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Direct Energy: Evolving a New Role for IT

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CISR Working Paper No. 370

Title: Direct Energy: Evolving a New Role for IT

Author: Cyrus F. Gibson

Date: June 2007

Abstract: In 2005 top management of Direct Energy, a rapidly growing energy utility, distribution and trading company, recruited a new CIO to be a member of the executive team. The case describes three years of significant change in the role of IT and provides lessons in mutual IT-business learning and relationship building for businesses in transition to greater dependency on IT as a competitive resource. Of particular relevance is the approach taken by top management in setting priorities and introducing change, including new IT governance mechanisms and assistance to businesses to gain credibility and influence.

Keywords: IT-enabled change, IT governance, IT and senior executive leadership

12 Pages

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Direct Energy:
Evolving a New Role for IT

In 2007 Direct Energy (DE), a Toronto-based subsidiary of Centrica (UK), was entering the third year of a significant change in the role of its information technology function. With the intent of adding an IT view to their executive team in light of the increasing cost and importance of IT to DE's businesses top management of DE had brought in a new CIO, Kumud Kalia, in 2005.

The philosophy and execution of change at DE provide lessons in mutual IT-business learning and relationship-building for businesses in transition to greater dependency on strategically important IT.

Direct Energy:
Creating a Business from Scratch

In 2000, top management of Centrica, a diversified utility in the United Kingdom, sent Deryk King to North America to start a new business. With capital from the parent and a relatively unrestricted mandate to "see what you can do…," King built an energy-based business by acquisitions in Canada and the United States. Initially focusing on acquisitions, DE found businesses of interest in the energy industry were changing dramatically as a result of deregulation, the Enron scandal, and extreme fluctuations in gas and electric prices. King and his team evolved a strategy based on being a vertically integrated producer, trader and reseller, and distributor of energy, as well as a provider of related services to consumers. Its particular energy business model, not unique in the industry but central and early in its competitive environment, was owning or contracting with supply resources of energy and offering customers fixed monthly charges rather than energy price dependent charges. As one executive put it,

> "We sell peace of mind, both to distributors and consumers. We say to them, 'Were going to fix your monthly energy rate, like a known mortgage rate.'"

Over six years more than 20 acquisitions and a few sales of businesses were made, with a net investment totaling some $2 billion. In 2007 DE operated in 18 states and provinces and over 30 discrete regulatory jurisdictions. Turnover in 2006 came in at $7.6 billion, and EBIT around $415 million.[1] (Exhibit 1 shows selected financial and operational trends over the life of DE.)

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[1] Total North America markets for the businesses DE was in were $370 billion for energy (gas and electricity) and $140 billion for related services.

DE consisted of four basic businesses:

1. Upstream gas drilling and power plants, where energy was produced: gas fields in Alberta, and three electric power plants and four wind generation units in Texas.

2. The Energy Management Group (EMG) managed the buying and selling of energy futures to supply DE's own customers and to trade in the respective commodity futures markets. Originally only a procurement business, EMG at DE evolved to also be a profit-centered trading business. Improvement in EMG's forecasting of energy supply and demand would have great impact on DE's profitability. The industry standard for forecasting was to come within two to three percent of demand. An improvement to one percent for DE would represent an increase in EBIT of some 10%. In 2006, approximately 12% of DE's operating profits came from EMG. Trading desks were run 24x7 in Calgary and Houston for gas and electricity. Critical was getting forecasts of demand right and "risk management" decisions on buying and selling of future contracts for energy delivery.

3. The downstream business was selling gas and electricity to households and businesses. Here, knowing the regulatory situation and adapting to it were key to business success. The apparent uniformity of operations of different energy distributors in North America was complicated by wide differences in the regulatory environments at the level of provinces, states and municipalities—differences that affected billing, customer information, and accounting. There were also differences in the relationships with suppliers and the consumer. Thus the DE "brand" might appear at the head of a consumer or business customer bill, or it might be a line item on the bill of a retailing utility who served as a channel for DE.

4. The services business was for installation and maintenance of gas and electricity consuming equipment such as furnaces and air conditioning for residential and commercial construction, and subsequent warranty servicing.

Exhibit 2 shows the organization of DE's businesses and members of the Executive Committee in early 2007. Exhibit 3 shows the geographical footprint of its operations.

Relative to many of its retail competitors, DE had the advantage of being more vertically integrated. Also, successful forecasting of energy supply, demand, and prices and successful trading of futures gave it a competitive advantage over retailers without those capabilities.

After five years, DE was seen by Centrica and analysts as a highly successful business. Revenue growth had been outstanding, and in 2007 DE top management continued to be alert to acquisition opportunities in all its businesses. At the same time, CEO Deryk King and his executive committee were increasingly sensitive about the need to achieve synergies and economies from consolidation of operations and processes across businesses, thereby enhancing profitability.

The Role of IT and the Decision to Make Changes

Historically IT was of varying importance to the different businesses of DE.

At EMG, the trading business, IT models and information regarding commodity trading and such critical variables as weather forecasting were central to day-by-day strategic decisions on pricing energy contracts. Systems were custom built. Software technicians constantly developed solutions to support forecasting of critical variables affecting energy pricing and systems to support the traders. The trading function was comparable to those in a Wall Street financial instruments trading firm. As CIO Kumud Kalia put it,

> *"Systems in EMG are the crown jewels of our business and we strive to maintain a competitive edge with them. Even if we buy some package, we surround it with our proprietary software."*

For the downstream and upstream businesses, IT had been locally supportive of functions in acquired businesses. Each business had applications for its own customer billing, for inventory management, for operational support of customer call centers, and so on, and none of these were of direct strategic importance nor of great significance as a cost of operations for each business. As a collection, however, there appeared to be huge possibilities for commonality, integration and cost savings for the enterprise as a whole for similar operations.

In 2004 King and his executive team initiated a search for a new CIO. The stimulus was recognition that the successful day-to-day operations of the business were dependent on IT support, and that the cost of IT as a percentage of gross margin was growing disproportionately. They felt comfortable that the technical aspects and operational reliability of IT was well handled by the current CIO, Bernie Gillies, who reported to the (then) COO. At the same time, as King put it in retrospect, he and top management were uneasy and wanted a voice for IT at the senior table:

> *"We decided we needed someone who could not only manage the function to a very high standard, but could also make a wider business contribution as well, to contribute around the top table and explain things in strategic and business terms, not just technical terms."*

Kumud Kalia was hired as CIO in March, 2005. Kalia had experience in the investment banking industry and at a telecom utility. (See resume, Exhibit 4.) This experience was precisely what DE had sought in its spec to the headhunter. "It was as though the search was rigged," one executive said. It was left that Kalia learn the energy business and the interactions among DE's businesses. Kalia reported directly to King and became a member of the Executive Committee (Exhibit 2).

IT Governance and Relationship Building

One of the first initiatives Kalia took at DE was to form a new IT governance structure. This consisted of a committee to view IT investments across the entire corporation, the Investment and Change Committee (ICC), and committees within each business unit, the Business Advisory Committees (BAC). Kalia first got the endorsement of his executive colleagues for these new structures, taking their advice into account. As he put it,

> *"The executive team backed the creation of these committees and these changes. They understood intellectually what the governance processes were supposed to do, but they made me understand that a dogmatic approach from the top was not advisable. So they were with me, but on faith that their support would yield positive business results."*

The work of these committees was essentially to manage demand so that IT resources could be applied to the highest business priorities. This required carefully developed business cases for projects—aligned to declared corporate strategy, and to conduct priority setting for all business initiatives that were IT-enabled. Historically, businesses made investment decisions within their silo without prioritization or alignment, in effect by "wish list." Enterprise-wide decisions had been limited to core infrastructure. Under the new methods, investments were to be leveraged by being enterprise level wherever possible. Investments within a business silo were to be validated only if they enabled the highest value initiatives.

Categories for projects were made explicit based on historical categories for capital expenditure decisions. These were: 1) projects necessary to keep the business going (like infrastructure maintenance), 2) mandatory projects (such as health and safety, regulatory, legal), 3) projects with a cost return within two years, and 4) "discretionary" projects, those with a cost return beyond two years.

The ICC at the corporate level consisted of the CFO, Kalia (Chair, as CIO) and the head of Strategy. Like the BACs in the business units, the ICC role was not only to review and decide on key projects of a certain scope (cross-divisional, in particular) but also of a certain

size. Whether or not the funding for project came from a business budget, if it met either of those criteria it had to be reviewed by the ICC. Their role also included review of project progress, with a view to understanding what value had been created. In looking across the enterprise, the committee used a portfolio approach of four IT asset categories: infra-structure, transactional, informational, and stra-tegic. As of early 2007 these categories were used to track investment decisions rather than to influence them.[2] Kalia expected that keeping a balanced portfolio overall, the goal of this mechanism, would be introduced as a criterion for investment decisions by the ICC beginning in 2007.

By 2007 all twelve business units involved in DE's four business areas adhered to the governance process of listing their projects in priority order, a change not only for IT but other capital investment requests. Three business units, the most profitable ones, had adopted the governance to the point that it was integral to their management. In two cases, heads of business units were saying and giving presen-tations that their BACs were changing the way they did their business thinking. Reflecting on these committees, Kalia recalled:

"We agreed in principle in the Executive Committee that these IT committees were a good idea, but at first people came saying, 'Why are we here?' Now it has caught on and is proving effective in the eyes of several key stakeholders. We still have a ways to go in many venues to make the meetings highly effective and valuable to the participants."

In building his relationships with the executive team, Kalia himself faced a steep learning curve in understanding the energy businesses. His credibility was helped by experience in financial trading, as his peers recognized the value of IT to the EMG business and the parallels with the

financial world. As often as not in discussions with the business, Kalia found himself making the case not for new IT systems, but for a fact-based understanding of the problem and the intention of what the business had in mind. This approach, manifested in business cases and their discussion, was seen by executives as a new kind of dialogue. It put the IS staff necessarily in a position of equality with business managers rather than being traditional "order takers." As Kalia put it,

"Now our IT people don't take orders, but we expect the business to tell us what their priorities are. More than that we don't ask what solution they want, but rather what they are trying to achieve in business terms. At the front end, before a project gets considered, we are looking at the business problem. This is a new role, not yet universal, but seems to be catching on and in many businesses is appreciated and valued."

After six months on the job, Kalia suggested to Deryk King that King and the CFO, David Clarke, attend a two-day executive program on IT for business executives. "I knew I was taking a risk recommending this," Kalia said. "But I knew the terminology and approaches in the course, such as governance and investment port-folios, fit in with what I was pushing for." King reflected back on the experience as quite posi-tive and worth his time.

Governance also applied to project management and the relationship of IT developers to their business counterparts. Kalia introduced several elements of "agile programming" to IT at DE. As a result, all projects were put on 90-day cycles with ten- or 15-day milestone checks, called "iterations" or "sprints." Business users were increasingly responsible for delivery along with IT, and business people remained in regular contact. Most projects had meetings of business and IT people every morning for 15 minutes, known as "scrum meetings."

The IT Estate

The organization chart for IS is shown in Exhibit 5. Kalia had seven direct reports, two of

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[2] See Weill, P. and Broadbent, M. *Leveraging the New Infrastructure: How market leaders capitalize on information technology*, HBS Press, 1998, and subsequent materials from the Center for Information Systems Research, MIT Sloan School of Management.

whom he had hired since taking his job. The team, including him, was noted for its diversity of professional education and experience. They held eleven degrees among them, including a PhD and three MBAs, one Chartered Accountant, two Chartered Engineers, and two former registered securities traders. Most had worked in at least two countries, and in sum they spoke more than eight languages. Experience included 22 years overall in energy industries. Heads of IT in each business had a solid line to Kalia, and a dotted line to their division presidents. Total employment in IS was 370, including contractors, and the IS budget was $140 million, or 1.6% of DE's revenue and 12.7% of operating expenses. DE used operating expense as a percent of gross margin as an indicator. Trends in the IS budget and employment and business ratios are shown in Exhibit 6, along with conclusions reached by IS in presentations to senior managers throughout Direct Energy.

Virtually all annual IT expenditure, particularly for established operations and projects requested by the businesses, was dealt with through the governance process. At the same time an important funding source was "self generated" funds, made available by IS from its own savings efforts. In 2006 this source amounted to approximately $2.25 million. These funds made possible the creation of positions for new competences, such as process engineering and enterprise architecture, as well as strategic investments such as a graduate recruitment program. It was hoped that creation of these competences and programs would yield further benefits and savings, thereby creating a virtuous circle.

Reporting to Kalia as CTO, head of Operations, Shared Systems and Architecture was Bernie Gillies. Gillies, as CIO, had been responsible for all of DE's systems since the early days. A benchmark evaluation by an outside entity in late 2006 gave DE high marks for its established IT operations and infrastructure. It reported that DE's costs of IT Operations were 24% below those of top-performing companies, and accomplished with 19% fewer staff, while service quality was comparable. At the same time the study identified potential annual cost savings of some $2 million which could be achieved without additional outsourcing, and more which could be achieved if DE chose to do offshoring, which it had not done to date. Kalia and King pointed to this assessment as very positive, but noted that it applied only to the ongoing operational services, not to new initiatives and the more difficult to benchmark changes in governance, project delivery, and business process changes for which IS was now responsible. As King put it, "We've benchmarked half of what IS does, now we need to benchmark the other half…"

In conjunction with the establishment of governance committees and other mechanisms for IT investment, aimed at involving enterprise-level executives as well as business managers within the businesses, Kalia looked for opportunities for enterprise-wide development projects. Shortly after his arrival he was asked to make a judgment on the installation of an ERP across several businesses, a solution underway in Centrica at the time. After brief review and familiarization with the business, Kalia recommended strongly against the ERP approach. He made the case that not only would it be a large investment, but that the problem with integration across DE's businesses, even those with identical business models and products, was not immediately one of automation by systems. Rather, business processes and data would need to be changed for integration to succeed and benefits of it to be achieved.

An opportunity for a company-wide systems-driven project arose in 2006 with the web portal project. Driven by a need to exploit the web as a low cost channel for sales and post-sale services, multiple business units signed on to this initiative. Getting agreement on the priorities and making staff available was non-trivial: "We put 35 people in a room for two days, and they came out with agreements on the priorities and nature of the project," Kalia recalled. Just as important, a multi-business unit "Executive Steering Committee" was created to oversee the progress of the project, to remove obstacles, and

support risky decisions such as going live on beta software.[3]

In short order, DE had repatriated a UK-hosted website to North America (important for search engine rankings), replaced the content management system, rebranded the website with a new corporate look and feel, and added entirely new functionality, such as the ability of customers to view and pay bills online.

Reflecting on the experience, Kalia considered the project a good initiation of front-end "hot-house" practices, a demonstration of the power of agile methods, and a validation of robust governance for execution with the Executive Steering Committee.

Early in his tenure at DE, Kalia was asked by King to take on responsibility for Business Continuity and Disaster Recovery for all business units. In 2006 CEO King asked Kalia to monitor and recommend improvement in all Customer Operations areas across the company. For this the Heads of Operations in each of the downstream business units had a dotted line relationship to Kalia, who provided input to his peers on the Executive Committee on the performance appraisal of their Operations executives. King commented on the assignment and role changes for IS as follows:

> *"We try to hire people keeping in mind the next job they might take. In the case of IT, the discipline and skill required are very much applicable to business process improvements as well as to information systems. Moreover, Kumud's function touches on operations across the company. So we made him responsible for oversight of operations, given that we want to rationalize and integrate operations for better overall performance, and to bring that view to the top table."*

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[3] Executive Steering Committees were created for all major projects or programs, as part of the new governance introduced by Kalia. Two members had to be from DE's Executive Committee. A key purpose was, as Kalia put it, "To ensure that the change necessary from a program did not exceed the capacity of the organization to absorb that change."

> *"So Kumud's the CIO but we've also broadened the role…"*

**Cross-Business Process Integration:
From Guerilla Tactics to a Top-down Project**

A priority for executives that was not evident prior to Kalia's arrival was the integration of separate but similar operations among the divisions. Asked about the strategic role of IT in the business, CEO Deryk King in early 2007 commented,

> *"Our highest priority for Kumud and IS is to lead the effort to improve operations and to achieve synergies and savings across businesses."*

Kalia and his senior colleagues agreed that business managers and the culture, heavily inclined toward near-term and quick action decision making, would not welcome a top-down corporate imposition of new systems or process change, nor even spending a lot of time investigating operational issues and problems. The approach taken was first to offer expertise to the businesses for teams to work with their operations managers on specific improvement projects within their areas. No intention of cross-business synergies or process or data uniformity was included. These projects were spearheaded by Sanjay Acharya, head of Process Engineering and a direct report to Kalia. Acharya was a Chartered Accountant and an MBA graduate of the MIT Sloan School of Management. His position was based within IS, but operated exclusively outside IS. Archarya described his approach and one successful project as follows:

> *"When I joined no one knew who I was or what I was doing. The idea was that I would bring rigor and methodology to projects… Beginning with ad hoc work, we got involved in responding to a request for a system to automate and support selling in a US-based business. This project eventually expanded to become our first 'Lead to Cash' project. We did an analysis that indicated the different channels being used to access different customer categories were misapplied. We*

were using the wrong channels for many customers. It was an eye-opener. There were other findings which allowed senior managers to compare and contrast process performance across the business unit's sub-regions. The facts confirmed for senior managers what they believed all along but had never been able to prove conclusively. They were really pleased."

Commenting on the approach to process improvement and the change in relationship between IS and the business, Acharya said:

"It used to be when our business partners had a problem they would ask IT to throw a system at it, saying 'We know what our problems are...' Now we go in and hold our ground, do an analysis of the process and produce facts which may reveal a very different problem—that a system could make worse. We're gaining credibility, and so far we've done it one win at a time.

You have to get middle managers to buy in, even if you have an endorsement from the top like we have had. It takes a different type of person—not someone with only technical proficiency but also with business awareness and interpersonal skills. It's not a structured job, it's discovering and being entrepreneurial, looking for opportunities and biding your time. You have to be comfortable with ambiguity. You have to overcome the stereotype many of the business managers have of the structured technician from IT. Most of all, you have to be mature enough not to crave sole recognition for insights and changes—without building a broad team that can share success, you will achieve nothing worthwhile."

By mid-2006 the guerilla, middle-up approach had enough success to justify the executive endorsement for doing it. For 2007 a major initiative was announced, one among ten written into performance contracts of divisional heads and their organizations, to collaborate across divisions in a Lead to Cash (L2C) study. An extension of the separate projects that had been done previously would be the next step in continuing local optimization and building the basis for common data definitions. While full integration of any particular process such as sales or billing, a logical outcome of the L2C initiative, was still at least a year away, Kalia saw the opportunity as a significant step in how change was being managed:

"Now we're going to force it more. Teams across the businesses and across North America have been established. The effort is one of our ten business initiatives for 2007, and it is in business heads' performance contracts where I am the evaluator. Performance on the project is one of the contributors to contingent pay bonuses."

King saw the project as a step in "intensifying what we do" as opposed to depending exclusively on acquisitions for revenue growth:

"In the past five years we've done our groundbreaking, frontier stuff with acquisitions; now our strategy is to intensify in each of these. We can double the profitability of our business in the next five years just by intensifying what we do. This would include moving all of certain businesses, like our industrial business, eventually across all of North America. So an early win will be by putting our industrial customers, in the hundreds as opposed to consumers in the millions, on to common processes and systems for specific purposes like billing, lead management and sales."

"But what I don't want is an all-singing, all-dancing multi-million dollar project to rationalize systems. What we do must fit the purpose of the business and not be for the sake of systems."

Summing Up the Progress of Change

Kalia was explicit in his approach and style in carrying out change at DE.

"For one thing, we had no burning platform at DE. The business was not in crisis. While Deryk and top management were concerned about IT and wanted to know more about it, they wanted changes to be done in the right way. My performance appraisal by Deryk is not only about what I accomplish, but how I accomplish it. It has to meet the test of acceptability and buy-in from not only my peers, but down in the ranks."

At the same time, Kalia and his team took an entrepreneurial, risk-prone approach to introducing initiatives. Once committed to something, they were growing a reputation in DE for being patient but insistent, and keeping their promises. Kalia reflected,

"I've had to learn patience, to do a few things at a time. I do think we've gone further than many companies, but we had to do it in a way that would work here."

CEO Deryk King commented on the success and challenges facing IT as follows:

"Kumud has brought both the discipline and the language to the top executive table. He is able to explain and coach us as well as give us the assurance that the function is doing what the business needs to have done. I wouldn't say we totally understand IT, but we do a helluva lot better than we did two years ago...It's a big step forward..."

External recognition of the effort and progress in changing the role of IT at DE was reflected in a cover article in the magazine *CIO Canada* which featured Kalia's picture on the cover and described the IT business relationship in terms of delivering reliable operations and executing on projects.[4]

Bob Huggard, President of Canadian Operations, endorsed the positive changes in IT and emphasized the importance of data rationalization as the key step in the L2C process project. At the same time, he noted that projects that drew on the time of line managers in the business above and beyond their regular responsibilities were difficult, and that explicit funding for resources would be more appropriate.

Looking to the Future

Kalia and his business colleagues believed that beyond operational efficiency, the achievement of integration and standardization would represent the foundation for potential future initiatives. With data comparable and available from the currently diverse and autonomous businesses, potential new revenue sources were possible. Moreover, the prospect of integration would become a driving function for architectural evolution in IT. Kalia allowed he "had not done much with architecture" as of 2007, but saw this as a technical change which would flow out of the change in operational scope as cross-business integration occurred in the L2C project. Thus, a strategy was emerging to create first a business architecture, then to derive a technology architecture to deliver to the business blueprint, but with the inherent flexibility that a modern services-based architecture could provide.

King and Kalia referred to DE as a "knowledge business." Kalia said,

"We're knowledge-based. Whatever we take in physically is represented by data and information which we take in, transform, pass on. This is what is important in how we think about what we are, because it is the basis for new business models to create value and revenue. When I first talked like this to my senior colleagues they thought I was crazy..."

King said,

"Early on it became clear to me I couldn't wash my hands of IT, even though it might give me a huge sense of relief that it is the CFO's worry, say, not mine...We are a people-based and knowledge- and information-based business."

Manifesting this conceptual view of the business, several executives foresaw the business moving toward innovations and new business models. Kalia saw himself personally

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[4] Carey, D., "Powering up the IT/business relationship," *CIO Canada*, Nov. 2006, V. 14, No. 10. pp 10–16.

as investing time in 2007 looking to the next wave of innovation for the business, seeking out ideas from academics and vendors such as technology in the home to optimize energy use. He saw this as his role to personally "stay a step ahead" of where his IS people would be going, and also as part of the development of his team to take on more responsibility as a team and as individuals without his close involvement. King and his executives were watching a huge forthcoming project announced in Ontario in which the government would be installing over four million energy consumption meters in homes and businesses. There had been no indication of plans for the management of the data that would be required to use the meters for benefit. These and other prospective activities were being monitored, but King summarized the agenda as one of focus:

> *"Our focus in using IT currently is on operational robustness first, cost reduction second, and added value opportunities third. I know it is not fashionable to say that, but that's where we are."*

Exhibit 1
Selected Performance Trends
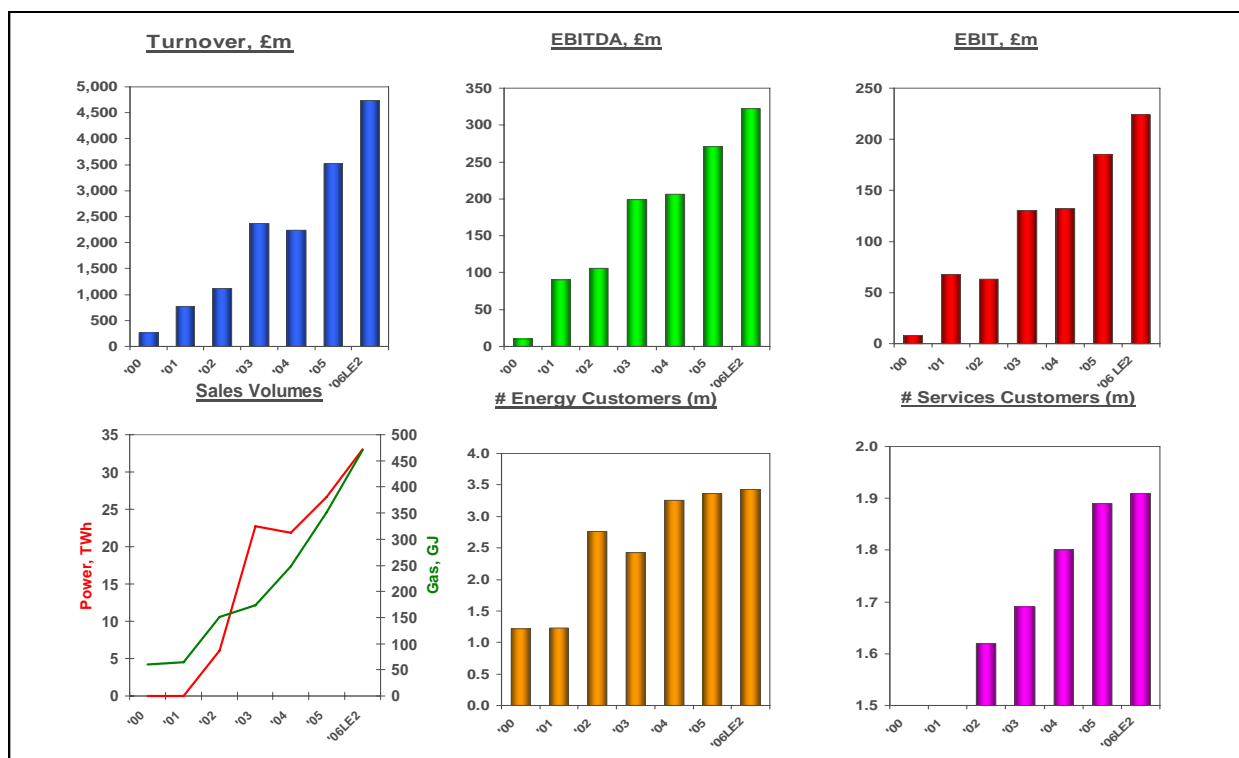
Exhibit 2
Direct Energy Business Organization

Chairman & CEO: Deryk King

- Canada 🇨🇦
  - Energy Services
  - Business Services
  - Home Services
  President: Bob Huggard

- USA 🇺🇸
  - Texas
  - Growth Markets
  - Home Services
  President: Phil Tonge

- Upstream
  - Power
  - Gas
  President: Bill Cronin

- EMG (trading and procurement)
  President: Bill Cronin

- Corporate/shared functions:

Maura Clarke:	EVP Strategy and M&A
David Clark:	CFO
Kumud Kalia:	CIO & EVP Customer Operations
Adele Malo:	EVP & General Counsel (Legal, G&RA)
Janice Thomson:	EVP Marketing & HR

Exhibit 3
Direct Energy Footprint (November 2006)

Direct Energy's gas and electricity business is focused in Canada, northeast USA and Texas.

Home services shares a largely common footprint, but also has operations in non-energy states (IN, KY, NC, KS, AL and FL).

Upstream assets include 3 gas fired power stations in Texas and 325 bcf of natural gas reserves in Alberta. We also have access to wind power in Texas through total offtake agreements with three producers.

North American headquarters are in Toronto, US headquarters in Houston, and US home services operates out of Dayton, OH. EMG operates out of Calgary and Houston and the non-Texas US energy business out of Stamford, CT

Exhibit 4
Kumud Kalia Resume, March 2005

- 2005: CIO **Direct Energy**
- 2002: CIO Business Markets Group, **Qwest Communications**
- 1998: CIO North America, **Dresdner Group**
  CIO Global Private Equity
- 1997: Head of IT strategy, **ING Barings**
- 1993: IT Manager, Swiss Bank Corporation (now **UBS**)
  Operations Manager; Strategy team member
- 1990: IT Manager, **Morgan Stanley**
- 1986: Systems engineer, **London Underground**

- BSc Electronic Engineering; Chartered Engineer

Exhibit 5
IS Organization (January 2007)

Regional leadership

Hugh Scott **(Houston)**
• US
  •Texas
  •Growth Markets
  •Home services
• Upstream Power
• EMG & Risk

David Cefai **(Toronto)**
•Canada
  • Energy services
  • Business services
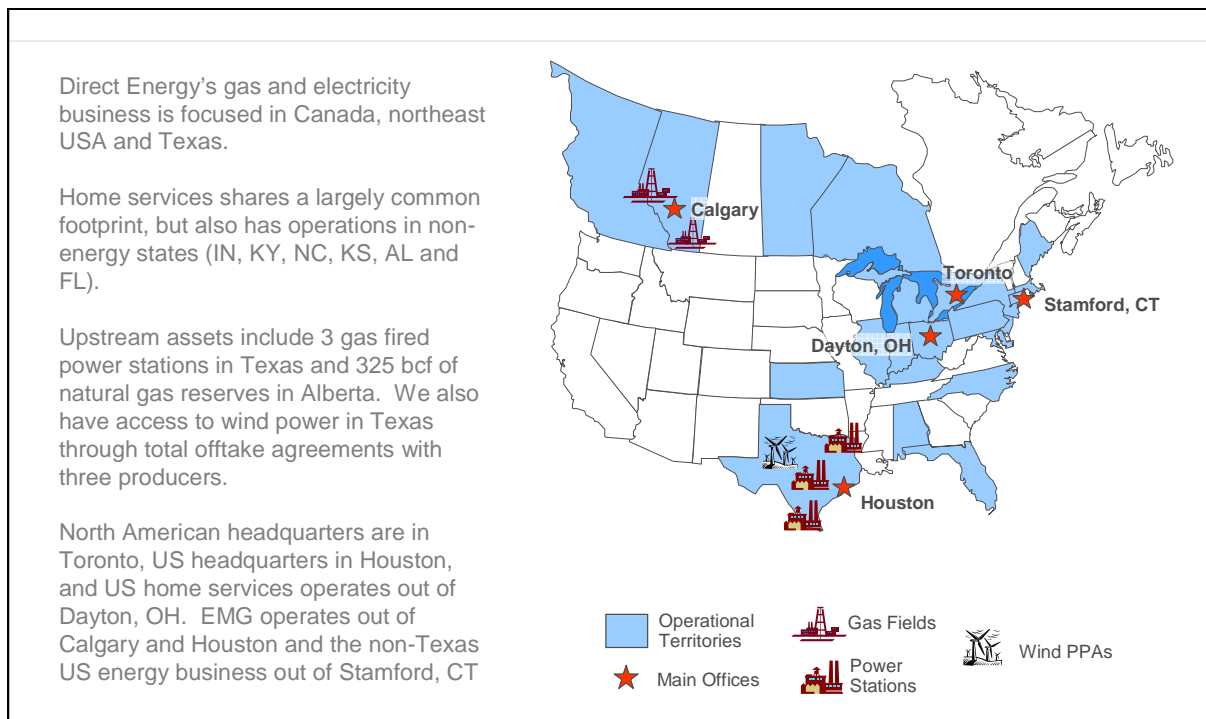 • Home services
• Upstream Gas
• Corporate functions

Bob Huggard, (Exec Committee)

Phil Tonge
Bill Cronin (Exec Committee)

Functional leadership

Business Management
Effie Simanikas **(Toronto)**
• planning & analysis
• program governance
• contract management

Operations, Shared systems, Architecture
Bernie Gillies **(Toronto)**
• managed seat
• data centre
• network
• production support
• application delivery

Cross-functional leadership

Process Engineering
Sanjay Acharya **(Stamford)**

Business Transformation
Chris Payne **(Houston)**

Operational Risk & Controls
Karen Kemp **(Toronto)**

All reporting lines solid to CIO; dotted for regional leaders to BU Presidents

Exhibit 6
Historic Spend Analysis

Total IS expenditure growth is relatively slight for the last 4 periods; IS operating costs growth rate is well below growth rates of North American revenue and operating expenses, while still accommodating upward cost drivers from:
– New capabilities: Governance (BAC); Disaster Recovery (including new datacenter); Business Continuity; Business Process Engineering; Architecture; Graduate Recruitment
– New operating costs resulting from IS capital investments and M&A
– Integration of shadow IS organizations

While improving performance levels

This equates to real year on year reductions – doing more with less.

Exhibit 6a
Historic Spend Analysis (cont'd)

▪ As DE has grown, total IS headcount has declined slightly.
– The percentage of total headcount attributed to contractors has declined from 34% at the end of 2004 to 18% at the end of 2006

▪ The ratio of IS opex, defined as operating costs plus depreciation, to DE gross margin and DE opex has declined since 2005
▪ The ratio of IS spend, defined as operating costs plus depreciation plus capex, to DE revenue has also declined over time
▪ **Both metrics demonstrate increased IS efficiency and productivity**

CISR MISSION

CISR was founded in 1974 and has a strong track record of practice based research on the management of information technology. As we enter the twenty-first century, CISR's mission is to perform practical empirical research on how firms generate business value from IT. CISR disseminates this research via electronic research briefings, working papers, research workshops and executive education. Our research portfolio includes:

Managing the IT Resource
- What the CEO wants from IT
- The Future of the IT Organization
- IT Governance in Top Performing Firms
- Enterprise Architecture as Strategy
- IT Portfolio Investment Benchmarks & Links to Firm Performance
- Reducing IT-Related Risk

IT and Business Strategy
- Business Models and IT Investment and Capabilities
- IT-Enabling Business Innovation and Transformation
- How IT Can Enhance Business Agility

Managing Across Boundaries
- Effective Governance of Outsourcing
- Building Effective Relationships Between Business & IT Leaders
- Effective Distributed Collaboration
- Effective IT Engagement Inside and Outside the Firm

Since July 2000, CISR has been directed by Peter Weill, formerly of the Melbourne Business School. Drs. Jeanne Ross, George Westerman and Nils Fonstad are full time CISR researchers. CISR is co-located with the MIT Center for Digital Business and Center for Collective Intelligence to facilitate collaboration between faculty and researchers.

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