

Aaron was recognized for his many years of leadership in Clifton, which I have been honored to represent in Congress since 1997, and so it is only fitting that these words are immortalized in the annals of this greatest of all free-elected bodies.

Mr. Halpern worked for the Clifton School System for 43 years, beginning as a high school teacher and guidance counselor. He became the principal of School 7 in 1959 and of Woodrow Wilson Middle School in 1962. A year later he became the principal of Clifton High School. He served that post for 25 years until his retirement on November 1, 1988.

During his tenure at Clifton High School, Aaron implemented many educational innovations including computer technology, student counseling and placement services. When he retired in 1988, it was estimated that more than 20,000 students had passed through the school in the years that he was in charge.

Aaron received the New Jersey Principals Supervisors Association's Distinguished Service Award in 1993, and the Clifton Parents Football Boosters named him 1982-83 Man of the Year. He also had a wing at Clifton High School named after him in 1997.

Principal Halpern was a member of the Executive Committee of the New Jersey State Interscholastic Athletic Association, where he was responsible for many athletic rule changes. He was a life member of the National Education Association and the New Jersey Congress of Parents and Teachers.

An Army Air Corps veteran of World War II, Principal Halpern was a member of the Clifton Jewish Center and its Men's Club, the B'nai B'rith and Humboldt-Ezra Masonic Lodge 114, all in Clifton.

A graduate of Passaic High School in 1938, Aaron received a Bachelor of Science Degree in Education from Newark State College, and Master's degrees in Administration and Supervision from Montclair State College (now University), in Guidance from Rutgers University, and in Secondary School Administration from Teachers College at Columbia University.

Aaron is survived by his wife, the former Dorothy Leibowitz, a daughter, Doretta Halpern of Cedar Grove and his nephew Jack Birnberg, Chairman of the Board of Waldorf Group, Inc. of Little Falls, New Jersey.

Mr. Speaker, I ask that you join our colleagues, Aaron's family and friends, Clifton High School, the Clifton Board of Education, the City of Clifton and me in recognizing the outstanding and invaluable service to the community of Aaron Halpern.

#### ELECTRIC UTILITY INDUSTRY

**HON. ED BRYANT**

OF TENNESSEE

IN THE HOUSE OF REPRESENTATIVES

*Wednesday, June 28, 2000*

Mr. BRYANT. Mr. Speaker, at a time when this Congress is beginning the debate over the future of our electric utility industry, I call to the attention of my colleagues an article in the current edition of Forum For Applied Research and Public Policy. The article is entitled "Electricity: Lifeline or Bottom Line?", and it is by Terry Boston, Executive Vice President of the Tennessee Valley Authority's Transmission and Power Supply Group. Mr. Boston oversees TVA's 17,000 miles of transmission lines,

one of the largest transmission systems in the country.

The article largely embodies information I received from Mr. Boston in a briefing earlier this month. The news media has given considerable coverage recently to the expected demands on our electric utility grid this summer and how those demands will almost certainly strain the system. Mr. Boston makes the point that more is being invested in generation and marketing than in transmission, distribution and reliability, and that until these two different facets of the business are brought more into balance, the strains on the system will continue.

All in all, the article will enhance Member's understanding of the problems we face this summer and the challenges that are before us as we confront the complex issue of electric utility restructuring.

[From Forum for Applied Research and Public Policy, Summer 2000]

ELECTRICITY: LIFELINE OR BOTTOM LINE?

(By Terry Boston)

On a blistering day last July, two large cables at a Chicago substation failed, triggering a local blackout that sent hundreds of air-conditioning deprived residents to hospitals and a few, tragically, to cemeteries. At its worst, the blackout left more than 100,000 people without electricity, and thousands remained that way for the better part of three days.

This was only one in a string of blackouts during the summer of 1999 that afflicted hundreds of thousands in New York City, Long Island, New Jersey, the Delmarva Peninsula, and four Gulf states. And the problems were not confined to local power companies; several high-voltage transmission systems—designed to deliver vast amounts of power over great distances in all sorts of weather—strained to keep up with demand. Over the course of five tense weeks, two other blackouts hit Chicago while other electric systems suffered with voltage problems and a few teetered on the brink of collapse.

What's happening here? Why is the world's strongest, most reliable electric grid scrambling to keep up with hot, but not unprecedented, summer weather? And why is it hard for some transmission operators to make eye contact when asked about the prospects for this summer? The reasons are complex, and agreement is lacking, but many point to the pressures competition is placing on an industry still learning how to compete. In short, the move to restructure the electric utility industry has the industry sprinting toward competition before it can walk. As a consequence, the long-sacred focus on reliability is beginning to blur. Instead of filling its traditional role as a lifeline, electricity is in danger of becoming just a bottom line.

#### LIGHTS OUT

Blackouts—small or large—are nothing new; but the reasons for some of last summer's blackouts and near misses are disturbing. For example, the U.S. Department of Energy cited Chicago's Commonwealth Edison for scrimping on its substation maintenance budget—which went from a high of \$47 million in 1991 to just \$15 million in 1998—as it shifted money into its nuclear program and preparations for competition. Other systems, including TVA's, were threatened when operators were unable to predict the massive amounts of power flowing across their systems from eager new sellers on one side to eager new buyers on the other.

Unless transmission operators understand exactly where and when power will flow

across their system, lines that are already overburdened by severe weather can fail, triggering widespread disruptions. Looking at the blackouts of 1999, DOE concluded that "the necessary operating practices, regulatory policies and technological tools for dealing with the changes [resulting from a restructured environment] are not yet in place to assure an acceptable level of reliability."

Energy Secretary Bill Richardson and Federal Energy Regulatory Commission Chairman James Hoecker have warned of more blackouts this summer, and Richardson criticized policymakers who "haven't kept pace with the rapid changes in the electric utility industry." While many would welcome legislation to ensure reliability, the industry desperately needs something more—time. Unless the industry has time to strengthen the grid, time to understand the new pressures that competitive pricing brings, and time to develop the complex computer modeling and analytical tools needed to safely manage the phenomenal increase in electricity transactions, many fear the grid may be headed for the most severe outages since the New York blackout of 1965. The Electric Power Research Institute estimates that power failures in the United States cost the economy approximately \$50 billion per year.

#### THE WORLD'S LARGEST MACHINE

Someone once called the North American electric grid—the massive conglomeration of generators, wires, switches, breakers, and related equipment that produces and moves electricity to almost every point on the continent—the world's largest machine. It's an apt description.

Originally, utilities were built to serve specific geographic regions and were physically isolated from one another. America literally had islands of electricity haves and seas of electricity have-nots. In fact, where TVA was created in 1933, only 3 percent of farms in the Tennessee Valley had electricity. As technology improved and power plants increased in size, these islands grew and began to connect with one another. Many of the connections were established to promote reliability in the wake of the 1965 New York blackout, allowing power to be routed in any number of ways to circumvent local problems.

Today, a single massive, interconnected grid serves the eastern United States and eastern Canada, while two other grids serve Texas and the western half of the continent. On that grid, large transmission lines—some operating at up to 765 thousand volts—move electricity from generators to lower-voltage local distribution systems where smaller lines take it to individual consumers.

Transmission is critical because electricity cannot be stored. Natural gas can be kept in tanks and pork bellies can be stored in freezers, but electricity is consumed the moment it is produced. The challenge then is to make electricity instantly available in the exact amounts demanded 24 hours a day, seven days a week. If the amount of power delivered equals the amount consumed—every second of every day—and if power plants, lines, switches, breakers, and insulators all do their jobs properly, we have reliability. If any part of the machine fails, however, power is interrupted. Interruptions can range from a few milliseconds, unnoticed except by sensitive computer equipment and VCRs, to outages that plunge a single street or entire regions into darkness.

Balance between neighboring power systems is also critical. If one system undergenerates—either deliberately to exchange power, or accidentally because a power plant

shuts down—imbalance results and electricity flows in from other systems like water through a breached levee. When that happens, systems can overload, and because they are designed to prevent problems from spreading, they automatically shut down. In the most extreme conditions—when weather forces heavy demand for electricity, and equipment over a wide area gets loaded to the maximum—losing a line many shift the burden to other lines, overloading them and causing them to fail. In those cases, power systems can begin to resemble a row of dominoes, which is what caused the West Coast blackout of 1996.

#### ENTER COMPETITION

Changes in national energy policy have encouraged the growth of independent power producers, electricity marketers, and brokers—all of whom differ fundamentally from existing utilities: they don't own their own lines. Consequently, these new entrants to the industry must rely on established transmission owners to provide the critical trade routes that move their product to market—even though at times they compete with those same transmission owners for capacity to serve native load customers. In fact, to promote competition, the Energy Policy Act of 1992 required utilities to provide these new players with transmission service virtually identical to the service they provide their own generators.

Traditionally, nature has posed the major threats to a reliable power delivery system. Tornadoes and ice destroy transmission structures. Lightning knocks out equipment. Trees grow and fall into power lines. And while those hazards still exist, competition challenges reliability in ways that we are just beginning to recognize and address.

#### PLANNING IN A VACUUM

Location is always a key consideration in building a new generating plant. Historically, plants were built where the transmission system could handle, or could be made to handle, the added power. In short, planning for new power plants always occurred in lockstep with planning for transmission. Plants were built where it made the most electrical sense, often near large concentration of customers to minimize transmission problems.

Today, however, power plants are built wherever it makes the most economic sense for the growing number of new players. The most attractive locations seem to be where natural gas pipelines converge with transmission interconnections between utilities. The pipelines provide fuel for the plants; the interconnections allow quick access to market. However, the existing transmission facilities may not be adequate or may be used up by the introduction of more generators, exposing everyone who depends on the transmission system to greater risk of interruptions.

And we are not talking about a handful of new power plants. Gulf States near natural gas wellheads are seeing hundreds of requests to connect from independent power producers with a combined generating capacity that the existing grid cannot possibly accommodate. At the same time, due to environmental and land-use concerns, building new lines has never been more difficult.

And while new plant owners must pay for any transmission upgrades necessary to connect to the grid, homeowners question the need for improvements and others complain that utilities may be using the connection process to restrict access.

#### OPERATING CONFLICTS

Adopting the mindset of blue-water sailors—always assume that the boat is trying

to sink and do your best to keep it afloat—transmission operators are doing their best to ensure reliability. Doing so is no easy task. Each day on the TVA system alone, hundreds of thousands of calculations are made to determine the demand for power, which plants to run, which to keep on backup, and which to shut down for maintenance. Operators also need to know which lines, substations, and switching equipment must be available at any given time, and which they can afford to take out of service temporarily for maintenance. Finally, they must know how much power will be flowing across their systems from producers on one side to consumers on the other. Without all that detailed information, the transmission system is extremely vulnerable, and ensuring reliability is simply not possible. And even with it, better tools are needed to instantly analyze the data and enable us to provide relief to the right place at the right time.

Competition means that more and more power is flowing in more and more directions on the grid as the number of deals between suppliers and customers grows exponentially. While TVA had about 20,000 interchange transactions with other utilities and marketers in 1996, it had nearly 300,000 in 1999. Since electricity follows the path of least resistance and respects no political or system boundaries, utilities sometimes find their lines clogged with power that they neither generated nor planned for. Because of the limited ability to predict how power actually will flow from moment to moment, power from most utilities—including TVA—sometimes inadvertently flows into or through neighboring systems.

In times of crisis, the added traffic can confound the efforts of operators to prevent a calamity. On a hot day last August, 10,000 megawatts—an output equivalent to that of eight large nuclear plants—flowed through the TVA system, three-quarters of it unplanned. The result: TVA—despite all its efforts—was one thin mishap away from a widespread blackout. In the future, as dozens of new plants are added to the grid, these inadvertent power flows—and the problems they cause—will only increase.

There is also concern about the ways some new merchant power plants—which are built to sell power to a particular buyer, rather than to serve a specific area—are being used. One marketer that owns merchant plants in TVA's region, aided by a puzzling interpretation of the rules by the National Electric Reliability Council—a utility-sponsored organization that promotes reliability—determined that its power plants can serve as transmission control areas and points of delivery for power transactions. Normally, a transmission control area contains generators and consumers of electricity and a control center responsible for ensuring that both the supply and demand for electricity are kept in balance. As a control area, the marketer would have the right to reserve space on TVA's transmission system, ostensibly to have large quantities of electricity delivered to its power plants.

Since a power plant consumes only minuscule amounts of electricity, however, delivering large amounts of power to one is physically impossible; and in fact, this marketer has no intention of receiving electricity at its plant. Instead, the arrangement serves the marketer by securing a needed path into TVA's transmission system. Later, when the marketer finds a buyer, it can inform TVA—with as little as 20 minutes' notice—that thousands of megawatts will be flowing across the transmission system, ready or not. We consider this a dangerous misuse of the transmission system and have determined that we will accommodate the mar-

keter's transmissions only if reliability can be protected.

Established electric utilities don't always wear the white hat. Competitive pressures can bring out rogue behavior in many organizations. Last summer, for example, one midwestern utility had more demand for electricity than it could supply. Normally in such circumstances, the price of power rises when demand exceeds the supply. If a utility cannot meet its contractual requirement, it should interrupt noncritical and keep critical loads, like hospitals, from being at risk. Instead of interrupting lucrative sales when power prices were exorbitantly high, however, the utility simply allowed its system to become a "black hole" on the grid. Because electricity flows to where it is needed, the utility sucked in power from other utilities without paying the high prices for it and increased the risk of blacking out its neighbors.

#### BUILD IT AND THEY WILL COME

What would happen if, with air travel booming, there were suddenly a freeze on building new airports or expanding old ones? Air travel would likely peak according to the number of planes that airports could safely handle, and then level off. That is not what's happening in the electric utility industry. Nationally, electricity sales are growing at a rate of about 2 percent annually, closer to 3 percent in the southeastern region. To meet this growth and possibly make large profits during periods of extreme demand, new generating plants are being built at an unprecedented rate. At the same time, investment in transmission systems nationally has almost bottomed out. In airline terms, we are building planes and sending them from the gate with hoards of travelers onboard, even though we are dangerously short of runways. To make matters worse, those planes take off and land without talking to the control tower about their flight plan.

Most of the nation's extra-high-voltage transmission lines were built after the infamous blackouts of the mid-60s. They were intended to enable bulk deliveries of power over long distances in the event of emergency—thus ensuring reliability. Today, however, those lines are largely used for day-to-day commerce. New players in the market argue that transmission owners still have the right to curtail transactions to protect reliability, but transmission providers know that every curtailment runs the risk of being challenged politically, publicly, and in the courts.

The societal cost of having too much transmission capacity is small compared to the societal cost of having too little. Yet industrywide transmission is not being built to support the new market. In 1990, utilities' 10-year plans called for a total of 13,000 miles of new transmission lines. After passage of the Energy Policy Act in 1992, those plans began to nose-dive. By 1999, only 5,600 miles were still planned. TVA, I'm pleased to note has not followed this trend. While the miles of planned transmission lines in the United States have been halved, TVA has doubled its transmission capital budget. We built more than 160 miles of transmission line last year and will build a comparable amount this year to enhance reliability within the region.

#### THE PUBLIC GOOD

Handled properly, competition can bring genuine benefits to society. Regions that have been plagued with high power costs may one day see lower rates. New participants in the industry may play an important role in bringing about this parity, and they should be encouraged to take part. Obstacles to a fair, open, and diverse marketplace should be removed, but carefully and for the

right reasons. The public has far too much at stake to allow competition to jeopardize reliability. Already, the pendulum has swung so far in the direction of open competition that reliability is being compromised.

New participants in the industry tend to think of electricity as a commodity, to be bought and sold like any other. They are fond of comparing electricity to natural gas and seek an industry structure in which they can trade electricity without limits. But as long as electricity is dependent upon instantaneous transmission—until it can be stored efficiently for later use—we cannot afford to treat it as a simple commodity. The risk are far too great to permit this mindset to govern energy policy. New players, policy-makers, and even many established utilities must come to realize that electric system reliability doesn't happen by itself. It takes planning, resources, and time to ensure that the nation's electric grid will continue to operate smoothly.

The North American grid can become a balanced playing field—accessible to all, supportive of open competition, and robust enough to withstand the worst that nature and growth can throw at it. Or it can decline into a choked and inefficient war zone where interruptions are commonplace, as industry players try to outdo each other in search of short-term profit. Restructuring can help create that balanced field by encouraging new generators to enter the market and relieve the current shortage of electricity production. Without comparable improvements in transmission, however, we may be putting out the fire with gasoline.

#### TRIBUTE TO ADAM GRAVES

##### HON. BILL PASCRELL, JR.

OF NEW JERSEY

IN THE HOUSE OF REPRESENTATIVES

*Wednesday, June 28, 2000*

Mr. PASCRELL. Mr. Speaker, I would like to call to your attention the exploits of a remarkable athlete and humanitarian, Adam Graves of Tucumseh, Ontario, Canada. On Wednesday, June 14, 2000, he was feted at the Brownstone House in Paterson, NJ, because of his selfless dedication to the community and children by the Boys & Girls Club of Passaic, NJ, at the Annual Sportsman of the Year Dinner. It is only fitting that Adam be honored, for he has a long history of caring, generosity and commitment to others.

The road to Adam's professional career took him through the minor leagues. He made his AHL debut in the 1987 playoffs. In 1989, he helped Adirondack win the Calder Cup and notched 11 goals and 7 assists.

In an All-Star Junior career, Adam totaled 100 goals and 124 assists in two and a half seasons with Windsor of the OHL. He led the team in playoff goals in all three seasons. Adam also captained the Spitfires to the OHL Championship in 1988. In addition, he led the OHL in playoff scoring with 32 points.

Adam Graves also has a stellar international record. As a member of the Gold Medal-winning Canadian Junior team at the World Junior Championships in 1988, he notched five goals. He also served as captain of Team Canada at the 1993 World Championships in Munich, Germany, tallying six points. Additionally, he garnered seven points representing Team Canada at the 1999 World Championships in Norway.

Selected by the Detroit Red Wings in the second round, Adam was the 22nd overall

pick of the 1986 NHL Entry Draft. After 3 years he was traded to the Edmonton Oilers, where he helped the team win the Stanley Cup. Adam was signed by the New York Rangers as a free agent on September 2, 1991, and clinched his second Stanley Cup in 1994.

In total, Adam has appeared in 907 career NHL games, registered 293 goals and 248 assists for 541 points, along with 61 post-season points. He played in his first NHL All-Star Game on January 22, 1994, at Madison Square Garden in New York.

Born April 12, in Toronto, Ontario, Adam Graves wears number nine on the New York Rangers. He plays left wing, is 6 feet tall and weighs 205 pounds. His teammates often call him "Gravy." Interestingly, in 1998, he appeared in an episode of "Spin City" starring Michael J. Fox. Adam also captured the "Good Guy" award, presented by the New York chapter of the Professional Hockey Writers' Association, for cooperation with the media. In addition, he is a four-time winner of the "Players' Player" award, given annually to the best "team player" as voted by the players.

As a concerned member of the community, Adam serves as a celebrity chairman for Family Dynamics, a New York City child abuse agency. He helped raise more than \$80,000 at the agency's annual Family Dynamics event. "Gravy" makes several appearances with many charitable organizations during the season, including the annual Toys for Tots collection during the holiday season. He was the recipient of the "Crumb Bum" award in 1992–1993 for his work with New York youngsters. Along with four other professional athletes, he was awarded the USA Weekend "Most Caring Athlete" Award for his charitable efforts and community service.

Over the years, Adam has made a significant impact in the NHL and beyond through his commitment to charity. He is a four-time winner of the Steven McDonald Award, given to the Rangers player who "goes above and beyond the call of duty," as voted by the fans. In 1993–1994, he received the NHL's prestigious King Clancy Memorial Trophy. This award is given to a player that best exemplifies leadership on and off the ice and has made a noteworthy humanitarian contribution in his community. He is the first Rangers player to be so honored.

Mr. Speaker, I ask that you join our colleagues, Adam's family and friends, the Boys & Girls Club of Passaic, the New York Rangers, the National Hockey League and me in recognizing the outstanding and invaluable service to the community of Adam Graves.

#### IN RECOGNITION OF HUGH M. "LALLY" BATES

##### HON. BOB RILEY

OF ALABAMA

IN THE HOUSE OF REPRESENTATIVES

*Wednesday, June 28, 2000*

Mr. RILEY. Mr. Speaker, I rise today to recognize one of Alabama's finest, Mr. Hugh "Lally" Bates. On June 30, 2000, Mr. Bates will retire, ending his distinguished 38-year public service career. Speaking about leadership, Winston Churchill once said "I have nothing to offer but blood, toil, tears, and

sweat." After a career marked by blood, toil, perhaps tears, and a great deal of sweat, Mr. Lally Bates will soon be retiring from public service.

Ever since enlisting in the U.S. Marine Corps on his 18th birthday, Mr. Bates has served his country, his state, and his community with nothing less than the utmost integrity and professionalism. Today we honor this distinguished man and publicly thank him for his sacrifices.

While serving in the Marine Corps, Mr. Bates was stationed in Korea with the First Marine Division, Fifth Marine Regiment. During his service, he was wounded on three separate occasions. He was awarded three Purple Hearts, and the Bronze Star with combat "V" for valor in personally destroying a North Korean machine gun emplacement and with it, four North Korean soldiers.

President Lyndon Johnson appointed Mr. Bates to the position of Postmaster of Clanton in 1965. His distinguished service in this capacity earned him the respect and admiration of his fellow Postmasters who twice elected him to serve as the National President of the National Association of Postmasters of the United States (NAPUS). In fact, Lally Bates is one of only two Postmasters ever elected to serve twice as the National President of NAPUS.

Aside from his professional duties, Mr. Bates has served Chilton County in a number of civic leadership capacities. He has twice been named the president of the Chilton County Chamber of Commerce, and been honored for his service as president of this organization that further honored him by naming him its Citizen of the Year this past January.

He further served as the president of the Clanton Quarterback Club, the Clanton Dixie Youth Baseball League, and the Civil Defense Rescue Squad. Additionally, his concern for others led him to serve as the Chairman of the Board of Directors for Chilton County Hospitals. Always selfless, Lally Bates has continued to serve his fellow veterans as commander of American Legion Post No. 6.

While Mr. Bates may be known by many as the Postmaster of Clanton, others may recognize his voice. For 41 years, Mr. Bates has been the Voice of the Chilton County Tigers football team on WEZZ radio, representing his alma mater.

Today I want commend Mr. Bates for his years of service. As an Alabamian, I am grateful for all that he has done to serve his community. I thank Mr. Bates, and the Bates family, for sharing time with the community. Today, I thank him for all of your blood, toil, tears, and sweat.

#### MANAGEMENT OF NATIONAL FORESTS

##### HON. JOHN J. DUNCAN, JR.

OF TENNESSEE

IN THE HOUSE OF REPRESENTATIVES

*Wednesday, June 28, 2000*

Mr. DUNCAN. Mr. Speaker, Matt Bennett, who is a very good friend of mine, wrote an editorial today in the Knoxville News-Sentinel about the management of our national forests.

This Administration has proposed a plan to manage our national forests which many people believe could actually end up harming our