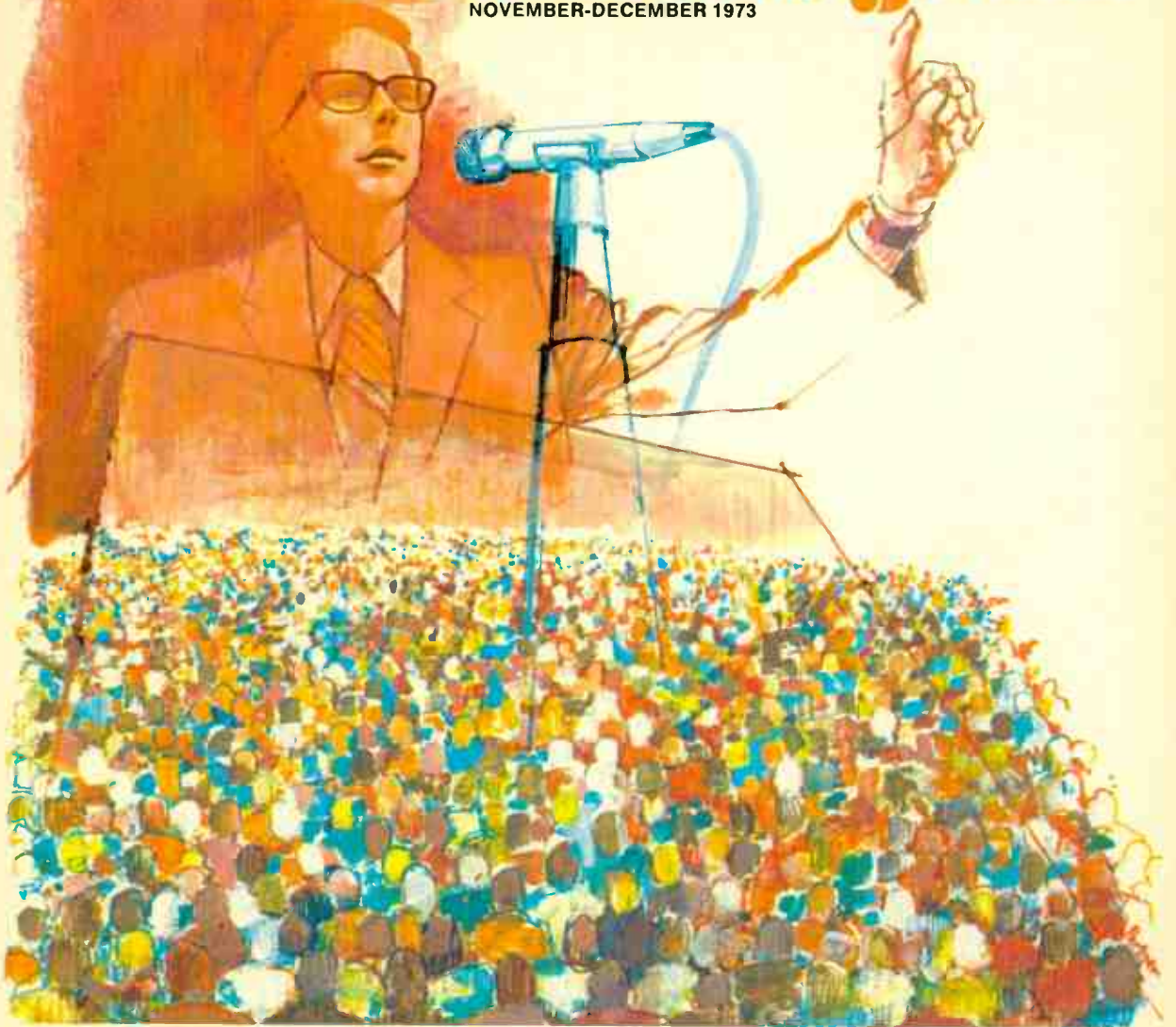


GENERAL ELECTRIC Monogram

NOVEMBER-DECEMBER 1973



MAKE YOUR NEXT SPEECH MORE EFFECTIVE

**GE'S AFFILIATE IN
SHAKESPEARE-LAND**

Plus — New slants on
strategic planning,
energy conservation,
talk with Nobel winner,
the 'cluster' concept





VOLUME 50, NUMBER 6

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THE COMPANY

STRATEGIC PLANNING: THREE NEW SLANTS

Is strategic planning really that important? Is it OK for the long term but not for today's problems? Is it good for business but bad for people? Here are recent answers by three GE officers.

REG JONES:

'IT WILL MAKE THE DIFFERENCE IN '74'

Nearing completion of his first year as GE's Chief Executive Officer, Chairman Reginald H. Jones is, if anything, even higher in his estimation of the value of strategic planning than he was a year ago.

He made this clear in his November 7 talk to the New York Society of Security Analysts. In his view, strategic planning is expected to make the difference next year in keeping GE's earnings performance from trending downward with the economy.

The Chairman reported GE economists' forecasts for a sharp downturn in the real growth rate of the gross national product next year, with a better second half than first half for the overall economy. Corporate profits, say the economists, are due for a 9% drop. Despite these portents, "we in General Electric are aiming to run counter to this trend in 1974."

He acknowledged there could well be "a confluence of unfavorable events beyond our control," including a more unpredictable fuel situation because of events in the Middle East and also shortages of feed stocks and other vital raw materials. "Nevertheless," he said, "our confidence is not simply based on optimism. It represents the results of strategic planning which

Reg Jones to security analysts: 'Strategically planned resource allocation will help keep GE outpacing the GNP.'



includes measures to offset periodic slowdowns in the national economy."

Further, he expects strategic planning to keep the Company's return on investment up around the healthy 18% level achieved in 1972. How? "Both by containing our risks and by allocating our resources to the right places, at the right time, for optimum growth and profitability."

And if any of the analysts missed the emphasis he was placing on strategic planning, he came back to the theme: "We've been stressing the strategic planning process at General Electric because we consider it to be a factor that is going to make the difference between mediocrity and strong, sustained growth in earnings."

He then came to the crux of his talk—and the main challenge to strategic planning—by taking on the persistent Wall Street opinion that would limit GE's prospects merely to the performance of the gross national product because GE's diversity makes it a GNP cross-section.

It's management's belief that GE "can outperform the GNP, can grow faster than the GNP," he told the security analysts. "We intend to do this through a *differentiated approach to resource allocation.*"

Essentially, this means applying the strategic planning process to the Company's various product areas so as to determine which to back most strongly with resources.

(continued on next page)

The top category: those product lines with the highest leverage for earnings growth—those “that have experienced and have, we believe, the potential to *continue* to experience earnings growth rates anywhere from 15% to 30% per annum.” Examples cited: engineering plastics, medical systems, aircraft engines, General Electric Credit Corporation, time-sharing computer information services and transportation.

“Our strategy,” the Board Chairman said, “is to pour maximum required resources into these growth areas, anticipating that they could produce almost a third of the Company’s earnings three years from now.”

He went on to a second category—“those steady, long-term contributors to corporate earnings which, while historically increasing earnings at a more modest rate, in the range of 5% to 15% a year, have provided a solid return on investment.” These products, he said, will receive a steady reinvestment so that they can continue to satisfy their customers and maintain their healthy levels of return.

Examples: major appliances, steam and gas turbines, lamps, contractors’ equipment and the industrial apparatus service business. “These are examples of products with earnings growth rates averaging about 9% a year, but bringing in substantial profits year after year. They are expected to provide more than a third of total earnings in the next five years.”

A third category designated by the Chairman: products whose earnings growth is somewhat slower but whose good return on investment makes a valuable contribution to total Company earnings. Representative products: specialty materials such as man-made diamonds, automation products, Carboloy systems, meters, specialty transformers and electronic components. “Our strategy here is to see that these products receive the necessary allocation of resources to sustain their contribution to Company profits.”

Placed in a special category by the Chairman was nuclear power, including both reactors and fuel, which he sees as “a growth opportunity of historic proportions for General Electric, though the high level of R&D expense limits its present contribution to earnings.” As dependence on nuclear power grows and exaggerated fears and environmental concerns give way to more realistic perspectives, he said, there will be “no stopping this tide.”

While designating the growth potentials for entire business sectors, GE’s Chairman also recognized that there are growth ventures *within*

existing Divisions. “Nearly forty such ventures are presently identified and account for less than 3% of the Company’s total estimated sales in 1973,” he said. He cited “the so-called ‘10-ton’ aircraft engine—which some see as the workhorse engine of the 1980’s; the man-made diamond-like material Borazon; microwave cooking; solid-state lamps; automatic meter reading; and over 30 others.”

In his view, if these growth ventures meet with anywhere near the success of similar programs over the past five years, “their combined sales should produce substantial earnings by 1978—and could be even bigger contributors in the five-year period beyond that.”

What about the balance of GE products? They “do tend to emulate the changes in GNP and are not as significant in terms of return on investment,” the Chairman said. These businesses can expect to see stringent controls placed on the resources allocated to them and may experience further pruning. But Reg Jones did not rule them out of future growth plans: “Some are allocated resources when they develop projects that have acceptable discounted rates of return. And then there are some that we feel can be rejuvenated with good planning and good management, and we are willing to make the necessary investments as these ingredients are demonstrated.”

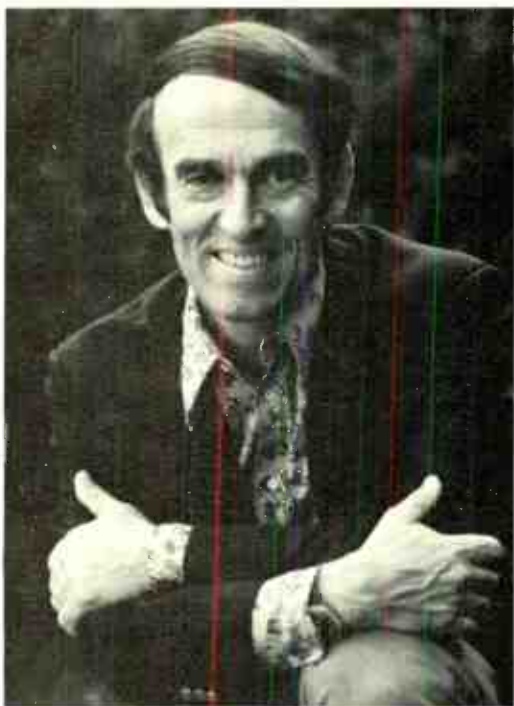
REUBEN GUTOFF:

‘STRATEGIC PLANNING IS FOR NOW’

Does strategic planning suggest the long-range view, the five-year plan—something that might have effect out there on the horizon somewhere but isn’t to be considered in the hurly-burly of today’s business?

Take it from the Company’s Senior Vice President in charge of strategic planning: any GE-er who thinks of strategic planning in those remote terms is missing a vital point. In Reuben Guttoff’s view it’s a tool not for the never-never but for now.

Summarizing a viewpoint he has been stressing in recent GE talks, Guttoff told the *Monogram*: “Many people confuse strategic planning with long-range planning. I’ve been emphasizing that there’s a significant difference. The difference centers on whether or not a real *change in the business* is contemplated in the planning. Long-range planning and forecasting are concerned with projecting results of an existing business out into the future without necessarily changing its structure. Strategic planning, on the other hand, deals with change either in the



Gutoff: a hard look at hockey sticks

internal structure of the business or with change in its external position—for example, in relation to competition or the market place.”

Making this distinction isn't just an academic nicety, Gutoff says. It has a particular significance for planning in GE today. “One of the major weaknesses of planning in the past has been that it was divested from the real operating decisions made about a specific business. It has been a common practice to project very exciting growth prospects five years out—after a period of downturn for the immediate future. And this has been carried over into strategic planning.”

The unfortunate consequence has been that when the shorter-term real business world equation is joined with the five-year strategic plan, “much too often we don't get a fit.” The result is the “hockey stick projection.” Says Gutoff: “The dip or plateauing in performance forecast for the next year out is the initial salvo in budget negotiating procedure, while the later-on climb in performance is the consequence of the strategic planning procedure. Strategy has somehow vanished in the short range.”

But this doesn't fit at all with Gutoff's concept of strategic planning. “Admittedly, some changes in a business take a long time to bring about. Take, for example, the change involved in developing a new generation of products in a high-technology field or gaining market position in a concentrated, competitive market

arena. But other changes can take place much more rapidly. What is required, simply, is insight.”

And that's where GE's deepening experience with strategic planning comes into play. “By this time,” Gutoff points out, “we have a growing inventory of successful strategic case histories. In a great many instances there's no need to wait—these examples can be ‘cross-ruffed’ against present operations and the resulting insights put to work here and now.”

To gain fresh insights out of this inventory of past experiences, Gutoff believes, three preconditions are necessary. “First of all, we have to open our ears and minds so that we search for similarities rather than differences between business experiences. Secondly, it's helpful to examine case histories at the extremes—great successes and abject failures where lessons are most glaringly apparent. And finally—and most importantly—we must be willing to experiment with change rather than just study it.”

To pin down his point, Gutoff has, on the tip of his tongue, case histories of short-term strategic planning that have helped to improve long-term results. “Our experiences with integrated circuits is an example. After a decade of sporadic effort, we were 22nd in the business and were faced with further fallback unless significant additional funds were applied. Over a three-month period in late 1971 we made an intensive strategic analysis and came to the decision to withdraw from the business. An immediate result was a reduction in operating losses. But the real story is that without that cash and management drain, attention could be focused on selectively managing the two dozen other key product lines in our electronic components business. We've gained competitively in power semiconductors and nickel cadmium batteries. We've successfully introduced new products such as metal-oxide varistors, and have diversified internationally. There's been a dramatic turnaround in performance—the result of a fundamental structural change made possible by strategic planning and action applied on a short-term basis.”

Gutoff sees a growing body of similar examples across the Company. “By cross-ruffing our experiences, acting boldly and creatively and, above all, by recognizing that strategy can influence short-term performance as well as results five years ahead, we have a unique opportunity. The key to major profit change is major change in business structure via strategy—and strategy is today.”

(continued on next page)

**TOM VANDERSLICE:
'STRATEGIC PLANNING IS PRO-PEOPLE'**

With discussions of strategic planning including talk of "pruning" or "exiting" marginal businesses, it's inevitable that conclusions will be drawn that strategic planning is "anti-people"—that a "hard-nosed" business plan can't help but leave little consideration for people's needs and career development objectives.

Not so, says Dr. Thomas A. Vanderslice, Vice President and Group Executive for the Special Systems and Products Group. "I can give a very direct answer to strategic planning's effect on people. Good strategic planning is people helping shape and formulate their environment rather than being victims of it. It's that simple. Good strategic planning and manpower development are almost synonymous."

Knowing where you're going in a business can't help but benefit people, Vanderslice believes. "The strategic plan is nothing more than a well-thought-out plan showing how you intend to get where you want to go in a business. People are the primary resource in any business and they always grow faster in a reasoned environment, one that has a sure and sensible direction, properly timed."



Vanderslice: so that people won't be victims

Career growth, he says, flourishes in such a business. "One of the most frustrating things I could think of is being measured against a moving target. A fair measure of your performance is the contribution you make toward the business's objectives. This contribution is more readily measurable in a planned business. The alternative is being measured against someone's subjective and changing ideas of success in an unplanned business. Getting people to think strategically puts them in closer touch with reality. They know where they are, what

contribution they're making and what the odds are for the future."

What about the effect that strategically planned withdrawals have on people? Again, Vanderslice is unequivocal: "Some exits are inevitable—especially when we consider the dynamic changes in 20th century technology. Strategic planning only makes the difference between a violent withdrawal and a smooth, well-planned one. Every product has a measurable life cycle—whether it's two years or a hundred—and if you know where you are in that time frame, you can plan an orderly exit that actually benefits people in the long-run career sense. Timely exits can, in fact, be the source of trained people critically needed in new business interests."

Certainly, strategic planning involves change and sometimes personal upheaval, he acknowledges. "But in most cases the individual comes out of the period of change in a stronger position than when it began. In the cases where we have gone out of a business we've worked very hard at getting the people relocated either in the Company or in other companies remaining active in the particular field. The result has been that these people have become employees in businesses that have the capability to compete rather than being headed for certain failure."

There's another aspect of strategic planning that Vanderslice is eager to point out: "Everyone hears about GE business exits that result from strategic planning, but few people credit strategic planning with a much larger number of strategic 'saves.' I can think of two examples in the town of Waynesboro, Virginia alone. Strategic analysis convinced us we should retain the electro-mechanical relays business and should, right now, begin adding extra program, sales and production people to the Termet business. For both of these businesses, their situations have been confirmed and they're moving forward because their people are making it happen."

Fear of strategic planning is based on misconceptions, Vanderslice concludes. "Planning doesn't either get rid of business risk or avoid the taking of risks, but it enables people to choose the most promising path, knowing the level and types of risk involved. Strong businesses and growing people are the result of sound plans and contingencies, carefully prepared by and communicated to people. In short, strategic planning is in the best interests of employees—it's pro-people. It's a vehicle by which people as well as businesses can grow and prosper." ■



A time of special recognition for GE research and engineering

Talk with Nobel Prize Winner Giaever

The highest honor a scientist can receive went on October 23 to Ivar Giaever, a 44-year-old Norwegian-born scientist at the General Electric Research and Development Center. He shared the 1973 Nobel Prize for Physics with two other scientists for his pioneering work on electron tunneling in superconductive metals. Giaever, characterized by associates as brilliantly inventive but unpretentious, was genuinely surprised.

"I heard rumors I had been nominated," he said in a recent conversation with the *Monogram*, "but you don't expect to win these things—at least not until you're in your 60's. It was six years ago that I heard I was nominated, and I really hadn't thought about it much lately."

On the subject of the work that led to the Nobel Prize, Giaever said: "It started with a hunch. I had been working with tunneling between metallic thin films and one day wondered if the tunneling effect might not be much more interesting if one of the halves of this metal sandwich was a superconducting metal. Superconductors are metals that lose all their electrical resistance at temperatures near absolute zero. After a few tries, I got it to work." Giaever's simple experiment amounted to a direct method of detecting and measuring in superconductors a quality known as the energy gap, a principal feature of the theory of superconductivity. His

experiments have made a major contribution to the rapid increase in the understanding of superconductors' behavior that has occurred over the past several years.

Dr. Giaever was trained in Norway as a mechanical engineer and it was only after he had become fascinated with an applied-research project during a six month assignment at the R&D Center that he decided to try to become a physicist. His unusual research philosophy has been molded by coming late to the field. "I believe strongly in the value of a fresh view on scientific subjects," he says. "Your best ideas probably come in the first few years of specialization in a subject. In other words, original ignorance can actually be a blessing in some cases because you get a fresh view. When you begin to find yourself thinking you know all there is to know about one corner, it's probably time to turn to another corner."

Giaever is taking his own advice. He's excited about his new research area—biophysics. "We have developed a new technique," he said, "to detect the presence of any specific enzyme or hormone or disease antibody in the human body. It's a slide with a thin metal film which you can dip into a blood sample and see visually the presence of a specific antibody or antigen immediately, even though the layers of the substance on the slide are only 120 billionths

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of an inch thick. We're testing the technique right now with the Albany Medical Center. We are attempting to diagnose hepatitis now and we hope it might even have some usefulness in cancer diagnosis."

Dr. Giaever expects to go to Sweden to accept the Nobel Prize around December 10. "It should be an exciting occasion—getting the award from the King of Sweden himself," he says. "My family and I are of course going to visit our home town, Toten, while we're there. I don't expect this to greatly change our way of life permanently, though. Before I went into science, I always thought that Nobel Prize winners were extraordinary people, but when you get to meet a few you realize that they are people, and now I know they are ordinary as well."

"Proud beyond words": GE research community elated

It was 7:30 in the morning on October 23 when the GE Research and Development community in Schenectady heard about the Nobel Committee announcement in Stockholm, and it was not going to be an ordinary day in Schenectady. Dr. Giaever, who ordinarily walks the half mile from his home to work, rode in a limousine, walked into work on a red carpet, met the press at ten and received the congratulations of his colleagues at a jubilant champagne reception in the evening.

The day brought memories of the other time a GE scientist won the Nobel Prize. The late Irving Langmuir won the prize for chemistry in 1932 as the first industrial scientist in the U.S. to be so recognized, causing similar jubilation in Schenectady. The forty-one years since have not lessened the extraordinary pride of accomplishment in winning a Nobel Prize. GE Chairman Reginald Jones told the Chicago Share Owners Information Meeting audience that morning: "We are proud beyond words. Dr. Giaever has honored his profession, his associates and his Company." In a personal telegram to Dr. Giaever, Jones said: "Now the name of Ivar Giaever joins the name of Irving Langmuir . . . among the immortals of General Electric."

"The discovery was elegant and had the esthetic simplicity that makes a scientist wonder why it had not been made before," wrote Roland W. Schmitt, Giaever's research manager in 1960 at the time of the discovery. The Nobel Committee apparently found that statement as true in 1973 as it was in 1960.

Dr. Coolidge a centenarian on Nobel Prize day

If a benevolent master schedule-maker had worked it out, it could not have turned out better. Dr. William D. Coolidge, one of General Electric's most distinguished scientists, reached his 100th birthday on October 23, 1973, the day Dr. Giaever won the Nobel Prize. Board Chairman Reg Jones called the coincidence of dates "poetic justice." The huge birthday cake for Coolidge at the Research and Development Center had 100 ductile tungsten lamps on it. The filament material Dr. Coolidge developed in 1909 is still used in billions of lamps each year.

As much as for the ductile tungsten filament, Dr. Coolidge also has been honored for developing the x-ray tube which became the prototype of all modern x-ray tubes.

Dr. Coolidge, shown here with Dr. Bueche, left, and former Research Lab Director Dr. C. Guy Suits, right, still lives in Schenectady and



"keeps in touch" with the research effort he headed until 1945. He is the recipient of many awards and honorary degrees, including one of the rarest of all—an honorary MD from the University of Zurich.

Steinmetz Award: A new GE tradition

The technical excellence of research and engineering people at General Electric extends to the ten operating Groups also, as Chairman Jones made clear while officiating at a brand new GE tradition—the First Annual Steinmetz Awards Dinner in New York October 10.

One scientist from each of the ten Groups accepted an engraved silver medal bearing the portrait of GE mathematical genius Charles Proteus Steinmetz, who died just 50 years ago (see September-October *Monogram*).

The winners were honored for their individual technical contributions and their impact on GE and society as a whole. Each Group may provide a candidate for a Steinmetz Award each year from now on if it chooses, picked by a nominating committee within the Group.

Chairman Jones praised the winners for "organized inventiveness, a concern for total systems, not mere gadgets; an eye to social needs; and a determination to transform life with new capabilities beyond previous generations."



Steinmetz Award winners posed with their hosts after dinner. They are (foreground, left to right): Joseph S. Alford, Aircraft Engine Business Group; William Speicher, Special Systems and Products Group; GE Chairman Jones; Research & Development VP Dr. Arthur M. Bueche; Dr. Edward G. Zubler, Consumer Products Group; and Frithiof V. Johnson, Aerospace Business Group. In the back row (left to right) are: Colin M. Stairs, International and Canadian Group; Dr. Daniel W. Fox, Components and Materials Group; Dr. Philip Barkan, Power Delivery Group; Dr. Charles Concordia, Power Generation Business Group; Hans O. Spauschus, Major Appliance Business Group; and Dr. F. Meade Bailey, Industrial Group. □



ENERGY: THE DRIVE TO CONSERVE

Mounting U.S. concern over energy shortages is meeting with a swift response from General Electric.

On November 1 Chairman Reg Jones announced that the Corporate Executive Office had asked Hershner Cross, Senior VP—Corporate Administrative Staff, to assume overall Company leadership of General Electric's consumption and conservation of energy.

Cross quickly formed the General Electric Energy Conservation Council, formed of a Division-level Vice President to represent each Group, plus officers of Staff functions most immediately concerned.

On November 15, Cross conducted the meeting pictured above: representatives from across the Company gathered in New York to get down to the specifics of keeping GE's machinery running on less fuel.

"The energy shortage is real and is with us now," Cross said, and made clear his belief that saving energy is essential to saving GE jobs. "General Electric plants have already been hit," he noted. "We suspect that things will get worse before they get better, and a number of our plants will suffer disruptions and shutdowns."

To minimize these effects, Cross advocated a Companywide energy conservation effort encompassing these goals:


- Keep General Electric people at work and continue to serve customers without interruption.
- Achieve an overall energy reduction of a minimum of 10% on a Companywide basis.
- Make full use of all GE resources in meeting energy challenges.

Cross noted the head start provided by past years of energy utilization studies and conservation programs. The goal now is to expand and accelerate these efforts.

In the reports that followed, the emphasis was on "hard ideas" that could result in substantial energy savings. Among these:

- A Companywide Energy Data Program, directed by James H. Bockhaus, to supply accurate up-to-date assessments of GE's energy status.
- Energy utilization audits by each component, following the lead set over the past ten years by Henry W. Heddeshimer of the Real Estate and Construction Operation. Each of his studies have accomplished energy savings of 5% to 15%.
- Accelerated waste-avoidance programs in all Division components.
- Corporate coordination of conservation suggestions and circulation of useful ideas across the Company.

Thus the Company is giving new urgency and thrust to energy conservation. But the full realization of the program's goals, Hersh Cross stressed, rests with responsible actions by the local operation and the individual GE man and woman: a gallon-by-gallon, BTU-by-BTU retrenchment in energy usage.

"Watts Going on Where You Live" is the title of a timely new booklet being distributed by GE's Major Appliance Business Group as part of its campaign to inform consumers on power saving tips. The 16-page booklet of suggestions for saving energy in the use of consumer products is available from component Employee Relations Operations. 

MONOGRAPHS



Royalty among GE Calendar's photographers: The General Electric Calendar has a reputation for featuring superb photography and for 1974 it adds another distinction—first contribution by a British peer. He is none other than Anthony Armstrong-Jones, professional photographer and husband of Princess Margaret. Mr. Armstrong-Jones, whose title is the Earl of Snowdon, took the picture used for the month of October 1974.

David L. Martin, Editor of the Calendar at GE's New York headquarters, explains how he came to add Lord Snowdon to the Calendar's list of professional photographers: "Each year we have to come up with 12 different photographs that relate to some aspect of General Electric activity and at the same time are attractive to look at—each one is up on your wall for 30 days. One subject selected this year was

an air monitoring system designed by GE for the state of Pennsylvania. We remembered a magazine article on the Pennsylvania Amish people photographed by Lord Snowdon. The air the Amish breathe—and air throughout Pennsylvania—is constantly being monitored at several GE-designed remote stations and the environmental data gathered by them is fed into a GE PAC-30 computer. We contacted Lord Snowdon's agent and selected the evocative picture of Amish children in an old-fashioned schoolyard for the Calendar."

Lord Snowdon joins a list of leading American photographers represented in the '74 Calendar, including the R & D Center's Walter B. Halstead.

A total of 450,000 GE Calendars are being distributed this month to GE components and customers worldwide.



Lighthouse of the month: It seems the purchase by GE manager George Hupman (September-October *Monogram*) was not a completely unique Company event. General Electric itself already owns a lighthouse—in fact, one of the most famous ones on the Maine Coast.

The Heat Transfer Product Section of the Turbine Department has custody of the "Bug Light," as it is known, at the entrance of the South Portland, Maine Harbor. The ornate little lighthouse was built in 1875, appears on the South Portland town seal and was recently completely restored by the Company.

"It came with the property," says Employee and Community Relations manager J. C. Vanselow. "When we moved up from Schenectady in 1967 and bought this waterfront property in the old South Portland shipyard, there it was."

(continued on next page)

TEI's winter highlights: On December 18 Tomorrow Entertainment, Inc., GE's entertainment affiliate, launches its winter TV season with "I Heard The Owl Call My Name." The show is the first of a new series of 90-minute contemporary dramas marking the return of the GE Theater to television. Five days later on December 23 TEI presents Jane Fonda in Henrik

Ibsen's "A Doll House," and on January 23 Academy Award nominee Cicely Tyson portrays a black slave in TEI's production of the "Autobiography of Miss Jane Pittman." The two-hour feature film describes the real-life drama of Jane Pittman, a black woman freed after the Civil War who lives for another hundred years to witness the second emancipation.



Carboloy promotes productivity: Montana businessman Chester R. Huntley delivered a strong editorial in Detroit last month—a luxury he rarely allowed himself as Chet Huntley, NBC News anchorman.

On behalf of the Carboloy Systems Department he urged U.S. industry to accelerate the pace of productivity to insure continued U.S. leadership, warning: "productivity is increasing at a much lower rate in this country than in practically every other industrial nation."

The forum was appropriate. Huntley was guest speaker at the dedication of Carboloy's new Customer Application Development Center. The Center, now the world's largest and

best equipped carbide tooling development laboratory, is dedicated to improving the productivity of Carboloy's metalworking customers. Several hundred customers and press, centering on the auto industry which makes heavy use of Carboloy's tungsten carbide metal cutting tools, crowded into the new center to hear Huntley, GE's Senior Vice President and Carboloy Systems alumnus Charles E. Reed, Dr. Walter Robb, Chemical and Metallurgical Division general manager, and other GE managers.

After the dedication, Huntley, left, Senior VP Charles E. Reed and Frank R. O'Keefe, Jr., Manager, Metalworking Products Section, toured the Center with the guests.



Unseen audience: "The General Electric Company is adding a new twist to its unique stockholder meeting schedule," said *The New York Times*. "Stockholders are being asked to submit by mail in advance of the annual information meeting any questions they may have for management. The new approach was announced in the fall issue of the *General Electric Investor*..."

What was the result of this innovation in share owner relations? By the time the 1973 Information Meeting was convened on October 23 in Chicago's Arie Crown Theater, share owners had mailed in more than 1,000 questions, Chairman Reg Jones reported. He called it "a gratifying response," to have this unseen audience of share owners represented at the meeting in addition to some 700 actually in the auditorium.

The outpouring was notable for its diversity. If GE management wanted to know what was on share owners' minds, it was all in the cards—everything from queries about the Company's philosophy on dividend pay-out to suggestions for new businesses GE might enter. One share owner seriously suggested a cut in dividends—if the extra funds could help clean up the environment. Vice Chairman Herm Weiss, forming an answering panel with other members of the CEO, assured the share owner that such a



sacrifice wouldn't be necessary—the Company is doing quite well in its environmental protection program while also sustaining its recently increased dividend rate.


© Reader's Digest Assn., 1973



Drama in Real Life is how *Reader's Digest* magazine characterized the story of the young family of Ben Roberts, sole General Electric Supply Company representative in Twin Falls, Idaho.

Returning from a vacation trip, the Roberts found themselves in a desperate situation when their car skidded on ice and plunged, upside down, into a freezing stream.

As dramatized in a *Digest* article, "Terror at Shoshone Creek," published in the October issue, Roberts had resigned himself to drowning in the icy water until he heard one of his children scream. Then he plunged into the back seat, gathered his four children together and fought clear of the car. His wife, driving, also got clear.

Their story of how this near-tragedy turned into a new appreciation of life and of each other has now been carried to an audience of more than 30 million in 13 languages through the *Digest's* pages. 

GE's affiliate in Shakespeare-land

Driving into Stratford-on-Avon from London, you proceed past the Royal Shakespeare Theatre on your left and Shakespeare's birthplace on the right and shortly thereafter you arrive at a squat brick office building on whose facade is the legend N. C. JOSEPH LTD.

You have arrived at General Electric's wholly-owned affiliate in Shakespeare-land.

N. C. Joseph has been quietly serving in this capacity since ownership was acquired by the Housewares Division in 1965. The affiliate continues to be operated by an all-British management, with two brothers, David and Alan Joseph, as its managing directors.

The story of how the firm became a part of GE was recounted recently by David Joseph:

"My father and uncle started a small metalworking business in Birmingham in 1912. Their first products were aluminium photograph frames (Britons say 'aluminium' where Americans leave out the second 'i'). In World War I they contributed aircraft components and, in 1920, moved to Stratford-on-Avon. The main products were kitchen utensils—pots and pans. Then in 1928 we started making chrome-plated tableware in aluminium. We returned to this sort of business after our World War II stint of producing such materiel as exhaust manifold systems for aircraft engines. In 1949 we started exporting into Canada and the U.S.A."

Enter GE: "In 1955 my father was in the States and sent back a cable asking us to meet two fellows from GE's Allentown operation. We did, and they had drawings of a chrome-plated aluminium coffee pot. Our people produced two hand-made samples and had them ready by midnight that same day. The GE fellows couldn't believe we could work that fast. That's how we got our first order. Then in 1963 we started producing bright anodized percolator bodies for Housewares. These were superior to the chrome-plated bodies because we get a good finish inside as well as outside and this eliminates corrosion. Also there's no plate that can blister and lift off. So its lasting properties are very fine and product returns are greatly reduced."

In 1964 the Josephs had a visit from Willard H. Sahloff (former GE VP in charge

of the Housewares Division). "My father agreed that if we ever decided to leave off running a purely family business we'd give GE first refusal. Some months after my father died, we were advised that it was desirable to change the structure of the company, either by amalgamation or going public. We naturally decide to honour my father's promise to Mr. Sahloff. That next year we became a GE affiliate."

How has the association worked out?

Alan Joseph takes a turn at answering: "In 1966 we installed the first fully automated anodizing plant for producing coffee pot bodies. In 1968 we installed the second plant and discontinued chrome plating altogether. Earlier this year we received the go-ahead for another expansion: a new warehouse building that will free up additional manufacturing space. So we've grown and are continuing to grow—profitably, I might add."

N. C. Joseph today supplies percolator bodies to GE and to other affiliates in Canada, Australia and South Africa. But it also continues to be a diversified metalworking facility. "We have our own line of hollow ware and housewares we call 'SONA,' for Stratford-on-Avon, which we market in the UK. In addition, we turn out floodlamp reflectors, automobile parts, spin dryer tubs. The truth is, we'll have a go at anything in sheet metal, be it stainless, aluminium, brass, copper. We don't mind so long as we can see a profit in it."

The affiliate operates as a complete business. "We have profit-and-loss responsibility. We're responsible for our own product development, engineering, marketing, distribution, finance, service, transport, advertising."

As to their view of the future, Alan sums up for the Josephs: "We're interested in Europe. For instance, we're trying to introduce percolators. Filter coffee-makers, of course, have a big hold there. But we're beginning to win some converts."

Aye, to hear the brothers Joseph speak of invading filter-prone France with electric percs brings back the words once penned by their illustrious neighbor for a French ambassador's view of invading Britons:

"Bearing their birthrights proudly on their backs, to make a hazard of new fortunes here."

The Josephs' guide to Stratford-on-Avon



David: "Here is our most revered spot. In this half-timbered house on Henley Street, William Shakespeare was born on or about April 23, 1564. In 1769 the famous actor, David Garrick, organized the first Stratford celebration in honor of Shakespeare, and that greatly increased public interest in the birthplace as a place of literary pilgrimage."

Alan: "Our N. C. Joseph plant is on Stratford's outskirts, alongside Birmingham Road. Our employment is 527 people—salaried, hourly, salesmen, everyone—and our new expansion now underway will put our manufacturing floor space past the 300,000-square-foot mark."

(continued on next page)



Alan: "N. C. Joseph is essentially a metalworking shop. Our father, for whom the business is named, put us early into producing aluminium pots and pans. But he always was interested in improving our skills and techniques, and in time we gained front rank as a producer of anodized aluminium products. That's what first drew General Electric to us—to serve as a supplier of bodies for GE coffee-makers."

David: "Scholars Lane leads to the Guild Chapel, Guildhall and Grammar School. It's generally believed that Shakespeare was educated here as a boy and saw his first plays presented by companies of travelling players in the Guildhall."



"At Shottery, just over a mile from the center of Stratford, is Anne Hathaway's cottage, early home of Shakespeare's wife. Its orchard and garden are particularly attractive, while inside are preserved original Hathaway family furniture and relics."

"An extra link between Stratford and America is represented by Harvard House. It was the home of John Harvard, who founded the U.S. university."

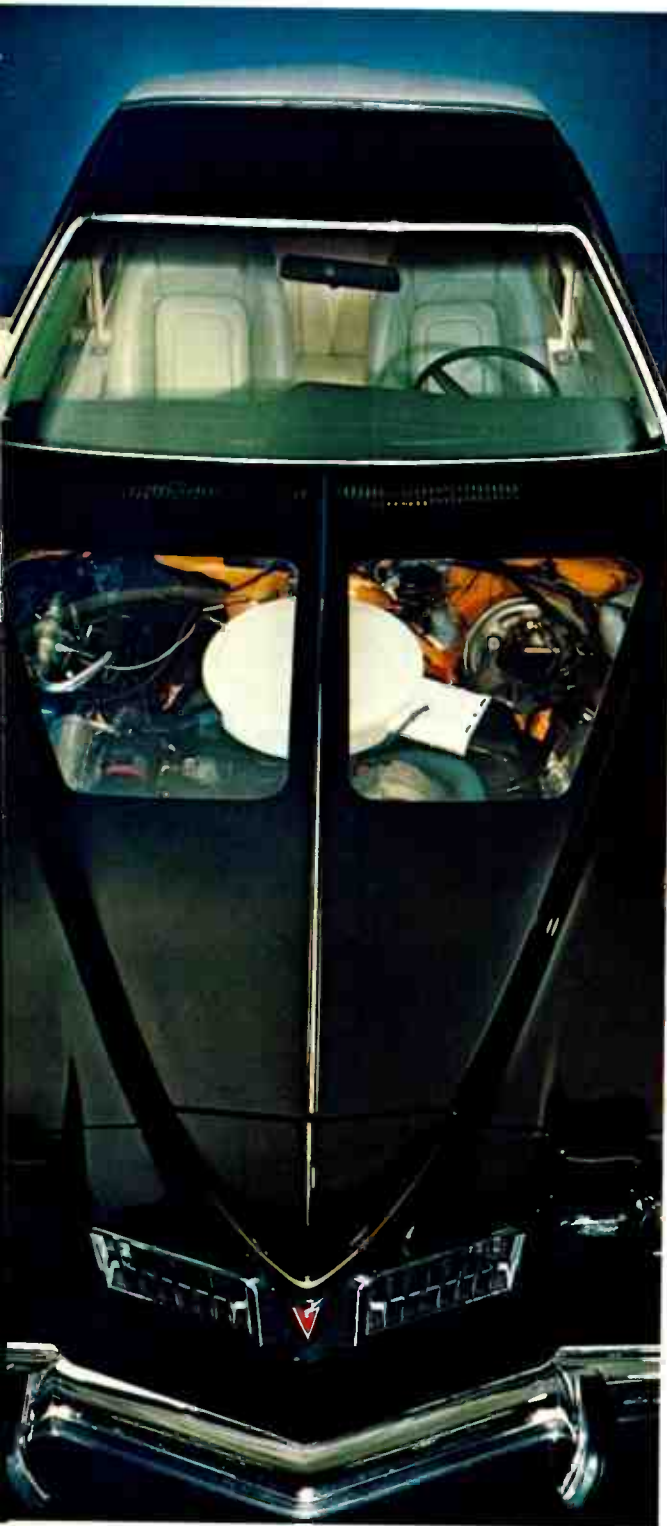


"GE Housewares became our largest single customer, purchasing bodies for GE percolators. After becoming a GE affiliate in 1965, we've greatly expanded and modernized our facilities."



"Teapots are, of course, an important line for the British market. England's participation in the European Common Market is opening up the opportunity for us to expand on the continent." ☐

PRODUCTS



A Pontiac Grand Prix GE silicone test car features many GE silicone applications from engine gaskets through exhaust system paint.



Silicone carb cleaner and lubricant provides inexpensive preventive maintenance against hard starts and rough running.



Silicone Hobby Glue forms a permanent chemical bond between almost any two surfaces. Hobbyists use it for leather and fabric jobs, too.



Silicone House and Garden Lube, used here on 10 speed derailleur bicycle gears, will lubricate, clean and protect from moisture, rust and dirt.

Putting GE Silicones To Work At Home



Amazingly tough GE Silicone Caulk, being used here to repair a brick chimney, will also repair wood shingles or concrete walks.



House and Garden Lube also makes chain and hand saws saw easier and clippers clip faster by reducing friction.



Creative Christmas displays for mantel or table are easily constructed using Silicone Hobby Glue, a plate for a base and inexpensive ornaments.

Practical advice from GE home experts was highlighted in the September-October *Monogram*. The Silicone Products Department in Waterford, New York points out there is another whole side to home improvement: improved performance and efficiency for things you already own.

That's the main virtue of a number of different silicone products the Department markets directly to consumers, supplementing a broad range of silicone fluids, resins, chemicals, and rubber materials sold to industry.

The silicone consumer products on these pages spring from two generic classes of silicones—the lubricants and the adhesives/sealants. Both the auto and home lubricants are specially formulated silicone fluids in aerosol cans. The sealants, which include hobby glue, silicone glue and seal in several colors, bathtub caulk, exterior caulk and auto sealants ranging from glass seal to high-temperature instant gaskets, are all formulations of tough room-temperature vulcanizing silicone rubber. The auto and household lines, 27 products in all, are carried in most hardware stores and mass merchandising outlets nationwide. "In addition" says Consumer Products manager Dave Korb, "we market some of our products through specialty outlets." Consumer Products planner for the Silicone Products Department Elliott Posner offers GE people some concrete ideas on these pages for putting GE consumer silicones to work at home:

Idea #1—Practice effective pre-winter preventive maintenance on your car. "Silicones are very effective for pre-winter automobile ignition system preventive maintenance," says Posner. "The commonest causes of winter morning no-start conditions are electrical. Our Battery Care spray combats one of these causes by cleaning battery terminals and leaving a silicone film that waterproofs and stops corrosion. The GE Ignition Protector spray covers the ignition by sealing out moisture. Wet ignitions are often an older car problem, but corroded battery cables can creep up in any car until that final no-start episode in the theatre parking lot late at night.

"Some of the people here in Waterford have put a dab of Clear Auto Seal on the edge of their car door," Posner adds. "It forms an instant little rubber bumper so you don't chip

other people's paint jobs in a parking lot when you open the door. You can stop all kinds of station wagon rattles using the same principle. We probably still don't know about half the ingenious applications like these in use, but some of our best ones came from an employees' contest we held two years ago."

Idea #2—Save fuel and reduce upkeep at your home by sealing everything that should be sealed. "With Silicone Caulk you seal things permanently," says Posner. "Tight storm windows can reduce heat loss through your windows by 50%. Direct air leaks around windows and doors, on the other hand, can add 15% to 30% to your heating costs. If your home is heated electrically (see September-October *Monogram*) you need to be especially careful about insulation and air leaks around windows and doors."

You can use GE All Weather Paintable Caulk two ways, Posner explains. "One way is to lay a bead between two surfaces you want to seal permanently and let it cure to a tough silicone rubber as in the chimney caulking example on page 19. The other way is to make your own form-in-place gasket for removable items like storm windows or air conditioners. To do this, lay a thin bead of caulk around the storm window housing while it is removed, let it cure, and you have an instant, tight, rubber gasket when you replace the window."

Idea #3—Get rid of irritations from poorly working household items. Here are a few samples of household irritation solutions suggested by Posner in addition to the repair applications illustrated on these pages:



Resticking car door gaskets or forming new ones with GE Auto Seal will stop leaks. The silicone rubber stays flexible in below zero temperatures.

"Wood reacts to winter temperature changes and dryness in the house," he says. "Lubricate sticky drawers with Silicone House and Garden Lube. Silicones leave only a dry film so they work between metal and wood, too. Garden tools, especially shears, should be put away in the winter with a film of House and Garden Lube protecting them from rust. Door locks freeze in winter. Silicone lube will repel moisture and lubricate without leaving a residue on your key, unlike oil or graphite."

"For you electronics hobbyists, silicone rubber seal can make a superb weatherproof insulation for electrical connections," Posner continues. "It will seal outdoor antenna lead-in connections and prevent signal deterioration. Finally, try making your own rubber door bumpers from the same silicone rubber products. You can tack them on in the appropriate place to prevent scarring your walls."

The GE silicones business is based on a breakthrough by GE scientists in the late 30's. They found a direct process for making this new family of man-made materials, all deriving common properties from silicone, but containing chemically-combined organic and inorganic compounds which give them some of the behavior of both.

The list of silicone applications goes on and on. "We may not yet even have thought of our top seller five years from now," says new Department general manager Donald E. Debacher. "Considering the versatility of uses for our product, from baby bottle nipples to space vehicle sealants, perhaps you can understand why our advertising campaigns carry the theme 'GE Silicones: The Answer.'"



Silicone Bath Tub Caulk and Seal, the old standby, is actually guaranteed for 10 years (or 10,000 baths whichever comes first).

GE THINKS SNOW:

Silicones And Ski Boots



GE's foremost skier, Mickey Cochran, left, spends weekends instructing, coaching; he has coached his daughter to an Olympic Gold Medal. Center, Mickey shows off his Dittofit^(TM) custom fitted ski boots on the slopes. Right, a pretty Dittofit customer at the Southworth Ski Shop, Killington, Vermont.

GE people on Christmas skiing trips this winter may run into the familiar monogram in an unfamiliar place—ski shops from Squaw Valley to Stowe.

The Silicone Products Department has a custom ski boot fitting system it calls Dittofit^(TM) and it's gaining increasing acceptance by the skiers across the country. With the Dittofit system a silicone material surrounds the skier's foot with silicone rubber instead of traditional materials.


One of Dittofit's unofficial sponsors and most enthusiastic supporters is Mickey Cochran, father of GE's undisputed "first family of skiing." Mickey doesn't work for the Silicone Products Department—he's an engineer for the Aircraft Equipment Division in Burlington, Vermont. But he needs no introduction to serious skiers all over the world who know him by name and reputation. The Cochran family lives on a Vermont ski slope and Mickey coaches the University of Vermont's Alpine ski team on weekends. The expertise has rubbed off on the Cochran children, three of whom have represented the United States at the Winter Olympics. Twenty-two year old Barbara won a Gold Medal in the last Olympics.

Mickey comments about the GE Dittofit system: "The thing I like about it is the uniform pressure I feel over my whole foot. There are no pressure points—no hard spots."

Custom fitting ski boots with quick setting material around the skier's foot is a technique that's here to stay, according to Mickey. It gives superior control and comfort in maneuvering to the novice or expert. The chief debate is over which material is better for surrounding the foot. Silicone Products Department people realized several years ago that a special formulation of silicone rubber could have superior qualities to the urethane foam material which was the market leader.

The foam system produces a cellular structure, prone to breakdown with repeated hard pounding. Dittofit silicone rubber proved to be more durable and comfortable.

"Silicone rubber insulates so well some skiers wear the boots without thick socks," says Department marketer George Dickinson. "As part of an extensive marketing test program a thousand skiers of varying abilities were fitted with Dittofit and asked for a written evaluation. Some 930 of them found the system much better than any other they had tried."

To get fitted with Dittofit you stand on the fitting machine with your feet positioned in the boots. Each ski boot comes with a thin rubber liner between the skier's foot and the boot lining, called the bladder. The bladder is injected with liquid silicone rubber using the hand injection unit mounted on the stand. Twenty minutes later it has cured into a mold, duplicating every contour of your foot. 

THE "CLUSTER" IDEA: How it helps minority colleges

The drive to strengthen minorities' participation in industry's professional and managerial ranks has brought fresh attention to the 90 predominantly black four-year colleges in the U.S. One result has been a sharpened awareness that these colleges need help—help in improving their teaching capabilities, curricula, facilities and equipment, help in developing dual-degree programs with other educational centers, help in all the details that can move a school from sub-par status into the educational mainstream.

How to marshal this help? One idea that was originated in the mid-'60's was that of a "cluster" bringing together one or more minority colleges, a traditionally white college as a resource, and business partners. The idea is attributed to a GE employee: Mel Bordeleine, of the Mississippi Test Support Operation. Initiated on a national scale in 1968, the program is now managed by the National Alliance of Businessmen (NAB).

In the U.S. today, the NAB reports, there are 42 established clusters channeling the aid of over 500 companies and some 900 people into support of minority institutions. In charge of NAB's Cluster Program is Sarah Smith, Director of Industry/College Relations. Mrs. Smith is on loan from her regular GE position as a specialist in the Urban Affairs Operation at the Aerospace Group. In her first six months with NAB she has organized three additional clusters and has eight schools on the waiting list.

General Electric is participating in 16 clusters, according to Calvin H. Conliffe, Consultant—Educational Relations, who is responsible for coordinating the Company's involvement in clusters. "Usually, prime responsibility for interfacing with a given cluster," he says, "is assigned to a plant operation that is eager to provide a key person to represent GE in cluster activities and to supply other cooperation and assistance. We urge all interested GE operations to let us

know so we can put them in touch with the GE cluster representative for a given school."

The clusters vary in effectiveness, Conliffe notes. "But when a cluster is operating well, it brings a tremendous flexibility to the aid the minority college receives from its partners. Money—direct financial support—is only one of the ways. A business can often make a much more effective contribution by providing administrative help, teaching expertise, equipment grants and other ingredients of quality education. We are solidly behind the cluster concept as a very workable way to get the job done."

There have been noteworthy accomplishments by GE cluster components. To see, close-up, one outstanding example, the *Mono-gram* visited the oldest black college in the U.S.: Wilberforce University, near Dayton, Ohio.

GE's participation in the Wilberforce cluster was made immediately evident in the person of Norman M. Baker. As an employee at the Aircraft Engine Group's Evendale plant, Norm was assigned to a dormant Wilberforce cluster in 1970. Credited with revitalizing the cluster, he became its chairman the next spring. But his interest went even beyond that. For the past two years he has been on loan from GE to work fulltime as the University's Director of Cooperative Education and Senior Placement.

The main accomplishment of these past two years, Norm Baker makes clear, has been a basic turnaround in the University's co-op program. Wilberforce is one of only three U.S. schools that require all students to join in work-study cooperative programs. At Wilberforce the year is divided into trimesters. Normally the student takes two trimesters of academic study on campus; the third he spends at work in an area of career interest.

Statistics show the turnaround that has been achieved. In 1969, some 88% of Wilberforce students were on work-study assign-

(continued on next page)



Cluster at Wilberforce: President Stokes shows plans for a new campus, a center from which University's students can radiate out on work-study cooperative programs. Representative of new buildings already completed: (lower left) Dr. Martin Luther King, Jr. Science Building. Lower right: Cluster at work—Norm Baker, seated at center, meets with business representatives helping to fill University's needs.



Photo Courtesy of Marathon Oil Co.

ments financed by the Federal government; only 12% had jobs in the private sector. Today the averages are almost reversed: at the end of the most recent trimester, the percentage placed in the private sector was up to 82.2%.

Further, instead of having an unplaced rate of 18 to 20%, there were 1.3 jobs available for every student enrolled. "For the past five trimesters," Baker says, with understandable pride, "we've been able to place every student—usually in work that is relevant to their career interests."

Along with this has gone a half-million-dollar increase in students' earning power—from \$1.2 million to over \$1.7 million.

"But the big thing is experience," Baker says. "These young people are out there in the real business world, getting the grounding for careers that will carry many of them into the professional and managerial ranks."

And if you think of co-op programs as being primarily regional in nature, forget it. Wilberforce students today are holding co-op jobs all over the U.S. and in Puerto Rico—jobs that vary from being teller-trainees in Seattle to serving on the staff of the *New York Times*.

"This kind of progress wouldn't have been possible without the aid of our cluster partners," Baker acknowledges. "They've helped in every way: putting people on loan to serve

as instructors, providing equipment and, most of all, by offering co-op work assignments. The school's closed-circuit TV system came through a grant from the GE Equipment Assistance Program. The Aircraft Engine Group has led in organizing 'career days,' which bring business people to campus to discuss business opportunities with the students. And GE operations as far away as Burlington, Vt., and Bethesda, Md. currently have our students at work for them. Overall, GE as an employer is second only to General Motors."

The General Electric Foundation is helping via a \$20,000 grant to aid in establishing a dual-degree program in engineering. In its first year, the program has enrolled 18 students, who, in five years, can expect to receive a BS or BA degree from Wilberforce and an engineering degree from the University of Dayton.

The final word about Cluster at Wilberforce belongs to the University's president, Dr. Rembert E. Stokes: "Cluster provides a good bridge from the academic to the industrial community. And for us one of the great gifts that has come across that bridge is the services of Norm Baker these past two years. That has been a supreme grant, topping many other grants, from General Electric. The Cluster concept provides, ultimately, one vital answer to the lack of qualified minority people in the white-collar ranks of business." ■

ORGANIZATION CHANGES

CORPORATE

Phillips S. Peter *elected*
a Vice President.

AIRCRAFT ENGINE BUSINESS GROUP

Raymond F. Letts *elected* a Vice President.

CONSUMER PRODUCTS GROUP

Ralph D. Ketchum, *General Manager—*
Large Lamp Department
(*Engineering and Manufacturing*)

INDUSTRIAL GROUP

James P. Curley *elected* a Vice President.

INTERNATIONAL AND CANADIAN GROUP

Richard W. Foxen, *General Manager—*
Europe Business Division.

SPECIAL SYSTEMS AND PRODUCTS GROUP

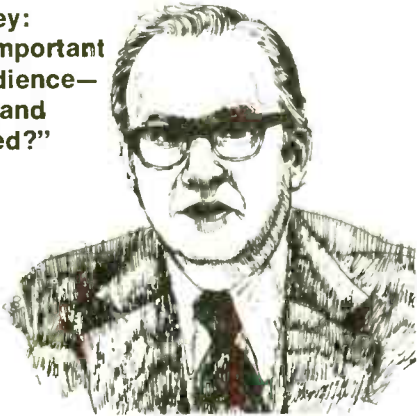
James C. Castle, *General Manager—*
Information Services Sales Department.



MAKE YOUR NEXT SPEECH MORE EFFECTIVE

For most of us, being in business almost automatically means making speeches. Maybe not to a share owners' meeting or a Utility Executives' Conference, but somewhere—a sales pitch to key customers, a kick-off for a local fund drive or a budget presentation to associates. What can you do to give that next speech more impact, greater appeal, more zing? Here are suggestions from five presentation professionals.

Bob Fegley:
“What’s important
to the audience—
intended and
unintended?”



After some 25 years of work on speeches both for GE executives and for his own extensive speaking and preaching engagements, Robert L. Fegley, GE's Manager—Planning and Research Operation in Corporate Public Relations, has developed several axioms for getting a presentation off the ground:

Axiom 1: Research the audience. “A common mistake for speakers,” Fegley says, “is to misjudge the audience—to go over their heads or to underestimate their knowledge and sophistication. So I say that the very first thing is really to investigate the audience. Who will be out there and why? What are their interests? Their expectations? Then correlate that with what you or the Company

want to get across. What's at issue that's important both for you and the audience to take up? That sort of original examination of both sides of the communications equation is a necessary first step.”

Axiom 2: Remember your larger audience. “Any public talk given by a General Electric man or woman on an important subject should be given not with just the immediate audience in mind but also the unintended audiences. Because it may well be reported in the papers or seized upon by critics. So you always have to think of how your content will look when and if it's reported.”

Axiom 3: Be selective of your main points. “Begin the head scratching and pencil scratching process by jotting down the thesis you want to present. Usually it's better to force yourself to think in terms of a statement that makes no more than three or four points. Any more than that and you are likely to end up with a confused audience. And try to make them *related* points because the more they make a logical structure, the easier it is for the audience to carry away a clear message. People look for consistency—consistency with their preconceptions, consistency within the story. Yet you can't simply pour soothing balm on their preconceptions because any good talk also has an element of surprise. It

(continued on next page)

must be worth the audience's time and attention, and to achieve that it should contain some surprising or unexpected point—at least enough to make them say 'I've never thought of it that way before'."

Axiom 4: Prove your points. "There's no use in putting down points that would be surprising if they could be proved—but can't be. You work within the context of what you know of the subject and what you can find out. There's quite a major effort involved in drawing on your long-time personal experience and resources and then supplementing these with outside resources. GE speakers are fortunate in having experts in-house on almost everything. They're there to help, if we're smart enough to tap in. And people in this Company are remarkably generous with their advice, their time, helping either to dig up the data you need or to point you toward it. So, after you've made your points, proceed systematically to prove them. Bring in the evidence. Often, in our measurements-prone society, that means bringing in the relevant statistics. I don't altogether subscribe to the Lord Kelvin theory that truth resides in measurement, but certainly appropriate numbers help to authenticate a talk."

Axiom 5: Determine the action you want the audience to take. "Are you there before the audience to incite action or merely to be descriptive? There are times when the latter may be more appropriate—then your job is to brighten up the occasion with narrative, personal anecdotes, names, personalities and possibly with slides or other visual aids. But the more serious talks usually indicate the "so what"—what is the audience supposed to do about it? People will resent an arrogant pose of 'Now I have the answer,' but they are disappointed if you don't at least offer some clues toward the answer. Some suggested action should be part of the wrap-up.

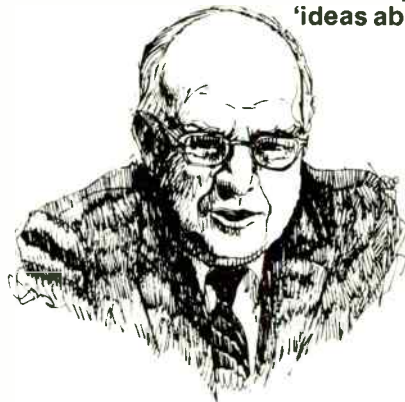
"On this point, there are some people who like to play a speech as a detective game—keep people guessing where they're going, what's coming up. But if your objective is not so much entertainment as it is getting across ideas and reaching for some tangible results, I say make it easy for people. Do the expected thing, which is to have a beginning, a middle and an end. In the beginning, state your thesis, your points that you want to make for that audience. Then present your evidence—the reasoning to support your

thesis. And in the end present your bid for action."

Axiom 6: Be brief—keep in mind the audience's fatigue threshold. "There's an old rule about sermons that nobody's soul has been saved after twenty minutes. It's true. If you can aim for somewhere between 15 and 25 minutes you're more likely to have a successful talk. If a much longer talk is called for, I often follow the practice of delivering something for about 15 minutes and then deliberately stopping either to ask a question or ask for questions. The chances are very good that I'll be able to make my remaining points in response to a question rather than in a continued monologue.

"Audience rapport is probably easier when you speak from notes rather than a fully written-out text. But when the text is to be reprinted afterwards it's necessary to have a written text because you're going on record. Working with an outline or cards is freer. You feel freer to follow a creative thought or an anecdote that pops into your head. And that freedom, any kind of a give-and-take with the audience, will usually help to make your talk more stimulating."

John Garrison: "The task is to present ideas about facts"



When it comes to the *writing* part of making a speech, here are thoughts by John L. Garrison, Manager-Special Communications Projects in Public Relations:

"The task of a GE communicator is not just to present facts and ideas, but 'ideas about facts.'

"In advancing concepts that are strategically useful to the Company, we should strive constantly to bring our writings to the level of literature. Literature is a transmission of power. Textbooks, dictionaries, manuals—they are communication; but literature is a

power line, and the motor is the auditor or reader.

“Our special opportunity at General Electric is to write literature—words that will really get something started.

“The writer must know *something* better than anyone else does. Hemingway said, ‘I always try to write on the principle of the iceberg. There is seven-eighths of it underwater for every part that shows. Anything you know, you can eliminate, and it only strengthens your iceberg. It is the part that doesn’t show. If the writer omits something because he does not know it, then there is a hole . . .’

“The corporate writer doesn’t make policy, but he is performe an ‘advocate’ of policy—because no one ever wrote a perfectly objective line. Even a comma can be significant.

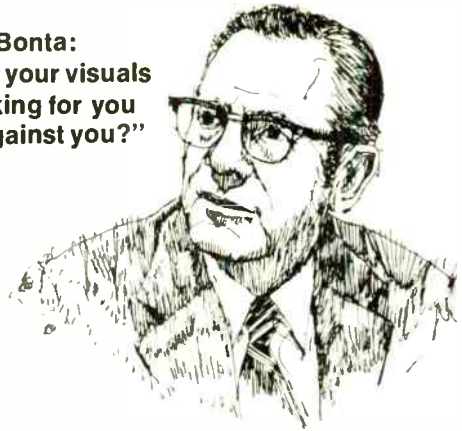
“The progress of a writer toward effective advocacy can be measured by a growing recognition that his role is not so much to write as to think deeply about the significance of everything that touches the corporate welfare. And by a diminishing curve that represents his own cleverness and conscious ‘style’ being discarded.

“Cleverness is the most widespread of literary commodities. It can be brushed over empty or shoddy work like varnish, and sometimes it conceals the holes. A mature writer is one whom experience and reality have taught to subordinate himself to the job. His discipline is to determine the implicit requirements of the job and then to do it wholly in terms of those requirements, disregarding everything else, disregarding his own ego most of all.

“When you have done your homework, talked to a lot of people, gathered your facts, how do you get started? My own answer is that I grope. Bernard DeVoto said that the best reason for putting something down on paper was that one could then change it. This correctly identifies the writing process as a groping one, at best. But the truly professional writer will acquire not only a sense of *groping for*, but a sense of having *groped to*—that is, an awareness of having rightly articulated the sought-for ideas.

“All challenging assignments begin by being ‘impossible’—either in the time available, the required specifications, or in some other dimension. You may take some comfort from the thought that if it were not impossible they would not need people like you to do it.”

Ray Bonta:
“Are your visuals working for you or against you?”



It's a fact of life that some people learn more readily through the eye, while others learn primarily through the ear. A typical audience will include both listeners and lookers. For this reason, the GE speaker needs to give consideration to the desirability of visualizing a talk. And that brings on Ray W. Bonta who, as manager of Audio-Visual Communications in Advertising and Sales Promotion Operations, has made a long-time specialty of gaining speech impact through visualization. Here are his recommendations:

“I’m a staunch supporter of advance visual planning. Effective visuals should keep the audience oriented. And to achieve this goal it’s essential to begin preliminary visual selection while the speech is in the early draft stage. Ideas may later leap from the final script, but visual selection should never be considered an afterthought.

“For the exceptional orator, visuals aren’t usually necessary. Bul for the average speaker, visuals can, if used properly, set the mood, gain impact by calling attention to specific passages and help keep the audience oriented—thus making the job easier for the speaker.

“Visuals don’t necessarily mean just slides. Use of film clips and audio tapes can be very effective if the situation and budget warrant such aids. But in view of the widespread use of slide visuals—their use and abuse—I suggest this visual checklist:

- “Make positive your visuals are functional and not merely decorative. Each should feature legibility, simplicity and interest.
- “Keep visuals concise. Avoid getting bogged down with too many details on a single chart or slide.
- “Confine slides to one point or idea per issue. Avoid too many word slides. Make the lettering legible.

(continued on next page)

- “Make sure there is a ‘family’ resemblance to the selected slides.
- “Group slides—don’t scatter them. Don’t leave a slide on just to look at.
- “Make sure the text reference suggests the slide or vice-versa.
- “Avoid having several visual aids on the stage since they will compete and fight with each other for attention.
- “Consider the use of a pointer when appropriate, particularly when you are calling attention to numbers or financial charts.
- “Remember that a talk should be visualized not to begin or end with slides—informal remarks at the opening or closing should not require visual support.
- “Because finished art is frequently the most costly and time-consuming part of a talk, avoid errors by setting up a visual plan for the talk.”

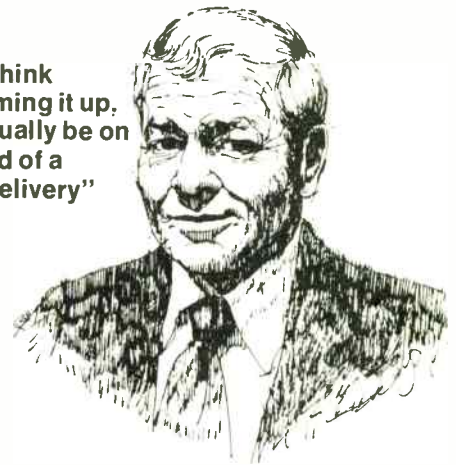
How to combat the high cost and lead time of assembling visuals? One new answer is Deltagraphics, A&SPO’s new computer graphics service.

The Deltagraphics concept is relatively simple: the artist sits at a specially-designed computer and creates word or picture slides in real-time on a color television screen. At his fingertips are controls for all graphic elements and he can experiment with letters, sizes, shapes and colors. When the art is completed, the operator can push a button and have it on film or store it away on computer tape, to be shot and processed later.



Deltagraphics: Helping reduce the cost and lead time of assembling visuals.

Lou Marsh:
“When you think you’re hamming it up, you may actually be on the threshold of a really vital delivery”



Louis V. Marsh, GE’s manager of Executive Communications and Conferences, is keenly aware of the disappointment of seeing a well-written speech ruined by the weak presence and poor delivery exhibited by the speaker. “No matter how well constructed a talk, or how well visualized, approximately 60% of its effect will depend on the presence, articulation and energy level of the speaker himself,” he says.

Elaborating, Marsh feels that the ‘great’ speech results from the intellectual energy that goes into its preparation. The effective orator must parallel this by the physical energy of his delivery. With practice, he believes, even the poor speaker can take good material and make it 300% more effective. “I have been moved by speakers whose speeches had little content. What made such talks effective was the relationship that speakers were able to establish with the audience through dynamic delivery.”

How to get started? Marsh explains that good delivery will bring out the structure of the speech if the speaker develops the capacity to vary his delivery with verbal emphasis through volume changes or what he calls “vocal underlining”: “Such effects can be achieved by transitions coupled with pauses for effect, with new starts at high energy levels as a change in subject to cue the audience that the speaker is, in effect, taking a new direction. A good speech poorly delivered becomes ineffective because its careful construction disappears when there is no parallel vocal structure.”

Once the speaker knows what he’s after, Marsh likens the delivery process to acting out a dramatic scene. “You have to have a desire, an emotion that pushes you through a scene, and one that presents an emotional line or base around which all else in the

scene coheres. If you want the audience to do something or think something you have to be explicit. But you don't put it in the dry terms of an objective. Express it in active, living terms."

To highlight the emotional base Marsh suggests that the speech should include quiet periods, vehement periods and periods in-between: "Timing such periods or pauses is tricky but they give the text a rhythmic quality that enables the audience to respond and keep track of the speaker's points."

For over two decades, Marsh has been coaching speakers to add this rhythmic quality to their delivery by making those who wanted such help go over and over passages and mark their scripts to remind them of emphasis and pauses. "When a speaker has a monotone," says Marsh, "I encourage him to overdo certain passages to the point where he feels ridiculous. At this point he may think he is only hamming it up—when, in fact, he is actually beginning to inject a certain vitality into his delivery."

When a coach is not available he recommends that the speaker practice changing his volume or emphasis by either recording his text on tape, speaking in front of a mirror or before several friends. "Experiment with your voice, determine just how dramatic your delivery can be."

To insure a one-to-one relationship between audience and speaker, Marsh recommends that delivery will be heightened by establishing frequent eye contact with the audience: "Speaking from notes permits you to look more often at your audience. Instead of thinking in terms of a generality called the audience, however, pick out a specific face, a pair of eyes. Perhaps on the next phrase shift your gaze to another face. Each person in the audience will interpret this technique as though you are addressing him directly, and such an approach can only serve to enhance your delivery and effectiveness."

In addition, Marsh strongly feels that the speaker should never attempt to conceal his personality before an audience: "At all cost, avoid trying to hide individual traits, mannerisms or your sense of humor. These traits should become an integral part of the talk because the speaker who is a bit whimsical—who makes himself the butt of his humor—who uses anecdotes to make complex issues appear simple—endears himself to his audience."

Leo McIlroy: "Learn from the granddaddy of all GE speaking aids"

Around the GE circuit still another avenue is open to help make your next speech more effective. Considered the 'granddaddy' of all study programs, the popular Effective Presentation Course was added to the Apparatus Sales Training Programs' repertoire back in 1943.



Leo McIlroy monitors a recent EP course offered by GE's Technical Marketing Program.

Available to all GE employees, the 15-week course covers the basic fundamentals of public speaking by offering practice in determining objectives, organization, strategy and 'stand-up' rehearsals in front of live audiences. "To date," reports EP's Academic Director Leo D. McIlroy, "we've graduated over 70,000 GE employee students and EP is still considered to be one of the best courses anywhere for learning to stand on your feet and conduct a persuasive presentation."

The real key to EP's growth and popularity, explains McIlroy, "results from the dedication and capability of EP instructors. Potential teachers are selected from the top graduates and then assigned to work with two or three instructors to gain on-the-job training."

Typical comments, filtering into McIlroy's office from recent graduates, indicate the program's effectiveness: "My confidence has improved . . . The course has helped me to organize—use simple language—expose my faults . . . I can now communicate with my manager in a more relaxed manner." Such responses have spun numerous instructors to expand EP's current availability to over 100 Company facilities here and abroad. ☐

A 12-trillion kilowatthour economy



1972-1.7 trillion KWH 2000-12 trillion KWH

Anything short of sextupling today's electrical usage by the year 2000 would be short-changing America, utility execs hear.

Some were shocked, Chairman Reg Jones admitted, when he first began to talk up the idea of continuing the electrical industry's historical growth rate of doubling every decade. Didn't such projections fail to recognize the shortages and restraints that have entered the energy picture? Wasn't it more appropriate to today's energy conservation mood to set smaller goals and plan on a drastic slowdown in electrical growth? Wasn't the GE Chairman merely reflecting "growth for growth's sake"?

Not at all, he told some 200 top utility executives who gathered with GE officers at the 1973 Electric Utility Executives Conference to ponder the industry's future.

"Let me say that these problems are recognized, and my assumption is that we will be better at solving them than other energy industries. My assumption is that we will come up with cleaner, more efficient ways to utilize the nation's energy resources. My assumption is that we will be more ingenious in battling inflation, more persistent in solving reliability problems, more creative in winning the support of the public . . . I think this country is going to need *more* electric power, doubling every decade, and will not let us settle for less."

On this philosophical basis he set his audience's sights on an industry growth goal of 10 to 12 trillion kilowatthours by the year 2000, comparing with some 1.7 trillion kilowatthours in 1972. "Unless we plan for a continuation of our accustomed growth curve," he said, "we may be short-changing America, as well as ourselves."

Vice Chairman W. David Dance hit hard at the theme by listing specific examples of the benefits that would accrue to the nation by relying on more rather than less electric power:

- "The energy *wasted* every day by the 125 million gas pilot lights in furnaces, ranges, water heaters and dryers would provide the electric heating requirements of a city of 10 million population."

- "If electric rapid transit were substituted for one-half the automobiles now used in major

—the possible dream

U.S. cities, air pollution could be reduced, conservatively, 20%. This would 'reallocate' 190 million barrels of oil for other uses, such as the production of clean electric energy."

- Electrification of high-density rail freight, and shifting of half the present truck freight haulage which could be moved more efficiently by rail, would together "reallocate" 330 million barrels of oil—"sufficient to operate a 1,000-megawatt steam station for 33 years."

- "In short," Dance said, "if electricity supplied 50% to 60% of America's energy needs instead of today's 25%, air pollution would be cut in half. And fuel consumed would be reduced by 15 to 20%."

Ideas and developments for helping the utilities meet their responsibilities formed a veritable technological parade. A few standouts, selected almost at random:

The benefits of standardization in designs of electrical equipment were emphasized by a number of speakers, most noticeably by Power Generation Group Executive Edward E. Hood, Jr. "Standardization," he said, "offers our best if not only hope of controlling the escalation of nuclear plant costs, of developing a data base for realistic assessment of component and systems reliability and costs, of reducing licensing time to manageable levels, and of achieving the economic benefits inherent in duplication."

Engineering in the mainstream—In the Power Delivery Group, engineers have been brought "back into the mainstream of our decision-making process," said Group Executive Arthur E. Peltosalo. Engineers are given personal responsibility for power transformers—for the engineer it's "his" transformer from design to the utility's taking title. Also, audits of what one utility's engineers think about GE power delivery products have been presented by the utility in a face-to-face meeting with GE engineers.


Accelerated research—An intriguing fact presented by Steam Turbine-Generator's VP Donald E. Craig: GE has "applied more research and development on the steam turbine-generator during the last ten years than in all the previous thirty."

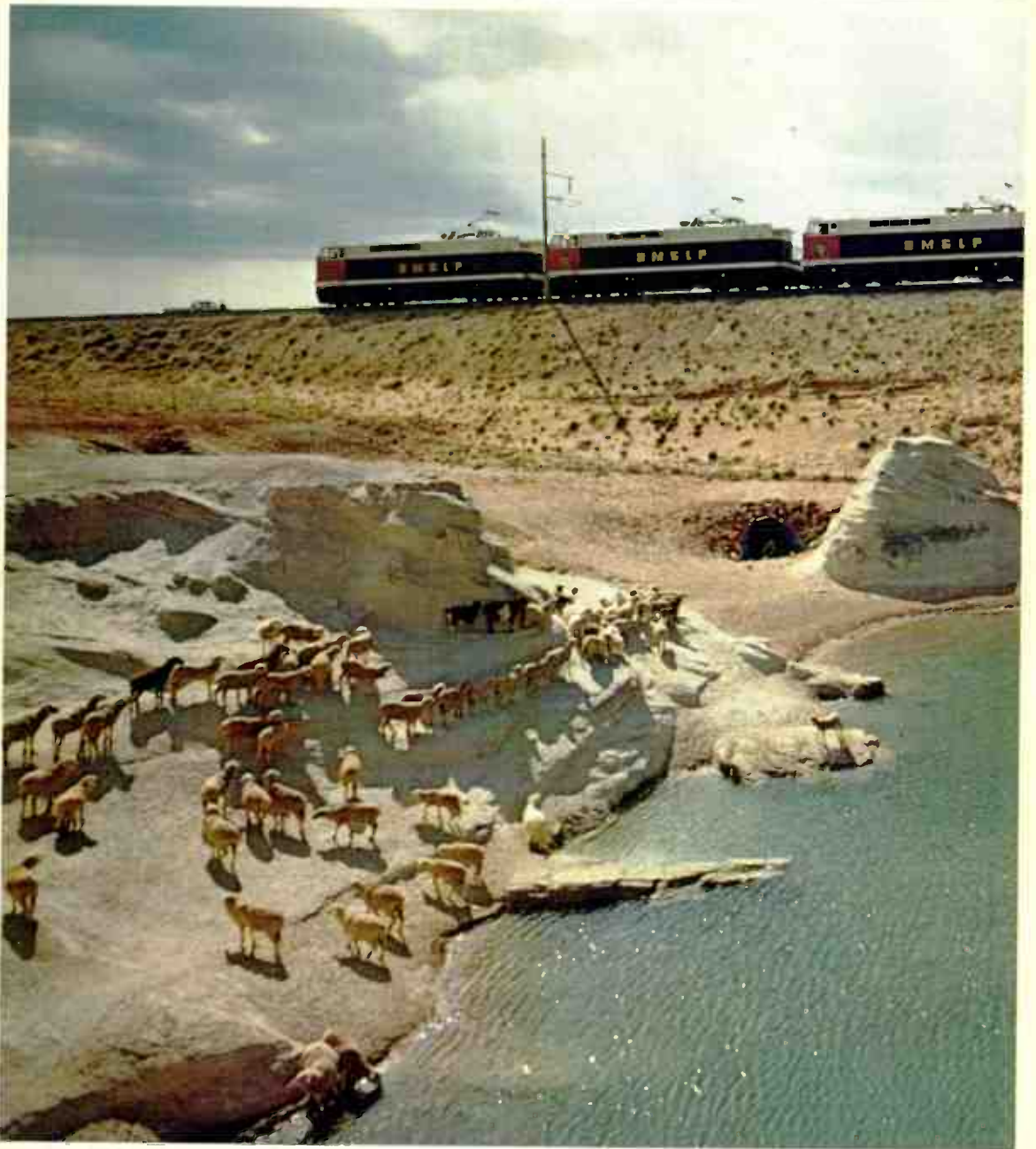
Generation parks—the idea of land areas large enough to encompass not just nuclear generating plants but also their facilities for

fuel processing and radioactive waste disposal—were envisaged by Power Generation Sales VP Milton F. Kent. He sees these as large enough, in some localities, "to support innovative utilization of the waste heat, such as keeping the St. Lawrence Seaway open year 'round."

Combined-cycle generating plants continue to come on strong. "The STAG cycle (GE's combination of steam and gas turbines) is a natural," said Gas Turbine's VP Whitman Ridgway. Reasons: the efficiency gained from recycling exhaust heat in a combined system is on the order of 8500 BTU's per kilowatt-hour, "matching today's best steam plants," and "STAG needs only 50% as much cooling water as conventional steam units."

A strong plug for HVDC, or high-voltage-direct-current transmission, was made by Switchgear's VP William R. Smart. "DC lines can handle two to three times as much power as AC lines on the same right-of-way," he pointed out, adding: "For underground or underwater transmission, the advantages of HVDC are multiplied as power-handling capability is increased to as much as four to one over AC cable." The big hitch has been the economics of power conversion equipment, but GE has brought down these costs by its solid-state converters. Smart pictured the Company as already involved in a major new HVDC project, with Square Butte Electric Cooperative. A 460-mile line will link mine-mouth generation in North Dakota with the electrical loads of Duluth, Minnesota.

Winding up the conference, Reg Jones reviewed the industry's problems, particularly those relating to the need to raise some \$95 billion in capital to finance construction in the next five years. But he returned to his thesis: for an industry of activists the high-side projections are "a possible dream." He added: "There are still uses of energy that have not yet been electrified. There are still many individuals who do not, at home or at work, have full benefit of electrical living and electrical productivity. There are still inventions to be made, still problems to be solved, still opportunities to be realized with electricity. The dream of a nation electrified, and then a world electrified, still lies before us, as it lay before Edison and other pioneers a hundred years ago." 



Riderless Railroad: Recently delivered by GE's Transportation Systems Business Division, the world's first fully automated 50,000-volt electric locomotives are serving Arizona's 78-mile Black Mesa and Lake Powell Railroad. Computer operated, the three locomotives will haul eight million tons of coal a year needed to power the Navajo Generating Station. Shown: the starkly beautiful landscape between the Black Mesa mine and Lake Powell.