



Preparing for Federal Climate Change Legislation – What Should Regulators Know?

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PacifiCorp Impact

- PacifiCorp's cap in 2012 is 50 million tons.
- PacifiCorp's free allowances under W-M are 27 million and under K-B are 23 million.
- The minimum auction price under both bills is \$10/ton.
- Assuming PacifiCorp does not exceed the cap in 2012, it will still need to buy at least \$270,000,000 in allowances and offsets (at the minimum \$10 per) for that year.
- Each state is affected differently as a result of jurisdictional allocations, but in Utah, PacifiCorp's largest jurisdiction, each \$270,000,000 increase in generation costs equates to a 7.5% average rate increase across all classes; about 6.5% for residential and over 11% for industrial because industrials are more energy intensive.

MEHC Utilities - Background

- PacifiCorp has 1.6 million electric customers in UT, OR, WY, WA, ID and CA.
 - Retail electric system load = 40% UT; 25% OR.
- MidAmerican Energy Company has 1.6 million electric and gas customers in IA, IL and SD.
 - Retail electric system load = 89% IA; 10% IL.
- Generation and transmission planning and generation dispatch for each are done on a system basis.

MEHC Resource Portfolios as of 5/31/09

Resource Type	MidAmerican (MW)		PacifiCorp (MW)	
	MW	%	MW	%
Pulverized Coal	3,640.0	48%	6590	50%
Gas-SCCT	909.5	12%	490	4%
Gas-CCCT	576.3	8%	1990	15%
Renewable (wind, geothermal & biomass)	1287.9	17%	1252	10%
Hydroelectric	3.6	0%	1044	8%
Net Purchases	249.3	3%	403	3%

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MEHC Resource Portfolios as of 5/31/09

Resource Type	MidAmerican (MW)		PacifiCorp (MW)	
	MW	%	MW	%
Interruptible	341.0	4%	237	2%
Oil	56.0	1%	0	0%
Class-1 DSM	60.0	1%	345	3%
Nuclear	456.0	6%	0	0%
Front Office Transactions	0.0	0%	725	5%
Gas-CHP	0.0	0%	62	0%
Total	7,579.6		13,138	

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2008 Utility Ownership of Wind Power

Utility Capacity (MW)	Capacity (MW)
MidAmerican Energy (inc. PacifiCorp)	1858.3
Puget Sound Energy	385.2
We Energies	146.5
Dominion Energy	132.0
Xcel Energy	126.9
Portland General Electric	125.4

2008 Investor Owned Utilities Wind Energy Portfolios

Utility	Under Contract MW (PPA)	Utility-Owned MW	Total MW
Xcel Energy	2779.5	126.9	2906.4
MidAmerican Energy (inc. PacifiCorp)	424.1	1858.3	2282.4
So. Ca. Edison	1137.0	0	1137.0
Pacific Gas & Electric	980.9	0	980.9
Luminant Energy	913.1	0	913.1

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2008 Top Five Wind Power Owners

Company	MW under “managing ownership”
NextEra Energy Resources	6290.1
Iberdrola Renewables	2063.4
MidAmerican Energy (inc. PacifiCorp)	1939.5
Horizon-EDP Renewables	1872.7
Invenergy	1276.5

PacifiCorp Situation Under Waxman-Markey and Kerry-Boxer

- Has taken bold steps over last two decades to reduce carbon emissions: added wind and natural gas and more on the way; no new coal; major energy efficiency
- Owns, has under construction or contract 1,868 MW of renewables; 90% since 2005
- Owns 1,044 MW of hydroelectric generation; and more under contract
- Owns 2,480 MW of natural gas generation; and more under contract
- Has not built a coal plant for more than 20 years; sold 500+ MW share of coal plant in 2000

(continued)

PacifiCorp Situation – Continued

- One of the first utilities to offer energy efficiency programs
- Building \$6 billion of transmission in large part to access wind resources
- Despite all these measures to reduce carbon intensity, overall CO₂ emissions have risen because of load growth
- Despite these actions, under H.R. 2454 will receive only 27 million of the 50 million allowances it needs in 2012 just to operate under the cap
- Despite these actions, under S. 1733 will receive only 23 million of the 50 million allowances it needs in 2012 just to operate under the cap

EPA versus Congress

- **EPA will use command and control approach.**
 - ▶ Try to adapt existing Clean Air Act provisions to regulate energy use
 - ▶ Aim to control energy by requiring technology redesign and workplace standards
 - ▶ Possibly lead to unintended consequences under Clean Air Act
- **Congress will develop market based system.**
 - ▶ Focus has been on cap-and-trade, but carbon tax is favored by some
 - ▶ Will impose industry-wide restrictions on GHGs
 - ▶ In theory, should be comprehensive and preempt Clean Air Act command and control approach, but current proposals leave much Clean Air Act authority on the table

EPA versus Congress

- **EPA’s “rulemaking” path is a virtual certainty.**
 - ▶ President Obama has committed to finalizing the first GHG regulations
 - ▶ EPA is presently pursuing three climate change rulemakings simultaneously
 - ▶ Environmental NGOs will use courts to force action
- **House cap-and-trade legislation was quick, but Senate action now less certain.**
 - ▶ Each state is an equal vote (i.e., 2 Senators) increasing the influence of less populated states and their concerns
 - ▶ Possible passage by Senate appears to be slipping to 2010
 - ▶ Can legislation be passed during a mid-term election year?

Upcoming Key EPA Rulemakings re: GHG Controls

- Endangerment finding (proposed April 17, 2009; comment period closed June 23, 2009; released Oct.-Nov., 2009; finalized prior to March 2010)
- Section 202 GHG regulation for cars and light duty trucks (released September 15, 2009; finalized March 2010)
- Title V and PSD “25,000 tons/year CO₂-e” threshold rule (proposed September 30, 2009; comment period closes December 28, 2009; and finalized prior to March 2010)

EPA Regulation of GHGs – “Tailoring Rule”

- **First Proposal:** Relying on legal precedents holding that statutory language need not be followed if it leads to an absurd result, and that new regulations can be phased in if it is impractical to give them full effect immediately, the **EPA has proposed** to:
 - ▶ Apply the permit requirement only to sources that emit more than 25,000 tons of carbon dioxide-equivalent (“CO₂e”) per year, measured by summing the global warming potency of six separate GHGs, of which carbon dioxide is the most important.
 - ▶ The EPA estimates this would result in about 13,000 sources requiring operating permits and about 400 a year requiring new source permits. Among the major source types covered would be electrical generators, cement plants, natural gas systems, refineries, aluminum smelters, chemical plants, landfills, pulp and paper mills, and even a few non-industrial facilities, such as major hospitals.

Potential Issues – “Tailoring Rule”

- Whether the EPA has power to ignore the existing CAA threshold statutory language in the proposed manner and whether there are any flaws in the legal argument supporting that position.
- Determining the exact emission levels that trigger requirements.
 - ▶ Although the EPA has proposed to require operating permits and permits for new sources at the 25,000 ton level, it asks for comment on other levels ranging from 1,000 tons to 100,000 tons.
 - ▶ For existing sources that are modified, the EPA proposes to pick a level between 10,000 and 25,000 tons per year and asks for comment both on what level to choose within this range and on numbers outside of it.

Potential Issues – “Tailoring Rule”

- Understanding exactly how the EPA will make new source permit decisions—and in particular how it will set emission control levels—for sources that remain in the system.
- What constitutes best available control technology (“BACT”).
 - ▶ A subcommittee of the Agency’s Clean Air Act Advisory Committee (CAAAC) is taking up the issue.
- Regulation will be challenged in the courts, continuing operational uncertainty
 - ▶ Unusual for a regulation to be stayed while litigation is underway.

Waxman-Markey and Kerry-Boxer Baseline Understanding

CAP

Waxman-Markey and Kerry-Boxer Baseline Understanding

TRADE

Key Comparisons Between Waxman-Markey and Kerry-Boxer

Affected Sectors

Waxman-Markey

Economy-wide bill affecting approximately 84.5% of greenhouse gas emissions in the United States

Kerry-Boxer

Although largely the same coverage as Waxman – Markey, Sen. Kerry testified the bill is not economy-wide and only impacts 7,500 facilities.

Key Comparisons Between Waxman-Markey and Kerry-Boxer

Reduction Targets

Waxman-Markey

Baseline Year is 2005

3% Below 2005 by 2012

17% Below 2005 by 2020

42% Below 2005 by 2030

83% Below 2005 by 2050

Kerry-Boxer

Baseline Year is 2005

3% Below 2005 by 2012

20% Below 2005 by 2020

42% Below 2005 by 2030

83% Below 2005 by 2050

Key Comparisons Between Waxman-Markey and Kerry-Boxer

Available Allowances

Waxman-Markey

Total available allowances between 2012 and 2050 are 132.23 billion

Kerry-Boxer

Total available allowances between 2012 and 2050 are 130.77 billion. Reduced allocation of 1.46 billion allowances spread between 2017 and 2029.

Key Comparisons Between Waxman-Markey and Kerry-Boxer

Deficit Reduction Allowances

Waxman-Markey

A small pool of allowances are allocated for deficit reduction in the early years of the program. This is equivalent to 13.4% in 2012, 2% in 2014, and essentially drops to zero by 2016

Kerry-Boxer

A larger percentage of all available allowances are allocated for deficit reduction in every year of the program.

2012-2029: 10%

2030-2039: 22%

2040-2050: 25%

The larger amount of auctioned allowances significantly reduces the amount of allowances freely allocated

Key Comparisons Between Waxman-Markey and Kerry-Boxer

Low Income Allowances

Waxman-Markey

15% of allowances are auctioned in each year for the benefit of low-income consumers

Kerry-Boxer

The definition has been expanded to low and moderate income consumers.

15% of allowances are auctioned from 2012-2029 for the benefit of low-income consumers. The percentage increases to 18.5% from 2030-2050.

Key Comparisons Between Waxman-Markey and Kerry-Boxer

Electric LDC Allowance Allocation Methodology

Waxman-Markey

The electric LDC allowance allocation methodology is based on 50% emissions and 50% retail sales, and is phased out between 2025 and 2030 (page 892).

Kerry-Boxer

No change in the allocation methodology.

Key Comparisons Between Waxman-Markey and Kerry-Boxer

Price Collar

Waxman-Markey

No price collar.

Standard auction price floor is \$10 (2009\$) in 2012, and escalates at 5% above inflation.

Strategic reserve auction price floor is \$28 (2009\$) in 2012, and escalates at 5% above inflation for 2013-2014. In 2015 and beyond, minimum price is 60% above 36-month rolling average daily allowance price (page 759).

Kerry-Boxer

No price collar.

Standard auction price floor is \$10 (2005\$) in 2012, and escalates at 5% above inflation.

Strategic reserve auction price floor is \$28 (2005\$) in 2012, and escalates at 5% above inflation for 2013-2017. In 2018 and beyond, minimum price escalates at 7% above inflation.

Key Comparisons Between Waxman-Markey and Kerry-Boxer

Combined Renewable Electricity and Energy Efficiency Standard

Waxman-Markey

The combined standard begins at 6% by 2012 and escalates by 3.5% every other year until the target of 20% is reached in 2020. The target remains at 20% through 2039, after which the program sunsets. Only renewable production in 2012 and thereafter qualifies. Only “incremental” energy efficiency savings after the date of enactment qualifies.

Kerry-Boxer

There are general energy efficiency requirements in the bill, but no combined RES/EE standard. This is likely due to the fact that similar provisions were already incorporated into the earlier Senate energy bill.

Key Comparisons Between Waxman-Markey and Kerry-Boxer

Offset Credits Available Annually

Waxman-Markey

2 billion each year; 1.0 billion from domestic sources and 1.0 billion from international sources. International amount can increase to 1.5 billion if not available domestically. Transactions are not restricted to owners and operators of covered entities.

Kerry-Boxer

2 billion available each year; 1.5 billion from domestic sources and 0.5 billion from international sources. International amount can increase to 1.25 billion if not available domestically. Transactions are not restricted to owners and operators of covered entities.

What Regulators Should Know

1. Allowances must be procured for every ton of emissions; not just emissions over the cap.
2. Every utility will be impacted differently, and there will be no single strategy for compliance.
3. H.R. 2454 and S. 1733 allow emitters to exceed the caps if they have allowances or offsets.
4. Achieving actual emissions reductions will require utilities to work with state regulators to develop resource plans in processes similar to integrated resource planning.
 - Energy and peak load growth
 - Energy efficiency and demand response programs
 - Fuel switching in existing units
 - Modification of dispatch order
 - New supply-side resource before and after technology development
5. The costs of 1 and 4 are cumulative.

Parting Thoughts

- Confidence in the certainty of declining caps is based on the mistaken assumption that cap and trade was proven in the EPA's acid rain program.
- In fact, addressing acid rain required relatively minor modifications to coal-fired power plants.
- In contrast, the issues presented by climate change cannot be solved by tweaks to facilities; it requires an energy revolution through investments in building clean-energy facilities.
- Cap and trade alone will not create confidence that clean energy will become profitable within a known time frame and so will not ignite the huge shift in investment needed to begin the clean-energy revolution.

Parting Thoughts

- Offsets – considered indispensable to keeping cap and trade affordable – are supposed to be “additional” reductions beyond what is legally required. But experience with offsets in Europe and California has shown that ensuring real “additionality” is not an achievable goal.
- The House and Senate climate bills are not a first step in the right direction.
- Together, the illusion of greenhouse-gas reductions and the creation of powerful lobbies seeking to protect newly created profits in permits and offsets will lock in climate degradation for a decade or more.

Source: *The Washington Post* Op-ed
By Laurie Williams and Allan Zabel
Saturday, October 31, 2009

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