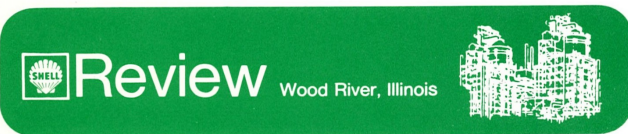


U. S. energy demands to double in 15 years, says Shell president at Houston Forum



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A tough, big business, says NFL official at SRA banquet

A 30-year-old, 270 pound lineman, whose chin shows traces of dark, blue-like beard stubble, is a far cry from the traditionally-thought-of college game player on Saturday afternoons before cheerleaders and adoring coeds. Pro football is, in fact, a different world. At times, it is tough, often a brutal business. But above all, it's a business--the dollars and cents kind.

And one man has a close up view of the rough and tumble business right on the field. The man: Ray Sonnenberg, a referee-official for the National Football League.

On December 2, Sonnenberg was the guest speaker at the annual SRA awards banquet at the Lewis & Clark restaurant in East Alton, Ill.

"Professional football is no longer a game played just for the fun of it. It's big business. Of all the sports franchises in the United States, a professional football team is the most profitable of all," he said.

Sonnenberg added that even though it's a big, profitable business, it has to be run aboveboard.

An example?
"Once I saw a pro game in which the officials erroneously gave one team a fifth down. Now, it was an honest error. Things like that happen once in awhile. But my point is, that even though it was a completely honest mistake, it cost those officials a thousand dollars apiece for it. I believe this shows how conscientious the NFL is about fairness and honesty."

According to Sonnenberg "instant replay" is one of the greatest boons to an official.

"I think the advent of instant replay keeps us on our toes. We know that with the camera recording our calls, we had better make sure they're correct," he said.

After Sonnenberg's talk, about 130 winners of numerous SRA events held during the past year were honored by the association with a buffet dinner and awards. Jackets were presented to 83 SRA members and 43 members received trophies.

'World of Golf' returns to TV

"Shell's Wonderful World of Golf" -- minus the well-known pecten and references to Shell -- is again being made available to television.

Arthur Pickens & Associates of Chicago have obtained rights to the show and plans to market a commercial package containing 50 outstanding tournaments from the series, which appeared on television under Shell sponsorship for nine consecutive seasons.

The edited segments will allow new sponsors to insert their own commercial messages into the series, retitled "The Wonderful World of Golf."



Ray Sonnenberg

The nation's energy demands in the next 15 years are going to double despite the anticipated rebirth of electric cars, more mass transit systems, a slowdown in population growth and more efficient use of fuels, Shell president Harry Bridges said recently.

Bridges, speaking to one of Houston's largest business forums, said Shell agrees with predictions by government and industry leaders that the U.S. energy supply capability over the next 15 years is "less than comforting under present conditions."

"We would dispute the concept, however, that increasing our economic and energy growth means we must necessarily endanger our quality of life. Or that the search for and the development of raw materials to meet the demands means we must relinquish our hopes for a clean environment," he said.

The Shell president added that since society has decided it wants both a plentiful supply of energy and a clean environment, "it is now up to us to give the consumers what they want."

"This is not the time for two sides to square off, draw a line in the dirt and dare the other to cross it," he said. "It is, instead, a time when we must work toward an acceptable tradeoff between energy and the environment, even knowing full well that our best of today will not be good enough by tomorrow's

standards."

Bridges devoted much of his talk to pointing out flaws in beliefs that zero population growth, electric cars or mass transit will help alleviate energy demands.

He said that zero population growth, even if it could somehow be attained by 1985, would provide only a four percent reduction in energy demands that year.

"Among the few things we know for sure about America's near future are a few facts about its population. We know that the people who are going to drastically affect the energy demands between now and 1985 are already born. They are the products of the baby boom of the late forties and early fifties. Increased use of energy per capita -- spurred by the maturing of the products of the baby boom and the continued development of the underprivileged segments of society--will have a far greater effect on energy demands than will population growth."

Bridges said that electric cars will neither be here in sufficient numbers to ease the energy demand situation by 1985 -- nor will they have any significant effect when they do become popular.

"Remember, an electric car really only substitutes one source of energy for another," he added, noting that while the electric motor is more efficient than the internal combustion engine, the net gain

(Continued on Page 2)

Shell's new rubber product

Here comes the orangeapple

"At last, the orangeapple."

That's the way a recent Shell ad describes the company's revolutionary KRATON® rubber -- a rubber so different it continues to flex its way into applications closed to more conventional rubbers.

The reason is that KRATON® can be reheated and remolded even though it behaves pretty much like ordinary rubber in other ways.

KRATON® is the first of a new generation of materials known as thermoplastic rubbers. It is the first synthetic rubber that does not require vulcanization.

The fact that it can be reprocessed is a bonus, meaning scrap can be re-cycled and converted into other products. As a consequence, more specialty project manufacturers are starting to use the product.

Last year the demand was for more than 30 million pounds. One reason for KRATON's® growing number of uses lies in the fact that while the material costs more than rubber, savings are realized in reduced processing time and expense.

Another reason is the material's availability. Natural rubber fluctuates in supply availability according to local climatic and political conditions. KRATON® is man-made and has stable pricing.

To assure customers an adequate supply, Shell is building a new facility at Marietta, Ohio. When the plant goes on stream early next year, it will have a KRATON® production capacity substantially greater than the current

market demand.

But perhaps the most important reason for increases in the demand for KRATON® is its versatility. Not only has it proved satisfactory for use in many rubber applications, it is also being used to make products once made with other thermoplastics.

As an indication of its flexibility, KRATON® is being molded into hundreds of products, including shoes, pressure-sensitive adhesives, food packaging, medical and pharmaceutical supplies, toys, rubber sheeting and product molding equipment.

To satisfy manufacturer's demands, Shell Chemical Company, which has marketed the material since 1965, offers five different types of thermoplastic rubbers, each designed to do a specific

job.

Almost daily, however, some new application is found as KRATON® continues to stretch the imaginations of enterprising businessmen looking for newer and more economical ways to make their products.

In fact, since its introduction, KRATON® has opened up a whole series of bold, new profitmaking possibilities. Many of these new specialty firms have received technical assistance from Shell in getting more use from the product.

Because of its cost-performance advantages, product versatility, ease of processing, and ready availability, KRATON® is continuing to change many traditional concepts about the manufacture of rubber and plastic products.

Season's greetings



It is my sincere wish that Christmas will find its true meaning for all of you, and that the holidays will be filled with happiness for you and your families.

E. A. Ballman

Retirements



Pete Curran
Purchasing manager



Woody Culp
Engineering field



Harold Dolan
Engineering services



Ernie Willerth
MTM research lab

Keep the holidays a safe time

Christmas trees, lighted candles, arrangements of evergreen sprigs—traditional decorative touches which spread the holiday atmosphere throughout the home—can also spread the horror of fire unless care is taken.

Follow these suggestions for a safe Christmas, when planning trees, lighting, decorations, wrappings and gifts:

Select a firm, fresh tree, and put it at once in a cool place with its base in water. Before setting it up, cut about an inch off the base to help the tree absorb water, then place the tree in a sturdy stand containing water. Be sure the water level stays above the cut—check it daily. Locate the tree away from heat and where it won't block exits. Take it down as soon as possible after Christmas—the more it dries out, the more of a hazard it becomes. Don't rely on do-it-yourself flameproofing treatments.

Never use lighted candles on a tree or near any evergreen decorations. Check sets of electric lights closely, for worn insulation, broken plugs, loose bulb sockets, and use only sets with Underwriters' Laboratories (UL) or Canadian Standards Association (CSA) label. Use extension cords sparingly. Never hang sets of lights on a metallic artificial tree—to avoid shock hazard, use only indirect spot lighting on such a tree, which should carry the UL label if it has a built-in electrical system. Turn off all indoor tree and decorative lights when leaving the house or retiring for the night. Outdoor lights should have special wiring.

For decorations use materials which are non-combustible, such as glass and asbestos, or which are flame-retardant. Keep natural evergreens and polystyrene foam decorations away from candles,

fireplaces, other open flames. Be sure holiday costumes and masks, such as Santa suits and whiskers and children's pageant outfits, are flameproof.

Pick wrappings up while opening gifts and put into covered trash containers. Never burn wrappings, cartons, etc., in the fireplace.

To meet safety standards, electric toys should carry UL or CSA label.

And some general holiday reminders from the National Fire Protection Association: keep children from playing under or near the Christmas tree; be especially careful with matches and smoking materials; and review the family's home escape plan for a quick exit in case of a fire emergency. Also, even with the pressure of last-minute shopping and errands as Christmas nears, never leave children alone or without proper supervision.

Service anniversaries



Tony Amburg
Operations
35 years



Earl Helmkamp
Operations
35 years



Chris Christopher
Engineering field
30 years



Ross Mormino, Jr.
Engineering field
30 years



Dean Smith
Engineering field
30 years



Darrell Fertch
Engineering field
25 years



Larry Stokes
Operations
35 years



Pete Balotti
Operations
30 years



Karl Harrison
Dispatching
30 years



Willard Shirley
Engineering field
30 years

Shell receives environmental control award

Shell has received a Special Meritorious Award from the Petroleum Engineer Publishing Company in recognition of its engineering innovation in the field of environmental control.

Competing against 11 other companies, Shell won the award based on its extensive marine oil spills control program. A total of 60 companies, representing 90 percent of the petroleum-gas-pipeline industry population, entered one or more of the 12 categories in the contest.

Elmer Milz, manager of Shell Pipe Line's research and development laboratory in Houston, accepted the award recently during a meeting of the National Association of Manufacturers in Washington, D.C.

Shell president

(Continued from Page 1)

in efficiency is only four per cent.

Discussing mass transit, Bridges said that even if the present system were to double in the next 15 years, it would only lower automobile usage four percent and gasoline consumption three percent. In addition, he said cities are starting to sour on rail mass transit systems because of high cost and an inability to lure commuters out of their automobiles.

Bridges also took issue with those who support the "zero economic growth" philosophy, noting that 23 million new workers will be entering the labor market in the next 15 years. He said the obvious effects of successful "zero growth" movement in terms of unemployment are "too tough to swallow."

"What the advocates of such a philosophy seem to minimize is that these young people are going to need the jobs and goods and services that industry provides. And there is no indication that today's children are willing to settle for less than what their parents enjoyed."

Bridges said the first impact of this zero growth philosophy has been felt by the petroleum industry and cited a number of examples to show that finding locations for new plants has been made increasingly difficult.

He noted that much of this "zero growth" activity is located on the East Coast. "The logic of this is somewhat hard to understand, since the East uses 40 per cent of the nation's oil while it has only 12 percent of the refining capacity," Bridges said. "As long as we expect the products and energy from oil, we can't expect to keep putting the refinery in someone else's backyard."

Classified ads

For Sale

Part Samoyd, part wolf puppies. \$50 each. Susie Campbell. 618-635-5139.

2 sets of girl's skates. Sizes: 1½ and 4½. Excellent condition. 618-637-2382.

25-acre farm with five room brick home, full basement and city gas and water. Block garage. Metal building 22' x 50'. \$25,000. Call 618-372-8179 or White Hall 217-374-2037.

Lindell electric bass guitar. \$50. Two microphones. \$20. 618-635-2363.

Girl's 26" bike, boy's 24" bike. Guitar and case. Like new. H. Kuhlman. 618-888-2427.

Wanted

Used coronet. Fred Owen. 618-585-4817.

Wood lathe. D. Slaton. 217-259-3049.

Shell forms footwear group to handle KRATON® demand

Shell Chemical Company has announced the formation of a footwear sales and development group.

This product development group was formed to handle the increasing demand and interest in KRATON® Thermoplastic Rubber by the footwear industry.

KRATON® is a revolutionary rubber material developed by Shell Chemical in 1965. It is the first of an advanced generation of elastomers known as thermoplastic rubbers. It is a true rubber but has the advantage that its shape can be changed time after time by applying heat — a quality generally restricted heretofore to plastics.

In making the announcement of the new offices, R.D. Sullivan, manager of Thermoplastic Rubber Products, said this affirms Shell's commitment to develop the products and services its customers need. "This way we can be more sensitive to the industry's needs and more responsive to the growing demand for KRATON®," he said.

Joe Young, who has an extensive background in the footwear business, will head the sales group. Young will be

assisted by J.A. Sanford and R. D. Fryrear, both experienced salesmen of raw materials to the footwear industry. This group will be headquartered at Princeton, New Jersey.

Sullivan said that show manufacturers have benefited from the combination of rubberiness and ease of fabrication of KRATON®. It can be processed using conventional thermoplastic molding equipment, in far less time, than vulcanized rubber. Some of the conventional processes presently being employed to manufacture KRATON® products include injection molding — both of solid and expanded parts — extrusion, and calendaring techniques. "And," he added, "most of these processes can be used without making equipment modifications, which can run up costs." Scrap can be fully recycled. These manufacturing cost advantages are extremely important to American shoe manufacturers who have been faced with severe competition from foreign shoemakers.

© Shell trademark.



Chatting and waiting for the luncheon to start are Margaret Stullken, Ed Ballman, and Mary Snider.

36 girls honored at '10 and over' luncheon

Thirty-six girls from Wood River were honored during a luncheon November 19, at Skaggs restaurant in recognition of their having recorded more than ten years of service with Shell.

Following the luncheon, refinery manager Ed Ballman congratulated the ladies for their achievement. Each girl received a boutique mirror as a token of appreciation. Also honored were Marian Teachout and Hazel Wardle, both of whom recently retired after each logged more than 45 years of service to the company.

Those with 10 or more years of service

with Shell include: Mary Snider, Margaret Stullken, Jane Thatcher, Ruth Holliday, Marian Roller, Roberta Kratschmer, Margaret Middlecoff, Toni Williams, Jean Day, Liz Halliday, Dee Moehle, Doris Jilek, Marg Stroud, Juanita English, Thelma O'Donnell, Trudy Rietveld, Betty Augustine, Arlene Tutt, Maxine Vaughn, Muriel Frazier, Pauline Korbet, Phyllis Carter, Darlene Gross, Hazelle Campion, Libby Woods, Mary Kay Archibald, Gini Jones, Gloria Hanson, Grace Cunningham, Madeline Peters, Mary Henley, Barbara Simms, Pat Rehg, and Mary Hyndman.

'Encouraging results'

Shell president looks ahead to '72

Exploratory wells drilled in Louisiana offshore have produced encouraging results, Harry Bridges told the Financial Analysts Society of Philadelphia recently.

"We have drilled 19 tests on seven of our nine tracts and so far have discovered hydrocarbon reserves in commercial quantities on three tracts," he reported. Shell bought the tracts at the December 1970 federal lease sale for \$47.6 million.

Bridges also said results of exploratory and development drilling in Michigan and Utah have been gratifying, announced plans to spend over \$200 million in the next five years for environmental control facilities at Shell refineries, and expressed optimism regarding the possibility of higher earnings next year.

He maintained that early development of unconventional fuels - oil shale, tar sands and coal - is required to help supply the nation's growing energy needs which are threatening to pass the domestic supply capability. Technology exists

today to produce gas from coal and oil from shale but it costs significantly more than the processing of conventional raw materials, he said. "To stimulate early development, industry must receive added economic incentives... either a higher price for these fuels, special tax considerations, changes in the royalty system, or some combination of these."

Greater reliance of foreign oil is only a partial and short-term answer to the domestic energy problem, he said. He referred to estimates that by 1980 the world's oil situation will approximate that of the U.S. position today. "To become overly dependent on foreign crude is to gamble with our national independence," he said. "We at Shell believe that in the long run the answer lies in a combination of increased domestic production, development of unconventional fuels, continued efforts to develop nuclear power, and stack gas cleaning to permit expanded use of coal."

Bridges expressed concern over the rise of a "no-growth" philosophy as the way to an improved environment and said, "Our society, I believe, needs a balanced approach to both its energy and environment problems. As you probably know, Congress recently authorized an in-depth study of our national energy situation and Shell supports this as a reasonable and much-needed step toward the formulation of a national energy policy. I am convinced that with rationality, goodwill and the mutual respect of all parties the energy needs of our society can be met in a way that will also meet goals regarding the environment and enhance our quality of life."

Reporting on Shell's operations, Bridges said that in Northern Michigan four wildcat wells this year have indicated discoveries—one gas and three oil. "We have had an excellent wildcat drilling success ratio there since 1969 - 13 successes out of 22 attempts," he said. "While individual accumulations found to date appear to be small, they are highly profitable." He added that an aggressive program of geophysical work and exploratory drilling is continuing in the area.

In the Uinta Basin in Utah, Shell is following up its May 1970 discovery with an active program of exploratory and

development drilling, he said. Thirteen Shell-interest wells have been completed. Although production has been estimated at a number of locations along a 20-mile trend, additional drilling and testing will be required to determine the full importance of the discovery.

Concerning projections of Shell's expenditures for manufacturing environmental control facilities, Mr. Bridges said the \$200 million 5-year total would cover control of sulfur and nitrogen oxides, hydrocarbons, particulate emissions and general upgrading of effluent water treating facilities. He added that facilities required for lead removal could well be of similar magnitude.

With respect to Shell's chemical business, Bridges said sales currently are about five percent ahead of a year ago. Chemical sales revenues are expected to total some \$550 million for the full year, compared with \$526 million last year, he said. He added that he regards the outlook for Shell Chemical Company as favorable for both the near term and the long term.

Bridges doubted Shell Oil's earnings for all of 1971 would reach the level of last year but said he was hopeful the third quarter results signaled a turn to improved performance in the near term.

More profits, more jobs, Nixon says

Even though there admittedly are "a lot more votes in being against profits," President Richard M. Nixon has made it clear that adequate profits are vitally important to the overall economic health of the nation.

The President, speaking to the Economic Club of Detroit, said he is for profits simply because he believes more profits mean more jobs.

"It is very easy to say let's control profits, let's limit profits and let's have an excess profits tax and, of course, the argument for saying that you are taking care of the big man and helping the little man," the President said.

"But when you really look at what makes this economy work, when you really look at what produces jobs, it comes from profits being plowed back into industry and making American workers thereby more competitive, and thereby producing more jobs.

"And I am for that, and I think every American would be for it if he understood it that way."

The President added that when

industry prospers, the nation prospers because government is a major beneficiary of profit.

"One dollar of every two in corporate profits goes to the government," he explained. "We would not have the money, for example, for education, to help the poor, the poverty program, and all the rest unless it were the fact that we had profits, of which 50 percent go to the Federal Government for its taxes."

President Nixon added that 100 million Americans also share in profits, either as stockholders, members of mutual funds, or as beneficiaries in other ways.

Noting that U.S. workers make approximately twice as much as their counterparts abroad, the President said only through the profit system can America compete with labor overseas.

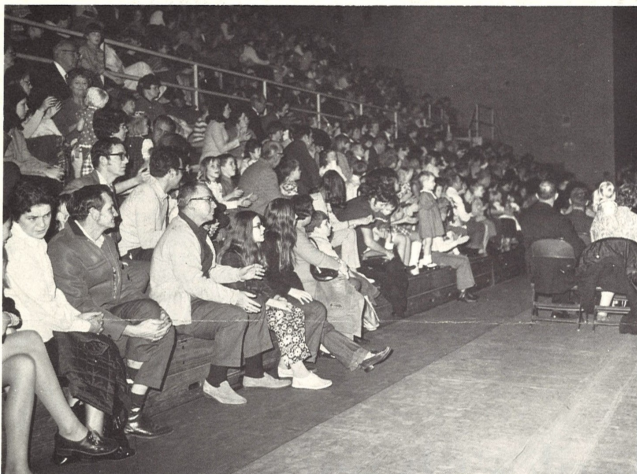
"Where do we get that?" he asked. "It is only through profits that industry can buy the new plant, the new equipment that will make our workers more productive and therefore more competitive in the world."



Safety first & last

Even with the multi-ton muscle of a cat crane, safety is the rule. Notice how the operator checks for overhead pipes or wires.

Christmas in Wood River



Homemaker may be employer under social security

Many homemakers in this area may not consider themselves employers, but if they hire someone to help them around the house—even on a part-time basis—they may be considered employers under social security.

According to E.W. Lehen, social security district manager in Alton, a homemaker is an employer if she pays a household worker \$50 or more in cash wages in any 3-month quarter—January - March, April - June, July - September, or October - December.

"A homemaker must send quarterly

reports of such wages, along with the social security contribution, to the Internal Revenue Service," Lehen said.

The employer contribution is 5.2 percent of the wages paid the household worker. The employee pays a matching contribution of 5.2 percent, Lehen said.

"However, many household employers pay the full 10.4 percent contribution themselves," he said.

By sending in the social security contributions each quarter, the homemaker employer is "insuring the

household worker and her family that they have the protection provided by the social security program," Lehen said. "Social security today means more than monthly checks and Medicare benefits after the household worker retires. Social security also provides monthly cash benefits for the family in case the worker becomes disabled or dies."

Nine out of every 10 household workers are women, the district manager said. "If a household worker suffers a long disabling illness, social security benefits might be her family's only income until she is able to return to

work," he said. "Even if that isn't the case, her children may be entitled to monthly checks."

Any employer who wants more information about making social security contributions for a household worker can ask for a copy of the leaflet "Social Security and Your Household Employee" at any social security office, Lehen said.

The Alton office is located at 302 Washington Square Plaza, 1623 Washington Avenue, Alton, Illinois, and is open Monday through Friday from 8:30 a.m. to 4:30 p.m.

SHELL OIL COMPANY
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