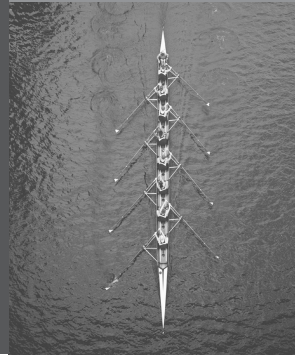


AES Corporation: Rewriting the Rules of Management



God made us all a certain way. We're all creative, capable of making decisions, trustworthy, able to learn, and perhaps most important, fallible. We all want to be part of a community and to use our skills to make a difference in the world.

DENNIS BAKKE, CEO, AES

We broke all the rules. No overtime. No bosses. No time records. No shift schedules. No assigned responsibilities. No administration. And guess what? It worked!

OSCAR PRIETO, AES MANAGER AND DIRECTOR OF LIGHT
SERVICIOS DE ELECTRICIDADE, BRAZIL, OCTOBER 1998

Spring 2002 presented AES Corporation, the world's largest independent power generator, with the most difficult business circumstances in its 21-year history. After a decade of strong growth and a steeply rising market valuation that had taken AES into the S&P 500 in 1998, AES's world had been shaken to its foundations by four major shocks. The first was the Californian power crisis of 2001. Despite limited involvement in the Californian electricity market, AES was immersed in the recriminations, lawsuits, and regulatory investigations that had followed California's electricity debacle. Second, AES had been caught up in the wake of Enron's collapse at the end of December 2001. Although AES's direct losses resulting from Enron's bankruptcy amounted to a mere \$15 million, Enron's collapse had a profound impact on investors' risk perception and upon the legitimacy of a range of previously accepted business practices, including off-balance-sheet financing. The third crisis having an impact on AES was Argentina. Argentina represented one of AES's largest overseas interests, with over \$1 billion

invested. The meltdown of the Argentine economy had rendered these investments all but worthless and had had knock-on effects on AES's power interests in Brazil. The gloom affecting AES's Latin American operations was further increased by the mounting crisis in Venezuela. Finally, the aftermath of the September 11, 2001 terrorist attacks on the US had created further uncertainties for AES's global interests. With investments in several Muslim countries – in particular Pakistan and Kazakhstan – AES was again subject to greatly increased financial, political, and physical risk.

These factors had combined to ensure AES's entry into the infamous "90% club" – those companies (mainly technology, media, and telecommunication companies) that had lost more than 90% of their stock market value. After touching \$70 a share in September 2000, AES's share price had fallen below \$4 in February 2002. The sharp decline in AES's market value had placed considerable strain on AES's finances, making it increasingly difficult for AES to access the capital markets. In February, ratings on AES's unsecured debt were cut to below investment grade.

These combined pressures had forced an abrupt reversal of strategy at AES. After two decades of continuous and rapid expansion, the company was forced to retrench. In a series of measures announced in February 2002, AES began the desperate task of shoring up its finances and protecting itself against an increasingly hostile external environment.

For co-founder and CEO Dennis Bakke the most troubling aspect of the sudden strategic shift was not the abandonment of AES's ambitious growth targets. He believed that AES possessed the financial and management strengths needed to survive the current financial pressures. His concerns related much more to his personal mission to build AES as a different kind of company. Under the leadership of its two co-founders, Roger Sant and Dennis Bakke, AES had rejected profit and shareholder wealth as its *raison d'être* and committed itself to the pursuit of integrity, fairness, fun, and social responsibility. These principles were embedded in a management system that was referred to by board member Robert Waterman (of *In Search of Excellence* fame) as an "adhocracy," and which the *Wall Street Journal* described as "empowerment gone mad."¹ There were no staff functions or corporate departments; almost all traditional management functions were devolved to workers at the plant level.

So long as AES was a darling of Wall Street, investors and analysts were happy to accept AES's lofty values and its founders' disdain for profit. But the events of 2001 and early 2002 had changed all that. AES's values and unique management system – which had been so effective in encouraging employees' loyalty and commitment, generating initiative and entrepreneurial drive, and promoting unmatched levels of operational efficiency – now had to come to terms with a very different environment.

AES had grown from an entrepreneurial startup to a public corporation with 38,000 employees and 179 plants in 31 countries. Could a management system based on trust, fun, openness, and decentralized decision making work in a large complex organization that embraced national cultures ranging from traditional Islamic societies (Pakistan), to post-communist systems (Hungary, Bulgaria, Ukraine, Kazakhstan) and the oligarchic societies of Latin America? AES's industry environment was also changing. During the 1990s, AES was one of a small number of independent power producers that was riding a wave of opportunity as governments throughout the world privatized their state-owned electricity sectors. During the 21st century the flow of privatization opportunities was slowing while competition was growing. New entrants into electricity production included not just the independent power producers but

also traditional utilities (Duke Power, Consolidated Edison, Electricité de France), gas companies (Centrica, Gaz de France), and oil majors (BP, Shell, Exxon Mobil).

AES's Origins and Development

In January 1982, Roger Sant and Dennis Bakke founded Applied Energy Systems based in Arlington, Virginia. Their purpose was to take advantage of a 1978 Public Utility Regulatory Policy Act (PURPA) that required utilities to purchase power from independent energy producers. Sant and Bakke believed they could build a business in a niche segment of the enormous power-generation industry.

At first glance, Sant and Bakke seemed a rather unlikely pair to start what was to become a large international energy company. Although both held Harvard MBAs, their experience was primarily public sector. Sant headed the Ford Administration's energy conservation efforts and Bakke served as a chief aide. Following government service, they moved on to the Mellon Institute's Energy Productivity Center, where they researched energy conservation. It was during this time that the pair came up with the idea of starting their own company.

Sant and Bakke had a very difficult time raising money at first, because nobody took them very seriously. According to Bakke, "[we] had the worst possible background for raising money . . . first government and then academic experience. It looked to investors like a combination of inefficiency and ivory tower."² However, Sant and Bakke had one key advantage: as a result of their involvement in drafting PURPA, they were among the first to recognize the opportunity for independent generators to produce power at much lower costs than the established utilities.

After several joint ventures (notably with Arco) Sant and Bakke decided to go it alone and in 1985 built their first power plant adjacent to an oil refinery in Houston, Texas. The plant was not profitable; however, the second and third plants that AES built "weren't disastrous, and four, five, and six turned out to be superb. By 1989 it was clear that we had reached viability."³

In 1991, AES went public. With a stronger equity base it was ready to look at opportunities overseas. Because of the rapid growth in electricity demand in many emerging markets, inadequate generating capacity, and the trend towards privatization, Sant estimated that over 70% of AES's opportunities lay outside the US. The fast-growing Asian markets for electricity, especially the huge potential markets of India and China, were especially attractive. In the early 1990s, AES acquired two plants in Northern Ireland and one in Argentina. International expansion involved participating in the auctioning of state-owned power plants by governments, and bidding for long-term contracts to supply power to electricity utilities. During the mid-1990s, AES's biggest new investments in power generation were in Kazakhstan and China. The 1996 acquisition of Light Servicos de Electricidade, Brazil, was a major strategic departure for AES: this was its first entry into the distribution end of the power business. Deregulation was also creating opportunities in the US. Changes in utility regulations at the state level resulted in some utilities selling off their generating facilities – AES was among the most prominent bidders for these facilities.

Between 1998 and 2001, AES continued to expand rapidly both at home and overseas. Tables 19.1 and 19.2 show AES's plants and distribution facilities at the end of 2001.

TABLE 19.1 AES's generating plants, December 31, 2001

Country	Number of plants	Generating capacity (MW)	Date of entry	Notes
USA	30	38,729	1986	15 coal, 14 gas, 1 oil
Canada	1	110	1997	1 gas
Brazil	10	9,711	1996	8 hydro, 2 gas
Argentina	6	3,353	1993	2 gas, 3 hydro, 1 coal
Chile	4 (?)	1,716	2000	1 gas, 1 hydro, 1 coal
Venezuela	4	2,265	2000	4 gas
Colombia	2	1,090	2000	1 hydro, 1 gas
Panama	3	380	1999	3 hydro
Mexico	1	484	2000	1 gas
Puerto Rico	1	454	2002*	1 coal
Dominican Republic	3	1,107	1996	2 gas, 1 oil
UK	7	5,763	1992	3 gas, 4 coal
Netherlands	1	415	1998	1 gas
Italy	1	140	2001	1 oil
Hungary	3	1,331	1996	1 gas, 2 coal
Georgia	3	823	2000	2 hydro, 1 gas
Kazakhstan	8	8,414	1996	6 coal, 2 hydro
Pakistan	2	695	1997	2 oil
India	1	420	1998	1 coal
Bangladesh	2	810	2001	2 gas
Sri Lanka	1	165	2002*	1 gas
Oman	1	427	2003*	1 gas
Qatar	1	750	2004*	1 gas
China	4	1,665	1997	3 coal, 1 oil
Australia	3	1,247	1999	2 gas, 1 oil
Nigeria	1	290	2001	1 gas
Cameroon	1	800	2001	1 hydro
Tanzania	1	112	2003*	1 gas
South Africa	1	600	2001	1 coal

*AES to commence production.

SOURCE: AES 10-K REPORT FOR 2001.

The result of the years of expansion was not only a substantial growth in the size of AES between 1998 and 2001, but also increasing complexity of the business as AES diversified its activities within the power sector. During 2001, AES recognized four lines of business activity:

- *Contract generation* – producing electricity supplied on long-term contracts (5 to 30 years) to distribution companies.
- *Competitive supply* – generating facilities that sell electricity directly to wholesale and retail customers in competitive markets. Output is sold into power pools, into daily spot markets, and on short-term contracts.

TABLE 19.2 AES's electricity distribution businesses, December 31, 2001

Country	Gigawatt hours	Customers served (000s)	Date of entry
USA	22,999	626	1999
Brazil	86,949	12,137	1996
Argentina	4,822	698	1997
Venezuela	9,724	1,132	2000
El Salvador	669	226	2000
Dominican Republic	2,990	350	1999
Georgia	2,200	370	1998
Kazakhstan	2,572	469	1999
Ukraine	5,540	1,146	2001
India	2,102	600	1999
Cameroon	3,020	452	2001

SOURCE: AES 10-K REPORT FOR 2001.

TABLE 19.3 Revenues and gross profit by line of business, 2000 and 2001

	Revenue (\$ billion)		Gross profit (\$ billion)	
	2000	2001	2000	2001
Contract generation	1.7	2.5	0.77	0.83
Competitive supply	2.4	2.7	0.56	0.44
Large utilities	2.1	2.4	0.54	0.74
Growth distribution	1.3	1.7	0.13	0.30

SOURCE: AES 10-K REPORT FOR 2001.

- *Large utilities* – regulated monopolies supplying electricity within specific geographical areas. These utilities combine generation, transmission, and distribution capabilities.
- *Growth distribution* – distribution facilities that offer significant potential for growth because they are located in developing countries or regions where the demand for electricity is expected to grow at a higher rate than in more developed areas.

Table 19.3 shows revenues and gross profit earned by AES's four lines of business.

Performance

AES's financial and operating performance during the 1990s placed the company among the top-performing firms of the decade, not only in its sector, but across the stock market as a whole. During 1991–2000, AES's return on equity averaged 25%, while in the five years up to the end of 2000, returns to shareholders averaged 70% a year.

This performance amazed many observers, given the limited priority that AES accorded profits and shareholder return. In monitoring its own performance, AES emphasized four performance measures:

- *Shared values* – How did we do in having an organization that is fun, that is fair, that acts with integrity, and that is socially responsible?
- *Plant operations* – How safe, clean, reliable, and cost-effective were our facilities?
- *Assets* – What changes occurred in our assets, including AES people, during the year? This intends to measure the company’s project development and construction progress as an indicator of future earnings potential.
- *Sales backlog* – What happened to our backlog of contract revenues during the year?

AES’s performance targets combined operational efficiency, employee satisfaction, community development, project development, and growth. For example, AES’s goals for 1998 were stated in “Our Wish List” published in the 1997 Annual Report. These included:

- Continuing progress in adapting to and living the AES principles and values.
- Creating the most fun workplace since the beginning of the industrial revolution, and eliminating hourly payment systems.
- Adding 10 to 15 new businesses to the AES portfolio.
- Engineering a breakthrough in slow development businesses such as Ib Valley (India), Puerto Rico, and Nile Power (Uganda).
- Maintaining 100 new business ideas in the development pipeline.
- Making our 1998 budgeted net income and cash flow.

Operationally, AES plants were among the best performers in their industry. AES’s US plants typically operated at around 95% capacity, compared with an industry average of 83%. Nor was operational excellence restricted to new plants. AES’s West Belfast power station has achieved 95% availability in some years, remarkable for a 43-year-old facility.

During 2001, AES’s financial performance deteriorated sharply. Although revenues grew by a healthy 24%, this was mostly from acquiring new businesses and adding new plants. Revenue from existing operations grew by a more modest 5%. Net income fell by two-thirds as a result of lower market prices in the UK, decline in the Brazilian Real resulting in currency losses of \$210 million, losses from closed telecom activities of \$194 million, and higher expenses.

Table 19.4 summarizes some key indicators of AES’s performance during 1991–2001.

Values and Principles

AES’s unique organization and management systems were the direct result of the values upon which the company was established and which defined every aspect of its management. These values reflected the personal beliefs of the two founders, Roger Sant and Dennis Bakke. Both men were brought up in strongly religious families:

TABLE 19.4 AES's performance, 1991–2001

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Revenue (\$ million)	334	401	519	533	679	835	2,227	3,257	4,117	7,534	9,327
Sales backlog (\$ billion)	n.a.	29	27	43	41	51	98	116	138	217	n.a.
Net income (\$ million)	43	56	71	98	107	125	299	441	357	795	273
Earnings per share (\$)	0.16	0.20	0.25	0.33	0.35	0.40	0.79	1.11	0.84	1.66	0.52
Total assets (\$ billion)	1.4	1.6	1.7	1.9	2.3	3.6	11.1	12.9	23.2	33.0	36.7
Long-term debt:											
Non-recourse (\$ billion)	n.a.	1.1	1.1	1.0	1.1	1.6	4.5	4.5	9.5	12.7	14.7
Recourse (\$ billion)	n.a.	0.1	0.1	0.1	0.1	0.5	1.1	1.6	2.2	3.5	4.9
Stockholders' equity (\$ billion)	n.a.	0.2	0.3	0.4	0.6	0.7	2.0	2.4	3.3	5.5	5.5
Equity generating capacity (thousands of MW)	0.7	1.2	1.5	1.5	2.1	3.4	4.6	n.a.	n.a.	n.a.	50.8
Return on average equity (%)	48.6	35.1	29.2	28.3	22.6	19.7	17.1	20.2	12.6	17.9	4.9

SOURCES: ANNUAL REPORTS, UBS SECURITIES EQUITY RESEARCH.

Bakke as a Baptist, Sant a Mormon. Bakke was raised on a farm in Washington State. From the age of five he had worked in the fields and by the time he was 18 he had built up a herd of 29 beef cattle. Bakke's attitude to enterprise and material possessions was strongly influenced by ideas of Christian stewardship, which emphasized responsibility, building for the future, and sharing good fortune with others. Sant attended Brigham Young University and spent two years as a missionary with Native Americans in Wisconsin. Over time, Sant became less committed to the church and increasingly active in the environmental movement.

From the outset, both men viewed AES as an opportunity for them to pursue their values and effect a fundamental change in business practices. In a section of its 10K report entitled "Principles, Values and Practices," AES stated:

A core part of AES's corporate culture is a commitment to "shared principles or values." These principles describe how AES people endeavor to commit themselves to the Company's mission of serving the world by providing safe, clean, reliable and low-cost electricity. The principles are:

- Integrity – AES strives to act with integrity, or "wholeness." AES people seek to keep the same moral code at work as at home.
- Fairness – AES wants to treat fairly its people, its customers, its suppliers, its stockholders, governments, and the communities in which it operates.

- Fun – *AES desires that people employed by the Company and those people with whom the Company interacts have fun in their work. The Company believes that making decisions and being accountable is fun and has structured its organization to maximize the opportunity for fun for as many people as possible.*
- Social Responsibility – *Primarily, the Company believes that doing a good job at fulfilling its mission is socially responsible. But the Company also believes that it has a responsibility to be involved in projects that provide other social benefits, and consequently has instituted programs such as corporate matching of individual charitable gifts in addition to various local programs conducted by AES businesses.*

AES recognizes that most companies have standards and ethics by which they operate and that business decisions are based, at least in part, on such principles. The Company believes that an explicit commitment to a particular set of standards is a useful way to encourage ownership of those values among its people. While the people at AES acknowledge that they won't always live up to these standards, they believe that being held accountable to these shared values will help them behave more consistently with such principles.

AES makes an effort to support these principles in ways that acknowledge a strong corporate commitment and encourage people to act accordingly. For example, AES conducts annual surveys, both company-wide and at each business location, designed to measure how well its people are doing in supporting these principles through interactions within the Company and with people outside the Company. These surveys are perhaps most useful in revealing failures, and helping to deal with those failures. AES's principles are relevant because they help explain how AES people approach the Company's business. The Company seeks to adhere to these principles, not as a means to achieve economic success but because adherence is a worthwhile goal in and of itself.⁴

Sant and Bakke recognized that these values could not be easily reconciled with the concept of a shareholder-focused, profit-maximizing corporation, and both leaders made it very clear where their priorities lay:

Where do profits fit? Profits . . . are not any corporation's main goal. Profits are to a corporation much like breathing is to life. Breathing is not the goal, but without breath, life ends. Similarly, without turning a profit, a corporation too, will cease to exist . . . At AES we strive not to make profits the ultimate driver of the corporation. My desire is that the principles to which we strive would take preeminence.⁵

AES's commitment to its values, at the expense of shareholder gain where necessary, was indicated by the proviso that AES inserted in all of its prospectuses for new security offers which identified AES's values as a source of investor risk:

The Company seeks to adhere to these principles, not as a means to achieve economic success, but because adherence is a worthwhile goal in and of itself. However, if the Company perceives a conflict between these principles and profits, the Company will try to adhere to its principles – even though doing so might result in dominated or forgone opportunities or financial benefits.⁶

The AES principles and their implementation reflected a set of assumptions about human nature. Sant and Bakke believed in the ultimate goodness of people – “Man is made in the image of God,” declared Bakke.⁷ Hence, within organizations, people can and should be trusted to exercise responsibility, and at the same time should be held accountable. Critical to the ability to motivate people is the innate desire of people to make a contribution to society. This implies that, for an organization to be effective and to harness human effort and ingenuity, the organization must be committed to a wider social purpose. These views are at variance with many of the assumptions on which many traditional management systems and techniques are based and imply a different approach: “[t]he people in AES are not principally economic resources. We are not tools of the corporation. Rather we hope the corporation is structured to help individuals make a difference in the world that they could not otherwise make.”⁸ Table 19.5 summarizes some of the ways in which Bakke believed that AES was different from other companies.

Organizational Structure and Management Systems

AES’s organizational structure and management systems were manifestations of its values and principles. AES described the key features of its organization in its statement of values:

In order to create a fun working environment for its people and implement its strategy of operational excellence, AES has adopted decentralized organizational principles and practices. For example, AES works to minimize the number of supervisory layers in its organization. Most of the Company’s plants operate without shift supervisors.

The project subsidiaries are responsible for all major facility-specific business functions, including financing and capital expenditures. Criteria for hiring new AES people include a person’s willingness to accept responsibility and AES’s principles as well as a person’s experience and expertise. Every AES person has been encouraged to participate in strategic planning and new plant design for the Company. The Company has generally organized itself into multi-skilled teams to develop projects, rather than forming “staff” groups (such as a human resources department or an engineering staff) to carry out specialized functions.

Many people have asked us about our team structure and how it works. To begin with, there is no one person in charge of teams and there is no Human Resources department. Teams are the basis of our structure, and they encompass the four values of our company. They are fluid; many people are members of more than one team at one time. A team is somewhat autonomous; all decisions about a project are made within that team, with final say granted to that team. Decisions are made not from the top-down, but from the bottom-up. Furthermore, responsibility is pushed to the lowest level possible, encouraging everyone to be part of a decision. As a result, each team member views the project in terms of a whole. Colleagues and team members must trust each other to follow through to the best of their ability.

Because people are what make up AES, we have decided not to resort to an organizational model. Instead, we give you the following comments from AES people regarding teamwork. In general, AES teams work extremely well in both

TABLE 19.5 What made AES different?

Conventional approach	Dennis Bakke's approach
More than 95% of important decisions are made by official leaders of the organization, officers and board members	Some 99% of all important decisions are made by non-leaders
Employees have established expenditure limits above which they must obtain prior approval	No approval by supervisors and higher-ups is required for spending company money; only obtaining advice is mandatory
Organization charts are published and job descriptions are determined for everyone by managers and HR dept.	No official organization charts; no job descriptions except those that say "Do whatever it takes" or ones written by the employee
Under "control" philosophy, the job of supervisors is to make decisions, hold people responsible, and perform a host of other tasks, making it impossible for more than a few people to report to any one leader. A large organization may require eight to 12 layers of management	No more than three to five supervisory layers between the CEO and an entry-level person. Each person is responsible for managing himself or herself
Leaders see their role as managing people and resources	Leaders see their role as serving other employees
Managers are responsible for closely monitoring employees and holding them accountable for performance	Leaders advocate self-accountability, self-initiative, self-control, and individual responsibility among employees
Many separate staff groups oversee operations. Members of each staff group have similar skills and educational backgrounds	Minimal number of specialist staff groups (strategy, finance, HR, etc.). These functions are assigned to local operating teams
Financial management, risk assessment, and new business development are set apart from general operations	Financial management, risk assessment, and new business development are important elements of each person's job
The principal purpose of the company is creating shareholder value, although other purposes or goals may be mentioned	The principal goal or purpose of the company is stewarding its resources to serve society in an economically strong manner
Shared values are promoted as a technique to achieve economic goals	Shared values are goals to which the company aspires in and of themselves
Board of directors sees primary role as representing the interests of shareholders	Board of directors sees role as representing the interests of all stakeholders (employees, suppliers, shareholders, customers)

achieving a common goal and having fun while doing so. The following ideas provide insight on what makes teams work well and what can stimulate true and productive teamwork.

"Teams imply friendship; not only the ability but the desire to work together. Starting with the wonderful example set by the original AES team, Roger and

Dennis, working together in small groups has been a natural way to get big things done while preserving the dignity of each person.” Tom Tribone.

“There are two reasons why teams are successful at AES: the type of people we have here and the environment in which they work. People at AES tend to be independent and thrive in a loose environment where roles and responsibilities are not always clearly defined. The environment at AES is one where responsibility is pushed down to the lowest level possible, encouraging everyone to take ownership for not only their piece of the project, but for the project in its entirety.” Michael Cranna.⁹

This is not to say that AES lacked formal structure altogether. The most striking feature of its organization was the few layers of hierarchy: until the mid-1990s there were only three organizational layers between the front-line employees and the CEO. AES was divided into regional organizations or “groups.” These groups comprised the different plants, each of which was headed by a plant manager. Within each plant there were typically seven areas or “families,” each of which was headed by a superintendent.

Figure 19.1 shows AES’s formal structure at the beginning of 2002.

No Functional Departments

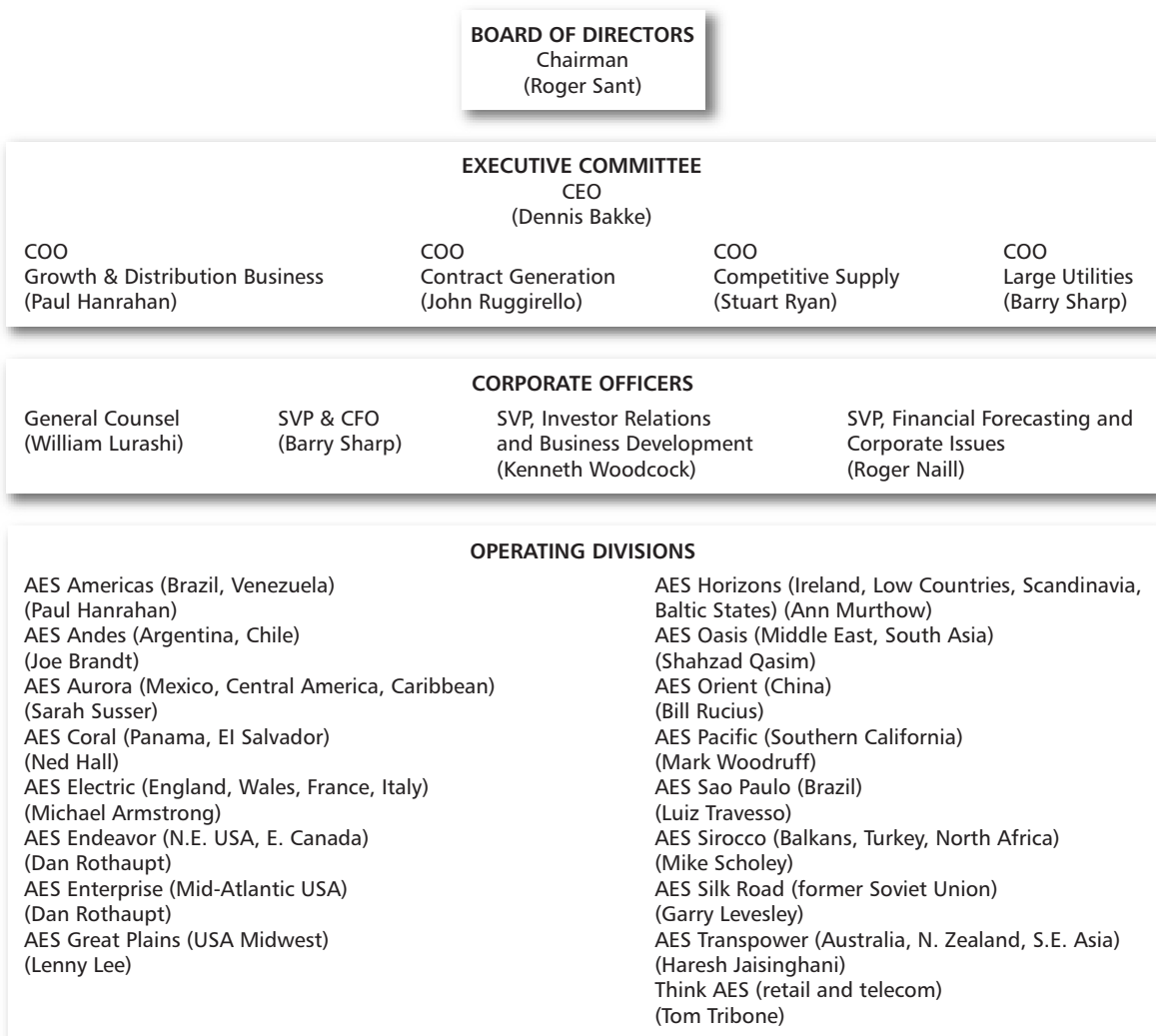
The company did not have a legal, human resources, or any other department. Decisions in such matters were made by teams at the plant level, which oftentimes had little or no experience in those decision areas. CFO Barry Sharp estimated that the company had raised \$3.5 billion to finance ten new power plants, but he was personally responsible for raising only \$300 million of that sum. The rest was secured by decentralized, empowered teams. When AES raised 200 million pounds sterling (about \$350 million) to finance a joint venture in Northern Ireland, two control room operators led the team that raised the funds.¹⁰ The same went for other areas of financial management. Treasury operations were decentralized to the individual plant level, where they were performed by teams of non-specialists:

His hands still blackened from coal he has just unloaded from a barge, Jeff Hatch picks up the phone and calls his favorite broker. “What kind of rate can you give me for \$10 million at 30 days?” he asks the agent, who handles Treasury bills. “Only 6.09? But I just got a 6.13 quote from Chase.”

In another room, Joe Oddo is working on J. P. Morgan & Co. “6.15 at 30 days?” confirms Oddo, a maintenance technician at AES Corp.’s power plant here. “I’ll get right back to you.”

Members of an ad hoc team that manage a \$33 million plant investment fund, Messrs. Oddo and Hatch quickly confer with their associates, then close the deal. “It’s like playing Monopoly,” Mr. Oddo says as he heads off to fix a leaky valve in the boiler room, “Only the money’s real.”¹¹

Similarly, there was no human resources department. At the corporate level there were no staff specialists dealing with salary ranges, or annual review procedures, or personnel policies, or contract negotiations with unions. There was a person whose responsibility was to track 401k retirement plan benefits and send out the necessary reports, but that was about it at the corporate level. Everything else was devolved to the individual divisions, and within these it was the teams within each plant that handled almost all the human resource functions.

FIGURE 19.1 AES's company structure

SOURCE: AES, 10-K REPORT, 2001.

The company operated without written policies or procedures. Issues such as hiring practices, leave periods, and promotion criteria, which in more conventional companies would be spelled out in a “Policies and Procedures” handbook, were left at the employees’ discretion. When trying to find out how much time she could take off after the birth of her daughter, a Project Director for AES Puerto Rico discovered that the company did not have a policy about maternity leave. After investigating what other “AES people” had done, she decided to do what made sense for both herself and the business requirements of the project. In the end she decided to take three months, but she made herself available at critical points in the project’s execution.¹²

Virtually all human resource decisions were made at plant level, and, within the plant, decision-making authority was located among the different teams. For example:

- *Recruiting.* The recruiting process was done at the plant level, without any support or guidelines from corporate headquarters. AES people at all levels were committed to the hiring process, and everyone could participate in it. The process generally involved an initial résumé review, and a phone interview followed by a group interview. Interviews usually did not include technical questions. Instead, they focused on characteristics that helped determine how the candidate would fit with the company's culture and values. There was little importance given to the candidates' educational background or experience, as greater emphasis was placed on the candidates' desire to learn, contribute, and grow, as well as their personal values and self-motivation.
- *Training and development.* In line with corporate values, AES employees were empowered to make decisions about their own development. Training was mostly done on-the-job, through open communication channels and embedded advice-seeking practices. However, AES people were free to take outside classes and they were reimbursed for them, as long as the courses were work-related.
- *Career paths.* Regarding development, there were no established career paths. Rather, the company encouraged flexibility, which was a necessary requirement in such a dynamic industry. Because one of the company's shared values was to "have fun," employees were encouraged to move within the company if they felt their current assignment was "boring." Job vacancies were always posted and promotion decisions were made at an area superintendent's meeting.
- *Compensation and benefits.* AES did not have a set salary schedule for any given job, and salaries were determined based on what others were being paid inside and outside the company. Raises were given every year and superintendents usually determined them in an annual meeting. Most AES people put their retirement savings in company stock, and the company matched up to 5% of the person's salary in the retirement plan.

This emphasis on multi-functionalism was central to AES's concept of making work fun. The key was to make people's work fulfilling by continually providing challenges and learning experiences. Moreover, argued Bakke, specialization did not promote efficiency or better decision making: "As soon as you have a specialist who's very good, then everyone else quits thinking," Bakke said. "The better that person is, the worse it is for the organization. The information goes through the specialist, so all the education is to the person who knows the most."¹³

Moreover, AES relied heavily on outside expertise. A key aspect of the system of empowerment was that individuals and teams were encouraged to seek out the best advice available, whether it was within the company or outside. In relation to finance, while AES's financial management and project management teams lacked great depth in financial expertise, they drew upon the knowledge of bankers and financiers. In any event, Bakke's view was that most management expertise, whether functionally specialized or general management skill, was not inherently difficult. Motivation,

attitude, and a willingness to learn were more important determinants of ultimate performance.

Decentralized decision making and lack of functional expertise meant that AES frequently made mistakes – sometimes big ones. AES’s experience in the former Soviet republic of Georgia displayed an inability to appreciate the implications of Georgia’s political or criminal environment. The result was a \$300 million loss for AES.¹⁴ AES also experienced dire government relations in Hungary.

The “Honeycomb”

AES referred to its organizational structure as a “honeycomb.” The idea was that each plant comprised a number of small, flexible, self-managed teams who were able to operate cooperatively and efficiently without any centralized direction. At the basis of this structure was the belief that organizations did not need to be managed. Thinking, motivated people could manage themselves and undertake the communication and mutual adjustment needed to coordinate complex tasks. According to Dennis Bakke, the key to effective decentralization was keeping the basic units of organization small:

I think of AES as a conglomeration of small communities. And I don’t think there’s any company in the world that’s so big that you can’t organize this way. Even a plant with 400 people can be broken down into smaller groups. It’s a small enough community that there is the ability to have an accountability structure within it, you know, a social structure as opposed to a military structure. We will break down the Kazakhstan plant into four units. How can we stay small and be big? By breaking the organization into groups with chief operating officers.¹⁵

The principle of self-organization imposed a very different role on managers from the conventional management model. Indeed, the term “manager” was seldom heard within AES; it was at odds with the principle of letting people decide for themselves. The example came from the top. “The most difficult thing for me as CEO,” confided Bakke, “is not to make decisions.” If individuals were to develop, they must be given responsibility and be allowed to learn:

[T]he modern manager is supposed to ask his people for advice and then make a decision. But at AES, each decision is made by a person and a team. Their job is to get advice from me and from anybody else they think it’s necessary to get advice from. And then they make the decision. We do that even with the budget. We make very few decisions here [indicating the headquarters office]. We affirm decisions.¹⁶

Sant made similar observations:

If Dennis and I had to lead everything, we couldn’t have grown as much as we have. People would bring deals for us to approve, and we would have a huge bottleneck. We’ve shifted to giving advice rather than giving approval. And we’ve moved ahead much faster than we would have otherwise.¹⁷

One consequence of this approach was the small size of AES’s corporate headquarters. At any point in time there might be between 40 and 70 AES employees at the Arlington office, but in terms of actual corporate staff, these numbered only about 35.

In terms of performance, one of the most important advantages of the AES system was that it permitted speed in decision making, preparing bids, and completing projects. AES abounded with a folk history of teams and individuals given huge responsibilities or thrust into unique and unexpected situations. Consider the following:

- Oscar Prieto, a chemical engineer with two years' experience with AES, was visiting AES headquarters in May 1996 when he was asked by Thomas Tribone to join a meeting: "I've got 14 people from France and some guys from Houston coming to talk about buying a business in Rio de Janeiro. We've only got two AES people. Could one of you show up?" The meeting with Electricité de France and Houston Light & Power concerned a possible joint bid for one of Brazil's largest utilities, which was being privatized. Within a month, Tribone was on his way to Paris to negotiate an agreement with Electricité de France. The deal was concluded, and by 1997 Tribone had moved to Rio to become one of the utility's four directors and a key player in a succession of deals in which AES acquired a string of power plants and distribution facilities in Brazil and Argentina.
- The development of the \$404 million Warrior Run power plant in Cumberland, Maryland was undertaken by an AES team of ten people who handled all the work necessary leading up to the plant's groundbreaking in October 1995. They secured 36 different permit approvals involving about 24 regulatory agencies and arranged financing that involved tax-exempt bonds and ten lenders. At other companies, such a project would typically involve well over a hundred employees.
- Scott Gardner joined AES in 1992 right after graduating from Dartmouth College. Gardner joined a team developing a \$200 million cogeneration plant in San Francisco. "It involved a lot of work and few people to do it," he says. "I took on tasks that ranged from designing a water system to negotiating with the community to buying and selling pollution credits." Gardner also helped lead a bid for a \$225 million cogeneration plant in Vancouver, British Columbia. When a comparable deal emerged in Australia, Gardner volunteered for that assignment. Two weeks later, he was on his way to Brisbane. "My task was to understand an unfamiliar regional power system, develop a design for the plant, and prepare a financial and technical bid document – all in six weeks," he says. When Gardner's proposal made the final round of competition, his division manager had him negotiate the terms of the \$75 million deal. "The stress was incredible, but I was having fun," he says. His bid won. "I held a press conference and was interviewed by local TV stations," says Gardner, who has since left AES to attend business school. "I had to pinch myself to be sure this was happening."¹⁸
- Paul Burdick, a mechanical engineer, had only been at AES briefly when he was asked to purchase \$1 billion in coal. "I'd never negotiated anything before, save for a used car," he said. Burdick spent three weeks asking questions of people both within and outside of the company on how to accomplish the task. At AES, he says, "You're given a lot of leeway and a lot of rope. You can use it to climb or you can hang yourself."¹⁹
- Ann Murtlow, a chemical engineer with no experience in pollution abatement, was given the job of buying air-pollution credits. She had already purchased

the option to buy \$1 million in credits when she discovered that the option she had bought was for the wrong kind of credit and useless to AES.

The Relationship with Employees

The AES principles and its concept of the honeycomb organization implied a different type of relationship between those employed and the corporation than that which characterized most companies. To begin with, the absence of functional specialists and the ideas about self-organization required a tremendous amount of information-sharing. According to the company, employees were given full access to the company's operating and financial information. Because of the extent of employee access to information that would normally be confidential at other companies, AES listed all its employees as "insiders" in its submissions to the SEC.

One of AES's crusades was to eliminate the distinction between salaried and hourly paid employees and to put all employees on a salaried basis. The 1997 Annual Report stated the goal of eliminating hourly payment systems. By the end of 1998 considerable progress had been made with more than half of AES's US employees salaried – despite the restrictions imposed by Federal health and safety legislation which perpetuated staff/worker distinctions. The primacy that AES accords its "people," as the company refers to its employees, was emphasized by its practice of listing every employee's name in the back of the AES Annual Report. However, once AES's total employment passed the 6,000 mark, this was no longer feasible.

AES and the Environment

AES's deep commitment to the environment extended well beyond Chairman Sant's personal involvement in environmentalist issues and his active roles in the World Wide Fund for Nature and as a member of the Environmental Defense Fund. AES used forestation to compensate for the emissions it generated. When the company constructed a coal-fired plant in Montville, Connecticut, it calculated that it would generate 15 million tons of carbon dioxide over its estimated life of 40 years. It devised a scheme to plant 52 million trees in Guatemala to offset these emissions. According to AES Executive Vice-President Robert F. Hemphill: "Making electric power historically has had a relatively high level of environmental assault. We are not planting trees as part of our strategy to make us a more valuable company, we're doing it because we think it's a responsible thing to do." AES's average company-wide emission levels were 40–60% of permitted rates.²⁰

The Challenge of Multiculturalism

As more and more of AES's business became located outside the US, and non-US citizens far outnumbered US citizens among AES's employees, an increasingly important challenge was to retain AES's culture as the company grew. The company acknowledged that even the stated value of having fun was difficult to accomplish with so many people with many different backgrounds. By the end of the 1990s, fewer than 8% of AES people were native English speakers. The principles of equality, teamwork, empowerment, and individual initiative were also likely to be more difficult to implement in traditional Islamic societies such as Pakistan, and countries with a socialist heritage such as China, Kazakhstan, Ukraine, and Georgia.

Nevertheless, AES remained committed to its principles not just for its US concerns, but for all its worldwide operations. Bakke firmly believed that the AES principles were universal and were not culturally specific either to the US or to the West in general. AES's experience was that its own corporate culture could be transplanted in many different national cultures. The challenges presented in running one of the world's biggest (and once one of the most dilapidated) coal-fired power stations in Kazakhstan, and turning around heavily bureaucratized, former state-owned utilities in South America provided remarkable test-cases in AES's ability to export its company culture. The results were often amazing. Even though AES was unable to eliminate the distinction between salaried and hourly paid employees within the US, in England, Argentina, and Pakistan it moved to an all-salary workforce.

Instilling the AES culture into the 100-year-old Light Servicios de Electricidade involved, first, a generous severance package to cut the workforce by half, second, the careful selection of young, motivated engineers and supervisors to take key positions as facility supervisors, and finally, the devolving of decision-making power to them. At Light's Santa Branca facility, Oscar Prieto chose Carlos Baldi, a 34-year-old engineer, to lead the plant. "I knew he was the right person," says Prieto, "He was young, eager to do more." After agreeing to shared goals and expectations – zero accidents, thrifty construction budgets – Prieto turned Santa Branca and a \$35 million upgrading project over to Baldi. After a short while, Baldi was managing in the same way with his project and team leaders.²¹

2002: Retrenchment and Restructuring

During the first quarter of 2002, CEO Dennis Bakke was forced to shift his attention from the issues that most interested him – AES's ability to maintain its values and live its principles – to address the fallout from Enron, Argentina, Venezuela, September 11, and the California power crisis that were devastating AES's share price. On February 20, AES announced a major shift of strategy. In the expectation that AES would be unable to access the capital markets in 2002 for additional borrowing, it would be forced to rely on its internally generated cash flows to fund operations and capital expenditures. Retrenchment measures included: reducing capital spending by \$490 million in 2002, selling several existing businesses, and withdrawing from its merchant generation businesses.²² However, several analysts were doubtful as to AES's ability to command a fair value for the assets it was putting up for sale. In a note to clients, Ronald Barone of UBS Warburg wrote: "The markets in which AES operates are depressed and there are a number of other companies that are already looking to dispose of similar assets."

Bakke recognized the seriousness of AES's situation: he opened his conference call to analysts with the simple statement: "Our world has changed." In the accompanying press release he stated: "We are taking aggressive action to restructure and de-leverage AES. Given today's market climate we are going to rely on the cash flows of our solid operating businesses. We have taken additional steps to provide a more substantial liquidity cushion. We believe the actions we have announced will provide for a more conservative business model."

Under pressure from the board of directors, Bakke was forced to make organizational changes. An executive office was created comprising Bakke as CEO together with four newly created chief operating officers – each with responsibility for one of

AES's four lines of business. The reorganization was intended to: "enhance operating performance, including further reductions of operating costs and revenue enhancements . . . Each COO is directly responsible for managing a portion of the Company's geographically dispersed businesses as well as coordinating Company-wide efforts associated with one of the Company's business segments. In addition, two special offices, the Cost Cutting Office and the Turnaround Office, have been created to bring improved focus and coordination to the management of expenses across the Company and to improve or dispose of businesses that AES believes to be under-performing businesses from a return on capital perspective, respectively. Each of these offices reports to the Executive Office."²³

The new emphasis on financial control and centralization of decision making conflicted directly with AES values and management principles. But how far did it mean an irreversible rejection of the management model that Bakke and Sant had created at AES? The circumstances affecting AES in 2002 were a "perfect storm" of coincidental adversities: Enron, the California energy crisis, 9/11, the collapse of UK electricity prices, and instability in several of the countries where AES did business – Argentina, Venezuela, and Pakistan. Inevitably AES would have to downplay "integrity, fairness, fun, and social responsibility" while it weathered short-term turbulence. But what about the longer term? The pressure that the AES board had come under from investors and banks demonstrated that the financial community was tolerant of AES's radical approach to management only when its share price was buoyant. But even without this pressure, how realistic was it for AES to maintain its informal, principles-based approach to management in a company that was a multinational employing almost 40,000 people?

Moreover AES's industry environment had changed. Not only was competitive pressure intensifying, but the basis of competition was shifting. In a tougher competitive environment, operational efficiency and entrepreneurial zeal were no longer enough; sophisticated financial structuring, risk management, and government relations expertise were increasingly important. These capabilities tended to be associated with functional experts at head office rather than with task forces comprising front-line employees. AES's unique organizational structure, management systems, and corporate culture had shown themselves to be highly effective both in the efficient operation of power stations and in supporting the entrepreneurial capabilities required for winning power supply contracts all over the world. Moreover, because of its very low rate of employee turnover and open internal communication, it has been very effective in retaining this expertise and sharing it internally. Looking ahead, a critical question was whether AES's management philosophy and methods had reached the limits of their effectiveness and henceforth AES would need to replace its emphasis on fun and social responsibility with a more conventional approach.

Notes

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- 15 Jeffrey Pfeffer, op. cit., p. 14.
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