

# solutions

+ Getting Ahead of the Curve:

## **Corporate Strategies**

That Address Climate Change

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*by*

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PEW CENTER

ON

Global CLIMATE CHANGE

## Case Studies

### Managing “Stroke of the Pen” Risk

Cinergy\*

Cinergy's heavy reliance upon coal combustion for electricity generation makes it particularly vulnerable to carbon regulation. Yet, according to Chairman and CEO Jim Rogers, addressing greenhouse gas (GHG) emissions is not only the ethically right thing to do; it is also a smart business decision. Rogers believes that U.S. industry

Table 6

#### Cinergy's Footprint (2005)

Headquarters:	Cincinnati, OH
Revenues:	\$4.6 billion
Employees:	7,842
Percentage of Emissions In Kyoto-Ratified Countries:	0 percent
Direct CO <sub>2</sub> e Emissions Legacy Generating Units:	58.2 MMtons*
Cinergy Solutions Projects:	2.6 MMtons
Other Direct CO <sub>2</sub> e Emissions:	0.3 MMtons
Aggregate CO <sub>2</sub> e Emissions**:	61.1 MMtons
Target:	5 percent reduction in GHG below 2000 levels by 2010-2012
Year Target Set:	2003

\* Million metric tons.

\*\*Cinergy does not track indirect emissions resulting from power purchases nor does it calculate emissions from product use.

will soon face domestic carbon constraints, a prediction that presents Cinergy with a serious strategic challenge. While climate change is a long-term problem, many industries need short-term regulatory and market clarity in order to properly value potential investments. For companies like Cinergy within the power sector, the future of climate policy and carbon regulation will affect strategic decision-making about investments in new generating capacity that have an expected life of 40 or 50 years.

“The greatest risk we face is ‘*stroke of the pen*’ risk, the risk that a regulator or congressman signing a law can change the value of our assets overnight,” says Rogers. “If there is a high probability that there will be regulation, you try to position yourself to influence the outcome.” Cinergy is actively managing this regulatory risk through its voluntary GHG emission reduction program and its

aggressive leadership role within the utility industry. These actions make the company a legitimate participant in the national policy debate, creating the opportunity to work with government, trade associations, environmental organizations and other stakeholder groups to help shape legislation on GHG emissions. But while Rogers leads Cinergy with a long-term focus, he does not feel that the company can take definitive action on climate change until there are both clear regulatory and market signals to do so. As Kevin Leahy, Managing Director, Climate Policy, explains, “The technologies will emerge when CO<sub>2</sub> has a price signal. All we need is a market signal to act, and that market signal will be created by regulation.”

\* We would like to thank Eric Kuhn, Kevin Leahy, David Maltz, Darlene Radcliffe, Jim Rogers, Catherine Stempien, and John Stowell for their contributions to this case study.

## Company Profile

Cinergy is one of the leading diversified energy companies in the United States, with 2004 revenues exceeding \$4.6 billion and a workforce of 7,842 employees. The company was created in 1994 through the merger of Cincinnati Gas & Electric (CG&E) and PSI Energy, Inc., the largest electric utility in Indiana. Cinergy is currently organized into two core businesses: Regulated Operations and Commercial Businesses.

The Regulated Operations unit consists of PSI's regulated generation, transmission and distribution operations, and CG&E's regulated electric and gas transmission and distribution systems. This unit plans, constructs, operates and maintains Cinergy's transmission and distribution systems, and delivers gas and electric energy to consumers. It owns over 7,000 megawatts (MW) of electric generating capacity serving 1.5 million electric customers, and operates 9,200 miles of gas mains and service lines that serve about 500,000 customers.<sup>92</sup>

The Commercial Businesses unit is comprised of the wholesale generation and energy marketing/trading operations. This includes CG&E's 6,300 MW of electric generating capacity in Ohio, which was deregulated in 2001. The wholesale generation division also includes the subsidiary company Cinergy Solutions (Solutions), which owns or operates 27 cogeneration projects with over 5,400 MW of electric generating capacity and performs energy risk management analyses, provides customized energy solutions and is responsible for all international operations.<sup>93</sup> Solutions' projects usually entail taking an ownership position in the energy production or distribution facilities of strategic partners and reworking the facility to improve energy efficiency and environmental performance. In addition to producing bottom-line revenues, these projects usually generate GHG reduction benefits as well.

In 2004 Cinergy generated 69 million megawatt hours of electricity, 98 percent of which were generated from the combustion of 28.2 million tons of coal, approximately 2.8 percent of the total 1.016 billion tons of coal consumed for electric power in the United States.<sup>94</sup> Cinergy's 2004 CO<sub>2</sub> equivalent (CO<sub>2</sub>e) emissions totaled 68.6 million metric tons, representing almost one percent of total CO<sub>2</sub>e emissions in the U.S.<sup>95</sup> The majority of these emissions (94 percent) are from "legacy generating units," those electric generating plants that were part of the original CG&E and PSI utility systems, as well as those electric generating plants acquired by the unregulated merchant group that are not Solutions projects. These figures have changed, as Cinergy has been acquired by Duke Energy through a \$9 billion stock swap (see "Cinergy's Merger with Duke Energy" on page 75).

## Climate Change Program Implementation

Cinergy began paying attention to climate change with a study in the early 1990's by ICF Consulting on the feasibility of adopting an internal CO<sub>2</sub> cap. Given the coincident activities surrounding the CG&E/PSI merger, the study only served to awaken concern within the company. GHG goal development was initiated in 1993 with Cinergy's participation in the Edison Electric Institute/U.S. Department of Energy (DOE) Climate Challenge. In September 2003, Cinergy formally announced its voluntary GHG emissions reduction program, with the goal of reducing annual emissions to five percent below the 2000 baseline for the years 2010 through 2012. The company's decision to more aggressively

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## Cinergy's Signposts

**Signpost #1:** States are taking action.

**Signpost #2:** An increasing number of U.S. Senators are expressing concern about global warming.

**Signpost #3:** The Kyoto Protocol was ratified and became law on February 16, 2005.

**Signpost #4:** A growing number of shareholder groups are asking companies to quantify the risks associated with GHG emissions.

**Signpost #5:** CO<sub>2</sub> and GHG emissions trading markets are developing in Europe and the United States.

**Signpost #6:** Global warming is becoming part of our everyday consciousness.

embrace climate change was made possible by three forces converging: an internal management push, pull from external stakeholders and technological developments that would allow the company to move forward in a carbon-constrained world.

**Internal Management Push.** Chairman and CEO Jim Rogers leads Cinergy with a long-term view and an approach that is rooted in stewardship. Given the expected 40 to 50 year lifespan of investments in generating capacity and the regulated nature of the industry, long-term planning is common for utilities. However, the principles of stewardship employed by Rogers are rare. “When your time horizon is short, you’re thinking ‘stonewall it and it won’t happen on

your watch,” Says Rogers. “If you are a steward, you make decisions on a longer time horizon, looking beyond your own tenure. When you think of it that way, your view changes. We look 20, 30, 50 years down the road.”

Today, when Rogers looks out over the business horizon, he sees six “signposts” indicating that climate change is an issue to be dealt with head on (see “Signposts” on this page<sup>96</sup>). Notably absent from this list is scientific research and analysis. According to Rogers, “Our decisions are purely business based. The science is interesting, but not truly relevant for our purposes.” Based upon these trends, he believes it is his responsibility to prepare the company for the likelihood of operating in a carbon-constrained world.

Cinergy deals with climate change as a long-term systematic effort primarily through capital investments and a focused public policy stance. This approach is well suited to the utility industry and aligned with the long-term nature of the climate change issue. Because climate change is caused by the concentration of long-lived GHGs in the atmosphere, there is reason to begin action but not immediate draconian reductions. The mantra is “slow, stop and reverse the growth of emissions.” Yet, according to Eric Kuhn, Principle Environmental Scientist, “There is a real commitment on Jim Rogers’ part to provide resources for this issue. CEO buy-in is critical, especially for a voluntary program.”

Rogers’ leadership style infuses the corporation with a strong focus on stakeholder engagement and transparency. His varied background and credentials lend legitimacy to his messages and engender trust from his audiences. Prior to joining PSI in 1988, he acted as an intervener on behalf of consumers in gas, electric and telephone rate cases in the Commonwealth of Kentucky, served as Deputy General Counsel for Litigation and Enforcement of the Federal Energy Regulatory Commission (FERC), and legally represented energy companies before the FERC, the Department of Energy, various Congressional committees and federal courts. Rogers has testified before Congressional Committees 13 times since 1989, on issues ranging from the environment to national energy strategy to industry restructuring.

The culture of stakeholder engagement dates back to when Rogers became head of Public Service Indiana (PSI) in 1988. At that time the company had a failed nuclear program, very poor relations with customers and was nearly bankrupt. Rogers introduced a strategy to improve relations through meaningful engagement with environmentalists, consumers and industrial groups in the state. Having a dialogue and listening with an open mind has developed trust from stakeholders, which has proven to be an asset for the company in efforts ranging from rate cases to locating infrastructure development. This credibility has extended into the policy arena, allowing Cinergy to base discussion on climate change on what it views as an economically rational foundation. Cinergy believes its collaborative approach is good for all of its stakeholders, including investors, customers, employees, policymakers, regulators, suppliers, partners and communities.

In fact, stakeholder engagement played a significant role in stimulating a more public position from the company on climate change. Early collaboration with the U.S. DOE on the Climate Challenge program and on-going interaction with policy makers on three air pollutant issues (sulfur dioxide, nitrous oxides and mercury) provided insight into the future of carbon regulation. Subsequent to these efforts, Cinergy made a commitment to participate in the U.S. EPA's Climate Leaders Program.

**Pull from external stakeholders.** In 2002, the Committee on Mission Responsibility through Investment (MRTI) of the Presbyterian Church (USA) submitted a shareholder resolution requesting that Cinergy provide information on GHG emissions and disclose the risks associated with climate change. Cinergy appealed to the Securities and Exchange Commission and was granted no-action relief. After MRTI tried again in early 2003, the company chose to reach out and engage in discussions that ultimately led to MRTI withdrawing the proposal. This dialogue also resulted in the development of a plan to disclose Cinergy's risks related to climate regulation.

In September, 2003, the company formally announced its internal GHG reduction program, a response to both the Climate Leaders Program commitment and the intervention by MRTI. In February, 2004, the company announced it would partner with MRTI to develop the *Air Issues Report to Stakeholders (AIRS)*. The December 2004 issuance of *AIRS* was a watershed moment for Cinergy. The report provided a broader analysis of the company's risks related to climate change and other emissions, with a thorough discussion of the linkage between energy, economics and the environment. The effort also represented a more public positioning on climate change and a culmination of analysis that had begun years earlier.

**Technological developments.** Heavy reliance on coal exposes Cinergy to regulatory risk in any form of carbon regime. Despite this fact, coal's abundance and low cost in the United States leads the company to believe that coal will continue to be central to the country's longer-term fuel mix. Cinergy's work with environmentalists gave it an early indication of a potential to break the carbon-environmental impasse; some environmentalists were warming to the idea of coal being part of the solution.

The most promising means currently available for utilizing coal in a carbon-constrained world is through the implementation of Integrated Gasification Combined Cycle (IGCC) technology combined with Carbon Capture and

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Sequestration (CCS). The coal gasification process converts coal into a synthesis gas (syngas) and produces steam. The hot syngas is processed to remove sulfur compounds, mercury and particulate matter before it is used to fuel a combustion turbine generator. The heat in the exhaust gases from the combustion turbine is recovered to generate additional steam. This steam, along with that from the syngas process, then drives a steam turbine generator to produce electricity. The technology has the potential to capture CO<sub>2</sub> much more economically than other coal technologies because a concentrated stream of CO<sub>2</sub> can be more readily removed from the syngas of an IGCC plant. Captured CO<sub>2</sub> would then be injected deep underground for geologic sequestration. Industry analysts estimate that carbon capture could add as much as 72 percent to the cost of electricity from a conventional pulverized coal plant, 60 percent to the cost of a natural gas combined cycle plant, but only 25 percent to the cost of electricity from an IGCC plant.<sup>97</sup>

The company has been involved in IGCC since the early 1990's when it built one of the first demonstration plants in the United States in partnership with the U.S. DOE through the Clean Coal Technology Demonstration Program. The West Terre Haute, Indiana plant is still in operation today with Cinergy purchasing syngas from it for one of the units at its Wabash River Station. In 2004, Cinergy entered into an agreement with GE Energy and Bechtel Corporation to study the feasibility of a commercial-scale (600 MW) IGCC generating station. Although various sites were evaluated as potential candidates, Cinergy's preferred IGCC site is the current location of a 160 MW pulverized coal plant near Edwardsport, Indiana built in the late 1940's. Given the importance of the climate change issue and the ability to continue to use coal, geologic sequestration potential was included as one of the siting criteria for the first time as part of the company's internal evaluation. A Front End Engineering and Design (FEED) study is being undertaken and should provide enough detailed design and cost information for a decision to be made whether or not to move ahead with the plant by late 2006.

Ultimately, Cinergy believes that resolving the climate change issue will require a paradigm shift regarding the technologies employed to refine and use energy. The types of technologies being discussed today and deployed over the next 20 to 30 years will all continue to utilize fossil fuel as their source of energy; even hydrogen would likely come from fossil fuels. Although they are more energy efficient and have the capability to capture CO<sub>2</sub>, they are only stopgap or bridging technologies to be used until low- or zero-carbon technologies are developed and deployed in the second half of this century.

But, notes Kuhn, "We are not a technology developer or owner. We are a customer for new technologies to enable us to economically operate our plants and/or produce electricity. We will however work with partners to provide test sites and assistance. But we'll likely not be the owner of resulting patents. We know intuitively that the cost of reductions could be huge so that the pennies that we are investing in research today could have tremendous returns in the future if only a small portion of the costs are reduced."

**Climate Program.** Cinergy's GHG Management Goal of five percent below 2000 levels for the period 2010 through 2012 was developed to position the company to take meaningful actions on GHG emissions and provide the company with credibility to lead the climate change policy debate. But developing the goal first involved a risk

assessment process, performed by Cinergy's risk management and portfolio optimization teams, which examined a variety of options for action.

Once an optimal goal was selected, it was reviewed by various non-governmental organizations (NGOs) and with that input, revised goals were presented to Cinergy's senior management. Many were unsure of the wisdom of setting such a goal, but most were persuaded that the strategic positioning and organizational learning were worth the associated risks. The goals were presented to Cinergy's Board of Directors as a matter of course, although not for official adoption. Similar to DuPont's response to both CFCs and GHGs, Cinergy set a target that was a stretch, not knowing precisely how it would achieve it.

The first step in implementing the new goal was performing an assessment of the baseline year-2000 GHG emissions. This effort was completed in 2004 and reviewed by Environmental Defense, who acted as an independent third party to add validity to the process. Environmental Defense has reviewed Cinergy's definition of its corporate emissions footprint, approved how GHG reductions are identified and measured, evaluated the company's implementation of the GHG fund, and serves as an ex-officio member of the GHG Management Committee that is charged with implementation of Cinergy's GHG goal. Cinergy has not yet engaged a third party auditor to verify its calculations, but plans to do so in 2006. Baseline year-2000 emissions were calculated to be 73.8 million metric tons CO<sub>2</sub>e (see Table 7).<sup>98</sup>

Given historical trends in energy demand, Cinergy's GHG Management Goal of a five percent reduction translates to an emissions level of approximately 70 million metric tons per year.<sup>99</sup> The goal was reviewed by EPA Climate Leaders staff, who determined, based on their own projections for electricity demand in the region, that the proposed goal was substantial. During the three year period 2010 through 2012, approximately 30 million metric tons of CO<sub>2</sub>e emissions reductions would be achieved.<sup>100</sup>

Reductions will come from the company's regulated and non-regulated electricity generating units, combined heat and power (CHP) facilities, natural gas distribution system, vehicle fleet operations and other operations that emit significant amounts of GHGs. Cinergy takes credit for emission reductions from its Solutions business, but only if it has an ownership position and operates the facility. The

emission credits are not prorated based on a percentage of ownership since Cinergy is taking responsibility for all of the GHG emissions from the facility. Cinergy operates, but does not own, a number of industrial power generation and CHP facilities. When Cinergy has no control over capital investments or operational changes at these units,

**Table 7**

Source of Emissions	Tons CO <sub>2</sub> e	Percent of Total
Legacy Electricity Generating Units	69,768,000	94.48
Fugitive Natural Gas	409,000	0.55
Cinergy Solutions Projects	3,454,000	4.68
Fleet Vehicles	36,000	0.05
SF <sub>6</sub> Emissions	176,000	0.24
<b>Total</b>	<b>73,843,000</b>	<b>100.00</b>

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their emissions are not included in the GHG baseline. Unless ownership passes to Cinergy, such emissions will not be included in future measures. Furthermore, Cinergy does not track the indirect emissions that result from power purchases, as it is difficult to determine the origin of electricity purchased by traders. Finally, emissions from the mining and transport of coal are not included in the calculations.

Cinergy intends to achieve at least two-thirds of emission reductions “on-system” (or within its operations), and up to one-third “off-system.”<sup>101</sup> On-system emission reductions involve projects that impact Cinergy’s direct emissions. Examples include: CO<sub>2</sub> emissions from smoke stacks and vehicular tailpipe CO<sub>2</sub> emissions, methane emissions from the natural gas distribution system, or SF<sub>6</sub> emissions from the transmission and distribution system. Examples of off-system reductions include forestry projects and research and development projects. Implementing both on-system and off-system projects will generate experience and knowledge regarding in-house technical capabilities for reducing GHG emissions as well as real-time data regarding the cost-effectiveness of such efforts. By taking these actions now, Cinergy will be better prepared to contribute to the policy discussion and to operate in a carbon-constrained future.

As emissions reductions are achieved, they are reported to the U.S. DOE’s Energy Information Administration (EIA) through the 1605(b) reporting system and to the U.S. Environmental Protection Agency (EPA) as part of Cinergy’s commitment under the Climate Leaders program. Cinergy feels strongly that early actors must receive credit for their voluntary reductions when legislation is ultimately passed.

Carbon dioxide is directly measured at generating units equipped with continuous emissions monitors (CEMs). For stations not equipped with CEMs, estimates are calculated using the BTU value of the fuel consumed multiplied by the pounds of CO<sub>2</sub> emitted per million BTU as provided through the DOE’s EIA 1605(b) reporting program.

Measurement and verification of biological CO<sub>2</sub> sequestered by tree plantings undertaken by Cinergy begins with the identification of measurement plots for testing. Within each sample measurement plot, tree volumes, underbrush and soils are measured for carbon content. The measurements are repeated at regular intervals, data is extrapolated between years when the measurement plots are surveyed and the measurement results are applied to the entire acreage of plantings. This process provides a statistical confidence level of 95 percent.

## Organizational Integration

In the years 2004 and 2005, Cinergy budgeted \$3 million (what Leahy calls “tuition to learn”) for projects to reduce GHG emissions, the first two installments of seven comprising the total \$21 million GHG fund through the end of the decade. This budget is managed by the GHG Management Committee (the Committee), which is comprised of ten senior representatives from business areas that would be affected by GHG restrictions (legislation) and one ex-officio member, Environmental Defense. Annually, GHG-reducing and offsetting projects are solicited throughout the company and are open to any employee who would like to propose a project. Project proposals are limited to five pages in length and include a description of how the project will reduce GHG



emissions, quantification of projected reductions, evaluation of the project's permanence, and an analysis of cost estimates for the project. Another critical factor is whether or not the project would be implemented without GHG Funds. Projects are reviewed, evaluated and ranked by staff using criteria established by the Committee. The projects are then presented to the Committee for their consideration and funding.

In 2004 and 2005, the Committee received over 150 project proposals. The majority of on-system projects were small efficiency projects in the power plants. Other on-system projects included wind and solar demonstration projects, the purchase of four hybrid vehicles for the Cinergy transportation fleet, and customer end use electric efficiency projects. Customer electric efficiency projects are considered on-system because they reduce the CO<sub>2</sub> emissions from Cinergy's power plants. Examples of off-system projects included tree planting and the funding of research and development projects in the areas of carbon sequestration, biomass fuels, and renewable energy generation.

In evaluating potential projects, Cinergy does not use a shadow price for carbon, largely because internal sentiment is that regulation is too remote and uncertain to reliably quantify a price. Another reason not to use a particular cutoff price for carbon is the secondary benefits commonly associated with the efficiency projects, such as reduced fuel consumption and reduced SO<sub>2</sub> and NO<sub>x</sub> emissions. Preliminary data collected for the power plant efficiency projects implemented in 2004 indicate that the projects actually return value to the company in the form of fuel savings and generation of SO<sub>2</sub> and NO<sub>x</sub> allowances. These projects were considered "low-hanging fruit" but as the company moves forward with its climate change program, reductions are expected to become more costly.

The criteria currently used to evaluate project proposals are more subjective than objective, including considerations such as the age of the facility and its availability rate. Ultimately, the Committee is interested in the cost per ton of CO<sub>2</sub>e emissions reduced, but it also considers issues such as project replicability, longevity of reductions achieved, and whether funding sources other than those related to GHG would be available. However, the cost data being gathered is part of the institutional learning desired by the committee, generating hard data from historical actions on available reductions at various price levels. This has value internally as well as in policy debates.

According to Kuhn, many of the on-system reductions have been projects "that were on the cutting room floor because they did not meet internal rate of return criteria." These projects had been previously forgone because the return on modest efficiency gains, in the form of fuel cost savings, was negligible given low coal prices. "However," says Kuhn, "these projects become attractive when the value of GHG emission reductions is taken into account."

Of the \$6 million allocated in 2004 and 2005, \$4.4 million (73 percent) was invested in on-system projects and \$1.6 million (27 percent) funded off-system projects, reducing annual CO<sub>2</sub>e emissions by approximately 600,000 and 25,000 metric tons respectively. While it is not fully accurate to calculate a cost per ton from these figures due to the research and development projects that are included, Cinergy estimates that the actual average cost per ton of CO<sub>2</sub>e emission reductions was \$8.28 in 2004 (on-system reductions averaged \$6.43 and off-system reductions

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**Table 8**

Cinergy's 2004 **GHG Fund** Projects

Project	Total Incremental Funds	Annual Tons of CO <sub>2</sub> Reduced	Average \$/ton CO <sub>2</sub> (2004-2009 projected)
<i>On-System</i>			
Heat Rate Improvement Projects at Generation Stations	\$1,940,000	349,882	\$1.11
Markland Dam Software Upgrade	\$285,000	7,400	\$7.70
Hybrid Cars	\$20,000	26	\$153.85
Renewable Energy Demonstration Projects *	\$55,000	35	\$314.29
<i>Off-System</i>			
The Nature Conservancy Reforestation Project	\$180,000	1,000	\$36.00
Vestar-Oldenburg Academy Energy Conservation Project *	\$90,000	62	\$290.32
Cincinnati Zoo Education Center Solar Project *	\$150,000	33	\$909.09
EPRI Research Project	\$250,000	---	
<b>Total All Projects</b>	<b>\$2,970,000</b>	<b>358,438</b>	<b>\$1.66</b>
On-System Projects and Reductions	\$2,300,000	77.4 percent	
Off-System Projects and Reductions	\$670,000	22.6 percent	

\* Small demonstration projects are more expensive than the costs per ton that Cinergy would accept for full scale utility projects.

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averaged \$59.00) and \$12.49 in 2005 (see Table 8). Cinergy has reviewed its reduction calculation methods with Environmental Defense and EPA Climate Leaders staff, and has pledged to hire a third party auditor to verify emissions reductions and provide assurance that figures and estimates are accurate for meeting its period 2010 to 2012 goal.

Looking more long-term, Cinergy is examining the potential of larger scale renewable energy sources in its service area, including wind, solar and biogas/biomass. But, according to Leahy, "Investment options depend in part on what one believes will happen on the technology front when regulation is set. For now, plant efficiency improvements will be first. These will be followed by methane from leaking pipelines and landfills, biomass co-fire in existing coal plants, and upgrades in renewables as possible. Tree planting will be part of the mix, but less than originally assumed as it is more costly than originally thought. There may be technologies like algae-based scrubbers to lower CO<sub>2</sub> from existing plants—though this is very early stage—that will be useful for existing plants."

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Some modest funding has been allocated to the development of renewable energy generating capacity, an energy conservation project, and carbon sequestration.<sup>102</sup> However, it is not believed that renewable energy sources will play a significant role in the voluntary GHG emissions reduction program, primarily due to their intermittent characteristics. When renewable energy sources are dispatched in regions where Cinergy operates, economics dictate that the most likely impact is displacement of a gas-fueled unit, rather than a coal-fired unit. However, should GHG legislation be passed, such technologies would become more competitive in a rising wholesale electricity market, and therefore could also become a more viable part of Cinergy's generating portfolio.

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That said, not all projects are chosen for low-cost emission reductions or long-term research value. Some are chosen for their symbolic or educational value. For example, the company's purchase of hybrid vehicles for its fleet does not represent the most cost-effective GHG emissions reductions available, but they do succeed in making the program tangible to employees and stimulating conversation.

Overall, the corporate culture of stewardship, the leadership of Jim Rogers, and the structure of the program have all been critical in garnering internal support for the climate change program. Naturally, having capital available to fund projects in a time of capital constraints makes the program much more real for staff working at the plant level. But the most critical component of Cinergy's program implementation, according to John Stowell, VP of Federal Legislative Affairs, Environmental Strategy & Sustainability, has been communication. "Internal and external communications are part of the culture at Cinergy," says Stowell. "Plant managers know about this program. We have meetings with them, and Jim Rogers discusses the issue often."

## External Outreach

External communication is an on-going component of Cinergy's GHG reduction program as well. In fact, it is such an integral part of the company's on-going initiatives and strategy already discussed that treating it as a separate initiative is not completely correct. Cinergy actively engages stakeholders to keep them informed and involved throughout the policy discussion and also to gather important feedback. In reality, the company finds the nuts and bolts of the program are of most interest to other specialists, while the wider public is interested in Cinergy's policy position and endorsement of regulation.

One way Cinergy began to engage its many stakeholders on climate change was through a third party consultant who conducted interviews which were published in the 2004 Annual Report titled *Global Warming: Can We Find Common Ground?* Taken as a whole, they led to a number of conclusions that reflect the core of Cinergy's approach to climate change: global warming is a complex problem that must be dealt with holistically; time is of the essence; the customer is still the top priority; good corporate governance is based on stewardship; and uncertainty will likely persist on this issue.<sup>103</sup>

But the challenge the company discovered in reaching out to stakeholders was finding a balance between the short-term interests of some groups of investors focused on quarterly earnings results, and the long-term interests of other groups such as employees, customers and communities. According to Rogers, "It's important to deliver for the investor, but when running your company from a stakeholder perspective, you include customers, communities, everyone. You need to raise rates slowly for the customer. You often need to make decisions that do not necessarily maximize the next quarter." The company has found that, because the financial risk associated with climate change is still uncertain, institutional investors are not as interested in this issue as they are in the prospects for near-term financial results.

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## Policy Perspectives

The uncertain regulatory environment flows through to uncertainty regarding the value of Cinergy's assets. It also makes it very challenging to evaluate large capital investments going forward. To help resolve this uncertainty, the company has laid out a number of broad criteria that it believes future regulation should encompass. GHG policy should focus on all sectors of the economy, embrace market-based cap-and-trade principles combined with a "safety valve," and be neutral to fuel type. In addition, compliance flexibility, including off-system reductions, is critical to finding a least-cost solution. Finally, GHG policies should be international.

Ultimately, Cinergy believes the policy should take steps to slow, stop and then reduce emissions growth while promoting public-private partnerships for the development of technology solutions (such as IGCC with CCS). The cost for individual companies of complying with GHG regulation will depend upon the timetable for implementation, emissions reduction requirements, allowance allocations, the impact on fuel prices and ultimately the form of the regulation. It is believed that a cap-and-trade program would be less expensive than a command and control approach.<sup>104</sup>

Cinergy communicates this message to lawmakers through the normal channels of the regulatory and legislative processes, including meetings, discussions at conferences and public statements. The company is not alone in its policy stance; utilities such as Exelon, Entergy and PNM have taken similar positions. According to Leahy, "What is important is that lawmakers know that even some coal-fired utilities think it is possible to deal with the climate problem without harming the economy. We've spent more time working on this problem and so have a better understanding of it than most. Our job now is to help other firms by being open with what we've found—facts are friendly." Industry groups such as the Edison Electric Institute provide a forum for CEOs to share perspectives and hear from experts. When Rogers takes the rotating Chairman's position in June, 2006, he hopes to help the organization move toward a broad consensus regarding climate change; perhaps one that focuses on opportunities, not just risks.

## Challenges Ahead

Cinergy's strategy is designed to position the company as an industry leader on climate change. That has paid off with recent recognition by Ceres as one of the electric power sector leaders (tied with AEP).<sup>105</sup> But when asked what the company could be doing better, Stowell responds that the company needs to go even further in presenting its policy position. "Being clearer on the details of desired policy would be helpful. We could probably benefit from communicating more with other utilities and coal companies about what we've learned regarding the risks and potential upsides. At the same time, we don't have all the answers or any precise legislative language to promote. But it's clear we're getting close to the point where all of us will have to come up with something more defined. That includes who's covered, what sort of allocation process to use, what's the base year for determining the level of the cap and so on. As is often the case, the devil will be in the details—but that's where we should be able to help."

And for all its strides, Cinergy people still feel the pressure to stay on top of technology developments so as to prepare for the market shift that climate change will create. According to Kuhn, "There are opportunities for

## Cinergy's Merger with Duke Energy

In May 2005, Cinergy and Duke Energy announced they would merge in an all stock transaction. The combined company retains the Duke Energy name, and is headquartered in Charlotte, NC, the home of the much larger Duke Energy (2004 revenues of \$22.5 billion and generation capacity of 32,000 MW).<sup>106</sup>

The merger is attractive on many dimensions, climate change being one of them. Rogers feels that the strong cultural fit between the two utilities assures that efforts on climate change will continue. Duke Energy CEO Paul Anderson (who has become Chairman of the combined company while Rogers has taken over as President and CEO) "has already socialized the issue at Duke," says Rogers, "my assignment is to continue to lead on it."

Synergies between the two companies' fuel diversity may help that process along. For example, Duke Energy's 3,600 MW of gas fired capacity located in the Midwest has not been profitable for Duke in the past. But these assets could be utilized immediately by Cinergy to meet system capacity requirements. If gas prices were to drop significantly, they could also reduce carbon emissions by shifting generation away from older coal-fired units, thus creating a partial hedge.

Another important aspect of this merger is nuclear power. Rogers explains, "If you think about a carbon-constrained world and our need for energy, nuclear may be an option for the future." However, both legacy companies that formed Cinergy (PSI and CG&E) had failed attempts at building nuclear capacity. Rogers continues, "Given our history, nuclear was not an option for us; coal and gas were it. Combining with Duke, one of the best nuclear operators in the country, gives us the assets and expertise to work in a future where nuclear is an option."

Despite these benefits, the risks associated with climate change were not part of the asset valuation process. Rogers explains, "They are regulated in rate base, as are we. Intrinsic value does not really change with carbon regulation because the cost would be passed through to rate payers. The [non-regulated] Ohio assets would change in value, but with their very low variable costs, they could remain competitive with a carbon charge." The larger picture shows that the portfolio of the combined company will be more diverse, lowering the regulatory risk profile.

The favored policy outcome of the combined company remains to be seen. Cinergy has maintained that a cap-and-trade policy would be best, while Duke has promoted a carbon tax. "We've been thinking about this for a long time," says Rogers, "We see how successful cap-and-trade is with SO<sub>2</sub>. Further, we don't think a tax is politically viable. In any case, the least expensive long term policy will employ a price signal of some sort." Rogers acknowledges the need to develop a position that best suits the combined entity. Yet one thing is clear, the size of the combined entity will provide much greater weight in shaping the policy debate moving forward.

reducing the cost of compliance by being active in the shaping of policy. There are also opportunities available by getting ahead of the curve to be in a position to be a first mover. If you're looking for the technologies, you'll be there to make the investments."

Like David Hone at Shell, Rogers worries how climate change could alter the fundamentals of his industry. "I worry that we are using 100 year-old technology. There will be a transformative technology. At what point will our generation and transmission lines become obsolete? There are a lot of things you might do, if you think there will be a new technology in 25 years. You need to hit your numbers with a short-term view, but you need to run your company with a long-term view." Having a seat at the policy table and influencing the final legislation will help ensure that it fits with Cinergy's interests and future direction.

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firms disclose how they engage on public policy engagement related to climate and the policy positions they advocate. Thus, a firm that CDP scores well on disclosure and operational efforts to reduce emissions may also be opposing progress toward legislation to cap GHGs.

76. See: <http://www.cdproject.net/>, viewed 3/3/06.

77. Op. cite, Smith, J. 2005.

78. *The Economist*. 2006. "Companies and Climate Change: Can Business Be Cool?" *The Economist*, June 10, 379(8481): 70.

79. Wellington, F. 2005. *Framing Climate Change Risk in Portfolio Management*. (Washington DC: World Resources Institute): 3.

80. Ibid, Wellington, F. 2005.

81. For more on Goldman Sachs' environmental policy framework, go to: [http://www.gs.com/our\\_firm/our\\_culture/social\\_responsibility/environmental\\_policy\\_framework/index.html](http://www.gs.com/our_firm/our_culture/social_responsibility/environmental_policy_framework/index.html), viewed 3/3/06.

82. Suozzo, P. 2006. "Investing in Solutions to Climate Change" *Citigroup Research*, June 12: 7.

83. Deutsch, C. 2006. "Wall St. Develops the Tools To Invest in Climate Change." *New York Times*, May 24: C3.

84. Op. cite, Deloitte Research. 2005.

85. Another problem is that there is a lack of harmonization of the standards. For example, as of June, 2006, 31 states used the AASHTO specification standards and 16 used the ASTM standards. Only 4 states used both (source: Portland Cement Association).

86. O'Driscoll, M. 2006. "Duke's Rogers Will Follow EEI Line on CO<sub>2</sub> Reductions." *Greenwire*, <http://www.eenews.net/gw/>, viewed 6/21/06.

87. Aston, A. and Helm, B. 2005. "The Race Against Climate Change." *Business Week*, December 12: 59-66, 132.

88. Top Scores for BELC members: DuPont (Chemicals), AEP, Cinergy, Entergy, Exelon and PG&E (Electric Power), Toyota (Autos), GE and ABB (Industrial Equipment), Alcan and Alcoa (Metals and Mining), BP and Shell (Oil and Gas) and Rio Tinto (Coal).

89. Op. cite, Cogan, D. 2006.

90. GHG controls will create new markets in emissions allowances, capital, and technologies that are efficient in their use of energy or creation of carbon.

91. Hoffman, A. 2005. "Climate Change Strategy: The Business Logic Behind Voluntary Greenhouse Gas Reductions." *California Management Review*, 47(3): 21-46.

92. Cinergy 2005. *About Cinergy, Cinergy at a Glance*, [http://www.cinergy.com/About\\_Cinergy\\_Corp/Corporate\\_Overview/default\\_at\\_a\\_glance.asp](http://www.cinergy.com/About_Cinergy_Corp/Corporate_Overview/default_at_a_glance.asp), viewed 10/9/05.

93. Ibid, Cinergy 2005. *About Cinergy, Cinergy at a Glance*.

94. Based upon the Department of Energy (Energy Information Administration) figure of 1.016 billion tons of coal consumed for electric power in 2004.

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95. Based upon Department of Energy (Energy Information Administration) 2004 data, combustion of coal accounted for approximately 85 percent of CO<sub>2</sub> emissions from the electric power sector in the United States in 2004. The electric power sector accounted for approximately 40 percent of CO<sub>2</sub> emissions in the United States. Total CO<sub>2</sub>e emissions in the United States were approximately 7.6 billion tons in 2004.

96. Cinergy. 2004. *Air Issues Report to Stakeholders*. (Cincinnati, Ohio: Cinergy Corp.): 26.

97. David, J. and H. Herzog. 2002. *The Cost of Carbon Capture*. (Washington DC: U.S. DOE, National Energy Technology Laboratory) [http://www.netl.doe.gov/publications/proceedings/O1/carbon\\_seq\\_wksp/David-Herzog.pdf](http://www.netl.doe.gov/publications/proceedings/O1/carbon_seq_wksp/David-Herzog.pdf), viewed 2/7/06.

98. Op. cite, Cinergy. 2004. *Air Issues Report*: 29.

99. Ibid, Cinergy. 2004, *Air Issues Report*: 2.

100. Ibid, Cinergy. 2004, *Air Issues Report*: 2.

101. Ibid, Cinergy. 2004, *Air Issues Report*: 26.

102. Ibid, Cinergy. 2004, *Air Issues Report*: 26.

103. Cinergy. 2004. *Annual Report*. (Cincinnati, OH: Cinergy Corp.): pp. 14-15.

104. Op. cite, Cinergy. 2004, *Air Issues Report*.

105. Op. cite, Cogan, D. 2006.

106. The full scale of Duke Energy is changing as it has announced the sale of Duke Energy North America (DENA) and its 6,200 MW of generating capacity for \$1.54 billion. Duke Energy 2006. "Duke Energy Announces Sale of DENA Power Generation Assets to LS Power." <http://www.duke-energy.com/news/releases/2006/jan/2006010901.asp>, viewed 2/1/06.

107. UNFI. 2002. *CEO Briefing on Climate Change*. <http://unepfi.org>, viewed 1/29/06.

108. Swiss Re. 2004. *Sustainability Report 2004*, <http://www.swissre.com>, viewed 1/29/06.

109. Swiss Re. 2004. *Climate Change Matters to All of Us: The Great Warming*, <http://www.swissre.com/>, viewed 1/24/06.

110. Schmidheiny, S. and F. Zorraquin. 1996. *Financing Change: the Financial Community, Eco-Efficiency, and Sustainable Development*. (Cambridge, MA: MIT Press).

111. Aston, A. and Helm, B. 2005. "Financial Services Leaders." *Business Week*, December 12.

112. Reinsurance is a contract by which an insurer is insured wholly or in part against the risk he has incurred in insuring somebody else.

113. Swiss Re. 1994. *Global Warming, Elements of Risk*. (Zurich: Swiss Re).

114. In December 2004, HSBC made a commitment to become the world's first major bank to achieve carbon neutrality. The target was achieved in 2006.

115. Swiss Re also works to meet MINERGIE® standards, the European equivalent of LEED®, in all its new buildings in Switzerland, and in refurbishing projects whenever financially, technically, and architecturally feasible. MINERGIE® certified buildings are 60 percent more efficient in their heating systems than is required by current Swiss regulations. Also, the standard requires that construction costs not exceed standard costs by more than 10 percent, and in practice they tend to be only about two to four percent higher. Since 2000, the company has received MINERGIE® certification for 13 real estate projects with a total floor space of 151,000 square meters (1,625,350 square feet).