



Court Ruling Gives Green Light to EPA GHG Regulations – Positive for Natural Gas, Renewables, and Efficient Vehicles

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Executive Summary

- On June 26, 2012, a panel from the US Court of Appeals for the District of Columbia Circuit unanimously upheld the US Environmental Protection Agency's (EPA) landmark greenhouse gas (GHG) regulations, keeping intact the EPA's authority to regulate carbon emissions from vehicle tailpipes and stationary sources.
- The case is of great importance as it effectively clears the way for the EPA to proceed with its proposed rules to regulate CO₂ emissions from both new power plants and from other new stationary sources, in addition to pressing ahead with new vehicle emission standards.
- For vehicles, the EPA released the 'Tailpipe Rule' in April 2010 requiring automakers to improve fleet-wide fuel economy and reduce fleet-wide GHG emissions for the model years 2012-2016. It required fuel economy to improve by approximately 5 per cent per year. EPA and Department of Transportation (DOT), in cooperation with the California Air Resources Board (CARB), then developed a new CAFE standard for light vehicles to supersede the current fleet average 35.5 miles per gallon (mpg) standard by 2016.
- For existing power plants, at present, the EPA has indicated that it does not plan to regulate GHGs emissions from established facilities, allowing states to continue to manage the permitting process under BACT.
- For future plants, EPA has proposed a New Source Performance Standard (NSPS) which is based on the Best System of Emissions Reduction (BSER) and set equal to an efficient gas fired plant. It includes a proposal for a two-phased limit for future coal plants with a higher limit at first and a lower limit in the future based future availability of CCS. It also provides a transition period for planned coal plants that have already received permits and begin construction by spring 2013.
- For investors in energy markets, the EPA's proposed GHG regulation provides reasonably high degrees of Transparency and Certainty as to its specific rules and their economic impact with respect to new plants and vehicles, although for existing plants, the outlook is not so clear.
- When it comes to Longevity, the outcomes of the November elections are highly relevant, as are potential further court challenges.
- DBCCA believes key winners at a sector level will be: Natural gas, renewable energy, efficient vehicles, and, if proven, carbon capture and storage (CCS).
- It is noteworthy that no US court has found against climate science.

Background

On June 26, 2012, a panel from the US Court of Appeals for the District of Columbia Circuit unanimously upheld the US Environmental Protection Agency's (EPA) landmark greenhouse gas (GHG) regulations, keeping intact the EPA's authority to regulate carbon emissions from vehicle tailpipes and stationary sources. In their highly anticipated decision in *Center for Responsible Regulation v. EPA*, the judges

denied industry arguments against four key EPA rules and upheld : (i) the 'Endangerment Finding' that GHG emissions endanger public health or welfare; (ii) the 'Tailoring Rule' which narrows permitting requirements to the heaviest-emitters; (iii) the 'Tailpipe Rule' which allows the development of carbon standards for light duty vehicles (in addition to fuel efficiency standards); and (iv) the 'Timing Rule' which provided that GHG standards for stationary sources did not take effect until the light duty vehicle standards took effect (January 1, 2011). The judges found the Endangerment Finding and Tailpipe Rule to be neither 'arbitrary' or 'capricious', stated that the EPA's interpretation of the Clean Air Act (CAA) was 'unambiguously correct', and concluded that industry petitioners had no standing to challenge the Tailoring and Timing Rules.

The case is of great importance as it effectively clears the way for the EPA to proceed with its proposed rules to regulate CO₂ emissions from both new power plants and from other new stationary sources, in addition to pressing ahead with new vehicle emission standards for model years after 2016, when the rules that have just been upheld run out. For existing plants, at present, the EPA has indicated that it does not plan to regulate GHGs emissions from established facilities, rather let states work on Best Available Control Technology (BACT) efficiency measures. But for new plants EPA has proposed a New Source Performance Standard (NSPS) which is based on the Best System of Emissions Reduction (BSER) and set equal to an efficient gas fired plant. It includes a proposal for a two-phased limit for future coal plants with a higher limit at first and a lower limit in the future based future availability of CCS. It also provides a transition period for planned coal plants that have already received permits and begin construction by spring 2013.

Further challenges to these proposed regulations will be made still. The challenges with the greatest chance of broad-ranging success are in the political arena, not in the courts. According to Governor Romney's policy proposal, the Clean Air Act serves to regulate the human health effects of pollutants but its purview should be amended to exclude the regulation of carbon.

DBCCA assesses policy frameworks in terms of the Transparency, Longevity, and Certainty (TLC) that they provide to investors. For investors in energy markets, the EPA's proposed GHG regulation provides reasonably high degrees of Transparency and Certainty as to its specific rules and their economic impact with respect to new plants, although for existing emitters, the outlook is not so clear. New electric generating plants will increasingly utilize natural gas and renewables, and not coal (unless utilities prove up the CCS technology and expect it to get much cheaper, which certainly appears to be a significant challenge at present). New manufacturing facilities will have to be increasingly clean. Old coal-fired power plants will be under siege on multiple environmental fronts, but it remains uncertain how GHG regulations will affect these. At the end of their useful lives, inefficient cars are going to be replaced by more efficient engines, hybrids and EVs. There will also be new technologies that drive efficiency that may also emerge and benefit. When it comes to Longevity, the outcomes of the November elections are highly relevant, as noted above, as are potential further court challenges.

The Court of Appeals decision has additional significance. The plaintiffs mounted the strongest attack they could on the climate science underlying the Endangerment Finding and all of GHG regulation. The Court of Appeals was completely unconvinced, and instead praised EPA for the thoroughness of its studies of GHGs and their impacts. This decision continues an unbroken streak for climate science in the courts. Hundreds of lawsuits have been filed in US courts on climate change. Not a single judge, in a written opinion or dissent, has expressed skepticism about the existence and dangers of anthropogenic climate change. Many courts have refused to engage the issue, finding various legal doctrines prevented them from doing so, and a few have acknowledged the existence of controversy, but none have embraced the skeptics' arguments. There has been one full-fledged trial on climate science, with sworn expert witnesses on both sides (in a case on Vermont's adoption of motor vehicle emission standards); the court sided with the environmentalists' experts. The Court of Appeals decision will make it even more difficult for climate skeptics to gain a foothold in their efforts to gain the courts as allies, and thus adds to the certainty that GHG regulations will continue to be adopted.

In this short note we summarize the context of these new and proposed regulations for stationary sources of GHG emissions and vehicle emissions, and outline how we believe this contributes to policy transparency, longevity and certainty (TLC) in the US. We also provide some political context.

Background

First, a very short bit of history is in order. In 2007 the United States Supreme Court, in the seminal case of *Massachusetts v. EPA*, ruled that GHGs fall within the definition of "air pollutant" in the Clean Air Act of 1970, and that EPA has the authority to regulate them if it finds they endanger public health and welfare. Not much happened as a result of this ruling for the balance of the administration of President George W. Bush, but when Barack Obama took office in January 2009, things swiftly changed. On December 7, 2009, after numerous hearings, EPA Administrator Lisa Jackson signed a landmark final action, under Section 202(a) of the Clean Air Act, concluding that six

key long-lived, well-mixed GHGs¹ constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to climate change.² This 'Endangerment Finding' paved the way for future US climate regulation, without further action from the US Congress. Then EPA quickly issued new regulations on GHG emissions from both stationary sources (such as power plants and factories) and mobile sources (such as motor vehicles).

It is also necessary to clarify certain terminology, since the Clean Air Act established several different programs. The table below shows the relevant programs, what they apply to, and what kinds of standards they involve.

| | New Source Performance Standards (NSPS) | New Source Review (NSR) | Prevention of Significant Deterioration (PSD) |
|-----------------------------|---|---|---|
| Applicable standards | Best system of emissions reduction adequately demonstrated (BSER) | Lowest achievable emissions rate (LAER) | Best available control technology (BACT) |
| Applicability | Everywhere | Nonattainment areas | Attainment areas |
| Scope | Nationwide | Facility-specific | Facility-specific |
| Trigger | New, reconstructed, modified facilities | New facilities or major modifications | New facilities or major modifications |
| Standard set by | U.S. EPA | States (usually) | States (usually) |

Source: DBCCA Analysis, 2012.

Stationary GHG Emissions

- In May 2010 the EPA issued its 'Tailoring Rule' which provided that only the largest stationary sources require air permits for GHGs. The rule sets thresholds for GHG emissions that define when permits under the New Source Review, Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities.³ The rule thus 'tailors' the requirements of the CAA permitting programs to limit which facilities will be required to obtain PSD and Title V Permits. Under this criteria, facilities that are responsible for ~70% of US GHG emissions from stationary sources would be subject to permitting requirements – including power plants, refineries and cement production sites. The much larger number of smaller sources -- by some counts, several million -- are spared regulation thanks to this rule. The tailoring rule only determines which facilities do and do not require permits for GHGs; it does not determine the contents of those permits, which will be set separately as discussed below.⁴ We note that there have been as yet no proposed EPA standards for GHGs from existing plants. In a March 2012 conference call, EPA administrator Lisa Jackson stated, "We have no plans to address existing plants and in the future if we were to propose a standard, it would be informed by an extensive public process with all the stakeholders involved."⁵
- Existing facilities that are covered by the PSD rule must install "Best Available Control Technology" (BACT) for GHGs, even though there is no specific performance standard. BACT is determined -- by the states with guidance by EPA -- on a case-by-case basis based on a process that considers available technologies, technical feasibility, cost effectiveness, and other factors. Most of the permits that have been issued so far under this program have focused on energy efficiency as the way to reduce facilities' GHG emissions. EPA in November 2010 issued guidance to the states to help them make BACT determinations. However, industry feedback indicates that some uncertainty remains about just what BACT determinations the states will make about various industries. For further analysis please see the Congressional Research Service's summary of "EPA's BACT Guidance for Greenhouse Gases from Stationary Sources."⁶
- In July 2011, EPA deferred for three years the applicability of these standards to CO₂ emissions from bioenergy and other "biogenic" stationary sources -- the combustion or decomposition of biologically-based materials other than fossil fuels and mineral sources of carbon. EPA says it needs to conduct further scientific studies before regulating CO₂ emissions from these sources.

¹ EPA Endangerment and Cause or Constitute Findings for Greenhouse Gases under Section 202(a) of the Clean Air Act: <http://epa.gov/climatechange/endangerment/comments/volume9.html>

² EPA Regulatory Incentives: <http://www.epa.gov/climatechange/EPAactivities/regulatory-initiatives.html>

³ EPA Fact Sheet Tailoring Rule: <http://www.epa.gov/NSR/documents/20100413fs.pdf>

⁴ We note that EPA sometimes refers to the NSPS as the Carbon Pollution Standard (CPS) for New Power Plants.

⁵ http://www.washingtonpost.com/blogs/ezra-klein/post/how-much-carbon-will-the-epas-new-power-plant-rules-actually-cut/2012/03/27/g1QAuTDeS_blog.html

⁶ <http://www.fas.org/sqp/crs/misc/R41505.pdf>, Accessed July 30, 2012.

- On March 27, 2012 the EPA proposed a first-ever New Source Performance Standard (NSPS) for new power plants that would set national limits on the amount of carbon emissions a power plant can emit under a Best System of Emissions Reduction (BSER). The rule applies purely to new fossil-fuel-fired electric utility generating units (EGUs) and not those currently operating or new permitted plants that begin construction over the next 12 months. According to the EPA, “the proposed requirements, which are strictly limited to new sources, would require new fossil fuel-fired EGUs greater than 25 megawatt electric (MWe) to meet an output-based standard of 1,000 pounds of CO₂ per megawatt-hour (lb CO₂/MWh), based on the performance of widely used natural gas combined cycle (NGCC) technology.”⁷ The best demonstrated performance of a coal-fired EGU is 1,800 pounds of CO₂ per MWh.⁸ The new standard could be met with carbon capture and storage, but that technology is not yet commercially available, and it is not likely to be for some years to come. The low price of natural gas; new or impending regulations on mercury, ash, and cooling water; and a systematic attack from the environmental community had already combined to virtually halt new starts of coal-fired power plants in the United States, and this new standard would further dim the prospects for any new coal-fired power plants. However, under the EPA rules, utilities have the option to delay implementation of CCS for 10 years if they can both a) operate at a rate of 1,800 pounds of carbon per MWh or lower for the first 10 years, and b) install CCS technology in year 11. This allows utilities to take the risk of betting on whether CCS will develop at scale in order to build new coal in the interim. EPA argues that CCS technology may be commercially available by then, and that if it is not, there are procedures available for EPA to revisit the requirement, and it therefore states that building new coal-fired power plants now with a promise to install CCS later is a viable option. However we are not convinced many utilities would take this risk on CCS.
- The NSPS applies nationwide. It serves as the floor for best available control technology (BACT) determinations for facilities in attainment areas (that is, areas that are attaining the national ambient air quality standards, and for lowest achievable emission rate (LAER) determinations for facilities in nonattainment areas (those where air quality standards are not met). Both BACT and LAER determinations are made facility-by-facility by the states. Thus once the NSPS rule for GHGs from EGUs is final, it will apply to all new, reconstructed and modified plants. The states may impose additional BACT and LAER standards on specific plants.
- On April 17, 2012, EPA issued new regulations restricting air pollution emissions from the oil and gas industry, involving minimizing fugitive methane emissions during well completions, applying to more than 11,000 hydraulically fractured gas wells each year, which is expected to reduce annual methane emissions ~1.0-1.7 million tons/year. EPA estimates that these rules will yield a nearly 95 per cent reduction in emissions of volatile organic compounds from new hydraulically fractured gas wells each year. The regulations will also reduce emissions of air toxics and of methane, a GHG.
- On July 3, 2012, EPA announced that it was keeping the tailoring rule thresholds for the PSD and Title V programs where it had set them in 2010. This “Step 3” rule means additional sources are not being drawn into these programs.
- New Source Performance Standards for GHG emissions from petroleum refineries are expected in the coming months.

Vehicle Standards

- Following the December 2009 Endangerment Finding the EPA released the ‘Tailpipe Rule’ in April 2010 requiring automakers to improve fleet-wide fuel economy and reduce fleet-wide GHG emissions for the model years 2012-2016. It required fuel economy to improve by approximately 5 per cent per year.
- EPA and Department of Transportation (DOT), in cooperation with the California Air Resources Board (CARB), then developed a new CAFE standard for light vehicles to supersede the current fleet average 35.5 miles per gallon (mpg) standard by 2016. Even if CAFE standards are reduced at a Federal level, the California standards are likely to remain as a separate, stricter, mandate. EPA and DOT proposed a new rule in November 2011 that would apply to the model years 2017-2025; by 2025 average mileage would be 54.5 mpg. EPA estimates that this new standard would avoid 2 billion metric tons of GHG emissions and save 4 billion barrels of oil over the lifetimes of these vehicles.
- In August 2011 EPA and DOT established the first-ever program to reduce GHG emissions from, and improve fuel efficiency of, medium and heavy-duty vehicles, such as buses and large trucks. These rules apply to the model years 2014-2018 and require up to 20% reduction of fuel consumption and GHG emissions by model year 2018. EPA has calculated that a semi truck owner could realize net savings of \$73,000 through reduced fuel costs over the truck’s useful life.

⁷ Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units, 77 Fed. Reg. 22,392 (proposed Apr. 13, 2012)

⁸ *Ibid.*

- In 2012, the state of Texas and major industries including those in the energy, chemical, utility and agriculture realm petitioned against the Tailpipe Rule. They contended that in declaring the Tailpipe Rule the EPA relied on an improper interpretation of CAA 202(A) and was 'arbitrary and capricious' in failing to justify and consider the cost impacts of its conclusion that the rule triggers stationary-source regulation under the PSD and Title V provisions. In other words they argued that the EPA should not have issued the Tailpipe Rule regulating GHGs from vehicles because if it did so, the next obvious step under separate provisions of the CAA would be to regulate GHG emissions from stationary sources, the costs of which were claimed to be extremely high. This argument was also dismissed in the June 26, 2012 court ruling, with the judges holding that the EPA lacked any discretion in setting tailpipe emissions once it found that GHGs endanger public health and welfare. The CAA required the EPA to regulate tailpipe emissions and the agency had no choice.
- The court decision marks a significant win for the Obama administration and means that the EPA can move forward under the CAA to finish drafting up the second round of clean vehicle standards requiring cars and light trucks to get a fleet-average fuel economy of 54.5 mpg by 2025 by August 2012. This CAFE standard was tentatively agreed upon by the White House, California and major automakers in the summer of 2011⁹. However, there is opposition to these tighter standards from the National Automobile Dealers Association and some other segments of the automobile industry, as well as certain important Republican members of the House and the Senate. Thus the ultimate fate of these standards remains uncertain, especially in view of the upcoming national election.

Further Potential Challenges

Two days after the GHG ruling, the US Supreme Court upheld most of the Affordable Care Act ("Obamacare"), but it struck down a portion that imposed penalties on states that did not participate in the program. Portions of the CAA do penalize states for failing to meet certain obligations with respect to state implementation plan, but none of the GHG regulations do that. The State of Texas has taken the position that EPA's imposition of a GHG permitting program on recalcitrant states is no less a "gun to the head" than the Affordable Care Act's provisions on Medicaid funding. EPA and several states and environmental groups are vigorously contesting this argument, and saying that it conflates a number of separate legal doctrines. This issue is now before the Court of Appeals for the District of Columbia.

- The industries and states whose lawsuits were dismissed by the Court of Appeals panel now have two other legal options to pursue their cases. On August 10 they petitioned for en banc rehearing, which means that all eight active judges (not just the three on the panel) would hear the case. If that does not succeed, they can ask the US Supreme Court to take the appeal. Both of these options may be pursued, but both must be considered extreme long shots, especially since the panel was unanimous, consisted of one Republican and two Democratic judges, and benefited from exhaustive briefing and argument from both sides. Moreover, one year ago the Supreme Court, in the case of *American Electric Power v. Connecticut*, strongly reaffirmed (and with a larger majority) its prior ruling in *Massachusetts v. EPA* that EPA has the job of regulating GHGs. It is also possible that industry will search for parties who arguably would have standing to challenge the Tailoring Rule (such as a large facility that says it is put at a competitive disadvantage by a small facility that escapes the permitting requirements thanks to the Tailoring Rule).
- Some challenges already concentrate on how the EPA chose this specific New Source Performance Standard and specifically the arguably novel approach of using natural gas as the best system of emissions reduction (BSER) for coal. For example, Tri-State Generation and Transmission Association, Inc. claims it has invested approximately \$70 million in the construction of a new coal-fired EGU in Holcomb, Kansas, though construction has not yet begun, and that the proposal of the new rule is jeopardizing its investment. Thus Tri-State has taken the very unusual action of suing EPA even before the new rule becomes final. Several other companies have filed similar petitions. In another case filed in the U.S. Court of Appeals for the District of Columbia Circuit, the Utility Air Regulatory Group (UARG) argues that the proposed NSPS should be deemed to apply only to natural gas-fired plants and not to coal-fired plants; rather than specify the BSER based on the emissions profile of a new combined-cycle gas plant, UARG argues that EPA ought to have specified separate CO2 limits based on what each different type of plant can achieve.
- Industry and state efforts to fight EPA regulations will also concentrate in other places going forward. Every new EPA rulemaking is likely to be challenged, both at the administrative level and in court. For example, the emission standards for heavy duty vehicles are the subject of a pending lawsuit called *Delta Construction v. EPA*; from the other side of the aisle, the Center for Biological Diversity has sued EPA for deferring for three years the permitting requirements for biogenic sources, illustrating that some environmental groups accuse EPA of regulating too little while many in industry say it regulates too much. State permitting actions will be fought at the state level. And efforts to cut off EPA's powers or its funding will continue in Congress; such efforts have won numerous votes in

⁹ "Fed's Proposed 54.5 MPG CAFE Requirements for 2017-2025 Released", DailyTech, November 16, 2011

the House of Representatives since the 112th Congress took office in January 2011, but have had no success in the Senate, and President Obama has threatened to veto them. The outcome of the November 2012 election will help determine the future fate of such attempts. Meanwhile, the Court of Appeals decision marked a decisive victory for EPA in the strongest and most concerted effort by opponents of GHG regulation.

- Environmental regulation has been discussed in the current election season. The central policy proposal of the presumptive Republican nominee for President Governor Romney proposes amendments to the Clean Air Act which would limit its role to reducing the human health impacts of air pollution, and not use it as a tool for regulating carbon. As stated in the proposal:

“Additionally, the Clean Air Act was passed to protect us against pollutants that pose dangers to human health. It was not intended to control carbon-dioxide emissions, and is poorly tailored to that purpose. The Obama administration’s efforts to fit that particular square peg into the round hole of the Clean Air Act— essentially achieving the effects of cap-and-trade without congressional approval— threaten enormous economic disruption. Romney will work to amend the Act and remove carbon dioxide from its purview.”¹⁰

It would still be difficult for a new administration to rescind the Endangerment Finding without risk of losing the likely lawsuit since its scientific basis has been upheld in courts so far. However, a new administration could certainly slow down the implementation of the substantive regulations, directing EPA to grant numerous kinds of extensions and exemptions from the rules it has issued, and not to issue any new rules or continue with existing proposals such as NSPS. The environmental community could then institute litigation challenging this, and while it might win some of those lawsuits, that process can take years.

- Congress could also use appropriations riders to restrict expenditures on rulemaking and enforcement.

Is EPA Providing Policy TLC for Investors?

According to EPA, the rules are “Practical, Flexible, and Achievable.” They enumerate numerous points but they really boil down to three:

1. Because of inexpensive natural gas, the industry had already stopped building new coal plants.
2. The cheap gas and the continued viability of old coal plants (at least for a while) will keep electric rates low.
3. The industry is welcome to try to develop CCS, which would provide a legal way to build new coal plants if it works.¹¹

From our perspective at DBCCA we have always looked at policies in terms of TLC – Transparency, Longevity and Certainty.

Transparency -- EPA’s rulemaking process is quite transparent, even if quite complex and requires substantive legal analysis. All proposed rules are published in the *Federal Register* for public comment, and before it issues proposed rules, EPA often issues notices of proposed rulemaking to solicit early input. However, some believe that the future of existing coal-fired plants remains uncertain; EPA has not yet proposed its rules for their GHG emissions, although it has said it has no plans to do so. Rules are also awaited for other significant sources of GHGs (such as cement plants), both old and new.

Longevity -- As discussed, changes in the political landscape post-election could affect the adoption and implementation of GHG regulations. Further legal challenges are also underway.

Certainty – in our investor requirements of TLC, certainty stands for the ability of investors to understand the economics and predictability of those associated with any policy or regulation. When it comes to new stationary sources, the ruling, if it becomes final and survives challenge in court, is going to mean coal stations are almost impossible to build as the only technology that could possibly achieve the GHG limits is Carbon Capture and Storage – currently unproven at scale and expensive. The current fleet of coal-fired power plants is aging, and as old units retire they are unlikely to be replaced by new coal plants. Natural gas plants and over time, as costs fall, renewable energy technologies are obvious winners. For vehicles, the decision means more efficient engines, hybrids and ultimately EVs as costs again decline.

Overall, the DC Circuit decision adds a good deal of certainty right now to the overall picture, though there are many devils in the details. Most of industry’s arguments against the GHG regulations, and its claims that climate science is inadequate as a basis for regulation, were firmly rejected, and the odds are small that a higher judicial level will reverse the decision. It may still be theoretically possible for

¹⁰ “Believe in America: Mitt Romney’s Plan for Jobs and Economic Growth,” Page 92, <http://www.mittromney.com/sites/default/files/shared/BelieveInAmerica-PlanForJobsAndEconomicGrowth-Full.pdf>, Accessed 7/23/12/

¹¹ See this sheet: <http://epa.gov/carbonpollutionstandard/pdfs/20120327factsheet.pdf>

other parties to challenge the Tailoring Rule, but the immediate effect of the annulment of that rule would be that many *more* sources of emissions are regulated, not fewer. EPA and the pro-regulation states will continue to face suits challenging particular implementing actions, but the broad outlines of the EPA regulatory program for GHGs under the Clean Air Act are now on a solid legal pedestal. Only politicians, not judges, are likely to knock it off.

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