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  
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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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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