

**THE CARBON  
PRINCIPLES**

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## The Carbon Principles: A New Environmental Diligence Process for U.S. Utilities

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# Why? – Allowing Banks to Finance Coal Responsibly



The Carbon Principles were developed to allow for the financing of new coal-fired generation through a responsible and robust process, addressing lender and investor concerns around carbon risk while working with sponsors to meet the future power needs of their customers

- **Government policy and proposed legislation in the United States is creating significant uncertainty around potential carbon costs**
  - This uncertainty is increasingly affecting the ability of power developers and utilities to advance coal-based power projects beyond the regulatory approval stage
  - As a result, project sponsors are losing the coal option, potentially increasing the industry’s dependence on natural gas which is subject to volatile price swings and growing dependence on imported LNG
- **In this environment of tension between carbon uncertainty and the need for a balanced supply portfolio, several leading financial institutions have developed an approach to assessing carbon risk that is both responsible and responsive to the concerns of investors, regulators and other stakeholders**
  - As lenders, our goal is to help our clients provide reliable, low-cost power to their customers
  - As financial institutions we have a duty to indicate potential risks to investors, including carbon and other environmental risks
  - We have developed the Carbon Principles as a set of common beliefs among leading banks, environmental groups and power companies that stresses the need for a balanced portfolio of investment options
  - The adopting banks are committed to applying the Enhanced Diligence Process to applicable transactions to include a review of carbon risks as part of our overall diligence
- **The Principles and Enhanced Diligence creates a robust process to provide greater comfort that project sponsors and their lenders are addressing a wide range of issues around proposed coal plants, including carbon risks**

# Current Environment is a Legislative Patchwork

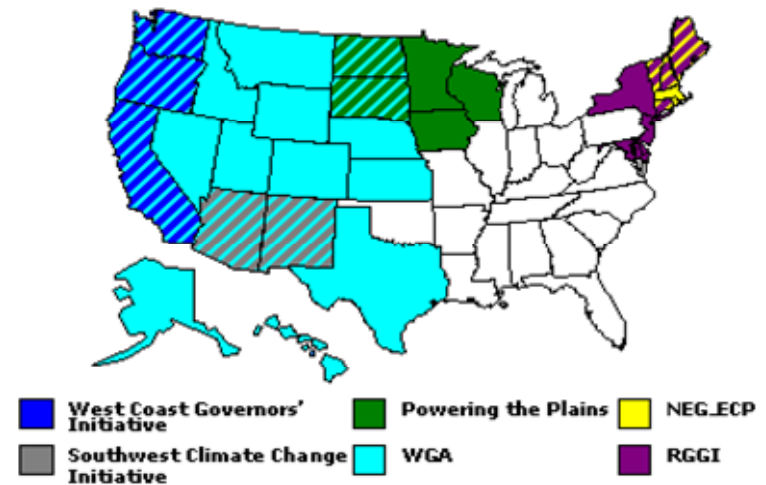


There is growing expectation of a national climate change policy in the next five years that will limit or tax the release of carbon dioxide by power generators. However, in the interim some regions and state have already advanced their own initiatives to limit CO2 in what could become a patchwork of localized programs.

## Proposed National Legislation

- **Climate Stewardship Act of 2003 (*McCain-Lieberman*)**  
2000 levels by 2010
- **Climate and Economy Insurance Act of 2005 (*Bingaman*)**  
2.4% yearly reduction in *intensity* during 2010-2019; 2.8% yearly reduction in *intensity* during 2020-2024
- **Strong Economy and Climate Protection Act of 2006 (*Feinstein*)** discussion draft (3/06) 2006 levels through 2010; 5% yearly reduction during 2011-2015; 1% yearly reduction during 2016-2020; 7.25% below current levels in 2020
- **Clean Air Planning Act of 2006 (*Carper*)** S.2724  
2006 levels in 2010-2014; 2001 levels in 2015 CO<sub>2</sub> from electric generation sector. (5/2006)
- **Safe Climate Act of 2006 (*Waxman*)** H.R.5642. 2009 levels in 2010; 1990 levels in 2020; 80% below 1990 levels in 2050. (7/2006)
- **Global Warming Pollution Reduction Act (*Jeffords*)**  
S.3698. 1990 levels in 2020; 27% below 1990 by 2030; 53% below 1990 by 2040; 80% below 1990 levels in 2050. (7/2006)
- **America's Climate Security Act (*Lieberman, Warner*)**  
S.2191. 10% below 2005 levels in 2020; 30% below 2005 by 2030; 50% below 2005 by 2040; 70% below 2005 levels in 2050. (10/2007)

## Regional Initiatives



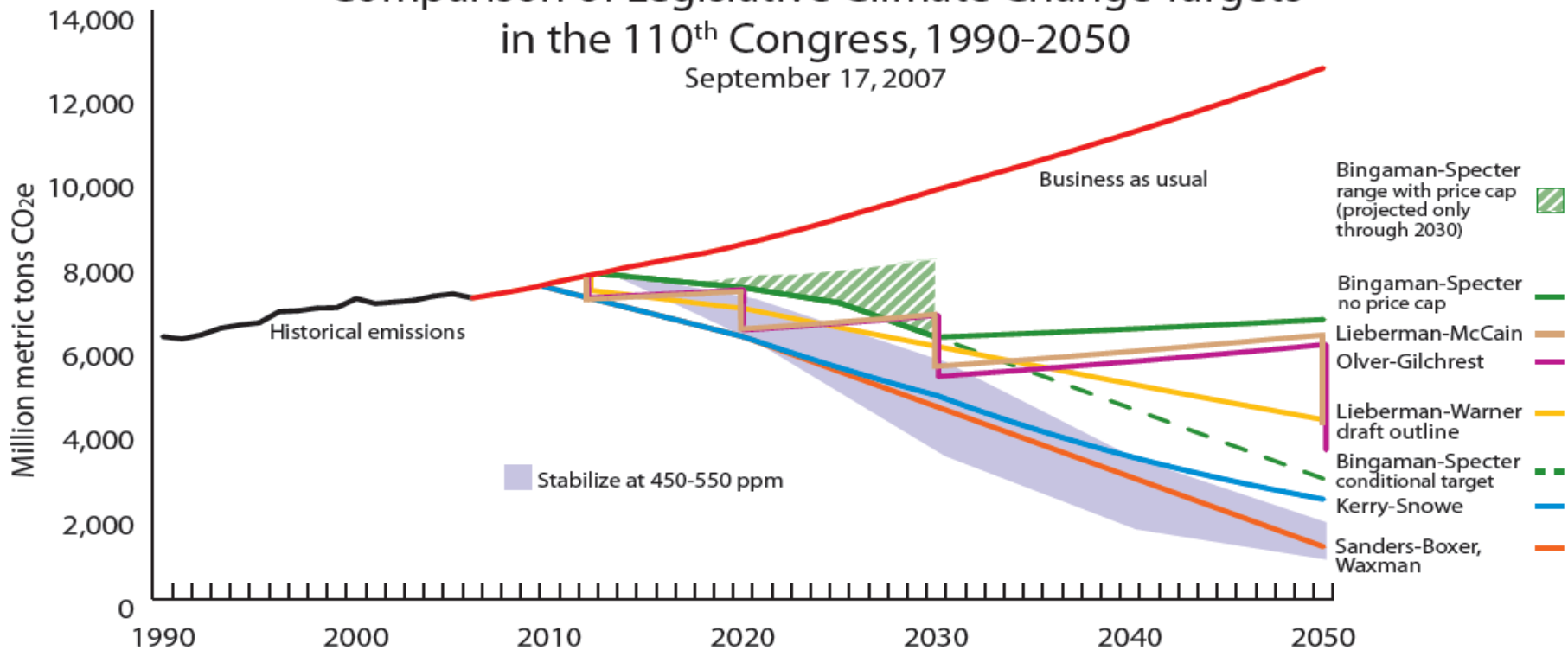
- Numerous states have adopted Renewable Portfolio Standards or Greenhouse Gas Reduction Targets, independent of National and Regional initiatives

# Carbon Policy Uncertainty Raises Cost Concerns



Uncertainty around the nature and form of a national program creates concerns about the future level of reductions required and the resulting costs to meet those reductions. Banks can no longer assume a business as usual approach to long term financings in the power industry

Comparison of Legislative Climate Change Targets  
in the 110<sup>th</sup> Congress, 1990-2050  
September 17, 2007



For a full discussion of underlying methodology, assumptions and references, please see <http://www.wri.org/usclimatetargets>. WRI does not endorse any of these bills. This analysis is for comparative purposes only. Data post-2030 may be derived from extrapolation of EIA projections.

**Note:** The 450-550 ppm CO<sub>2</sub>eq stabilization target is similar to the one used in the *Stern Review*. Stabilization lines for atmospheric CO<sub>2</sub> equivalent concentrations of 450 and 550 pp represent reductions the U.S. would need to achieve in tandem with immediate and significant commitments from all industrialized countries and the eventual cooperation of all major developing country emitters to prevent atmospheric greenhouse gas concentrations from exceeding 450ppm or 550 ppm based on the multi-stage scenario used in this study.

3 The *Union of Concerned Scientists* have prepared a similar analysis, but it targets the lower 450 ppm target. See Figure 3a in [http://www.ucsusa.org/global\\_warming/science/emissionstarget.html](http://www.ucsusa.org/global_warming/science/emissionstarget.html)



# A Groundbreaking Collaborative Effort

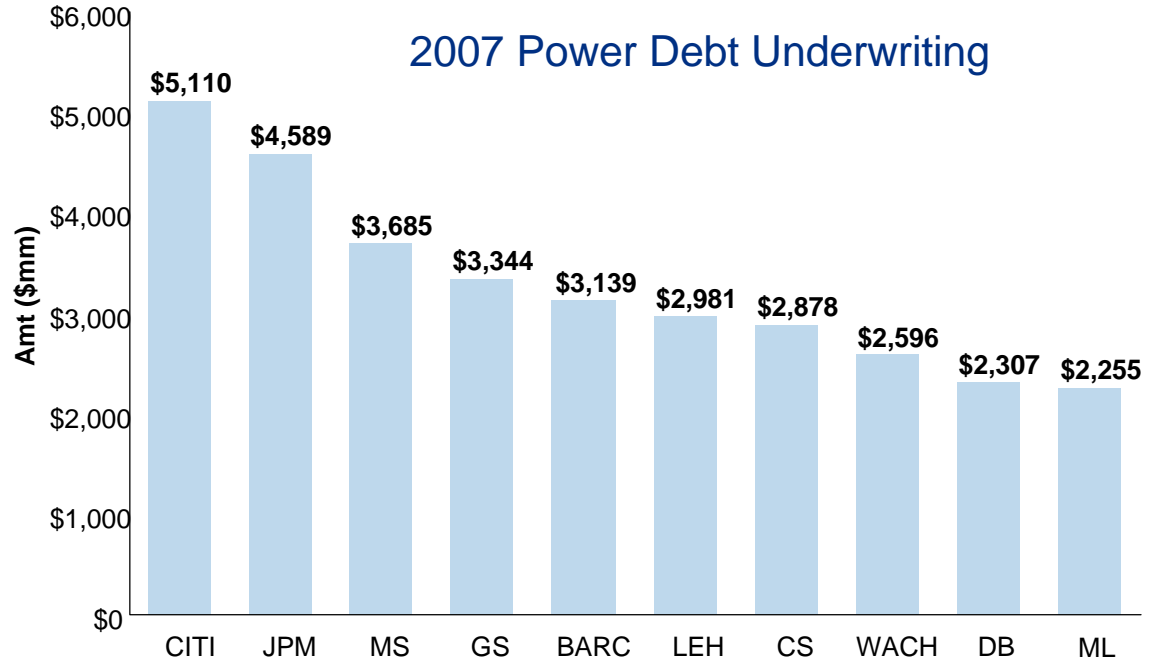


The Carbon Principles are the culmination of a year-long collaborative effort by several leading financial institutions in the power space, in conjunction with their industry clients and leading environmental groups to create a responsible and responsive approach to examining carbon risk

## Current Adopters



## Industry Advisors



## Environmental Advisors



# What Are The Carbon Principles?



The Carbon Principles are a common set of beliefs that a balanced portfolio approach is needed in the power industry to meet future needs

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## **This balanced portfolio includes:**

- **Energy Efficiency**
  - The best way to limit CO2 emissions is to not produce them
- **Renewable and low-carbon energy technologies**
  - Renewable energy and low carbon help meet electricity needs while also leveraging American technology and creating jobs
- **Conventional and advanced generation**
  - Conventional or advanced generating facilities will be needed to meet demand, including power from natural gas, coal and nuclear technologies

**When a client has selected a coal-fired power plant as the best supply options for its customers, the Carbon Principles banks will apply the Enhanced Diligence Process to assess the potential carbon related risks of that investment as part of our overall diligence procedures**

# When do the Principles Apply?



## What plants will be covered by the Carbon Principles?

- All new construction or expansions of coal-fired power plants with a net increase greater than 200MW
- Built by investor-owned entities, public or private
- Located in the United States.
- It does not apply to non-coal plants, municipal or co-op owned plants, or plants less than 200MW
- This would cover approximately 70% of planned new MWs of coal generation in the United States



Construction of new coal power plant in Illinois (source: [www.cwlp.com](http://www.cwlp.com))

## In which situations will the adopting financial institutions apply the Enhanced Diligence?

- When leading a Project Financing with known use of proceeds
- When leading a Corporate Financing where the borrower has represented that they have a coal plant under construction or will begin construction within the next six months

## When will the adopting financial institutions start implementing this process?

- Within six months of adopting the Carbon Principles

# What is the Enhanced Diligence Process?



The Enhanced Diligence Process is meant to supplement the due diligence a financial institution would normally engage in during a financing. It is meant to probe deeper into the risks surrounding future carbon policy and evaluate the extent to which these risks have been considered and/or mitigated during the planning stage.

## **The Enhanced Due Diligence Process does NOT:**

- pre-suppose an outcome,
- judge a company's supply choice,
- mandate specific carbon price hurdles, policy assumptions, or technology choices

**Each financial institution will make its own diligence judgments on any financing in which the Enhanced Diligence Process is employed**

## **The Enhanced Due Diligence Process does:**

- Provide lenders with a process by which to evaluate a proposed financing against a range of potential carbon emissions policy assumptions and expected costs
- Assess the economic viability of proposed financings under a range of carbon price scenarios
- Encourage consideration of assumptions that err on the side of caution until more clarity around anticipated carbon policies becomes available
- Examine the strategies of the project sponsor to mitigate these carbon related risks
- Promote a discussion around a company's overall strategy supply strategy, including energy efficiency and renewable efforts where applicable

# All Documents are available at carbonprinciples.org



# The Future of the Carbon Principles



## The Next Steps for the Carbon Principles include:

- Recruiting other financial institutions to adopt the Principles
- Educating our US-based power industry clients on the intent and implications of the Principles
- Working with municipal clients to lay the groundwork for expanding the Principles to the municipal finance market at a future date
- Ensuring that implementation deadlines are met and sharing best-practices among adoptees
- Maintaining an ongoing dialogue among the adoptees, the power / utilities sector and environmental advisors and other interested parties

In January 2007, Citi released a Climate Change Position Statement, the first US financial institution to do so. As a sustainability leader in the financial sector, Citi has taken concrete steps to address this important issue of climate change by: (a) targeting \$50 billion over 10 years to address global climate change: includes significant increases in investment and financing of alternative energy, clean technology, and other carbon-emission reduction activities; (b) committing to reduce GHG emissions of all Citi owned and leased properties around the world by 10% by 2011; (c) purchasing more than 52,000 MWh of green (carbon neutral) power for our operations in 2006; (d) creating Sustainable Development Investments (SDI) that makes private equity investments in renewable energy and clean technologies; (e) providing lending and investing services to clients for renewable energy development and projects; (f) producing equity research related to climate issues that helps to inform investors on risks and opportunities associated with the issue; and (g) engaging with a broad range of stakeholders on the issue of climate change to help advance understanding and solutions.

Citi works with its clients in greenhouse gas intensive industries to evaluate emerging risks from climate change and, where appropriate, to mitigate those risks.

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