Next Stop: Cancun

Goldman Sachs

Global Markets Institute

Global climate and energy policy update

Cancun – the next major UN climate conference

The Cancun climate conference will take place November 29 through December 10, 2010. Last year's Copenhagen conference was the last major attempt to negotiate a global climate treaty. Both the UN Secretary General and the Executive Secretary of the UNFCCC have publicly stated that a global climate treaty will not be reached in Cancun. Climate negotiators are now looking beyond Cancun to South Africa in 2011 as the next best chance to achieve a binding international treaty.

New climate policies are being adopted

Many nations are moving forward even without a global treaty. For example, about 500 European cities, mostly in Italy and Spain, have pledged to cut CO_2 emissions 25% below 1990 levels. China announced the establishment of the National Energy Commission to help reduce carbon intensity by 40-45% by 2020. India announced a tax on coal to fund clean energy development, and South Africa received funding from the World Bank to plan and build some of the largest solar and wind power plants in the developing world.

US Congress stalled on climate legislation

Comprehensive climate and energy legislation will not be passed in the US this year. The Senate has removed these issues from the 2010 agenda despite the heightened public concerns regarding environmental issues due to factors such as the Gulf of Mexico oil spill. Mid-term elections and the lack of sufficient support for any one proposal made it difficult for a bill to garner the votes needed to pass.

Oil spill in the Gulf of Mexico

An explosion on the BP-leased Deepwater Horizon oil rig resulted in the largest offshore oil spill in US history. The well has successfully been capped, but only after 4.9 million barrels of oil spilled into the Gulf over 87 days. The amount of oil lost would not even satisfy US oil demand for one day. This report provides a review of the spill's implications and context. Abby Joseph Cohen, CFA

(212) 902-4095 abby.cohen@gs.com Goldman Sachs & Co.

Amy Semaya

(212) 902-7009 amy.semaya@gs.com Goldman Sachs & Co.

The Global Markets Institute is the public policy research unit of Goldman Sachs Global Investment Research. Its mission is to provide research and high-level advisory services to policymakers, regulators and investors around the world. The Institute leverages the expertise of Research and other Goldman Sachs professionals, as well as highly-regarded thought leaders outside the firm, to offer written analyses and host discussion forums.

Table of Contents

COP 16: The Cancun UN climate conference	
International climate change policy post Copenhagen	6
Developed economies – The EU and Australia	6
Emerging economies – China, India, and South Africa	6
US Congress stalled on climate policy	8
The EPA continues to take action to curb GHG emissions	9
The Gulf of Mexico Oil Spill	11
Conclusions: Looking post Cancun towards South Africa	13
Selected bibliography	15

COP 16: The Cancun UN climate conference

The next major UN climate conference is scheduled from November 29 through December 10

The next major UN climate conference, officially known as the sixteenth Conference of the Parties (COP 16), will take place in Cancun, Mexico from November 29 through December 10, 2010. The Copenhagen conference in December 2009 was the last major attempt to negotiate a global climate treaty. Although many hoped a formal treaty would emerge, it became clear by autumn 2009 that this was unlikely. The global credit crisis and economic recession had taken the time and attention of policymakers in many countries and they had not yet laid the political or legal groundwork in their own nations.

A political agreement, entitled the Copenhagen Accord, was reached by world leaders as the conference neared its final hours. The accord was negotiated by a group of approximately 30 countries and ultimately directly by the leaders of Brazil, South Africa, India, China (the so-called BASIC nations), and the United States. Importantly, this was the first global climate agreement that included China and other major developing economies. This is significant given the rapid economic growth of these nations, and the resultant pace at which their use of energy and carbon emissions are increasing.

Since the conference, 138 countries, including the 27 EU member states, have "associated" themselves with the accord. According to the US Climate Action Network, these countries represent approximately 87% of global emissions (see Exhibit 1).

Exhibit 1: Copenhagen Accord associations Selected countries

Country	Submission Date	Engagement Level	Reduction by 2020	Percent of World's GHGs	CO ₂ Emissions Per Capita (tCO ₂ eq)
Australia	1/27/2010	Associated with target	5 to 25% relative to 2000	1.3%	27.4
Brazil	12/29/2009	Submitted actions	36.1 to 38.9% compared to business as usual	6.6%	15.3
Canada	1/30/2010	Associated with target	17% relative to 2005	1.9%	24.9
China	1/29/2010	Submitted actions	40 to 45% reduction in carbon intensity	16.6%	5.5
EU	1/27/2010	Associated with target	20% / 30%	11.7%	10.3
India	1/29/2010	Submitted actions	20 to 25% reduction in carbon intensity	4.3%	1.7
Indonesia	1/26/2010	Associated with actions	26% compared to business as usual	4.7%	9.3
Japan	1/26/2010	Associated with target	25% relative to 1990	3.1%	10.6
Mexico	1/31/2010	Associated with actions	30% compared to business as usual	1.6%	6.6
New Zealand	2/1/2010	Associated with target	10 to 20% relative to 1990	0.2%	19.1
Russia	2/1/2010	Submitted target	15 to 25% relative to 1990	4.6%	14.0
South Korea	12/30/2009	Submitted actions	30% compared to business as usual	1.3%	11.8
South Africa	1/5/2010	Submitted actions	34% compared to business as usual	1.0%	9.0
United States	1/28/2010	Associated with target	17% relative to 2005	15.8%	23.1

Source: US Climate Action Network.

The Copenhagen Accord of December 2009 included specific international funding levels A dramatic achievement of the accord was the inclusion of specific international funding levels that developed countries have pledged to provide to developing countries. This funding is intended for use by developing countries in support of mitigation efforts, adaptation, technology development, and transfer and capacity building. Developed countries have agreed collectively to provide initial fast-track funding of approximately \$30 billion between 2010 and 2012. Further, developed countries committed to collectively fund \$100 billion a year by 2020. Since the conclusion of the conference, the EU announced it is prepared to fund \$9.7 billion by 2013 and the United States announced it would fund \$3.0 billion by 2012 (see Exhibit 2).

Exhibit 2: Fast start country funding

Pledges made by developed nations

Country	Fast Start Funding Commitment (2010-2012)	USD (\$) equivalent
EU Member States	€7.23 billion total commitment	\$9.7 billion
France	€1.26 billion	\$1.6 billion
Germany	€1.26 billion	\$1.6 billion
Ireland	Up to €100 million	\$0.1 billion
Netherlands	€310 million	\$0.4 billion
United Kingdom	£1.5 billion total	\$2.4 billion
Australia	\$599 million total commitment	\$0.6 billion
Japan	\$15 billion total commitment from public and private sources	\$15.0 billion
USA	\$1.304 billion in 2010 and \$1.725 billion in 2011	\$3.0 billion

Source: WRI.

Unclear future of the Copenhagen Accord

The future of the accord remains unclear. In early April 2010, the UNFCCC (United Nations Framework Convention on Climate Change) organized a meeting for climate negotiators from 175 countries in Bonn, Germany to lay the groundwork for achieving a new binding global climate treaty in Cancun. Numerous aspects of the Copenhagen Accord were debated. Notably, climate negotiators discussed whether any portion of the Copenhagen Accord should be included in future treaty drafts. Developing countries, especially small island states, declared the accord to be too weak, citing a UNFCCC report which concluded that the voluntary pledges made in the accord were not strong enough to limit global temperature increases. Further, developing countries emphasized their disappointment regarding how the Copenhagen Accord was originally drafted, specifically noting that only a few countries were included in the negotiating process. Representatives from the United States and Australia, who strongly pushed for the inclusion of the Accord in any future treaty, worried about losing progress in the multi-year negotiating process.

Dim outlook for Cancun

The newly named UN climate chief, Christiana Figueres, and the UN Secretary-General, Ban Ki-moon, have both publicly stated that there is no hope of achieving a global binding climate treaty at the Cancun climate conference. Perhaps Figueres and Ban are seeking to manage public expectations prior to this year's conference. Nevertheless, global climate negotiators will endeavor to make progress in Cancun and announced plans to work to create a roadmap towards a treaty. However, it is also clear that climate negotiators are already looking beyond Cancun to the meeting South Africa in late 2011 as the next best chance to achieve a binding global climate treaty (see Exhibit 3).

The Copenhagen Accord has come under fire, in part due to process



Exhibit 3: UN climate negotiation timeline

Source: UNFCCC, IPC, PBS and the Global Markets Institute.

The disagreements aired during the most recent global climate change meetings highlight the obstacles which face the traditional UN negotiating process in producing a meaningful global climate treaty. The COP process requires consensus among all UN countries, essentially providing all 192 member countries with a voice, a vote and veto power. Critics of the negotiating structure argue that the process is too slow and offers inadequate incentive for compromise.

It may be desirable to reconsider the way in which global climate change agreements are negotiated. The countries that are most crucial to a global climate agreement are both the current and projected largest GHGs emitters, including the United States, the EU nations, Russia, China, India, and Brazil. Climate mitigation actions implemented by these nations alone can have a significant effect on the world's cumulative emissions levels. Therefore, it may be possible to reach an effective climate agreement with the participation of this relatively small group of countries. Bear in mind that the Copenhagen Accord was initially negotiated among a small number of nations and only later did many other nations choose to "associate" themselves with the accord. Agreements of this kind can be negotiated through existing multi-country associations such as the G-20 or the Major Economies Forum.

However, some countries will oppose moving away from the UN approach. For example, the BASIC Group of countries (Brazil, South Africa, India, and China) have stated they believe the only "legitimate forum for negotiation of climate change is the UNFCCC." Even so, perhaps a multi-step approach, in which a small number of heavy energy users reach an agreement, followed by acceptance by a larger group of nations, offers a way forward.

The manner in which international climate agreements are negotiated may need to be reconsidered

International climate change policy post Copenhagen

Despite the stalling of the UN climate treaty process, progress is being made in other ways. Many countries are taking domestic action to reduce global GHG emissions; we highlight a few of these below.

Developed economies – The EU and Australia

The European Union

Since Copenhagen, the EU announced plans to remain a world leader on global climate issues. In the EU's Europe 2020 report, the EU reiterated its longtime goal of combating climate change and promoting a resource-efficient economy. The EU predicted that increasing the use of renewable energy sources could result in a €60 billion reduction in oil and gas imports by 2020. In addition, increased clean energy use can add between 0.6% and 0.8% to EU GDP by 2020. The EU's current goal of generating 20% of the region's energy from renewable sources is expected to create more than 600,000 jobs.

In May, 500 cities within the EU pledged to cut CO₂ emissions 25% below 1990 levels. The European Commission will make available over €100 million to help fund energy efficiency in these cities. Approximately half of the 500 cities are located in Italy and 100 are located in Spain.

Australia

Former Prime Minister Kevin Rudd worked to implement an economy cap-and-trade program, the Carbon Pollution Reduction Scheme (CPRS). Rudd publicly referred to climate change as "the greatest moral challenge of our time" yet postponed his ambitious capand-trade proposal after it failed three times to receive enough support to pass the Senate. New Prime Minister Julia Gillard announced plans to eventually implement similar climate policy as her predecessor, but not until at least 2012.

Emerging economies – China, India, and South Africa

In April and July the environment ministers from the BASIC Group of countries met to discuss the upcoming UN climate conference in Cancun. The ministers outlined the need for more detailed information regarding the fast start funding outlined in the Copenhagen Accord. The environment ministers from the BASIC countries will meet again in October prior to the Cancun conference.

China

Since the Copenhagen conference in December 2009, China has announced the establishment of the National Energy Commission (NEC) to help the country achieve its goal of a 40-45% reduction from 2005 levels in carbon intensity by 2020. Premier Wen Jiabao, who led China's delegation in Copenhagen, will be the official head of the new commission. The NEC will be responsible for drafting a new national energy development plan, reviewing energy security, and coordinating domestic energy development and international cooperation.

China will host the last round of UN climate negotiations before Cancun in Tianjin on October 4-9. UNFCCC chief Christiana Figueres applauded China for hosting this last gathering, calling it "an important gesture by China".

Mitigation actions taken by China are significant because China is the world's largest user of energy and emitter of GHGs. China's share of world energy usage is projected to continue to increase as the economy grows (see Exhibits 4-5). The nation's energy intensity, that is, the amount of energy used to produce a unit of GDP, is among the world's highest.

The EU predicts increasing the use renewable energy sources could result in a €60 billion reduction in oil and gas imports by 2020

Australia has backed away from proposed legislation

The BASIC Group of countries met to discuss their role in forging an international climate treaty

Exhibit 4: China's share of world energy consumption 1990-2035E



Source: US Department of Energy, Energy Information Administration.

Exhibit 5: China's CO₂ emissions 1990-2030E



Source: US Department of Energy, Energy Information Administration.

India

India announced a carbon tax on coal to help fund clean energy development

In June, the Indian Ministry of Environment and Forests released a document outlining the country's domestic climate change actions post-Copenhagen. Recent actions include (1) a carbon tax on coal to help fund clean energy development, (2) the release of India's official GHG emissions data for 2007, making India the first developing country to publish updated official numbers, (3) plans to generate 20,000 MW of solar power by 2022, and (4) plans to increase the quality of the country's forest cover.

The government of India continues to take steps to increase individual access to electricity. According to the UNDP, between 25 and 50% of the population still does not have electricity. At the same time, the government aims to reduce the impact of electricity expansion on rising GHG emissions. In early 2010, India announced "24 Recent Initiatives Related to Climate Change" including programs in science and research, policy development, policy implementation, international cooperation, and forestry.

South Africa

In April 2010, the World Bank granted \$3.45 billion to South Africa in the form of a loan intended for expansion of the nation's energy supply. The loan will finance the construction of a new coal-fired power plant, in addition to some of the largest solar and wind energy power plants in the developing world. The United States, United Kingdom, and Netherlands abstained from voting on the loan due to the environmental concerns of building a new coal power plant in a developing country which already relies on coal (a major source of GHG emissions) for the bulk of its power supply (see Exhibit 6).

The World Bank granted South Africa a \$3.45 billion loan to help fund the construction of a new coal power plant





Source: WRI, IEA.

In February 2010, South Africa announced the renewal of its three-year climate change partnership with Australia, which will focus mainly on adaptation of the agriculture sector and GHG reporting and monitoring. Further, under the agreement Australia and South Africa will have an exchange program on climate policies and technical knowledge, with a focus on clean coal technologies.

US Congress stalled on climate policy

Despite public upset over the Gulf of Mexico oil spill, Congress will not pass comprehensive climate and energy legislation this year In the early days of the Gulf of Mexico oil spill, some environmentalists believed that climate legislation was more likely to be passed because the public was enraged about the oil spill. History has shown that environmental legislation is more likely to be passed when drafted in response to an environmental crisis. Despite the public outcry over the spill, there will be no near-term change in US legislative policy as it relates to climate, for several reasons. First, members of Congress have been focused this year on other Obama Administration priorities including health care and financial regulation reform as well as the economy and job creation. Senate Majority Leader Harry Reid (D-NV) originally announced plans to attempt debate on energy and climate legislation on the Senate floor this summer, but there was little political appetite to pass additional contentious legislation. Second, opponents of energy and climate legislation have often described these proposals as new forms of taxes. Third, the upcoming midterm elections and the lack of sufficient support for any one of the various energy and climate proposals made it difficult to garner the votes needed to pass a Senate bill.

In June 2009, the House of Representatives passed The American Clean Energy and Security Act, comprehensive climate and energy legislation, which includes an economywide cap-and-trade program. Since then, several pieces of climate and energy legislation have been proposed by members of the Senate from both major parties. The American Power Act was the Senate's latest bipartisan effort and had been considered the primary initiative in the Senate. The bill was sponsored by Senators John Kerry (D-MA) and Joe Lieberman (I-CT), and one of the original drafters was Senator Lindsey Graham (R-SC). Senator Graham, upset that Senate leaders placed discussion of immigration reform ahead of climate legislation, withdrew his sponsorship. Senator Kerry, a long-time proponent of climate and energy legislation, announced in mid-September that the American Power Act was stalled.

Exhibit 7 summarizes the latest major congressional climate and energy proposals and the key provisions of each bill. It is unlikely that any of these bills will be debated in their current form.

The EPA continues to take action to curb GHG emissions

In the face of Congressional inaction, the Environmental Protection Agency (EPA) continues to take steps to reduce GHG emissions in the United States. In late August, the EPA joined with the Department of Transportation (DOT) to announce proposed changes to US fuel economy labels on cars in dealer showrooms. The new labels would more clearly explain fuel economy to potential car buyers. In August the EPA also announced a list of international priorities for policymakers. The list includes (1) building strong environmental institutions and legal structures, (2) combating climate change by limiting pollutants, (3) improving air quality, (4) expanding access to clean water, (5) reducing exposure to toxic chemicals, and (6) cleaning up e-waste. The EPA announced plans to work with foreign governments to institute these priorities globally.

In May the EPA proposed regulations to further reduce emissions from sulfur oxides (SOx) and nitrogen oxides (NOx), across the borders of 31 eastern states. SOx and NOx create smog which impairs air quality, causing health problems. These pollutants react in the air and can travel long distances making it difficult for states to regulate and achieve either national or local clean air standards. The "Transport Rule" aims to reduce power plant SO₂ (sulfur dioxide) emissions 71% and power plant NOx levels 52% by 2014, both based on a 2005 baseline. The proposal would replace the 2005 Clean Air Interstate Rule (CAIR), which the US Court of Appeals for the DC Circuit called "fundamentally flawed" and ordered the EPA to revise in 2008.

In June the Senate voted down a resolution to strip the EPA of its authority to regulate GHGs

Senator Lisa Murkowski (R-AK), the ranking Republican on the Senate Energy and Natural Resources Committee, sponsored a resolution that would have stripped the EPA of its power to regulate GHGs under the Clean Air Act. The Senate voted against the resolution but President Obama vowed to veto it had the resolution passed. The EPA was only recently given the power to regulate GHGs through an endangerment finding in late 2009.

The EPA announced a list of international priorities

The EPA proposed

reduce emissions

from SOx and NOx

new rules to further

Exhibit 7: Comparison on recently proposed congressional climate legislation

Brief summary	The American Clean Energy and Security Act of 2009 H.R. 2454 Sponsors: Waxman- Markey Comprehensive climate and energy legislation that would establish an economy-wide GHG cap-and-trade system. Directly addresses climate change. Passed the House	American Power Act Sponsors: Kerry- Lieberman Comprehensive climate and energy policy with GHG reduction goals similar to H.R. 2454. Contains a market based cap-and-trade program for electric utilities,	Practical Energy and Climate Plan Act S. 3464 Sponsors: Lugar, Graham and Murkowski A broad energy bil aimed to promote clean energy development, increased energy efficiency, and domestic energy resources through the creation of a	Clean Energy Jobs and American Power Act S. 1733 Sponsors: Kerry-Boxer Legislation focused on promoting US energy independence, reducing global warming, and transitioning the US into a clean energy economy	Carbon Limits and Energy for America's Renewal Act (CLEAR Act) S. 2877 Sponsors: Cantwell- Collins Establishes a program to control CO ₂ emissions by auctioning carbon permits to producers and importers of fossil fuel products. Permits would be auctioned by the	American Clean Energy Leadership Act of 2009 S. 1462 Sponsor: Bingaman A broad energy bill that promotes clean energy development, energy efficiency, and domestic energy sources through a renewable energy standard
	on June 26, 2009 by a vote of 219 to 212	industrial sources, and a separate mechanism for the transportation sector	"Diverse Energy Standard" that encourages a broad range of electricity generation including nuclear and advanced coal	through the use of a cap-and- trade program	Treasury	for electric utilities
Emissions cuts	3% emissions reduction in 2012, 17% reduction in 2020 and 83% reduction in 2050, all relative to a 2005 baseline	2013 emissions will not exceed 95.25% of 2005 emissions levels, 2020 emissions will not exceed 83% of 2005 emissions levels, and 2050 emissions will not exceed 17% of 2005 emissions levels	Cut GHG emissions more than 20% below business as usual, or 1.6 gigatonnes, by 2030	3% emissions reduction by 2012, 20% reduction by 2020 and 83% reduction by 2050, all relative to a 2005 baseline	20% reduction by 2020, 42% reduction by 2030, and 83% reduction by 2050, all relative to a 2005 baseline Covers only CO ₂ , not all GHGs	No set emissions cuts included in the legislation
Emissions permits	\$10 minimum price starting in 2012 Maximum price of no more than 60% above a rolling average	Initial floor of \$12 in 2013, increasing 3% over inflation annually Initial ceiling of \$25 in 2013, increasing 5% over inflation annually	Not applicable	\$28 maximum price, adjusted for inflation, additional reserves available to help control cost	Prices would be determined by a bidding process among fossil fuel companies Traders and speculators would be prohibited from the market	Not applicable
Revenue allocation	Approximately 8% will be directed to federal deficit reduction	Two-thirds of all revenue not decicated to reducing the country's deficit will be returned to energy consumers 2.5% of auction proceeds will be put into a fund to provide relief for some Americans for higher energy costs	Not applicable	25% will be directed to federal deficit reduction	75% will be returned monthly to fuel end users on an equal per capital basis 25% will go into a Clean Energy Reinvestment Trust Fund	Revenue will be used to offset legislation costs Creation of a Clean Energy Deployment Administration (CEDA) within the DOE which would be authorized to give loans for clean energy projects
Renewable electricity standard	As much as 20% of country's electricity to come from renewable sources by 2020	None	No specific renewable electricity standard but contains a "Diverse Energy Standard" that permits electricity generation from a range of technologies including renewables, nuclear, and advanced coal generation	No federal electricity standard but enables the EPA to provide funding to assist entities meet state specific requirements	None	Sellers of electricity must obtain a proportion from renewable energy sources, 3% between 2011-2013, 6% between 2014-2016, 9% between 2014-2018, 12% between 2019-2020, and 15% between 2021-2039
Transportation	Includes provisions to help support electric cars and plug- in hybrids	Emissions from transportation sector included within the pollution cap Provides funding to improve highways, mass transit, and tax incentive for conversion to clean energy vehicles	Encourages long-term and predictable increases of fuel efficiency standards for passenger cars and trucks Would implement a reverse auction for advanced biofuels Requires all new vehicles to be flex-fuel capable	Encourages the development of mass-transit	Includes fossil fuels produced for use in transportation sector in initial upstream cap	Not directly addressed in the legislation
Other notable provisions	Encourages energy efficiency in buildings Electric vehicle provisions	Prohibits states from implementing or enforcing a "cap-and-trade" program to control GHGs Authorizes revenue sharing between states and federal government for offshore oil and gas drilling - states will receive 37.5% of revenues from rental and royalty payments	Implements a national building energy performance standard for new residential and commercial construction Implements a voluntary retirement program for coal power plants Offers \$36 billion in loan guarantees for nuclear development	Includes a 6 year moratorium (2012-2017) on states imposing their own GHG cap- and-trade provisions	Average family refunds expected to be \$1,000 annually 80% of Americans are expected to incur no cost, lowest income population will receive net positive benefits. Top earners will see less than a 0.3% decrease in income	Emphasis on enhancement of the electricity grid Modify the mix of products stored in the Strategic Petroleum Reserve (SPR) Federal government would have ability to indemnify CCS operators

Source: H.R. 2454, American Power Act Discussion Draft, S.1733, S.2877, S.1462, and Pew Center on Global Climate Change.

The Gulf of Mexico Oil Spill

4.9 million barrels of oil spilled into the Gulf of Mexico

It is well known that an explosion on April 20, 2010 on the Deepwater Horizon offshore oil rig in the Gulf of Mexico, leased by BP Exploration & Production, resulted in the largest offshore oil spill in US history. The well was successfully capped, but not before 11 people died and 4.9 million barrels of oil, or 206 million gallons, spilled into the Gulf of Mexico over the course of 3 months (see Exhibit 8). It has been estimated that between 35,000 and 60,000 barrels of oil spilled into the Gulf daily, equal to an *Exxon Valdez* oil spill every one to two weeks.

Captured through containment Still at sea or on systems shore 17% 26% Burned or skimmed 8% Dispersed chemically 8% Evaporated or dissolved Dispersed 25% naturally 16%

Exhibit 8: Assessment of the 4.9 million barrels of oil that spilled into the Gulf of Mexico As of August 1, 2010

Source: NOAA, NY Times.

A moratorium on Gulf oil drilling is currently in place

A Gulf of Mexico offshore oil and gas drilling moratorium is currently in place until November 30. The ban impacts only the 33 rigs in the exploratory stages of drilling, not the more than 3,000 rigs already in production. The ban has been one of the more controversial aspects of the Obama Administration's response to the oil spill. Immediately after the Deepwater Horizon explosion the Department of the Interior instituted a six-month moratorium on Gulf drilling operations to allow an independent panel to conduct a study of offshore drilling safety. Louisiana public officials publicly opposed the ban because of job losses for Louisianans and the negative financial impact reduced drilling has on their state. Oil drilling companies also challenged the ban and filed a lawsuit because of lost revenue. A judge in the Eastern District of Louisiana ruled against the first moratorium saying the ban on all drilling in the Gulf was "arbitrary and capricious." The Department of the Interior appealed the decision but the original ruling was upheld by a US Appeals Court. In response to the court rulings, the Department of the Interior instituted the revised moratorium that is currently in place. The Obama Administration has stated that they hope to be able to lift the current moratorium before the November 30th end date. However, on September 2, another offshore oil rig in the Gulf caught fire. The fire did not cause a major oil spill or any fatalities. Nevertheless, this incident has again sparked debate over offshore drilling, as has news that Cuba plans to drill about 50 miles from the coast of Florida.

The amount of oil that flowed into the Gulf as a result of the spill would not satisfy US oil demand for even one day

US demand for fossil fuels continues to grow. The amount of oil that flowed into the Gulf as a result of the Deepwater Horizon oil spill would not meet US oil demand for one day (see Exhibit 9).





Source: US Department of Energy, Energy Information Administration, and The Atlantic.

Offshore oil and gas exploration has shifted to deeper waters

In order to meet the increasing oil demand, offshore oil and gas exploration has been shifting to deeper waters as crude resources below land and shallow water become exhausted. In 2007, crude oil production from oil obtained more than 200 meters (656 feet) deep into the Gulf of Mexico accounted for over 75 percent of the crude produced from the Gulf (see Exhibit 10). At the time of the explosion, the Deepwater Horizon was drilling at a water depth of approximately 1,524 meters (5,000 feet).

Exhibit 10: Gulf of Mexico offshore oil production 1992-2007



Source: US Department of Energy, Energy Information Administration.

Conclusions: Looking post Cancun towards South Africa

The Copenhagen Accord was developed at the last major UN climate conference

International climate treaties may need to be driven by a smaller number of countries

South Africa in 2011 is the next best chance of achieving a global climate treaty

Countries continue to take domestic action to control their GHG emission levels

Comprehensive climate and energy legislation will not be passed in the United States in 2010

The EPA continues to take action to monitor and control GHG emissions

The Deepwater Horizon explosion and oil spill resulted in the largest offshore oil spill in US history The next major UN climate conference will take place in Cancun, Mexico from November 29 through December 10. The Copenhagen conference, which took place in December 2009, was the last major attempt to negotiate a global climate treaty. One outcome of the conference was the Copenhagen Accord, a political agreement negotiated directly by a group of approximately 30 countries and ultimately directly by the leaders of China, India, Brazil, South Africa, and the United States. Since the conclusion of the conference, 138 countries have "associated" themselves with the accord. These countries represent approximately 87% of global emissions.

The disappointing outcome of the climate change meetings thus far in 2010 may suggest a new approach driven by the nations with the heaviest energy use and emissions rather than the current wide-ranging UN process This might include a small group of countries such as the United States, the EU nations, Russia, China, India, and Brazil.

The newly named UN climate chief and the UN Secretary-General have both publicly stated that there is no hope of achieving a global binding climate treaty at the Cancun conference. Nevertheless, global climate negotiators are still looking to make progress in Cancun and announced plans to create a roadmap for future action towards a treaty. However, climate negotiators are already looking beyond Cancun to the meeting in South Africa in 2011 as the next best chance to achieve a binding global treaty.

Since Copenhagen, several countries continue to take domestic action to control their level of GHG emissions. The EU announced that 500 European cities, mostly in Italy and Spain, pledged to cut CO₂ emissions 25% below 1990 levels. The new Australian Prime Minister announced plans to pursue climate policy initiatives despite the difficulties faced by her predecessor. China announced the establishment of the National Energy Commission to help achieve its goal of a 40-45% reduction in carbon intensity by 2020 from 2005 levels. India announced a carbon tax on coal to help fund clean energy development, and South Africa received funding from the World Bank to help build some of the largest solar and wind power plants in the developing world.

Comprehensive climate and energy legislation will not be passed in the United States this year. The Senate has removed climate and energy from the 2010 agenda despite the heightened public awareness of environmental issues as a result of the oil spill. The midterm elections and lack of support for any of the various energy and climate proposals made it difficult for any Senate bill to get the 60 votes needed to pass.

Even though Congress has not passed climate and energy legislation, there have been several legislative proposals made since the House passed cap-and-trade legislation in June 2009. The Obama Administration aims to take action to control GHG emissions through the regulatory action of the EPA. In late August 2010, the EPA, together with the DOT, announced proposed changes to US fuel economy labels on cars in dealer showrooms. The EPA also proposed regulations to further reduce emissions for sulfur oxides (SOx) and nitrogen oxides (NOx) across the boarders of 31 eastern states. SOx and NOx create smog, which impairs air quality causing health problems. The "Transport Rule" aims to reduce power plant SO₂ emissions 71% and power plant NOx levels 52% by 2014, both compared to a 2005 baseline.

In response to the oil spill, the Department of the Interior instituted a six-month moratorium on drilling operations in the Gulf. The ban affected only 33 rigs in the exploratory stages of drilling, not the more than 3,000 rigs already in production. Nonetheless, oil drilling companies challenged the ban and filed a lawsuit because of lost revenue. The Obama Administration issued a new suspension of deepwater drilling through November 30 that extended the initial drilling moratorium on the 33 rigs that were initially affected.

The amount of oil that spilled into the Gulf would not satisfy US oil demand for one day

Despite the magnitude of the oil spill, US demand for fossil fuels continues to grow. The amount of oil that spilled into the Gulf would not even satisfy US oil demand for one day. In order to satisfy this increasing demand for oil, offshore oil and gas exploration has shifted into deeper waters as crude resources below land and shallow water become exhausted.

Selected bibliography

BP (2010) "Deepwater Horizon Accident Investigation Report".

Busby, Joshua W. (2010) "After Copenhagen Climate Governance and the Road Ahead." Council on Foreign Relations.

Congressional Budget Office (2010) "S. 1733 Clean Energy Jobs and American Power Act".

Congressional Budget Office (2009) "S. 1462 American Clean Energy Leadership Act of 2009".

European Commission (2010) "International climate policy post-Copenhagen: Acting now to reinvigorate global action on climate change".

European Commission (2010) "Europe 2020: A strategy for smart, sustainable and inclusive growth".

Holladay, J. Scott; Michael A. Livermore (2010) "CLEAR and the Economy: Innovation, Equity, and Job Creation". Institute for Policy Integrity New York University School of Law.

Pew Charitable Trusts (2010) "Who's Winning the Clean Energy Race?"

Purvis, Nigel, and Andrew Stevenson. (2010) "Rethinking Climate Diplomacy: New Ideas for Transatlantic Cooperation Post-Copenhagen." The German Marshall Fund of the United States, Washington D.C.

Ministry of Environment & Forests, Government of India (2010) "India: Taking on Climate Change".

Office of Management and Budget. (2010) "Budget of the United States Government, Fiscal Year 2011".

Pew Center on Global Climate Change (2010) "Fifteenth Session of the Conference of the Parties to the United Nations Framework on Climate Change and Fifth Session of the Meeting of the Parties to the Kyoto Protocol".

Solar Energy Industries Association (2010) "US Solar Industry Year in Review 2009".

UNFCCC (2009) "Copenhagen Accord".

United Nations, UN-Energy (2010) "Delivering on Energy: An overview of activities by UN-Energy and its members".

United States Department of State (2010) "U.S. Climate Action Report 2010: Fifth National Communication of the United States of America Under the United Nations Framework Convention on Climate Change".

Disclosures

This report has been prepared by the Global Markets Institute, the public policy research unit of the Global Investment Research Division of The Goldman Sachs Group, Inc. ("Goldman Sachs"). As public policy research, this report, while in preparation, may have been discussed with or reviewed by persons outside of the Global Investment Research Division, both within and outside Goldman Sachs, and all or a portion of this report may have been written by policy experts not employed by Goldman Sachs.

While this report may discuss implications of legislative, regulatory and economic policy developments for industry sectors, it does not attempt to distinguish among the prospects or performance of, or provide analysis of, individual companies and does not recommend any individual security or an investment in any individual company and should not be relied upon in making investment decisions with respect to individual companies or securities.

Distributing entities

This research is disseminated in Australia by Goldman Sachs & Partners Australia Pty Ltd (ABN 21 006 797 897) on behalf of Goldman Sachs; in Canada by Goldman Sachs & Co. regarding Canadian equities and by Goldman Sachs & Co. (all other research); in Hong Kong by Goldman Sachs (Asia) L.L.C.; in India by Goldman Sachs (India) Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Securities Private Ltd.; Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Securities Private Ltd.; Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Securities Private Ltd.; Securities Private Ltd.; Securities Private Ltd.; in Japan by Goldman Sachs Japan Co., Ltd.; in the Republic of Korea by Goldman Sachs (Asia) L.L.C., Securities Private Ltd.; Securities Private

European Union: Goldman Sachs International, authorized and regulated by the Financial Services Authority, has approved this research in connection with its distribution in the European Union and United Kingdom; Goldman Sachs & Co. oHG, regulated by the Bundesanstalt für Finanzdienstleistungsaufsicht, may also distribute research in Germany.

General disclosures in addition to specific disclosures required by certain jurisdictions

Goldman Sachs conducts a global full-service, integrated investment banking, investment management and brokerage business. It has investment banking and other business relationships with governments and companies around the world, and publishes equity, fixed income, commodities and economic research about, and with implications for, those governments and companies that may be inconsistent with the views expressed in this report. In addition, its trading and investment businesses and asset management operations may take positions and make decisions without regard to the views expressed in this report.

Copyright 2010 The Goldman Sachs Group, Inc.

No part of this material may be (i) copied, photocopied or duplicated in any form by any means or (ii) redistributed without the prior written consent of The Goldman Sachs Group, Inc.

Goldman Sachs

Global Markets

Institute

President

Abby Joseph Cohen, CFA +1-212-902-4095 (US)

Chair

Esta E. Stecher

Sandra Lawson Michael A. Moran, CFA Douglas B. Gilman Amy C. Semaya Rachel Siu +1-212-902-6821 (US) +1-212-357-3512 (US) +1-212-902-3132 (US) +1-212-902-7009 (US) +1-212-357-0493 (US)

+1-212-902-3490 (US)

Recent Publications The new geography of global innovation September 20, 2010

Critical juncture in global accounting standard setting June 14, 2010

Pension review 2010: Pension palpitations refuse to dissipate for corporate plan sponsors June 11, 2010

Tax time: Plenty of charges from the health care bill, but changes in corporate behavior loom March 30, 2010

"First take": Corporate pensions end 2009 with improved funding but face ongoing challenges March 25, 2010

Dynamic approach to investment policy for corporate pension plans March 16, 2010

SEC takes action on climate change disclosures January 28, 2010

2010 pension preview: Headwinds remain despite funded status improvement December 18, 2009

Effective Regulation: Part 5 - Ending "Too Big to Fail" December 15, 2009

Health Buys Wealth December 9, 2010

Goldman Sachs Research personnel may be contacted by electronic mail through the Internet at firstname.lastname@gs.com Goldman Sachs Global Investment Research



Mixed Sources Product group from well-managed forests and other controlled sources www.fsc.org Cert no. SW-COC-001941 0 1996 Forest Stewardship Council