System (UTTAS) and for both entries in the Advanced Attack Helicopter (AAH) competition;

- The CF6 commercial engine, with its three percent edge in fuel consumption over other engines on wide body jets, is now the chosen engine on three different aircraft types, the DC-10, A300 and 747; and

- Right behind the CF6 the twenty-two-thousand-pound-thrust-class CFM56 engine jointly developed by GE and SNECMA, the French engine manufacturer, will be waiting in the wings for the next commercial engine market—aircraft flying short, medium and long distance/low density routes.

Strong analyst interest was also directed at a corner of AEG's business which is gaining a foothold in a distinctly non-aircraft industry. GE's aircraft-derivative marine gas turbines, as they are called in the marine propulsion market, are now on the high seas for the U.S. Navy. Take the giant front fan off a CF6-6 aircraft engine producing 40,000 pounds of thrust and you have the LM 2500 gas turbine, producing up to 27,000 shaft horsepower.

A principal reason for the success of the LM-2500: For the first time, aircraft gas turbine fuel consumption rates have been lowered enough to permit competition with other marine power modes. This and two other GE ways to propel a ship are illustrated at right.

*GE-powered planes make news: (below) U.S. Air Force-Northrop YF-17 prototype—potential fore-runner of new generation of high-performance low-cost combat fighters—made first flight in June.*




## buying cycle...and a third GE way to propel a ship



Newcomer to the ship propulsion market: Aircraft Engine Group's marine gas turbines—modified jet engines. They've been selected for the U.S. Navy's Spruance class destroyers shown here, the NATO Patrol Missile Hydrofoil and Patrol Frigates for the U.S. Navy, Italian Navy and Peruvian Navy.

Heavy duty gas turbines from the Gas Turbine Products Division are now also propelling ships. Shown: The roll on/roll off iron and steel carrier Iron Duke, powered by a 19,000-horsepower GE unit.



GE's principal and oldest ship propulsion business is that of Marine Turbine and Gear Products Department in Lynn, Mass., which has supplied 65 million horsepower of marine steam turbines. Shown: Norman Lady, largest liquefied natural gas carrier in service, propelled by a 30,000-horsepower GE steam turbine system. 



## GE calendar painter rediscovered as fine artist



Among the more popular examples of poster art for sale today are large, colorful reproductions of paintings by artist Maxfield Parrish, who reached his heyday in the 1920's and 30's.


An interesting sidelight for GE people is that several of these poster paintings began life as illustrations for GE calendars.

From 1918 through 1934, Parrish supplied the illustrations for the immensely popular Edison Mazda Lamp Calendar. Three of his works for the calendar, now available as posters, are reproduced on these pages.

In addition to outstanding skill as a draftsman, Parrish developed a technique of painting with pure color glazes that is still unduplicated.

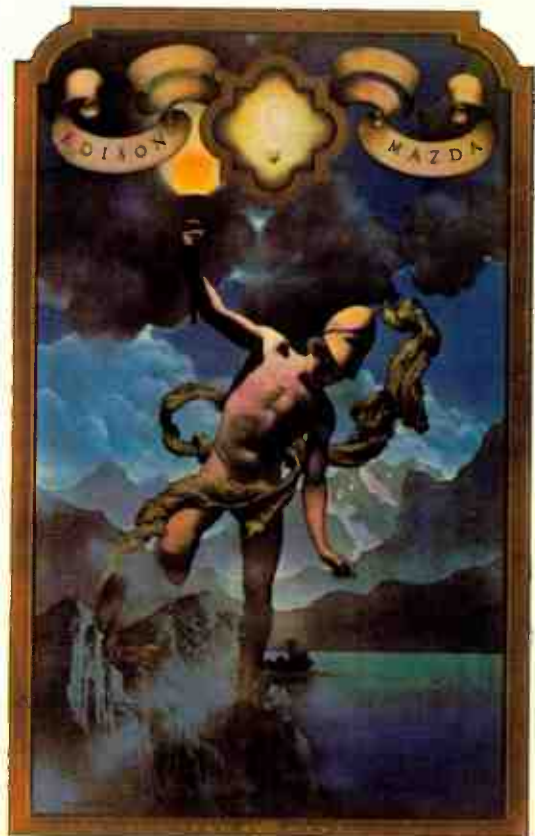
The result is that works he did as a commercial artist have been rediscovered, since his death in 1966 at the age of 95, and have been given a special niche among the fine arts.

The revival of interest in Parrish extends to more than poster reproductions. Also available in bookstores today are two handsome books devoted to his life and works:

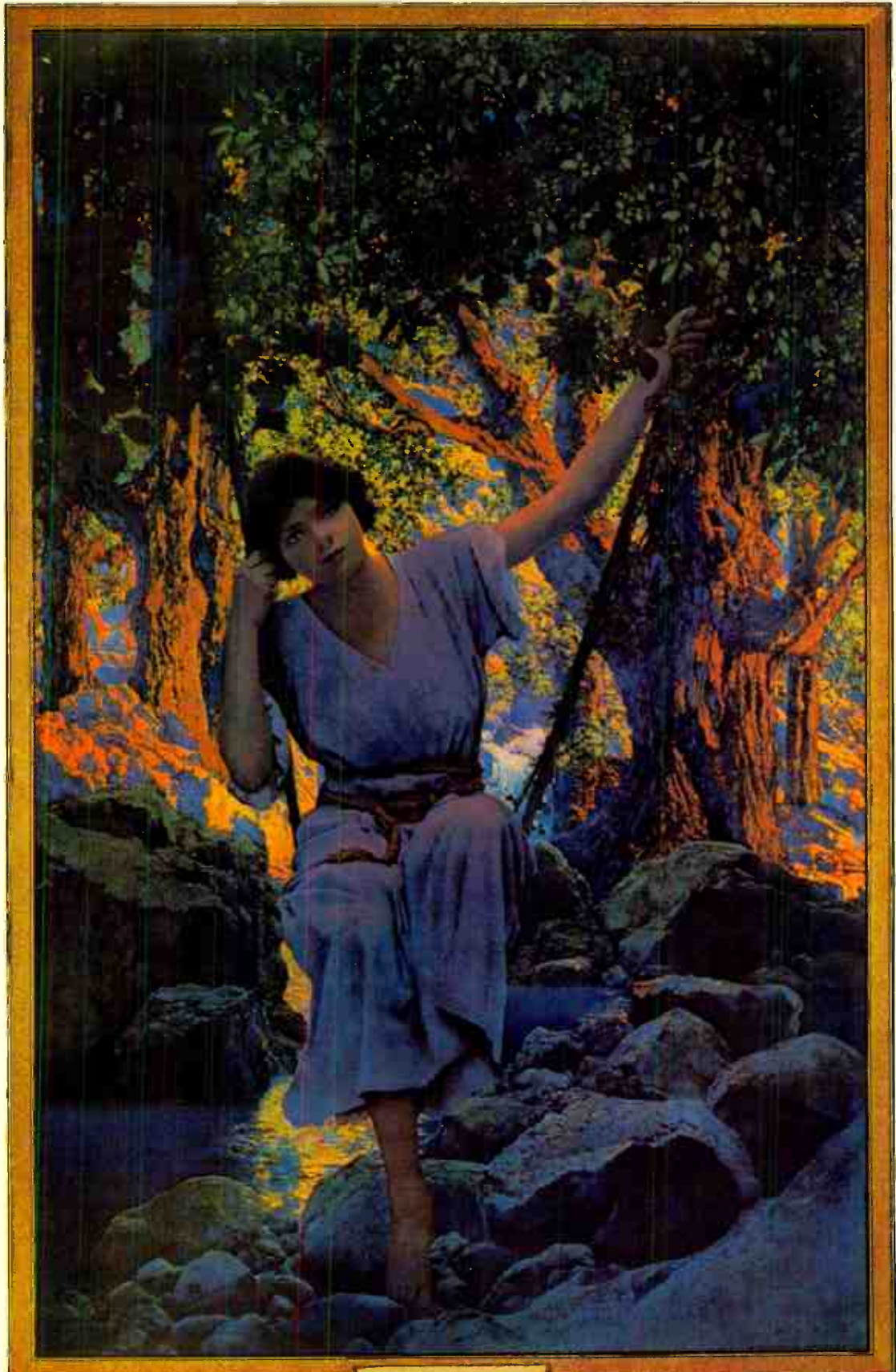
"Maxfield Parrish," selling for \$25; and "Maxfield Parrish: The Early Years, 1893-1930," selling for \$60. 

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*Far right: Dream Light was the 1925 Edison Mazda Lamp Calendar painting. Prometheus and Lamp Seller of Bagdad appeared on the 1920 and 1923 calendars, respectively, and were part of a five-year commissioned series on the history of light.*







DREAMLIGHT



Toward the  
Electric Economy:

### 3. New 'atrium' home dramatizes electric heat's growth future



**SOMETHING NEW:** The maturing of the heat pump has stimulated creative applications by designers and builders. Left and above, Cleveland builder Bob Schmitt's "sun house": Transparent panels over the central atrium of this \$125,000 Strongsville, Ohio home transmit winter solar heat and, through the greenhouse effect, reduce the heating load for the GE Weathertron® heat pumps.

Two statistics foretell the future for electric heat.

One is the percentage of total energy use that goes into space heating—residential, commercial and industrial. The most recent breakdown of energy consumption in the U.S. puts space heating's portion at 21%.

The other figure: the percentage of the total accounted for by electric space heating. That same analysis allots electric heat just 4% of the total.

The way GE experts see it: that's 17% of total energy usage where electricity from coal, water power or nuclear sources can save other more scarce fuels.

Not only *can* but *should*, for the public welfare and the preservation of the environment.

For electric space heating saves oil and gas for unique uses—like autos or chemical feed-stocks, for example.

The soundest course, say GE's specialists: put electric heat to work and move the point of com-

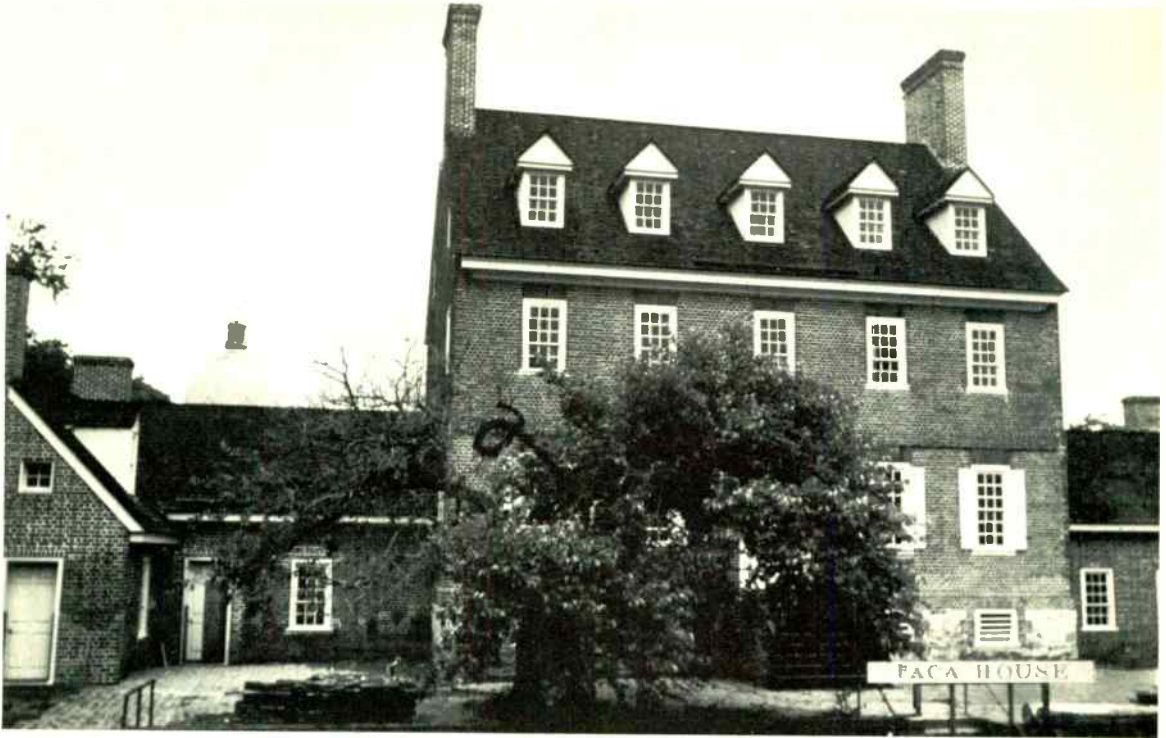
bustion back to the generating plant, out of the city's heart, where pollution controls can be applied, lessening impact on the residential environment.

And have no doubt of it: the hero of this drama of electrical white-hats riding to the city's rescue is the heat pump—that all-electric heating and cooling engine that General Electric calls the Weathertron®.

With the heat pump playing a rapidly expanding role, electric heat has been steadily penetrating the space heating market. In fact, 1974 will see an important cross-over: according to the Electric Energy Association, over 50% of new homes built this year will install electric heating, compared with 45% in 1973, up from 14% in 1968.

The trend to electric heat has been accelerated by shortages of pumpable fuels, says Joseph H. Gauss, VP and general manager of the Air Conditioning Products Division. He adds: "But there are

(Continued next page)



**SOMETHING OLD:** The Robert Pacca house in Annapolis, Maryland, circa 1765 and now in the final stages of restoration, will benefit from the creative and hidden use of GE heat pumps, like the installation pictured at right. Pacca was one of the original signers of the Declaration of Independence. The dome of Maryland's state capitol is visible behind the house.

more fundamental factors operating also which will carry the momentum beyond the acute shortages. The total operating cost balance is shifting in favor of the heat pump, our reversible central air conditioner. It still costs more to equip a home with the heat pump than with a furnace but those first costs are being offset in an increasing number of cases by lower operating costs."

**There's another plus** in the heat pump's future: architects are finding that it gives them new options in home design. The "sun house" displayed on these pages is one example. The home's builder, Robert F. Schmitt of Cleveland, has become one of the most consistent supporters of GE's Weathertron heat pump. Schmitt says utility bills for his

improved home designs, which include better insulation and construction as well as the GE Weathertron, are about 10% less than utility bills for the similar-sized gas-heated residences he built previously. He hopes to increase this differential with his sun house.

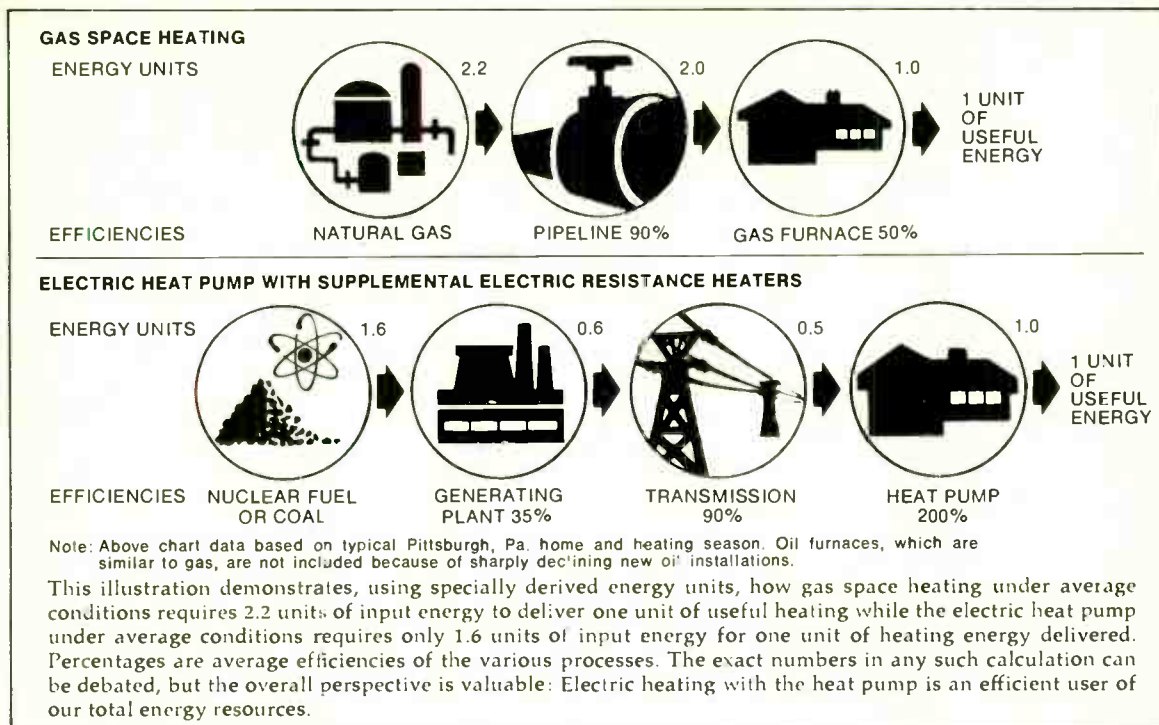
Schmitt notes another favorable aspect of using GE Weathertrons: "You can insulate an electric home better than a combustion-heated one. You lose about 15% of your heat just through the ventilation necessary for combustion heating."

**Critics of electric heating** have raised a new cry—they say it is wasteful of total energy. Richard C. Barnett, venture manager for GE's heat pump does not agree. "Many of the critics compare the 35% average winter efficiency in



generating electricity from fossil fuels to the 50% or possibly slightly higher efficiency of the average oil or gas furnace," he says. "That is not the whole picture. The advantage reverses back to electricity when you crank in a typical 200% efficiency of the heat pump (which

## Conserving resources: how the heat pump stacks up.



varies regionally) and account for the energy consumed in distributing fossil fuels to homes."

**Looking at the end use of energy in the home,** the heat pump itself is actually four times as efficient as the average oil or gas furnace because it delivers two BTU's of heat for every BTU of electrical energy it consumes over a wide range of outdoor temperatures. "It can reach this 200% efficiency because it simply moves heat indoors or outdoors instead of creating it," says Barnett. "Some people have dubbed it the 'breeder reactor of home heating systems.'"

In short, Barnett believes that in homes requiring both heating and cooling, the heat pump is not only going to be the system most conserving of total energy but the most inexpensive and efficient system to operate in almost every area of the country. It is for this reason that the Weathertron heat pump is one of 12 Company ventures marked


for highest growth.

Heat pumps presently run third in electric heating sales, with about 125,000 installed in 1973—behind radiant baseboard heaters and electric furnaces. But their sales have been marching steadily upward in the first quarter of 1974 despite easing of the energy shortage and in the face of an actual decline in housing starts. January through April 1974 figures for the industry put heat pump sales up 20.3% and gas furnace sales down 8.5% over the same period for 1973.

**One of the chief barriers** in the heat pump's path: public understanding. Of GE's education effort, Stanley A. Gorski, general manager of the Central Air Conditioning Distribution Sales Operation, says: "We're working on educating dealers, builders, architects, real estate people, utility men, mortgage bankers—everyone connected with construction of new housing. It's really not an exaggeration to say that next to

the heat pump, the furnace is an old-fashioned pot-bellied stove in technology. So re-education is needed."

Gorski himself is an enthusiastic user of the GE Weathertron: "There's a total enveloping warmth in winter, with less chance of blasts of hot air or pockets of hot and cold in the room. The air coming out of the register is very close to room temperature and it hasn't been parched by superheating. It's easy to have totally filtered air in a heat pump home and things stay cleaner because the home is tighter."

The 130,000 heat pumps projected to be installed this year seem small next to the predicted 1.6 million housing starts in 1974—and to the existing pool of 60 million homes. But the Company is betting on the Weathertron to continue its fast-paced growth rate and to be a major factor in accelerating the shift to an electrical economy. 

## They've retired— to apply their skills in foreign lands

For some GE people, the idea of pursuing their old line of work after retirement—but doing it in a new and exotic locale—is a dream. But it's a dream that's come true for a number of GE pensioners.

How? One way is through the International Executive Service Corps, a not-for-profit organization based in New York City. Its primary purpose is to serve as a means by which the talents of retired people can be applied in other nations where such expertise is urgently needed. GE began its association with the IESC in 1964, the year it was organized, when a former GE Board Chairman, Phillip D. Reed, became a member of the Board of IESC. Since then 22 GE retirees have completed 41 projects in overseas locations.

Another way is intramural to General Electric. The General Electric Technical Services Company, a support affiliate of the International and Canadian Group, provides for the transfer of needed technology from GE products departments in the U.S. to its associates abroad via Company representatives. These domestic representatives often include retirees because of their valuable expertise in specific areas gained through years of service with the Company.

If a specific assignment requires a lengthy stay abroad, both organizations offer the necessary expenses for the pensioner to bring along his or her spouse.

The catch, of course, is to possess skills or knowledge urgently needed abroad. But as shown by these few examples, GE retirees are finding varied ways to apply their experience to those overseas challenges:

Operating a Texas ranch plus selling real estate has kept Frank C. Neal (holding blueprint) pretty busy since his retirement from GE in early 1973. Nevertheless, Neal, formerly general manager of GE-Houston's Distribution Assemblies Product Department, took on a job for GETSCO advising the Industrial Products Operation of General Electric de Mexico. "I got into it partly because I was already acquainted with many of the employees in Mexico who had visited my office on business," he says.



Among Neal's challenges were helping establish a new organizational concept patterned after the one in the U. S., updating designs of switchgear and control products,

rearranging and enlarging the manufacturing plant and installing new machinery.

Neal is beginning a new but similar advising assignment in Rio de Janeiro, Brazil and is currently in Mexico finishing up his task there.

Walter M. Kell has just returned to his Alameda, Calif. home from his second IESC assignment—this time helping Indonesia develop its resources in electrical wire and cable.



Cable is a business Kell knows inside out. He retired from GE in 1970 as plant manager of the Wire and Cable Department in Oakland, Calif.

"I was getting bored with all the free time on my hands," Kell says. "It's possible to have too much of a good thing, you know. My wife came with me and taught English to the wives of the Jakarta businessmen, so we both have made many good friends with whom we are keeping in touch."



Andrew W. Kramer (right) has been away from his Roanoke, Va. home for two years with his wife Virginia. After retiring from a GE career in late 1969 as an engineer for Industrial Control Products Department in Schenectady, N.Y. and Salem, Va.—designing AC equipment for steel mills—Kramer did local consulting for a while. Then in 1972 he was recruited by GETSCO for its Benoni, South Africa affiliate.



Now he is a consultant in design and application for all the steel mill equipment being supplied from the South African General Electric Company's Benoni Works to the Iron and Steel Corporation of South Africa.

"After spending 40 productive years with General Electric," Kramer says, "I guess I could never just be idle."

"I give credit for the accumulation of my experiences and knowledge to three learning phases," William J. Sarmuk says. "To have or get the opportunity; to absorb it all; and to be able to play it back."

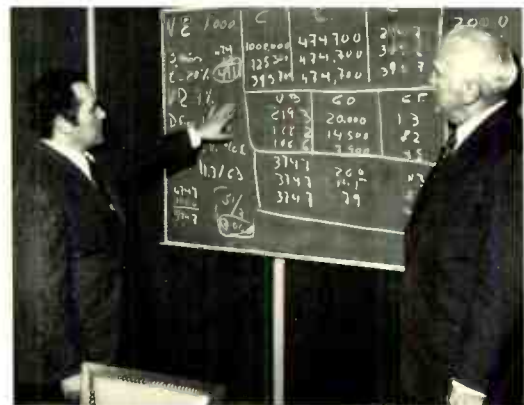
Formerly a design engineer with GE's Transformer and Distribution Equipment Di-

vision in Pittsfield, Mass., Sarmuk followed this formula throughout his 42-year career with General Electric. After retirement he was requested by GETSCO to share his expertise with General Electric de Mexico's Industrial Products Operation, modernizing the production of transformers with new technology and equipment. He's back in the States now but anticipating another visit to the affiliate in late August to review the procedures he set in motion.

"My wife accompanied me on the project and we both found it highly educational," he says. "But the main memory of this experience will be my deep satisfaction when I can see the programs I suggested working well for the Mexican GE people."

Retirees ought to keep active, says Norman H. Smeltzer. "It's the single most important key to their own sense of well-being. Also, why waste mature talent when there are so many places where it can be utilized?"

Smeltzer takes his own advice. A former Vice President and general manager of



GECC's Consumer Finance Division, he accepted an offer put to him by the IESC the very day of his retirement in March, 1972.

(continued next page)

## RETIREES (*continued*)

The assignment: could he help a small business firm in Mexico City overcome their financial difficulties? He could and did. "A challenge like that gives you a renewed sense of excitement," he adds.


From that assignment sprang a new way of life. Currently, Smeltzer is chairman of the Fairfield, Conn. chapter of SCORE—an organization funded by the government to aid small business.

"Teaching was my prime interest when I retired," explains William C. Wichman, "but I was approached by the IESC and a year later my wife and I went to São Paulo, Brazil, assisting the IESC Country Director. Then we were off to Mexico, carrying out a two-month seminar program in Obregon for local business leaders on management theory and practice."



Wichman(left, with former GE Board Chairman Phillip D. Reed) retired from GE in 1966 after 38 years of service. He was a Vice President and had been general manager of the Component Products Division, Industrial Power Components Division, GE Supply Company, Hotpoint and International GE.

Residing in Greenwich, Conn., Wichman now commutes to IESC's New York City headquarters to serve as senior staff advisor. He also finds time to lend his management expertise as a professor emeritus of the Graduate School of Management at the University of Rochester and teaches a program for management executives at the Carnegie Mellon Institute in Pittsburgh, Pa.

"Although I love the staff work," he adds, "I'm ready for another overseas project anytime." 

## ORGANIZATION CHANGES

### CORPORATE

Leonard C. Maier, Jr., *Vice President—Corporate Employee Relations*

Van W. Williams, *Staff Executive—Business Planning and Review, Corporate Strategic Planning.*

Robert J. Canning, *Manager—Financial Manpower Operation.*

### AEROSPACE BUSINESS GROUP

Richard A. Passman, *Program General Manager—Aerospace Field Programs.*

### AIRCRAFT ENGINE BUSINESS GROUP

Brian H. Rowe, *Vice President, appointed General Manager—newly established Airline Programs Division.*

Robert H. Goldsmith, *General Manager—Commercial Engine Projects Division*

Paul C. Setze, *General Manager—Group Product Quality Operations*

### COMPONENTS AND MATERIALS GROUP

Charles R. Carson *elected a Vice President.*

David O. Gifford, *General Manager—Specialty Motor Products Department.*

Donald K. Grierson, *General Manager—newly established Battery Business Department*

William A. Rutledge, *General Manager—General Purpose Motor Business Department.*

### CONSUMER PRODUCTS GROUP

Raymond F. Pettit *elected Vice President—Finance, General Electric Credit Corporation*

### INDUSTRIAL GROUP

Harold Bongarten, *General Manager—Eastern Apparatus Service Department.*

### MAJOR APPLIANCE BUSINESS GROUP

Duane L. Barney, *General Manager—Home Laundry Products Engineering Department*

### POWER DELIVERY GROUP

Nicholas Boraski, *General Manager—Power Transformer Products Department*

James J. Farrell, *Manager—Power Delivery Group Studies.*

### POWER GENERATION BUSINESS GROUP

Charles C. Thomas, *General Manager—newly established Installation and Service Engineering Business Operations.*



# OUR MEN IN THE STATE CAPITOLS

They need the help of 'three-level citizens' at GE plant locations

"The Federal Government may be wallowing in Watergate but state governments are accelerating, broadening, undergoing a revival. In terms of expenditures, these state governments are outgrowing most other segments of the economy. And the outpouring of state legislation that impacts on General Electric amounts to a staggering volume."

The speaker is Stephen K. Galpin, manager of Community and Government Relations for Corporate Public Relations Operation.

Responding to this significant new flow of power, GE now has eight full-time state Public Affairs managers stationed in state capitols, up from three just four years ago. The task of these eight managers, Galpin explains, is to be experts in GE viewpoints and experts in the processes and personalities of government.

Their work-load is the kind where even full-time efforts are never enough. "More than 140,000 bills were introduced in state legislatures last year, 44,000 were enacted, and an estimated 20% of the bills affected

General Electric," says William C. Hart, manager of State and Urban Affairs. "That amounts to a very positive and definite need for GE people to be involved in the process."

The colloquial term for our men in the state capitols is lobbyist—and these unusual men, placed in the states with the highest GE population, are indeed registered lobbyists where required by law. Does the term accurately reflect the process that goes on? "Not completely," says the dean of GE's State Public Affairs managers, Boston-based Norman J. Randell, who consented to have the *Monogram* accompany him on a day's rounds at the Massachusetts statehouse. "You're more of a missionary," he says, "an advocate trying to promote communication and understanding between two cultures that often seem not able to understand each other anymore. There's no place for partisan politics in this job—you're not a Republican or Democrat—you are a proponent introducing the GE point of view into the governmental process." (continued next page)

*State Public Affairs managers—GE's political pros in seven key state capitols—gathered in Boston for a recent conference with corporate advisors. They are, left to right: Charles B. Dates, Pennsylvania; Robert L. Jordan, California; corporate legal advisor Lucile Lomen; Francis V. Donovan, Connecticut; Everett L. Murch, Ohio; Stephen K. Galpin; Norman J. Randell, Massachusetts; Paul M. Ostergard, New York; William C. Hart, manager—State and Urban Affairs; Richard T. Tibbetts, consultant—Public Affairs Communication; Charles A. Willsey, Illinois. Unable to attend was Joseph G. Gray, covering four other Atlantic States: Maryland, Virginia, North Carolina and South Carolina. GE also has active Public Affairs Councils in Kentucky, Indiana, Florida, Texas, Tennessee and New Jersey.*



## OUR MEN (*continued*)

Massachusetts' importance to General Electric is pointed up by the fact that it's third in GE population at about 30,000 employees, and is host to major GE facilities at Lynn, Pittsfield and smaller locations.

Randell has watched Massachusetts politics on GE's behalf for almost twenty years. He chaired the Company's first state Public Affairs Council in 1955 and was appointed its first full-time State Public Affairs manager in 1958. "The composition of the legislature has changed dramatically in that time," he says. "There used to be a much larger share of lawyers and people familiar with business. Now 25 percent of our 240-person House and 40-person Senate are new this term and many of them are unfamiliar with the economics of running a business. It makes our educational job more essential than ever before."

Randell sees his job in a positive role. "Because not all the legislators are well informed about business, they need honest, well-reasoned evaluations of the effect of their bills on GE to round out their knowledge," he says. "The so-called 'Life-line Bill' (S-156) being considered right now, for instance, which really represents consumer frustration over rising electricity rates, would change rate structures for electrical power so drastically that the Pittsfield plant alone would pay \$700,000 more per year for power. It's my job to see that state leadership knows what the consequences of that might be for GE in Massachusetts, and for the state in terms of possible jobs lost."

A recent *Harvard Business Review* article by Martin Ryan Haley and James M. Kiss put it this way: "State legislators want to do a good job, but they often lack well staffed committees or good research services. For them the lobbyist can be a critical resource."

**Credibility is everything** for GE's public affairs managers. "You don't transfer relationships in the political world," says Randell, "you earn them, build them up carefully with truthfulness so that your voice is given real weight on a matter like S-156." When the real crunch comes—on the occasional issue of absolutely vital interest to the Company—then the years of groundwork pay off.

A typical day for Randell while the legislature is in session includes a couple of hours on the phone from his Lynn office coordinating efforts with GE plant representatives and other business leaders. Then he drives to the



Vice President Gerald L. Ford addresses a recent luncheon of the Public Affairs Council. Listening is Steven K. Galpin, manager of Community and Government Relations and chairman of the national governmental relations organization.

statehouse. The Randell legislative progress checklist included 42 bills on the day of the *Monogram's* visit—all of some interest to GE—several of great interest, including an expanded health care benefits bill already out of committee and being debated on the floor. After catching the tone of the debate, Randell stopped at the offices of several Massachusetts House of Representatives leaders to urge on them the merits of some business-oriented amendments to the bill. During the final two weeks of the session—called proration—legislators and Randell will literally spend 24 hours a day at the Capitol sleeping just across the street and seeing the bills through to enactment or defeat.

**The seven other public affairs managers** must also watch a proliferation of legislation that goes far beyond the GE concentration on labor and tax laws fifteen years ago.

For example, eight state legislatures recently introduced bills which would either declare a moratorium on any new construction of nuclear power plants or require that each proposed nuclear installation be approved by the legislature. The energy crisis also stimulated an outpouring of bills. For instance, the New York legislature considered bills that would ban the sale of instant-on television sets and outlaw refrigerators that contain a continuously energized electrical resistance heating unit. New York, like several other states, is debating the merits of establishing minimum energy efficiency

## Norm Randell's day: contact on many state fronts.



*Above, Norm Randell confers with Speaker of the Massachusetts House of Representatives David M. Bartley, center, and House Majority Leader Thomas W. McGee, right.*




standards for all appliances. For these complex issues GE's statehouse professionals often draw on corporate expertise and executive spokespersonship.

Other organizations and people with similar views can often work together in the lobbying business. Randell says, "I'm not just a lonely voice crying in the political wilderness although business lobbyists are greatly outnumbered by other interests. I do have some resources I can call on." One of those resources Randell calls "arm lengthening": suggesting to another interested party such as the Associated Industries of Massachusetts that they take a leadership role on a specific issue. "But my most basic resources are what I call my three-level citizens at every GE location," Randell declares. "They're key people, many of them know their legislators personally, but most basic-

ally they're people who believe in (1) studying and speaking up on an issue; (2) supporting a candidate based on his views; and (3) urging others to become active in the political process. It takes three-level citizens to make the American political process work right. And in my job you can ask for support at the statehouse only if you can show some voter support back at the grassroots level." A monthly newsletter keeps Randell's three-level citizens up-to-date on action items.

**Randell also suggests** that GE executives volunteer for state study panels concerned with such issues as energy and mass transportation. The state benefits from their expertise and the Company benefits from having its point of view ably expressed.

In Illinois, State Public Affairs manager Charles A. Willsey took an important initiative on the state's energy policies and developed a report exploring all the state's options for developing its coal resources and funding an energy authority. Willsey was motivated by Governor Dan Walker's expressed desire to make Illinois the leading coal gasification state in the nation. The report became the standard reference work around the state capitol.

That kind of resourcefulness is necessary for GE's eight State Public Affairs managers. Steve Galpin: "These men never know exactly what problem will hit them next. But they seem to thrive on challenge, and the tremendous job they do is increasingly important for General Electric." 

## TIME TO EXORCISE AN ECONOMIC GHOST?

The great depression of the Thirties bred a deep fear in U.S. society: an overriding concern for the welfare of the consumer. Except for war periods, this concern has dictated economic policy ever since, giving priority to stimulating consumer demand, redistributing wealth, providing for social welfare and increasing government services.

While much good has flowed from these policies, do today's economic realities require re-examining the basic economic equation and reasserting the economy's production side: the needs for building productivity, the creation of capital, the role of profits and retained earnings?

Top GE spokesmen answer yes; the time is here to exorcise this economic ghost out of a distant past; U.S. social welfare itself demands new attention to a production system that is undernourished and over-aged.

Two recent actions by Board Chairman Reginald H. Jones set the pattern: his testimony on "Capital Requirements of Business, 1974-85," presented to the Subcommittee on Economic Growth, of the Joint Economic Committee of Congress; and his statement in a U.S. Steel series of advertisements, as reprinted at right.

Vice Chairman Herman L. Weiss followed through with a closely reasoned talk on "The Profit Ethic" to the New York Chamber of Commerce and Industry.

The Monogram space precludes all but a few highlights from these key statements. Readers can gain the full texts by a note to the Editor.

Chairman Jones told the Congressmen, in essence, that the U.S. has, by favoring consumption over production, "created an unbalanced situation which threatens continued national progress."

The country now has an economy whose tax structure and economic policies tend to discourage savings and capital investment, he said, adding that the popular U.S. attitude toward profits "is one of grudging acceptance and little understanding."

One result is that the U.S. has been investing comparatively less of its wealth in capital for the future than have other leading industrial nations. Gross private domestic investment as a percentage of GNP for 1973 totaled 15.7% for

the U.S., while Germany invested 26%, France 28% and Japan 37%.

Jones warned that "the consequences of under-investment are catching up with us in those basic industries that undergird the national economy and its expensive social services. Shortages of fuel, raw materials, transport and industrial commodities are forcing us to re-examine our national priorities. Unless we want to live with ever-worsening shortages, and all the unemployment and inflation and government controls that would result, we will have to establish policies that once more encourage savings and investment."

The principal part of his testimony was given to a GE analysis of U.S. capital needs and resources between now and 1985. The conclusion: even with the present low percentages of investment in relation to the GNP, the U.S. will have to go from a total of \$1.5 trillion for the period 1962-73 to "a staggering \$4.5 trillion" for the twelve years ahead—an investment that, in constant dollars, will mean a 69% increase, the rest going to overcome the effects of inflation.

Jones' estimate: "we'll have to do better than that"—perhaps 18 to 20%—if we want to lick inflation and maintain a socially acceptable level of unemployment.

**"My thesis," he said, "is that this country has drifted into a situation where its investment needs may exceed its savings, and what we need are incentives and policies that will divert more funds from consumption to investment."**

But won't the reported increases in corporate profits make up some of the gap? Jones cut this prospect down to size by showing what has happened to return on investment for American industry in these past inflationary years: ROI (adjusted for underdepreciation and illusory inventory profits) has dropped from 7.8% in 1965 to "dismal 3.6%" in 1973 for industry overall. "With interest rates above 8.5%—which amounts to 4.1% after taxes—there clearly is little incentive to invest in expanded facilities." Business has met its needs by borrowing—"Corporate debt has doubled since 1966."

What can be done? The GE Chairman offered a series of policy recommendations:

- Tax reforms that will encourage savings and investment.

*(Continued on page 30)*

At the invitation of United States Steel...

# Reginald H. Jones asks: Can we afford the future?

***"The capital needs of this country are mind-boggling."***

Reginald H. Jones, Chairman of the Board,  
General Electric Company.

Most Americans recognize by now that increased productivity is the key to a rising standard of living.

But it has a price: capital investment to provide the facilities and machinery that enables people to be more productive. Capital investment to provide the energy and materials that are running short.

The capital needs of this country are mind-boggling. Electric utilities will have to raise and invest \$500 billions between now and 1985.

The oil and petrochemical industries must invest \$270 billions in the same period.

To upgrade our transportation system—rail, air and water—will take another \$170 billions.

From 1962 through 1973, capital investment totalled \$1.6 trillions in this country.

But in the next twelve years, through 1985, our capital needs will come to about \$3.3 trillions in today's dollars, even without inflation being taken into consideration.

Most of that incredible sum will have to be raised and invested by the business community.

Where in the world will it come from?

The capital available to business comes only from profits—profits that may be reinvested directly or used to attract and support investment by others. The higher the profits, the higher the levels of investment that are possible.



The headlines have been carrying announcements of record profits. In 1973, a very prosperous year, after-tax profits of industrial corporations recovered from their low point in 1969-70 and were up 30% higher than they were in 1965.

But wait a minute.

In the same eight years, the gross national product—the total value of everything produced—went up 88%.

So, industry's profits now equal only 3.9% of the gross national product compared with 5.6% in 1965.

We're losing ground.

If profits become a smaller and smaller part of the picture, we'll never be able to raise the money that will have to be invested between now and 1985 to keep America prosperous.

If profits keep shrinking we'll have to live with ever-worsening shortages and inflation and unemployment and government controls.

There are many things government and business management can do to help business earn the profits it needs to fund America's future.

But one thing we all can do. And that's to improve our personal productivity on the job. Work with enthusiasm and care, whatever our assignment.

Conserve energy and materials. Come up with money-saving ideas. Help to make more out of less: that's productivity.

This will not only help industry earn more and invest more in America's future. It will also help each of us earn more as we produce more.

With increased productivity, everybody wins.

And with increased productivity, we will be able to afford the investment needed to assure a healthy future.

*United States Steel knows that it must earn sufficient profits to permit major investments in new equipment and facilities to expand operations. Our company will have to invest billions between now and 1980, if we are to help meet the soaring demand for steel. That's one important reason why our company is putting so much emphasis on improving our own productivity. United States Steel Corporation, 600 Grant St., Pittsburgh, Pa. 15230.*

 **We're involved.**

U.S. Steel advertisement quoting GE's Chairman appeared in Time, Newsweek and other leading periodicals.

## EXORCISING A GHOST (continued)

- Better control of government spending.
- Redirection of government spending toward more productive ends—R&D, for instance, to open up new fuel sources and more efficient energy conserving systems.
- Steps to improve the atmosphere for foreign investment capital—“especially those petrodollars that have been flowing to the oil-producing nations.”
- And measures to develop more attractive profit prospects—including “inflation accounting” in Federal statistics, a better flow of equity capital to regulated industries and policies that avoid economic controls.

The need for a “profit ethic,” supported by the same dedication that is now given to the “conservation ethic” or the “growth ethic,” is seen by Vice Chairman Herm Weiss as one of the nation’s great urgencies.

In his view, profits comprise a subject “which is no longer confined to just business, but is at the heart of survival for an American economic and social system achieved by more than 200 years of hard work.”

An increasing proportion of the public, academic and governmental constituencies, Weiss observed, “seem to have forgotten the simple economic truth that if we are to provide improved health care, improve the environment, be self-sufficient in energy, provide better housing and attain a host of other national objectives, additional capital is required and that a fundamental test applied by any rational investor of capital is that gains in earnings must reasonably parallel increases in investment.”

**Profits are being attacked and misinterpreted, he noted, at the very point in U.S. history when the economic challenges are the most staggering.**

“The nation,” he said, “will continue to have an expanding work force, has long-standing traditions of rising wages and a rising standard of living, and has made a strong commitment to the greatest possible degree of economic self-sufficiency. Enormous sums of investment capital will be needed to finance growth, to correct scarcities and to maintain a competitive international economic posture.”

Weiss foresees electric utilities alone needing \$500 billion in cumulative capital needs between now and 1985, while \$470 billion will be needed by the petro-chemical industry and \$27 billion for the development of coal resources.

“Approximately 75% of the plant and equipment in this country is more than five years old

and 65% is more than ten. This is the highest of any nation in the world.” By contrast, some 62% of Japan’s production equipment was installed within the past five years—giving the Japanese a 10.4% annual increase in productivity in the period 1960 through 1972, compared with a 3.1% gain in the U.S.

Inflation is another powerful force working against profits. Weiss’s estimate: corporate profits for 1973 were overstated by some 40% because of inventory underestimation and inadequate provision for plant replacement cost.

“But more startling, perhaps,” he noted, “is the point made by Dr. Paul W. McCracken that retained earnings, when expressed in 1965 prices, dropped from \$19 billion in 1965 to \$2 billion in 1973.”

The reason for concern on this front: “An increasing portion of the astronomical investment requirements will have to come from retained earnings. This can only be attained if margins are allowed to widen and thereby permit businesses to step up their reinvestment rates as well as to attract new capital.”

**One chief barrier in the way of this essential widening of margins: public understanding. “Everyone must understand the important contributions made through profits, and the sterile economy and society that would develop if profits are inadequate.”**

Weiss urged renewed efforts to inform the public that:

- Profits have grown slowly—less than 5% a year since 1947, half as fast as the rise in total government spending, and now represent only 3.9% of GNP against 5.6% in 1965.
- Profits fluctuate widely from one year to another, unlike wages and taxes.
- Profits and jobs move together, with employment receding in times of profit decline, gaining when earnings are good.
- Profits guide businessmen in placing their emphasis in efficiently converting labor, materials and energy into useful products and services.
- Nearly half of all profits are collected and spent by the government.
- Inflation will persist until supply can be increased to meet the demand—and this increase depends on risk-taking investments.
- And, ultimately, both our political liberty and economic freedom require defending the incentive system, a prominent element of which is profits—“the legitimate and necessary earnings by which business finances the economic future of this country.”

## 'A new host of hybrid leaders'

"Not since World War II has it been so apparent that the federal government and private business must act as full-time partners to deal with the monumental problems that confront contemporary society. Yet the public and private sectors are beset with misunderstandings about each other."

So begins an article by Vice Chairman Herman L. Weiss in the July-August *Harvard Business Review*.

Weiss has been actively championing one means to strengthen government-business cooperation: for the past two years he has served as Chairman of the President's Commission on Personnel Interchange, and he continues on the Commission.

In the HBR article he comments: "The United States needs a new host of hybrid leaders, men and women with firsthand experience in solving the problems and melding the methods of both government and business." The Interchange Program, he adds, "was formed to build up a cadre of such leaders." At present 45 executives from the private sector are at work in critical managerial jobs in the federal government, while 35 from government are busy in similarly critical positions in private companies.

## A first for Bonnie S?

For engineer Bonnie Schnitta of Marine Turbine and Gear Products Department here in Lynn, Massachusetts, venturing into a non-traditional women's career path has brought her a "first."



Bonnie recently became the first female in the history of MT&GPD to go on a sea trial as a member of the "shakedown" crew. She may well be the first American woman in this role. We were reminded of her unique accomplishment by the May-June 1974 *Monogram* article on expanding opportunities for women. We like to think Bonnie's adventure is symbolic of our attitude encouraging women in engineering here.

Bonnie graduated from Purdue in 1973 and joined MT&GPD's Engineering Intern Program last October as a systems development specialist in Propulsion Systems Engineering. In late April, accompanied by Bob Butcher, MT&GPD manager of Propulsion Systems Development, she left Lynn for the Uddevalla Shipyard in Sweden, where the Norse Queen, a VLCC (Very Large Crude Carrier) powered by MT&GPD's marine steam turbines stood ready for her first cruise.

Bonnie was probably better prepared for her role as a pioneer than the shipyard's sea trial crew, who were just a little hesitant at first about accepting her as a working member of the crew. "But when we got underway and I started to work," she said, "they saw I got no special treatment because I was a woman and they accepted me." Several members of the Swedish sea trial crew commented afterwards that they had never seen a junior engineer perform better than Bonnie.

BILL FOLSOM  
Lynn, Massachusetts



Vice Chairman Herm Weiss presents Executive Interchange Program plaques to Marvin Bell, William C. Broeffle and Albert T. Christensen, GE participants who have completed periods of service in government assignments. □



New GE headquarters makes the most of its pastoral setting in Fairfield, Connecticut.