

1-1-2006

## 'Flex Your Power': Energy crises and the shifting rhetoric of the grid

Anne Marie Todd

*San Jose State University*, [annemarie.todd@sjsu.edu](mailto:annemarie.todd@sjsu.edu)

A. Wood

*San Jose State University*

Follow this and additional works at: [https://scholarworks.sjsu.edu/comm\\_pub](https://scholarworks.sjsu.edu/comm_pub)



Part of the [Communication Commons](#)

---

### Recommended Citation

Anne Marie Todd and A. Wood. "Flex Your Power': Energy crises and the shifting rhetoric of the grid" *Atlantic Journal of Communication* (2006): 211-228. [https://doi.org/10.1207/s15456889ajc1404\\_2](https://doi.org/10.1207/s15456889ajc1404_2)

This Article is brought to you for free and open access by the Communication Studies at SJSU ScholarWorks. It has been accepted for inclusion in Faculty Publications by an authorized administrator of SJSU ScholarWorks. For more information, please contact [scholarworks@sjsu.edu](mailto:scholarworks@sjsu.edu).

**“FLEX YOUR POWER”:  
ENERGY CRISES AND THE SHIFTING RHETORIC OF THE GRID**

**Cite as:** Todd, A.M. & Wood, A. (2006). ‘Flex Your Power’: Energy crises and the shifting rhetoric of the grid. *Atlantic Journal of Communication*. 14, 4, 211-228.

Dr. Anne Marie Todd  
Department of Communication Studies  
HGH 205, One Washington Square  
San Jose State University  
San Jose, CA 95192-0112  
[amt@sjsu.edu](mailto:amt@sjsu.edu)

Dr. Andrew Wood  
Department of Communication Studies  
HGH 210, One Washington Square  
San Jose State University  
San Jose, CA 95192-0112  
[wooda@email.sjsu.edu](mailto:wooda@email.sjsu.edu)

An earlier draft of this essay was presented at the 2005 conference of the Western States Communication Association, San Francisco, CA.

## *Abstract*

In response to widespread power outages, rolling blackouts and ubiquitous energy debates, this essay considers our relationship to energy and the grid that produces it. First, we investigate California's multimedia Flex Your Power campaign, which individuates consumers as nodes of the grid to emphasize their responsibility to maintain a stable energy supply. Second, we examine state and national responses to the 2003 blackout in the Northeastern United States, attending to three strategies through which grid administrators sought to impose order, enact hierarchy and deindividuate power. We propose that the grid invokes personalization at the "local" level and abstraction at the national level. These contradictory (but overlapping) narratives show a complex, nuanced set of relationships between human society and mechanized processes of power distribution.

“FLEX YOUR POWER”:  
ENERGY CRISES AND THE SHIFTING RHETORIC OF THE GRID

We worry, complain and agonize about power when we don't have it -- when the lights go out and our appliances fail. But we hardly give it a thought when we have it. Such is our all-encompassing dependence on what is arguably one of the largest and most complicated machines ever built by man [sic]. (Washington Post, September 23, 2003, p. E01)

On August 14, 2003, the largest electrical blackout in U.S. History cascaded across a large region straddling the United States and Canada, cutting power to about 50,000,000 people in the Northeast, Midwest, and Ontario. The outage occurred quickly, rippling across a large area, affecting hundreds of cities. New Yorkers were stranded by non-functioning subway lines, Ohioans battled massive fires, and travelers throughout the area found themselves stranded in airports. Initial research into the blackout's economic impact on the United States economy estimated a cost of \$6.4 billion, mostly due to lost wages and earnings (Anderson Economic Group, 2003). Later estimates ranged from \$7-10 billion (Electricity Consumers Resource Council, 2004). The cause of this “cascading blackout” was initially unknown—observers pondered the possibilities of a plant fire in Ohio, a weakness in Canadian facilities and, of course, terrorist attack (e.g. CNN, 2003). Meanwhile, across the country, California had just experienced another summer of power conservation and restriction prompted by an energy crisis that necessitated rolling blackouts in 2001.

While power outages are nothing new, the California rolling blackouts and Northeast power outage prompt us to consider our relationship to energy and the electricity grid that produces it. Initially, we might be tempted to view the grid, its functioning, and its frustrations, as a purely technical process: a vast machine whose workings comprise a “black box” that may not be opened by qualitative research. After all, according to its operators, the grid is perhaps too vast to be “read” as a mere text:

The North American electricity system is one of the great engineering achievements of the past 100 years. This electricity infrastructure represents more than \$1 trillion (U.S.) in asset value, more than 200,000 miles . . . of transmission lines operating at 230,000 volts and greater, 950,000 megawatts of generating capability, and nearly 3,500 utility organizations serving well over 100 million customers and 283 million people. (US-C Taskforce, p. 5)

We note the numbers and their implications. But we disagree with the notion that the grid simply offers a mathematical means to order disparate points into a coherent system. We argue instead that the grid reflects a system of social ordering; it is a practice of human communication designed to maintain power in both a literal and figurative sense.

To analyze the grid as a tool to communicate power, our essay proposes a Foucauldian framework. This perspective re-reads the grid as a discursive practice of both individuation and deindividuation. We then investigate two contrasting strategies enacted by state and national administrators to confront energy crises. First, we examine how California's multimedia Flex Your Power campaign individuates consumers as nodes of the grid to emphasize their responsibility to maintain a stable energy supply. Then, we explore how the 2003 power outage resulted into discourse that seeks to impose order through the invocation of hierarchy and deindividuated power. Throughout this analysis, we propose that the grid invokes contradictory rhetorics: personalization at the local level and abstraction at the national level. These contradictory (but overlapping) narratives co-construct a singular discourse of the modern nation confronting an emerging age of regionalism and globalization.

### **The Grid, Discourse, and the Distribution of Power**

The "grid" offers a useful lens to public life. As a method of organization, the grid

evokes an image of objects (and persons) placed equidistant from one another with mathematical precision. Kunstler (1993) reminds us how this kind of order has been historically associated with a uniquely American notion of modernity, describing the post-Revolutionary War grid used to lay out the cities of the new nation “as the product of the era’s neoclassical spirit, at once practical and idealistic. It was rational, mathematical, and democratic. It was fair and square, and easy to understand” (pp. 29-30). As such, gridded-modernity reflects a series of strategies through which the natural world becomes edited according to the designs (never the whims) of dispassionate planners and steady-eyed architects. Even so, Michel Foucault reminds us that any territory, no matter how it may be mapped, reflects a certain kind of “juridico-political...power” (1980a, p. 68). From his perspective, the city grid reflects a matrix of regulations, a means to discipline the movements of people and resources (Foucault, 1994b). For our purposes, one question remains: is this power individuated or deindividuated?

Individuation transforms the distribution of power into an aesthetic, a whimsical fetish, an American moral statement illustrated by the Googie “dingbat” or the neon sign. In his book Narratives and Spaces, David Nye (1997) illustrates this notion with his description of the electric paradise of Times Square:

From one point of view its presence signified the standardization of products, the use of advertising as a means of mass persuasion, the power of large corporations, and the widespread celebration of technology. But for the artist and the writer, the landscape’s chaotic brilliance also expressed an implicit ideology that valued simultaneity, fragmentation, and montage. This new electric landscape stamped itself upon the imagination, and became a central part of the intricate topography of modernist experience. (p. 88)

Visiting “spaces” such as Times Square, we encounter modernity as a locale, almost a cathedral evoking an electrical sublime (Thrift, 1996). This sublime celebration of power

reflects one strategy for its frequently undemocratic distribution: it must be named, marked, separated; it must be individuated.

This process also includes the body as a node of power. Foucault's (1969) discussion of archaeology and (1979) explication of biopower describe the power of individuation, noting the socially constructed landscape of relationships between humans and nature, the state and its populace, and individuals' minds and bodies. Foucault argues that bodies become transformed into signs of power; they communicate its expanses and limits through demonstrations of docility. In this manner, the individuated body reflects a kind of communication that bridges the gap between abstract order and the corpus of social control:

In a society such as ours... there are manifold relations of power which permeate, characterize and constitute the social body, and these relations of power cannot themselves be established, consolidated nor implemented without the production, accumulation, circulation and functioning of a discourse. (Foucault, 1980b, p. 93)

The discourse of individuation reflects one strategy for the distribution of power, typically through a shift of authorship from one entity to another. Analysis of this process requires the isolation of texts that sanction and set apart objects and persons, rendering even more responsible for the grid than the authors and architects who built it.

A second approach concentrates on the deindividuation of power. This process of deindividuation reflects a different kind of discourse whose strategic abstraction appears to be authorless. By way of illustration, consider a contemporary roadmap of the Phoenix/Mesa metroplex with its axes of roads crisscrossing their ways in four cardinal directions toward the open plains beyond. A seemingly open discourse, the grid appears to be freely accessible to anyone who can read a map. Of course, a hierarchy emerges as various types

of streets stretch beyond the reach of the blue interstate highways that orient our navigation through the United States. This hierarchy reflects a form of administrative power as the grid of “freeways” and “surface streets” offer differing speeds and connect to differing locations. Moreover, there are some places that cannot be easily reached, or visited at all, even with a map. Thus the abstract map fails to offer a meaningful view of the territory. To understand the pulse of power within the grid, we must view it strategically as the construction of knowledge:

Once knowledge can be analysed [sic] in terms of region, domain, implantation, displacement, transposition, one is able to capture the process by which knowledge functions as a form of power and disseminates the effects of power. There is an administration of knowledge, a politics of knowledge, relations of power which pass via knowledge and which, if one tries to transcribe them, lead one to consider forms of domination designated by such notions as field, region and territory. (Foucault, 1980a, p. 69)

The transcription of the means through which power becomes transformed into knowledge begins by examining the strategies through which objects and bodies have been deindividuated.

In our analysis of recent discourses surrounding the North American power system, we propose that both individuation and deindividuation reflect shifting strategies employed to construct differing responsibilities of the grid’s administrators and consumers. To be sure, power relationships such as the individual and the state play themselves out in our general practices. However, questions of power and vested interest surrounding energy issues are revealed through our discursive practices (Holdsworth, 2003). As we analyze the formation of knowledge surrounding the grid, we can understand how power plays out beyond the textual world of discourse and into the realm of everyday life. To that end, we



undertake discursive analysis that offers multiple interpretations of a dynamic event that itself could not engender a static interpretation.

A discursive formation is defined neither in terms of a particular object, nor a style, nor a play of permanent concepts, nor by the persistence of a thematic, but must be grasped in the form of a system of regular dispersion of statements. (Foucault, 1980a, p. 63)

In our analysis, we encountered a dispersion of texts whose differing meanings contained a totalizing rhetoric about power in North America. Here, we employ Foucault's definition of discourse as:

... statements different in form, and dispersed in time, [that] form a group if they refer to one and the same object... that emerges in various ways in individual or social experience... in all the statements that named it, divided it up, described it, explained it, traced its developments, indicated its various correlations, judged it, and possibly gave it speech by articulating, in its name, discourses that were to be taken as its own. Moreover, this group of statements is far from referring to a single object, formed once and for all, and to preserving it indefinitely as its horizon of inexhaustible ideality. (Foucault, 1969, p. 32)

From this discursive standpoint, we selected artifacts that relate to each other and give each other meaning. Indeed, it is nearly impossible to isolate these texts from the context of governmental attempts to control energy use and responses to energy crises. Thus, this essay extracts meaning from the multiple texts provided by administrative responses to power crises and challenges. What remains is the need to investigate practices employed to communicate the supremacy of the grid and to affirm its "utility" when this product of planning and design fails us. Toward that end, we seek to explore a "rhetoric of the grid" as a contested terrain of administrative and consumer practices. We begin with strategies employed by California power administrators to individuate the grid through the docile

bodies of power consumers.

### **Grid-ed Individuals and Collective Power**

California's power crisis, experienced largely in the summer months of 2000 and January-August 2001, was striking evidence of what Energy Secretary Spencer Abraham warned was the country's most serious energy shortage since the 1970s (CNN, 2001). Some analysts blame the deregulation of the state's electric utilities in 1996 for California's twenty-first century energy shortages. Energy executives blame then-Governor Davis' failure to act immediately upon the first sign of power shortages (CNN, 2001). Given the conflicting nature of responsibility for the crisis, the state of California responded with a media campaign aimed at encouraging consumers to conserve, individuating consumers as responsible nodes of the energy grid.

Flex Your Power is a media campaign waged by California that includes a variety of media. One of the more visible elements of the Flex Your Power campaign was a series of television advertisements encouraging Californians to turn off lights and use major appliances on off-peak hours. These ads played in heavy rotation on California television stations in the summer of 2001 and are still broadcast, with less frequency, during summer months. While some critics saw these ads as having little impact, the larger Flex Your Power campaign is ongoing and California is now the most energy efficient state in the nation. Additionally, the California governor's office (under the leadership of Gray Davis

and later Arnold Schwarzenegger) created and hosts a website ([www.fypower.org](http://www.fypower.org)) dedicated to Flex Your Power. The site offers residential, commercial and industrial tips for saving energy; money saving tips, and some history of the power crisis—including speeches from Gray Davis, transcripts of phone calls. Finally, major policy addresses by the governor and press releases issued by his office help shape the Flex Your Power education campaign. This section identifies two strategies that shape the messages of Flex Your Power. First, through links between knowledge and power, individuals become the grid. Second, through the collective power of individuals, California becomes the grid.

### Individuals as the grid

Our critique is informed by the post-structuralist notion that individuals are shaped by sociological, psychological and linguistic structures and as such, are active producers of meaning. Multiple interpretations of the power crisis offer an understanding of how individuals are shaped by societal power and how they are positioned by the grid. Foucault extends his notion of state disciplinary power to a more biological understanding of how individuals are measured and controlled (Foucault, 1977 & 1979). Some theorists have extended it to non-human life (e.g. Darier, 1998; Rutherford, 1998). For the purposes of understanding the electrical power crises, what is important is the type of power relations inherent in the management of individual resource use. Power is “a right of seizure: of things, time, bodies and ultimately life itself” (Foucault, 1979, 136). So power involves the administration of individual human bodies as well as populations, or the “species body” (Foucault, 1979, 139). To underscore their message of the need to conserve, the governor’s office establishes the complicity of individuals for constructing and maintaining the health of the grid.

Biopower is a way of exercising power to control entire populations. This

technology of power is manifest through a set of regulatory operations that control modes of production and consumption:

Power relations can materially penetrate the body in depth, without depending even on the mediation of the subject's own representations. If power takes hold on the body, this isn't through its having first to be interiorized in people's consciousness. There is a network or circuit of bio-power, or somato-power, which acts as the formative matrix... within which we seem at once to recognize and lose ourselves. (Foucault, 1980c, p. 186)

Human use of and dependence on electricity implicates consumers in the functioning of the grid. Flex Your Power exhibits characteristics of biopower through its efforts to influence consumer behavior. The Flex Your Power website offers a variety of information for consumers. Part of the website gives them access to administrative responses with this knowledge they are complicit—they have power. In this way, the grid individuates power by encouraging consumers to be aware of and responsible for their own energy use. By seeing what the government is doing and can do, individuals are encouraged to participate in the process of maintaining the grid. Through the site they can even gain access to a matrix that shows the use of the grid.

Who and What Uses Our Energy? Electricity is consumed by five primary sectors: commercial, industrial, governmental, agricultural, and residential. Commercial and residential sectors consume the largest amounts of electricity, each comprising approximately 35 percent of statewide electricity loads at peak statewide use times.  
(Flex Your Power A)

Graphs of sector power use allow individuals to see the demand on the grid statewide. Here individuals have access to the knowledge of the wide impact of their energy use.

Californians can see the vectors of the grid and see themselves as part of the grid. With this extension from mechanical to bodily processes, Flex Your Power invokes the

responsibilities of consumers as an extension of the mechanistic distribution of energy to bodily power.

In addition to the corporeal connection, the Flex Your Power campaign also equates power and knowledge: “It only takes a little energy to save a lot” (Flex Your Power B).

Humans become part of the power system, and are powered by it. Here energy (electricity) is connected to human energy (effort); electrical juice is responsible for human capability.

The Flex Your Power website advertises its “energy knowledge base. Ask the energy brain how to stop your energy drain” (Flex Your Power B). When individuals have knowledge, they become part of the system. They have access to transcripts of conference calls between

Governor Davis’ administration officials and local operatives. This knowledge gives

individuals access to the system as incentives for wise energy use. This “economy of power” allows “the effects of power to circulate in a manner at once continuous,

uninterrupted, adapted, and ‘individualized’ throughout the entire social body” (Foucault,

1980d, p. 118). The Flex Your Power campaign individuates power: as Californians

understand their own place in the grid, they, as individuals, become aware of the effects of entire social body of which they are a part.

Individual responsibility is a large part of California’s energy campaign. In a public address, Governor Davis assures Californians of their energy security, but notes that

Californians have the power to keep the market stable:

Now, as you know, I have fought tooth and nail against raising rates. It's become increasingly clear, however, that with rising natural gas prices, the feds' failure to control costs, and the state's lack of supply, that some rate increases are needed to keep our lights on and our economy strong. But I remain committed to protecting average Californians from massive rate hikes. So I'm urging the Public Utilities Commission to adopt a plan that

will protect average consumers, reward those who conserve and motivate the biggest users to cut back. Under my proposal, more than half of you won't pay a penny more. ... The more you use, the more you pay. The more you conserve, the more you save. Conservation is our best short-term weapon against blackouts and price-gouging. By flexing your power, you'll help secure our energy future. (Davis, April 5, 2001)

Davis asks Californians to flex their power use, which will protect average Californians from increased electricity prices. Here the connection between knowledge and power is made explicit. Californians generate this power with knowledge of how to conserve. “The exercise of power creates and causes to emerge new objects of knowledge and accumulates information.... The exercise of power perpetually creates knowledge and, conversely, knowledge constantly induces effects of power” (Foucault, 1975, 752). This is the strategy of the Flex Your Power campaign: by giving individuals the knowledge of how to conserve, the state can wield the power of citizens’ conservation efforts to prevent future power shortages.

Wally McGuire, innovator and director of the Flex Your Power effort, notes that the campaign “is not only about energy conservation, but encouraging Californians to use energy efficient appliances that reduce consumption and lowers their energy bill.... If only half the households in California replaced their 10-year old refrigerator with a new Energy Star(r) qualifying model, we'd save enough energy to power California for 11 days” (Flex Your Power, August 10, 2001). Individual use is connected to the powering of the state. Households are located within the larger state grid of California and the electricity needs.

Californians can see their own connections to the grid in that how they use their energy affects the stability of power supply and security of the grid. Individual use of electricity is directly connected to the power grid. Flex Your Power uses individual responsibility as a key argument in their call for conservation. California’s energy narratives call into question our understanding of the grid as simply a mechanistic power distribution system, and even require a rhetorical (re)framing to incorporate individual roles

in the overall functioning of the grid.

### California as the grid

As we explore California's energy narratives beyond Flex Your Power's calls for individual conservation, we see an emphasis on California identity. Individual consumers are not only incorporated into the grid, but also are painted as Californians. "It is the population itself on which government will act either directly, through large-scale campaigns, or indirectly, through techniques that will make possible, without the full awareness of the people... the directing of the flow of population into certain regions or activities, and so on" (Foucault, 1994a, p. 217). The Flex Your Power campaign encourages Californians to conserve by connecting their activities directly with the health of California's energy grid. Part of this conceptualization of consumers as the grid is locating individual responsibility in the context of globalization. As consumers, Californians play a collective role in averting a power crisis. Individual Californians are aiding the fight for the stability of the grid, but are collectively powerful as a populace. Davis explicitly states that consumers are powerful in the stability and maintenance of the grid. He gives individuals responsibility for and to the grid.

Friends, we have a power shortage but we are far from powerless. We are 34 million strong and if each of us does our part, we can minimize disruptions and get through the summer. We are Californians. We've withstood earthquakes, floods, fires, and droughts. Yes, this mess is man-made, but with your help and God's blessing, we'll get through this as well.  
(Davis, April 5, 2001)

Californians are "far from powerless" because they are connected to each other through the grid; individuals' power use are linked through networks of electricity lines. The individuation of power constructs a gridded landscape, connecting Californians through their energy use.

In an increasingly globalized world, where local (energy) problems are connected, individuals can fix the power crisis by conserving together. Governor Davis heralds the state's citizens for helping to bring California's energy under control:

The greatest amount of credit goes to Californians. They took advantage of conservation incentives and used 9 percent less energy during peak hours during 2001 than they did during all of 2000. Today, California is the most electricity-efficient state, per capita, in the nation. Californians continue to conserve in record numbers. Though the state's troubles with energy are not yet over, California is now positioned to emerge from this challenge stronger than before. (Flex Your Power E)

The power crises have strengthened the state (economically) because of the collective efforts of consumers. California is strong because its people are strong. "California has the power of the world's sixth largest economy. Your individual efforts, multiplied by 35 million Californians, will make a real and immediate difference. All you have to do is *flex your power*" (Flex Your Power D). According to this rhetoric, when the people flex their energy use, California's dependence on the grid becomes much more flexible. As state control over natural resources is altered by trans-border relationships, administrators incorporate individual activity into the functioning of the state.

This can be seen in administrative responses where "power crises" become "energy challenges." Davis refers to California's energy situation as a "challenge" not a "crisis." The implications of this rhetorical choice are twofold. First, a challenge can be overcome; it is not an insurmountable obstacle, rather a test that we can pass (with the knowledge provided by Flex Your Power campaign). While challenge does not require a rethinking of our energy consumption, a crisis is something that ruptures the order of the status quo. Second, challenge means that the state of California, and by extension, humanity in general still have control. A crisis is something that happens out of our control, it happens because we did not have control. An energy challenge is something that is within the bounds of the state's purview: it is not out of control or unpredictable. It is predictable, if only because



they are about to provide the solution, or the means to meet this challenge. The message here is that the power shortage is simply a challenge that has arisen to our resource demands. The carefully worded phrases in Davis' public rhetoric and the Flex Your Power website strategically positions the state of California (its people and government) in control of the situation.

We are the grid, we are Californians, California is the grid

Part of the way that California tries to control the energy crisis is to invoke territorial rights of the state. This is Davis' claim to sovereignty. Davis says he wants to solve "California's Energy Challenge" by increasing power production within the state's borders: "By reducing our electricity demand by even a small amount, we can reduce the price, avoid shortages and lower energy bills. And our long range goal must be greater energy production within our borders" (Flex Your Power C). The idea that California should produce more energy within its borders invokes a territorial quality to the grid, making the lay out of the grid easily visualized as a map of the state. The message from the Governor's office is that as individuals we are the grid and we are Californians: California is the grid.

The rhetoric of the electricity grid is a demonstration of how nation (state) governments are trying to hold onto power over the populace in order to prevent and solve energy crises. This involves providing reliable, yet affordable energy. Applying Foucault's notion of biopower to the grid reveals how government and media responses to power crisis position individuals as part of the grid and given responsibility for and to effective power policies. Governments give consumers responsibility for solving the energy challenge to prevent further power crises. The grand narrative of the administrative response to the power crisis tells a story of how individuals are implicated for the power

crisis and how consumers are responsible for the community use of power crisis.

This is not just the experience of Californians, as we turn to examine the government responses to the 2003 Northeast blackout, we see a continued questioning in the media of individuals' relationship to the grid:

We are the grid. It's not a novel thought, just one that some of us tend to forget when the going gets tough, or hot, or cold, or dark, or hungry. There's the grid of transmission lines, but there's also the cultural interconnectedness of all of us who run the air conditioner, turn on the oven, plug in the laptop, swing by the ATM, slouch in front of the TV, or linger in a hot shower. (Minneapolis Star Tribune, August 20, 2003)

Foucault's notion of the production of knowledge situates the individual within modernity: human subjects both help create and are affected by power relations.

Power is maintained through knowledge(s) and ideologies in many ways. Foucault saw a constant articulation of power on knowledge and of knowledge on power. Power is productive in that it constructs the modern social structure and content and constitutes subjectivity as the individual body is constructed by the discipline of the institution and regulatory mechanisms of the state.

Asking how power is distributed through society demands that we investigate how individuals and the state each respond to the modern condition. A look at the administrative response to the crises illustrates how governments facing energy shortages place power at the hands of consumers. The education campaign of Flex Your Power show a reliance of knowledge and power and the consumers' ability to help the government dealing with this crisis while maintaining state order and control over the situation. However, the widespread Northeast blackout of August 2003 shows how the grid is more than individuals, it is the manifestation of a nation seeming to spin itself apart. Here, we note a significant shift in the rhetoric of the grid from corporeal to abstract power. We argue that this turn reflects a national response to more than its struggles to maintain power in a purely electrical sense; it

illustrates the difficulties of the nation-state to affirm its supremacy in the face of regional and global forces beyond its control.

### **Administrative Grid-ing**

The collapse of the power grid over such a large territory inspired nationalistic fervor on both sides of the US-Canada border. Where did the drain start? Who was to blame? In response to the significance of this power disruption President George W. Bush and then-Prime Minister Jean Chrétien ordered the creation of a U.S.-Canada Power System Outage Task Force (hereafter referred to as the US-C Taskforce) that would investigate the causes of the 2003 blackout and propose improvements to enhance the security and reliability of the North American grid. Co-chaired by the U.S. Secretary of Energy and the Canadian Minister of Natural Resources, the taskforce formed three working groups composed of industry and government experts that focused their attentions on the electrical system, related security matters, and the role of nuclear power plants in the blackout. Following the release of an interim report in interim report in November 2003, the US-C Taskforce announced its comprehensive findings in April 2004.

The 228-page report concentrated its findings on the series of local problems experienced by an Ohio utility, FirstEnergy Corporation, which included a downed tree that contributed to the initial interruption of power and the accidental shutdown of monitoring equipment that reduced “situational awareness” among utility operators. The report also highlighted larger problems affecting the entire grid, including failure of regional oversight entities to ensure the proper training of local technicians and lax oversight by the North American Electric Reliability Council [NERC], the non-governmental group of utility companies charged with regulating its own members through voluntary rules.

Reviewing the local split-second accidents of chance and failures of communication

that enabled a local outage to cascade into the largest blackout in North American history, the US-C Taskforce proposed 46 recommendations to reduce the risk of future blackouts. Among the most significant of these, the Taskforce advocated the creation of a new oversight body whose supervision of the grid would be backed by federal law, not corporate collegiality. Throughout the report, however, one finds little indication that either the U.S. or Canadian governments intend to alter the fundamental practices of post-deregulation energy industry. Intriguingly (and not too surprisingly) the Taskforce recommended that the existing oversight body could be charged with this new task so long as its funding and mandate originated with consumers and not utilities: “If the proposed U.S. reliability legislation passes, the North American Electric Reliability Council [NERC] may undertake various organizational changes and seek recognition as the electric reliability organization [ERO] called for in [proposed legislation]” (US-C Taskforce, p. 142).

Throughout the US-C taskforce report, one encounters a coherent communication strategy in which the technologies of the grid become mirrored in the defense of its practices. In this section, we offer the second of the essay’s two moves by investigating the US-C Taskforce Report response to the blackout of 2003. Doing so, we contextualize our analysis with a discussion of the “rhetoric of the grid” according to three practices: the grid imposes order, enacts hierarchy, and deindividuates power. As we will see, these strategies demonstrate the practice through which the grid ceases to demonstrate national power and begins to assume a nearly autonomous power of its own.

### The Grid Imposes Order

Foucault maintained that modern order exists as a grid of small (sometimes) petty disciplines, overlapping terrains, interconnected fields of force. Each of these alone may be localized, even individuated according to the power of an object or person. But together, they form a totalizing regime whose power stems from its ubiquity. When the US-C

Taskforce reported on the August 2003 blackout, its authors wrote:

Modern society has come to depend on reliable electricity as an essential resource for national security; health and welfare; communications; finance; transportation; food and water supply; heating, cooling, and lighting; computers and electronics; commercial enterprise; and even entertainment and leisure -- in short, nearly all aspects of modern life. (US-C Taskforce, p. 5)

The grid has become necessary for the continuation of modern life. It imposes order through its invocation as an ideal structure of nodes where, otherwise, one might find chaos. It was this chaos described by a Wall Street Journal editorial:

Grid operations are balkanized with too many control areas exercising limited control while operating that 'one, large interconnected machine' . . . The myopic vision of local system operators should be replaced by a larger view of the grid to track operations and respond to problems. (Hogan, 2004, p. A20).

Significantly, the grid can hardly be viewed from the perspective of the individual; it becomes a machine too vast for human eyes. The US-C Taskforce report noted a structural failure due to the inability for individual nodes to contribute to this "larger view":

Each control area operates as part of a single synchronous interconnection. However, the parties with various geographic or functional responsibilities for reliable operation of the grid do not have visibility of the entire system. Events in neighboring systems may not be visible to an operator or reliability coordinator, or power system data may be available in a control center but not be presented to operators or coordinators as information they can use in making appropriate operating decisions. (US-C Taskforce, p. 108)

Here, the grid because an interconnected network whose order depends upon the "bird's eye view" available only via abstractions. One may not "see" the grid except through the various lens afforded by display screens, flow charts, and other technologies that objectify the flow of power. A common theme to this ordering process--and its failure during the

August 2003 blackout--lies in the power of surveillance gaze. Lack of oversight, the inability to see the entire picture, emerges as a central crisis afflicting the North American

power grid. The order of the grid depends upon the power of the surveillance gaze:

Our society is not one of spectacle, but of surveillance; under the surface of images, one invests bodies in depth; behind the great abstraction of exchange, there continues the meticulous, concrete training of useful forces; the circuits of communication are the supports of an accumulation and a centralization of knowledge; the play of signs defines the anchorages of power; it is not that the beautiful totality of the individual is amputated, repressed, altered by our social order, it is rather that the individual is carefully fabricated in it, according to a whole technique of forces and bodies. (Foucault, 1995, p. 217)

When those forces and bodies cannot be easily seen, when their movements cannot be easily anticipated, the grid risks collapse. Here we are reminded that the grid does not merely move electrical power through North America, it represents a modality through which power becomes discourse. Notions that “nearly all aspects of modern life” construct “one, large interconnected machine” that fails for lack of a “control center” reflect more than a practical solution to mechanical problems; they seamlessly affirm parallel forms of administrative rhetoric found in other realms. The Wall Street Journal fear of “balkanization” illustrates most effectively a recent and ongoing question of national cohesion. Here, we turn to an expected response: the call for enhanced hierarchy.

### The Grid Imposes a Hierarchy of Formal Relationships

The grid enacts a hierarchy of formal relationships, even when a physical “center” may not be found. In the case of the August 2003 blackout, the US-C Taskforce noted the need for NERC to establish a strictly hierarchy of powers within the grid:

Recent changes in the electricity industry have altered many of the traditional mechanisms, incentives and responsibilities of the entities involved in ensuring reliability, to the point that the voluntary system of compliance with reliability standards is generally recognized as not adequate to current

needs. NERC and many other electricity organizations support the development of a new mandatory system of reliability standards and compliance, backstopped in the United States by the Federal Energy Regulatory Commission. This will require federal legislation in the United States to provide for the creation of a new electric reliability organization with the statutory authority to enforce compliance with reliability standards among all market participants. (US-C Taskforce, pp. 10-11)

“Curing” the problems that ail the grid demands the establishment of more robust power relationships--local/regional, state/federal--through which responsibility must flow in sharply defined directions. Indeed, according to the US-C Taskforce report, the need for amore formal hierarchy emerged once more to reject the ambiguity of the historically collegial relationship among energy utility companies.

ECAR decisions appear to be dominated by the member control areas, which have consistently allowed the continuation of past practices within each control area to meet NERC requirements, rather than insisting on more stringent, consistent requirements for such matters as operating voltage criteria or planning studies. ECAR member representatives also staff the reliability council’s audit program, measure individual control area compliance against local standards and interpretations. It is difficult for an entity dominated by its members to find that the members’ standards and practices are inadequate. But its should also be recognized that NERC’s broadly worded and ambiguous standards have enabled and facilitated the lax interpretation of reliability requirements within ECAR over the years. (US-C Taskforce, p. 40)

An editorial in the Cleveland Plain Dealer (2004) offers an even more direct evocation of this rhetoric when it advocates for the passage of legislation to federalize FERC’s ability to rein in “frontier-style grids” (p. B10). Bringing order to the wild frontier demands a range of modernizing strategies best illustrated by Foucault’s analysis of the prison:

The carceral apparatus has recourse to three great schemata: the politico-moral scheme of individual isolation and hierarchy; the economic model of force applied to compulsory work; the technico-medical model of cure and normalization. (Foucault, 1995, p. 248)

Thus, a “new mandatory system of reliability standards and compliance” calls for local entities to place their agency within a powerful an outside authority with the power to

discipline and punish if necessary. Such authority cannot be identified with a particular interest, object or person, though. It must transcend the individuated face and, instead, become dispassionate and abstract.

### The Grid Deindividuates Power

The grid deindividuates power in a manner that ensures its own stability while lessening the need for a strong central node, or at least its appearance. This notion of deindividuation draws from “crowd” research, focusing upon the diminishing sense of self that follows admission into a larger group. The resulting reduction in self-monitoring behaviors (by both persons and entities) offers a useful parallel to the chaos that often follows energy-grid collapses. In its report, the US-C Taskforce offers a clear answer the question of where the blackout began. However, it also displaces responsibility for the deregulatory practices that also contributed to this event through its apparently scientific description of the forces that cut the lights for 50,000,000 people by emphasizing on the cascade of events that quickly transcended human control:

A cascade is a dynamic phenomenon that cannot be stopped by human intervention once started. It occurs when there is a sequential tripping of numerous transmission lines and generators in a widening geographic area. A cascade can be triggered by just a few initiating events, as was seen on August 14. (US-C Taskforce, p. 73)

References to water and other forces that may be influenced but not entirely controlled are fairly common when discussing the power grid in both technical and journalistic documents. Consider an excerpt from the Christian Science Monitor:

Managing a power grid is a supreme balancing act. It's a bit like controlling a small wave pool with hundreds of wave machines around its edge. If all the machines are operating at about the same level, there's a basic equilibrium in the water. But if some machines are churning faster or harder than others, rogue waves can form - and start swamping the entire system. The wilder the waves, the more power plants start disconnecting themselves



from the system - to avoid damaging their equipment. But that only complicates the problem. Some wave-making power is needed to tame big waves and bring the pool back into equilibrium. (McLaughlin, 2003, p. 1)

The power cascade, like the flow of water it evokes, draws from naturalistic imagery of immutable forces, impenetrable deeps, and inevitable outcomes. Human beings built the grid but have become powerless to shape its courings. Naturally, one may yet discern a more reasonable interpretation. In many ways, the deindividuation of power could easily be redefined simply as the distribution (and de-personalization) of blame:

Thus the suggestion that IPPs [Independent Power Producers] may have contributed to the difficulties of reliability management on August 14 because they don't provide reactive power is misplaced. What the IPP is required to produce is governed by contractual arrangements, which usually include provisions for contributions to reliability, particularly during system emergencies. More importantly, it is the responsibility of system planners and operators, not IPPs, to plan for reactive power requirements and make any short-term arrangements needed to ensure that adequate reactive power resources will be available. (US-C Taskforce, p. 38)

Interviews with technicians were observed the blackout cascade around Lake Erie offer an almost chilling demonstration of the grid's power to remove human beings from the decision-making process:

Beginning at this time, the FE operators began to think that something was wrong, but did not recognize that it was on their system. 'It's got to be in distribution, or something like that, or somebody else's problem . . . but I'm not showing anything.' (US-C Taskforce, p. 65)

At once, the grid emerges as a text with no author. Here, we remember the role of the grid to deindividuate power (and authority/responsibility) to a broader array of points across the system. However, we choose to explore how this distribution ensures the existence of that central node. Doing so, one considers the hidden architect of the grid, the faceless planner whose work authors its own legitimacy through the very distribution of its own power. Such an analysis calls forth Foucauldian fields of force composed of apparently autonomous and frequently anonymous bureaucrats:

Small-scale legal systems and parallel judges have multiplied around the principal judgement [sic]: psychiatric or psychological experts, magistrates concerned with the implementation of sentences, educationalists, members of the prison service, all fragment . . . legal power . . . (Foucault, 1995, p. 21)

As the grid fragments utterances, expenditures, and movements, we encounter the classroom seating chart, the corporate spreadsheet, and the urban renewal plan. In his germinal book, The Mode of Information, Mark Poster (1990) expands this analysis to the struggle to maintain control over databases that increasingly transcend the “fields” of information employed to bring coherence to corporate life. When any of these physical or intellectual grids break down, we engage in disembodied projects of problem solving in order to reestablish order.

## **Conclusions**

Studying the “rhetoric of the grid” offers a challenge for all components of the academy. Recently, Pratt and Hauser (2004) challenged universities to carve out more comprehensive training programs for electrical power engineering studies. The positioning of this appeal as a communications challenge is most evident when they call for universities to “develop a framework for communications among consumers, generators, and utilities that transmit and distribute electricity, to enable them to share information on an integrated network” (p. B17). Clearly much work needs to be done. Indeed, inspiration for this essay came from the 2003 Northeast blackout, a catalyst, which evolved into an inquiry into a larger rhetoric of the Grid, undoubtedly shaped by the authors’ (both California residents) not too distant memory of California’s rolling blackouts that started two years earlier and were blamed by some on deregulation of the state’s energy market. Investigation into media and government discourse surrounding the Northeast and California blackouts show a complex, nuanced set of relationships between human society and mechanized processes of

power distribution. While often invoking public fear and protest, energy crisis phenomena offer a fascinating picture of how the electric grid constructs power relationships beyond that of consumer-regulator-provider.

The story of blackouts and the story of the grid represent a contested terrain, a contest of economic, social, cultural, and ecological values. To invite further investigations of that terrain, we traced a rhetoric of the grid through our analysis of the Flex Your Power campaign and the administrative rhetoric of the US-C Taskforce. Along the way, we have argued that the grid demonstrates overlapping but opposing narratives of individuation and deindividuation. The Flex Your Power campaign illustrates efforts by the former governor of California to define the challenge of energy conservation as a means to relate the individual to the grid and to the state. Both abstract and geographical communities affirm the possibility of regional identity in a period of globalization. In contrast, the national response to the Northeast Blackouts demonstrates an opposing tendency of administrative rhetoric as profoundly deindividuated. Here, one encounters the desire to dematerialize the human nodes of information under an abstract matrix of forces beyond human control.

California's grid affairs reflect larger power relationships that are increasingly part of the contemporary global experience. The collective power of Californians is California's response to the changing nature of society individual relationships. Through processes of globalization, global and local have become indistinct from each other in many ways, as geographies have become commodified through the influences of globalization: "A variety of geographical scales (the body, family, building, city, nation, ecological niches, communities, international trade and economic relations) become condensed and embodied in commodified display" (Swyngedouw, 1993, p. 168). Scaled places reveal relations of power in processes of scale. Human community functions to configure space in ways that embody social relations of power, which condense and commodify our bodies politic.

Globalization processes disclose the negotiations of power in a sense of place. That is, as the world becomes more globalized, individuals are implicated in the power relationships of energy management: how we use electricity helps shape our identity as not just members of an electricity-using society, but part of the grid--individuals and their electricity consumption are situated as the grid itself.

The California campaign produces a personalization of the grid while the US-C taskforce response to the 2003 blackout produces an abstract and depersonalized image of the grid. This paradox reflects the processes of globalization. Globalization alters our conventional notions of state control as we encounter an increasingly borderless world, less and less characterized by territorial divisions, characterized by a new “geography of power” (Lubbers and Koorevaar, 1998). Globalization exhibits paradoxical processes of integration and fragmentation, diversity and collectivity, which alter our relationship to natural resources. So a rhetoric of the grid reflects how globalization forces us to reconsider sovereignty. Sovereignty is typically constructed as territorial control, which is tied to state jurisdiction. “The ability to control rules of access to the environment and natural resources—to define who may alter, and to what extent, which specific natural material, systems, and processes—has been a central component of state authority and legitimacy” (Conca, 1994, p. 707). The rhetoric of the grid illustrates the negotiation of access to energy resources as administrators assert control of energy resources while encouraging consumers to take control of their own consumption and conserve. These strategies reveal how the grid functions at an institutional and social level: energy crises require both swift action on the part of administrators to reestablish a functioning electricity grid and also action on the part of consumers to conserve energy and reduce the potential of another crisis. Flex Your Power and the US-C Taskforce frame our understanding of the grid in different ways. As consumers we can have confidence in the grid while we are complicit in maintaining its

healthy functioning. As energy conservation remains on the public agenda, the grid will continue to be framed by a discourse of power that will likely further reveal the implications of our energy use.

The scope of this essay only traces a tentative rhetoric of the grid. There are myriad areas left unexplored by our analysis, which provide areas for future research. The grid offers a potential avenue for assessment for the relationship between organizations and human identity and behavior (e.g. Perrow, 1984; Weick, 2004)

The ecological implications of the grid should prove significant for scholars of environmental communication. Indeed pundits and experts have directly linked surges in demand for green power to the California rolling blackouts (Rathmann, 2003). Discourses surrounding green power could shed light on how the grid affects humanity's relationship with natural resources.

Furthermore, in examining the media surrounding the power crises of California and the Northeast, we do find resistance to being part of the grid: people who are "off the grid." Being off the grid means relying on alternative power sources or generators that are self-sufficient. "The off-the-grid movement has been fueled in recent years by a somewhat unlikely mix of left-wing greenies, right-wing survivalists, New Age architects and assorted energy futurists" (Kirby, 2002, p. D1). This group remains eclectic and small, which underscores the grid's role in human capacity. "About 1.1 million homes use solar power for one purpose or another. But use of it for home heating is so negligible that it doesn't register as a statistic. Most New Yorkers use natural gas, followed by fuel oil. And few people are willing to sever themselves from the grid" (Milwaukee Journal Sentinel, August 24, 2003, p. 1F). While most people want to be part of the grid, and indeed have no other options, individuals who are off the grid are empowered. "We become so attached to the grid, when the grid goes down, we're powerless," says Lawrence D. "Larry" Jarboe,

who employs two Amish workers at his sawmill in Charlotte Hall and also represents their district as a county commissioner. “Yet, there are ways to be off the grid and be empowered and live better lives” (Washington Post, September 28, 2003, p. C03). This resistance becomes an important perspective: those off the grid gain a “keen awareness of where [their] power is coming from, of the climate, of living close to nature” (Kirby, 2002, p. D6). The implications of this resistance are ecological, cultural, and offer a potential direction for future research. This essay reveals the grid as text, one that can shed light on how we negotiate and perform our role as energy consumer.

### References

Anderson Economic Group. (2003, August 19). Northeast blackout likely to reduce US earnings by \$6.4 billion. [Online]. Available: [http://www.andersoneconomicgroup.com/Pubs/articles\\_pressreleases/pre04/03blackoutReport.htm](http://www.andersoneconomicgroup.com/Pubs/articles_pressreleases/pre04/03blackoutReport.htm)

- Cleveland Plain Dealer. (2004, April 7). Probing the darkness. Cleveland Plain Dealer. p. B10.
- CNN (14 August, 2003). Major power outage hits New York, other large cities, [On-line]. Available: <http://www.cnn.com/2003/US/08/14/power.outage/>
- (2001). California power crisis sends shockwaves nationwide, [On-line]. Available: <http://www.cnn.com/SPECIALS/2001/power.crisis/backgrounder.html>
- Conca, K. 1994. "Rethinking the ecology-sovereignty debate." *Millenium: Journal of international studies*, 23, 3, 701-711.
- Darier, E. (Ed.). (1998). Discourses of the environment. Oxford: Blackwell Publishing.
- Davis, G. (5 April, 2001). Gray Davis addresses Californians on energy, [Online]. Available: <http://www.sacbee.com/static/archive/news/special/power/040601transcript.html>
- Electricity Consumers Resource Council. (2004, February 9). The economic impacts of the August 2003 blackout. [Online]. Available: <http://www.elcon.org/Documents/EconomicImpactsOfAugust2003Blackout.pdf>
- Flex Your Power. (August 10, 2001). Flex your power and California retailers join forces to encourage consumers to buy energy efficient appliances, [Online]. Available: [www.energy.ca.gov/releases/2001\\_releases/2001-08-10\\_governor.html](http://www.energy.ca.gov/releases/2001_releases/2001-08-10_governor.html)
- Flex Your Power. (Accessed March 24, 2004). Who and what uses our energy? [Online], Available: [www.ca.gov/state/fyp/fyp\\_htmldisplay.jsp?sFile=%2Ffyp%2Fhtml%2Ffeature.uses.html](http://www.ca.gov/state/fyp/fyp_htmldisplay.jsp?sFile=%2Ffyp%2Fhtml%2Ffeature.uses.html). (Flex Your Power A in text).
- Flex Your Power. (Accessed June 6, 2005). Energy brain [Online]. Available: [http://www.energybrain.ca.gov/SRVS/CGI-BIN/WEBCGI.EXE?New\\_Kb=EnergyPortalKB,Company={F9C5CD10-553B-11D5-8BFF-00306E02C80F},VARSET\\_BV\\_SessionID=@@@@1591701951.1118086503@@@@,VARSET\\_BV\\_EngineID=ccceaddeklmlfjkcfngcfkmdffidfng\\_0](http://www.energybrain.ca.gov/SRVS/CGI-BIN/WEBCGI.EXE?New_Kb=EnergyPortalKB,Company={F9C5CD10-553B-11D5-8BFF-00306E02C80F},VARSET_BV_SessionID=@@@@1591701951.1118086503@@@@,VARSET_BV_EngineID=ccceaddeklmlfjkcfngcfkmdffidfng_0). (Flex Your Power B in text).
- Flex Your Power (Accessed June 6, 2005). Issues-energy, [Online]. Available: [http://www.governor.ca.gov/state/govsite/gov\\_issues\\_details.jsp?sCatTitle=Issues&sSubCat=Energy](http://www.governor.ca.gov/state/govsite/gov_issues_details.jsp?sCatTitle=Issues&sSubCat=Energy). (Flex Your Power C in text).
- Flex Your Power (Accessed June 6, 2005). California's energy challenge, [Online]. Available: [http://www.bth.ca.gov/energy\\_links.htm](http://www.bth.ca.gov/energy_links.htm). (Flex Your Power D in text).

Flex Your Power. (Accessed March 24, 2004). Summary of Gray Davis' actions, [Online]. Previously available: [www.flexyourpower.com](http://www.flexyourpower.com). As of June 6, 2005, quoted material has been removed. (Flex Your Power E in text).

Foucault, M. (1969). *Archeology of knowledge*. New York: Routledge.

Foucault, M. (1995). *Discipline and punish: The birth of the prison*. New York: Vintage.

Foucault, M. (1975). Interview on the prison: the cook and its method. *Dits et écrits*, Vol 1. p. 752. Quoted in Gordon, C. (1994). Introduction. In Faubion, J.D. (Ed.). *Michel Foucault: Power*. New York: The New Press, p. xvi.

Foucault, M. (1979). *The History of Sexuality vol. 1*. New York: Routledge.

Foucault, M. (1980a). Questions on geography. *Power/Knowledge: Selected interviews and other writings 1972-1977*. C. Gordon (Ed.). New York: Pantheon, 63-77.

Foucault, M. (1980b). Two lectures. *Power/Knowledge: Selected interviews and other writings 1972-1977*. C. Gordon (Ed.). New York: Pantheon, 78-108.

Foucault, M. (1980c). The history of sexuality. *Power/Knowledge: Selected interviews and other writings 1972-1977*. C. Gordon (Ed.). New York: Pantheon, 183-193.

Foucault, M. (1980d). Truth and power. *Power/Knowledge: Selected interviews and other writings 1972-1977*. C. Gordon (Ed.). New York: Pantheon, 108-133.

Foucault, M. (1994a). Governmentality. *Power: Essential works of Foucault, 1954-1984, Volume III*. Faubion, J. (Ed.). New York: The New Press, 201-222.

Foucault, M. (1994b). Space, knowledge, and power. *Power: Essential works of Foucault, 1954-1984, Volume III*. Faubion, J. (Ed.). New York: The New Press, 349-364.

Gordon, C. (1994). Introduction. In Faubion, J.D. (Ed.). *Power: Essential works of Foucault, 1954-1984, Volume III*. New York: The New Press, pp. xi-xli.

Hogan, W.W. (2004, April 19). Shedding light. *The Wall Street Journal*, p. A20.

Holdsworth, D. (23 April 2003). Book review: The hydrogen economy: The creation of the worldwide energy web and the redistribution of power on earth. *NRC Research Press*, Available: <http://pubs.nrc-cnrc.gc.ca/rp/rppdf/a03-003.pdf>



- Houde, L.J. (2000). Ecological 'bodies that matter': Toward an ecofeminist corporeal rhetoric. Unpublished manuscript presented at the Western States Communication Association conference, Sacramento, CA.
- Kirby, D. (8 November, 2002). Life, unplugged: Surviving 'off the grid.' New York Times. Page D1 &D6.
- Kunstler, J.H. (1993). The geography of nowhere: The rise and decline of America's man-made landscape. New York: Touchstone.
- Lubbers and Koorevaar (26 November 1998). The dynamics of globalization, [On-line]. Available: <http://www.xs4all.nl/~koorevaa/html/dynamic.html>.
- McKerrow, R. (1998). Corporeality and cultural rhetoric: A site for rhetoric's future. Southern Communication Journal, 63, 315-328.
- McLaughlin, A. (2003, August 22). Behind the hum of the power-grid: Human choices. Christian Science Monitor, p. 1.
- Nye, D.E. (1997). Narratives and spaces: Technology and the construction of American culture. New York: Columbia University Press.
- Perrow, C. (1984). Normal accidents: Living with high-risk technologies. New York: Basic Books.
- Poster, M. (1990). The mode of information: Poststructuralism and social context. Chicago: University of Chicago Press.
- Pratt, B. & Hauser, S. (2004, July 2). Colleges can help bring the power grid into the 21st century. The Chronicle of Higher Education, p. B17.
- Rathmann, C. (February 7, 2003). California blackouts have business people thinking about energy conservation again, [Online]. Available: [http://www.warmliving.com/article\\_natgasprices.asp](http://www.warmliving.com/article_natgasprices.asp)
- Rutherford, P. (1998). The entry of life into history: Foucault and ecological governmentality. In Darier, E. (Ed.). Discourses of the environment. Oxford: Blackwell Publishing.
- Segal, J.Z. (1991). The structure of advocacy: A study of environmental rhetoric. Canadian Journal of Communication, 16, 3/4, [Online]. Available: <http://info.wlu.ca/~wwwpress/jrls/cjc/BackIssues/16.3/segal.html>

Thrift, N. (1996). Spatial formations. London: Sage.

U.S.-Canada Power System Outage Task Force (2004, April). Final report on the August 14, 2003 blackout in the United States and Canada: Causes and recommendations. [Online]. Available: <http://www.nrcan-rncan.gc.ca/media/docs/final/BlackoutFinal.pdf>

Weick, K. (Marcy 2004). Normal accident theory as frame, link and provocation. *Organization & Environment*, 17, 1, 27-31.