The Post and Courier (Charleston, SC)

                           December 24, 2007 Monday
                                Final Edition

**Rhetoric met reality at Bali**

BYLINE: The Post and Courier Editoria

SECTION: EDITORIAL/OPINION; Pg. A8

LENGTH: 445 words

Nobel Peace Prize winner and former Vice President Al Gore appeared at the world
climate conference in Bali, Indonesia, recently and declared, "My own country,
the United States, is principally responsible for obstructing progress here in
Bali. We all know that." The comment drew applause, but in fact a number of
nations at Bali drew a line against a new Kyoto-style agreement with mandatory
carbon emissions targets for some nations and not for others.

Among the holdouts, according to The New York Times and other reports: Japan,
Canada, Australia, Britain, Russia, and the United States. Together, they
account for nearly half of the world's economic output.

And the reason for the disagreement? China, on track to overtake the United
States as the biggest emitter of greenhouse gasses in an economy growing at 11
percent a year, thinks it is unfair to penalize developing nations by requiring
them to cap emissions. The Indian position is the same. But it will be
impossible to meet the 2050 global targets recommended by the International
Panel on Climate Change without the participation of these big economies, unless
developed nations are willing to drastically reduce the prosperity of their own
citizens through very deep cuts in energy use.

Mr. Gore called his comment slamming the United States "an inconvenient truth,"
alluding to his film lecture on the dangers of global warming. But he was
forgetting some key political facts in the background. The impasse over
developing nation emissions is hardly news and hardly the fault of the Bush
administration. In 1997, while Kyoto was under negotiation, the Senate voted
95-0 for a resolution rejecting binding emissions targets for the United States
unless developing nations also made commitments. Mr. Gore ignored this advice
when he led the U.S. delegation at Kyoto, but President Clinton wisely refrained
from putting the Kyoto agreement to a Senate vote. The Bali conference, forced
to confront the politics that Kyoto glossed over, demanded that developing
nations take "actions in a

measurable, reportable and verifiable" way to reduce carbon emissions. In doing
so, it was following the lead taken by President Bush in seeking a way to bridge
the differences on climate change policy using voluntary measures and
incentives.

The United States may some day adopt carbon caps on its own. But as Sen. John
Kerry, D-Mass., warned the Bali conferees, an international treaty with
mandatory carbon ceilings has no chance in the U.S. Senate, no matter which
American political party is ascendant, unless the major developing countries are
covered.

Climate change rhetoric met reality at Bali, inconvenient or not.

 Foreign Policy in Focus

                    December 24, 2007 Monday

Bali's Business-As-Usual Mandate

BYLINE: Redman, Janet.

Janet Redman, a Foreign Policy In Focus contributor, is a researcher for the
Sustainable Energy and Economy Network at the Institute for Policy Studies.
Redman went to Bali as an NGO observer of the UN climate talks.

SECTION: FPIF COMMENTARY; Pg. N\_A ISSN: 1524-1939

LENGTH: 2408 words

ABSTRACT

Carbon trading has already been outlined in the Kyoto Protocol as a way for
polluting countries to "offset" their greenhouse gases by purchasing credits
from projects in developing countries that reduce emissions. For example, an
energy company from Spain could buy credits from a company in Chile that wants
to build a hyrdropower plant, which would substitute "clean" electricity for
power that would otherwise come from burning coal. The idea is that the hydro
electricity could not be produced without the additional investment from the
Spanish company. This Clean Development Mechanism (CDM) is meant to both lower
global emissions levels and provide an income stream for non-industrialized
countries to develop clean sources of energy.

The definition of "clean" in the "mechanism" has also been called into question.
Technologies like flaring gases that escape from landfills result in other forms
of pollution while providing a financial incentive to keep toxic facilities
open. Large hydropower projects are abundant in the CDM registry, but large
impoundments not only release methane, they often lead to the displacement of
whole communities, plunging families further into poverty. And institutions that
are neck-deep in carbon trading like the World Bank are experimenting with new
methodologies for supposedly "clean" coal and flaring methane from gas
pipelines. In other words, some of the most polluting industries would then
qualify for additional finance because they would be considered "clean."

Described in Bali's road map is an Adaptation Fund for developing countries that
could reach $500 million by 2012, which would be administered by the Global
Environment Facility (GEF) with the World Bank acting as financial trustee. One
funding proposal suggests bolstering donations to the Fund from industrialized
countries by recouping a 2% fee on revenues from CDM projects. Proponents of the
Adaptation Fund claim that by using the Clean Development Mechanism, rich
countries would be "forced" to finance clean energy projects in poorer
countries. Because the United States, which releases 24% of the world's
greenhouse gases, is not a party to the Kyoto Protocol, it cannot participate in
the CDM and would once again get off the hook in compensating those who will
live the harsh effects of global climate change.

FULL TEXT

Following two weeks of climate talks in Bali that brought together nearly 190
countries and more than 10,000 delegates, observers and activists, it looks like
there's very little to show for negotiations that were less about urgent climate
action than business as usual.

The meetings were convened under the UN Framework Convention on Climate Change,
the international body that 10 years ago negotiated the Kyoto Protocol, the
accord that set binding targets for industrialized countries on climate-altering
greenhouse gas emissions. The United States was the only wealthy country not to
ratify the agreement. This year's talks were about forging a path to a new
agreement that would be ready to take over when Kyoto expires in 2012.
Ultimately, Bali turned into a game of cat and mouse with the U.S. trying to
water down the plan and everyone else trying to get the U.S. on board.

Monumental Boos

The final straw came on December 15, a day after the talks were scheduled to
end, when U.S. Under Secretary of State for Democracy and Global Affairs Paula
Dobriansky said the United States could not accept language that required rich
countries to help poorer countries deal with the consequences of climate change
in "measurable" ways. An unprecedented thunder of boos went up from delegates,
most of whom were from poorer nations. Dobriansky left the room only to return
moments later saying that the United States would not block progress on a
roadmap for future negotiations. The cheering that followed left delegates and
observers, and apparently reporters, with a sense that something monumental had
been accomplished at Bali.

But the Bali "action plan" does almost nothing to ensure that the people most
affected by the worst impacts of climate change will receive the resources
needed to survive impending climate chaos. This transition plan for replacing
the Kyoto Protocol, which is so far being called the "Bali mandate," instead
entrenches the power of big business, and the global financial institutions that
work on its behalf, without committing any government to tangible emissions
reductions.

Carbon Trading

The proposals put forward in the agreement for reducing emissions and adapting
to climate change lack concrete detail, but they are spelled out clearly enough
to see that trading in carbon credits will likely be at the center of a
post-2012 global treaty.

Carbon trading has already been outlined in the Kyoto Protocol as a way for
polluting countries to "offset" their greenhouse gases by purchasing credits
from projects in developing countries that reduce emissions. For example, an
energy company from Spain could buy credits from a company in Chile that wants
to build a hyrdropower plant, which would substitute "clean" electricity for
power that would otherwise come from burning coal. The idea is that the hydro
electricity could not be produced without the additional investment from the
Spanish company. This Clean Development Mechanism (CDM) is meant to both lower
global emissions levels and provide an income stream for non-industrialized
countries to develop clean sources of energy.

What's the Point?

However, criticism of the effectiveness of carbon trading generally, and the CDM
more specifically, abounds. After two years of operation the European Union
Emissions Trading System failed to reduce emissions and resulted in windfall
profits of up to $2 billion for private corporations that were given free
credits for their pollution. Add to this the findings of a study commissioned by
the World Wildlife Foundation that about 20% of projects that received funding
from the CDM didn't deliver more emissions reductions than would have been
generated without the extra money. You have to wonder whether carbon trading
will actually help avoid climate catastrophe.

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Forcible Finance

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Adaptation Fund claim that by using the Clean Development Mechanism, rich
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countries. Because the United States, which releases 24% of the world's
greenhouse gases, is not a party to the Kyoto Protocol, it cannot participate in
the CDM and would once again get off the hook in compensating those who will
live the harsh effects of global climate change.

The Fund's total capital is almost insignificant compared to the $50 billion
that Oxfam estimates the developing world will need every year to cope with
climate changes. But by naming the CDM as a major source of funding for
adaptation, the Bali action plan entrenches carbon trading in future
negotiations. The proposal ensures that developing countries, eager for a way to
pay for responses to expected disasters, have an increasingly vested interest in
seeing market mechanisms flourish. And as the institution that both promotes new
"clean" development methods and brokers offset finance for emerging
technologies, the World Bank will have an increasing stake in the carbon market,
as well.

Little Mitigation

The fact is, the Bank is continuing to finance oil and gas companies with public
money to the tune of $8 billion since 2000 (82% of which was for export to
industrialized countries). And the Bank's existing carbon finance portfolio has
done little to mitigate climate change or support the development of sustainable
energy for the 1.6 billion people living without access to electricity.

To date, the Bank has channeled more that $1 billion from the most polluting
companies in the industrialized north to the most environmentally destructive
industries in the global south. Only a fifth of the World Bank's active "carbon
finance" projects are in the renewable energy sector. More than 80% of the funds
dispersed have gone to coal, metal, cement and industrial gas companies. Of the
Bank's entire carbon finance portfolio only 2% of the total $2 billion in
capital raised is earmarked for projects with explicit sustainable community
development requirements. It should either fund real renewable energy
alternatives or stop claiming to be part of the solution.

Code REDD

Considering the World Bank's less than stellar track record, it was surprising
to see the international community call on the Bank to take the lead in a
proposal emerging from the Bali talks to reduce greenhouse gas emissions from
deforestation in developing countries, a process known by the acronym REDD.

By making the goal of slowing deforestation part of the roadmap, forests
essentially get folded into the carbon market. But the Bali Action Plan does
little to explain how forested countries, and the communities who depend on
forests for their survival, would be compensated for slowing deforestation.

The World Bank has stepped into this vacuum to guide a market in forest credits
through its newly launched Forest Carbon Partnership Facility (FCPF). This fund
will select countries to try a new approach to carbon trading by setting
national reduction targets for a country's entire forest sector, instead of
creating baselines and targets on a project-by-project basis.

Indigenous Protests

Indigenous rights and sustainable forestry groups have protested that there is
nothing built into this World Bank program ensuring that the benefits of a
global forest trading scheme would reach the people who live in and depend on
forests. These fears appear to be well-founded. According to the World Bank's
own staff, indigenous and forest- dwelling peoples were left out of early
planning for the fund. Critics familiar with the World Bank's current forestry
program have raised warnings of massive displacement as companies rush to
acquire forested land and governments shift public policy to facilitate
industrial land grabs.

Investors, however, are quite pleased with the concept, having long asked for
the Bank to establish consistency throughout the carbon market. Under the new
World Bank initiative, private investment companies would have an easier time
assessing the risks of putting money into the carbon market, and lower their
transaction costs by purchasing credits from a large number of carbon offset
forestry projects at the same time.

Aside from its work dealing with forests, the Bank has already begun designing
another new system for channeling money from rich countries to poor ones to
address climate change called the Carbon Partnership Facility. This initiative
will simplify the trading in carbon credits generated from power sector
development, gas flaring, energy efficiency, transportation and waste management
systems in developing nations.

The growing role of the World Bank in clearing a path for private capital in an
expanded carbon market was not lost on climate justice groups in Bali. Close to
100 activists from around the world demonstrated outside the conference room
where Bank president Robert Zoellick led inauguration ceremonies for the Forest
Carbon Partnership Facility. And World Bank side events and press conferences
were peppered with demands for the Bank to get out of the carbon market.

Calling for Alternatives

In a broad call for climate justice, the Institute for Policy Studies and the
International Forum on Globalization convened 137 prominent citizen leaders from
every continent to put forward positive solutions to the climate crisis. The
result was a demand for a parallel track of negotiations to initiate the just
transition to an equitable, low-carbon global economy. Our "Bali Call," urged
negotiators to set binding emissions cuts of at least 80% below 1990 levels by
2050, and ensure that those with the greatest resources bear the greatest burden
of adjustment.

To deliver deep cuts, signatories outlined a number of strategies to move away
from intensive energy consumption, including promoting sustainable agriculture,
"green cities," and community control of natural resources. The Bali Call also
underscores the need to cut back on oil production and consumption, and protect
human rights and ecosystem integrity.

Also, before the talks even began, business leaders from 150 global companies
called on the Bali delegates to create further stability in the carbon market by
setting legally binding targets for greenhouse gas cuts. In a communique they
argued that tackling climate change could be a catalyst for growth. But scaling
up investments in renewable energy technology will require concrete commitments
lacking in the Bali action plan. Ironically, companies are calling for stronger
global environmental regulations than appear to be on the way. With no guarantee
of large profits to be made from clean energy, businesses are largely remaining
on the sidelines in discussions about real alternatives to dirty energy
consumption.

As climate negotiations unfold in the next two years, scrutiny of the World
Bank's climate programs - and proposals for real solutions from those most
affected - will be increasingly important to ensure that people, not markets,
determine the shape of a just international agreement to stem greenhouse gas
emissions.

 San Gabriel Valley Tribune (California)

                           December 24, 2007 Monday

Thomas Friedman: Just what were the Bali accords all about?

SECTION: OPINION

LENGTH: 811 words

AS readers of this column know, I have a rule that there is a simple way to test
whether any Arab-Israeli peace deal is real or not: If you need a Middle East
expert to explain it to you, it's not real. I now have the same rule about
global climate agreements: If you need an environmental expert to explain it to
you, it's not real.

I needed 10 experts to explain to me the Bali climate agreement - and I was
there! I'm still not quite sure what it adds up to. I'm not opposed to forging a
regime with 190 countries for reducing carbon emissions, but my gut tells me
that both the North and South Poles will melt before we get it to work.

There is a better way. Just make America the model of how a country can grow
prosperous, secure, innovative and healthy by becoming the most clean,
energy-efficient nation in the world - and let everyone follow us.

Unfortunately, the Bush team has not been able to lead on this issue - for two
reasons. First, its credibility is shot, even though if you add up all the clean
energy, biofuel and other programs the administration has initiated over the
past two years, plus the half-a-loaf energy bill spearheaded by the Democrats
that the president is scheduled to sign today, they're not a zero anymore.

There was a revealing encounter here Thursday between the U.S. negotiating team
and environmentalists that was worthy of pay-per-view. The American team was
giving its big briefing. The room was packed with activists from around the
world. They came loaded to carve up the Americans, who, it was just assumed, had
to be stupid because they represented the Bush administration.

And then something unexpected happened. For 90 minutes, Andy Karsner, who runs
the Department of Energy's renewable energy programs, James Connaughton, who
heads White House climate policy, and their colleagues put on a PowerPoint
performance that was riveting in its understanding of the climate problem and
the technologies needed to solve it. Their mastery of the subject was so
impressive that it left this room full of global activists emotionally confused:
On the one hand, it was obvious that these U.S. officials really knew their
stuff, yet on the other, I'd bet not a single person there believed they
reflected the true Bush policy.

As if reading the minds of everyone there, Malini Mehra, the chief executive of
the Centre for Social Markets, an Indian activist group, took the microphone
and, in so many words, asked the Bush aides: Who are you and what planet did you
come from? It could not possibly be from planet Bush.

"Anyone who has been listening to the news on climate change knows that there
has been one message from this administration - that any serious action on
climate change threatens the U.S. economy and our way of life," Mehra said to me
later.

So to now hear these American technocrats "present what was a thoughtful
analysis that made sense, flies in the face of what we have come to know about
this administration," she added.

A lot of this is the price America is paying for the gratuitous way President
Bush trashed the Kyoto treaty in 2001, without presenting any alternative for
six years. Message to world: "Get lost. We only care about ourselves."

So now, when both Bush and Congress have moved a little, few people believe even
that is for real. As Irwandi Yusuf, the governor of Indonesia's Aceh province,
bluntly said to me: "We don't believe the Americans in this administration."

The other reason we can't be a model is that whatever the U.S. is now doing to
address the global warming challenge, it is not transformational. It is an
incremental approach to a scale problem that can only be solved by triggering
massive innovation in clean power. And without a price signal - a carbon tax or
cap-and-trade system - to make it profitable to invest enormous sums, long term,
in new clean technologies, it will not happen at scale.

The Bush team loves new technologies, but not the price signals needed to
initiate them. By the way, finance or energy ministers who deal with price
signals weren't even at the Bali convention, which was dominated by
environmental regulators.

"This is a problem of economic transformation, not environmental regulation,"
said Glenn Prickett, senior vice president at Conservation International.
(Disclosure: My wife is on its board.) "The transformation needed will require
far more than just passing one law or signing one treaty. It will require the
same level of focus and initiative that the Bush administration is devoting to
the war on terror. No political leader in the U.S. is approaching this issue yet
with anywhere near the seriousness required."

So I still don't know what Bali was about, but I do know that it was
incremental, not transformational - and incrementalism, when it comes to clean
energy, is just a hobby.

Thomas Friedman is a columnist with The New York Times.

  December 24, 2007

**Despite Climate Change Fears, China And India Focus on Coal;
Energy investment in China to hit $3.7 trillion by 2030**
BYLINE: Housley Carr

SECTION: The Global Sourcebook; Pg. 66 Vol. 259 No. 2

LENGTH: 2116 words

For all the talk about climate change, one fact is irrefutable: The world--led
by China, India and other large developing nations--is in the midst of an
extraordinary boom in the construction of conventional coal-fired powerplants.

"As they become richer, the citizens of China and India are using more energy to
run their offices and factories, and buying more electrical appliances and
cars," the International Energy Agency says in its newly issued World Energy
Outlook.

IEA estimates that China needs to add more than 1.3 million MW--the equivalent
of 2,000 650-MW coal plants--to its electricity-generating capacity by 2030,
more than the total current installed capacity in the U.S. Projected cumulative
investment in China's energy-supply infrastructure between 2006 and 2030 will
amount to $3.7 trillion in 2006 dollars, "three-quarters of which goes to the
power sector," IEA concludes.

Powerplant development activity in China is "extremely busy," says Hoe Wai
Cheong, managing director of Black & Veatch's Asia region energy business. "In
2007, an average of one plant a week has been commissioned there," about 90% of
them coal-fired because of China's abundant coal reserves.

International engineering and construction companies like B&V, which is based on
Overland Park, Kan., can compete for work in China, Cheong says. He adds,
however, that many Chinese firms are capable of designing and building basic
coal-fired powerplants, so unless the projects are very complex, there is really
no need to partner with large international firms.

"A local firm--whether in China or India--would ask, 'Why do we need the
participation of an international contractor?' The simple answer is that they
only need us if we can bring something to the table" in the form of expertise,
such as B&V's extensive experience in designing and building combustion-turbine
projects, Cheong says.

India is in a powerplant building boom of its own. It is expected to add more
than 400,000 MW of new generating capacity by 2030. Like China, most of it is
coal-fired.

New Delhi-based National Thermal Power Corp. (NTPC), India's largest generator,
currently has 11,440 MW of new coal plants under construction and expects to be
able to place orders for an additional 7,990 MW by March 2008, A.K. Singhal,
NTPC's chief financial officer, recently told energy analysts. Most of the new
output would be coal-fired, he says.

While no other nation can compare with China and India in terms of the number of
coal plants being built, others countries, including Indonesia, Thailand,
Malaysia, Vietnam, South Africa and Brazil, have aggressive plans nonetheless.

Utilities in Indonesia, for example, plan to add a total of 10,000 MW of new
coal-fired capacity over the next four years alone, according to the country's
Dept. of Energy and Mineral Resources, including 6,900 MW in the Java-Bali
region. Engineering, procurement and construction work on one project--the
600-MW Rembang coal station in central Java planned by PT Perusahaan Listrik
Negara of Jakarta, Indonesia--is just getting under way. A 70/30 joint venture
team of Kuala Lumpur-based Zelan Berhad and PT Priamanaya Djan International of
Jakarta won the $560-million EPC contract.

B&V's Cheong notes that Tokyo-based Sumitomo Corp. recently subcontracted to his
firm a significant portion of its EPC work on a two-unit, 1,320-MW Tanjung Jati
B coal-fired power station in central Java that is scheduled to begin commercial
operation in the third quarter of 2010.

In Africa, South Africa's Eskom electric utility, which is based in
Johannesburg, is rebuilding and returning to service three large coal stations
that had been put on hold several years ago. It also is planning several new
coal-fired facilities, including the Medupi and Brava stations, each of which
will have the capacity to generate 4,800 MW.

While conventional coal plants dominate the global plant-construction market,
there also is strong demand for a wide variety of electricity-generation
technologies that have much less of a climate impact. A new generation of
nuclear-power generating systems is beginning to be built and international
utilities are interested in building coal- or oil-fired projects with carbon
capture and sequestration. Wind power also continues to grow.

China leads the way in nuclear projects, with plans to bring on line an average
of two nuclear plants a year between 2008 and 2020. As part of that plan, China
Guangdong Nuclear Power Group, Shenzhen, in November 2007 awarded Paris-based
Areva an $11.9-billion contract to build two new-generation European
pressurized-water reactors in Taishan in southern Guangdong province.

Areva CEO Anne Lauvergeon says that the record-breaking China deal "reinforces
our presence in one of the most promising markets for the decades to come [and]
opens the way for a new cooperation between CGNPC and [Electricite de France],"
the French utility, which will hold a 30% ownership in the new nuclear
powerplants.

In July, a joint venture team of Westinghouse, Monroeville, Pa., and The Shaw
Group, Baton Rouge, La., won a contract from China's State Nuclear Power
Technology Co., to build four Westinghouse AP1000 nuclear units--two in Zhejiang
province and two in Guangdong province.

Carbon Sequestration

The growing list of fossil-fired projects with reduced carbon-dioxide emissions
includes a recently announced plan by BP's hydrogen energy unit and Rio Tinto to
co-develop a potential $1.5-billion plant in western Australia that will gasify
coal and capture 90% of carbon-dioxide emissions to store it in a deep
underground geological formation.

BP and Rio Tinto, both based in London, say they will decide by 2011 whether the
project is technically and financially viable. "This would be the first
hydrogen-fueled power project to store CO2 in a saline formation, a type of
geological structure which is more common globally than suitable oil and gas
reservoirs," BP officials claim, adding that they hope to duplicate the project.

The Top 25 International Design Firms In Power

  RANK\*FIRM$ MIL.

  1SNC-Lavalin International Inc.369.8

  2WorleyParsons Ltd.210.8

  3Chengda Engineering Corp. of China183.9

  4Poyry183.0

  5AMEC plc156.0

  6Foster Wheeler Ltd.156.0

  7Parsons Brinckerhoff Inc.108.3

  8Lahmeyer International GmbH102.2

  9Fichtner GmbH & Co. KG81.0

  10Washington Group International73.0

  11Burns and Roe Group Inc.67.7

  12Black & Veatch62.6

  13AECOM Technology Corp.57.5

  14Bechtel57.0

  15Mott MacDonald51.1

  16The Shaw Group Inc.41.6

  17Golder Associates Corp.41.5

  18Earth Tech Inc.38.0

  19McDermott International36.0

  20Fugro NV35.0

  21COWI A/S30.3

  22URS29.3

  23CH2M HILL Cos.26.2

  24Honeywell Process Solutions22.0

  25China Power Engineering Consulting Group Co.21.3

\* BASED ON 2006 DESIGN REVENUE OBTAINED OUTSIDE THE HOME COUNTRY FROM POWER AS
REPORTED IN ENR'S SURVEY OF LEADING CONTRACTORS AND DESIGN FIRMS.

The Top 25 International Contractors In Power

  RANK\*FIRM$ MIL.

  1Chiyoda Corp.3,023.0

  2Abeinsa741.2

  3Hyundai Engineering & Constr. Co.711.8

  4Grupo ACS618.3

  5Foster Wheeler Ltd.529.0

  6BOUYGUES479.0

  7VINCI456.0

  8EIFFAGE450.0

  9Bilfinger Berger AG444.0

  10Balfour Beatty plc399.0

  11Sinohydro Corp.370.3

  12China National Machinery Indus. Corp.350.0

  13Daewoo E&C Co. Ltd.323.5

  14Taisei Corp.322.0

  15McDermott International299.6

  16CEGELEC291.0

  17Bechtel278.0

  18Construtora Norberto Odebrecht225.0

  19Shandong Electric Power Constr.201.4

  20Washington Group International188.0

  21Soletanche Bachy171.0

  22Grupo Isolux Corsan SA152.4

  23Skanska AB140.7

  24HOCHTIEF AG139.9

  25Shanghai Electric Group Co. Ltd.136.8

\* BASED ON 2006 CONTRACTING REVENUE OBTAINED OUTSIDE THE HOME COUNTRY FROM POWER
AS REPORTED IN ENR'S SURVEY OF LEADING CONTRACTORS AND DESIGN FIRMS.

The Top 15 International Contractors In Fossil Fuel

  RANK\*FIRM$ MIL.

  1Chiyoda Corp.3,023.0

  2Hyundai Engineering & Construction Co., Ltd.581.3

  3China National Mach. & Equipment Imp. & Exp. Corp.358.4

  4Daewoo E&C Co., Ltd.323.5

  5Taisei Corp.272.0

  6Foster Wheeler Ltd.265.0

  7Shandong Electric Power Construction Corp.201.4

  8Shanghai Electric Group Co. Ltd.136.8

  9China National Chemical Engineering Group Corp.129.8

  10GAMA122.6

  11McDermott International Inc.122.3

  12China National Machinery Industry Corp.113.0

  13Harbin Power Engineering Co. Ltd.105.7

  14Dongfang Electric Corp.87.0

  15Larsen & Toubro Ltd. E&C Division83.5

\* BASED ON 2006 CONTRACTING REVENUE OBTAINED OUTSIDE THE HOME COUNTRY AS
REPORTED IN ENR'S SOURCEBOOK MARKET SURVEY.

The Top 15 International Design Firms In Fossil Fuel

  RANK\*FIRM$ MIL.

  1WorleyParsons Ltd.166.8

  2Burns and Roe65.7

  3Foster Wheeler Ltd.61.0

  4Black & Veatch47.0

  5Poyry47.0

  6Fichtner GmbH & Co. KG46.0

  7Lahmeyer International GmBH40.1

  8Bechtel35.0

  9Mott MacDonald29.2

  10URS24.3

  11Parsons Brinckerhoff Inc.22.0

  12Chiyoda Corp.21.0

  13Shandong Electric Power Construction Corp.20.5

  14McDermott International Inc.14.8

  15CH2M HILL Cos.14.7

\* BASED ON 2006 DESIGN REVENUE OBTAINED OUTSIDE THE HOME COUNTRY AS REPORTED IN
ENR'S SOURCEBOOK MARKET SURVEY.

The Top 5 International Design Firms In Transmission and Distribution

                  RANK\*FIRM$ MIL.

                  1AECOM Technology Corp.57.5

                  2Earth Tech Inc.38.0

                  3Parsons Brinckerhoff Inc.25.3

                  4Mott MacDonald16.4

                  5Fichtner GmbH & Co. KG16.0

 In Nuclear Plants

                  RANK\*FIRM$ MIL.

                  1AMEC 87.0

                  2The Shaw Group Inc.31.6

                  3Poyry29.0

                  4Empresarios Agrupados19.5

                  5WorleyParsons Ltd.18.3

 In Hydroplants

                  RANK\*FIRM$ MIL.

                  1Poyry40.0

                  2Lahmeyer International GmBH39.7

                  3The Louis Berger Group15.1

                  4Hatch Group15.0

                  5MWH Global14.5

 In Cogeneration

                  RANK\*FIRM$ MIL.

                  1Poyry24.0

                  2Jacobs20.0

                  3CTCI Corp.13.1

                  4McDermott International Inc.12.6

                  5Parsons Brinckerhoff Inc.11.4

\* BASED ON 2006 DESIGN REVENUE OBTAINED OUTSIDE THE HOME COUNTRY AS REPORTED IN
ENR'S SOURCEBOOK MARKET SURVEY.

The Top 5 International Contractors In Transmission and Distribution

                  RANK\*FIRM$ MIL.

                  1Abeinsa Ingenieria y Construccion Industrial SA614.3

                  2Bechtel249.0

                  3Bouygues170.0

                  4Hyundai Engineering & Construction Co., Ltd.129.8

                  5Harbin Power Engineering Co. Ltd.120.1

 In Nuclear Plants

                  RANK\*FIRM$ MIL.

                  1China Zhonyuan Engineering Corp. 95.9

                  2McDermott International Inc.71.3

                  3Bouygues70.0

                  4Day & Zimmermann Group28.0

                  5Bechtel23.0

 In Hydroplants

                  RANK\*FIRM$ MIL.

                  1Construtora Norberto Odebrecht SA225.0

                  2Sinohydro Corp.221.0

                  3China National Machinery Industry Corp.139.0

                  4Hochtief AG116.4

                  5SEPCOIII Electric Power Construction Corp,105.0

 In Cogeneration

                  RANK\*FIRM$ MIL.

                  1McDermott International Inc.106.0

                  2Kiewit Corp.66.2

                  3Stellar61.0

                  4Jacobs53.1

                  5China National Machinery Industry Corp.37.0