

David Leiter Sarah Litke

DJLeiter@mlstrategies.com SLitke@mlstrategies.com ML Strategies, LLC 701 Pennsylvania Avenue, N.W. Washington, D.C. 20004 USA 202 434 7300 202 434 7400 fax www.mlstrategies.com

ENERGY AND ENVIRONMENT UPDATE August 14, 2011

Energy and Climate Debate

With Congress in recess until early September, Washington is gearing up for a busy autumn. All 12 members of the Joint Select Committee on Deficit Reduction (or the super committee) were named this week, and the battle over federal spending will pick-up right where it left off when Congress reconvenes. The committee will be co-chaired by Rep. Jeb Hensarling (R-TX) and Sen. Patty Murray (D-WA) and rounded out with Rep. Dave Camp (R-MI), Rep. Fred Upton (R-MI), Sen. Jon Kyl (R-AZ), Sen. Rob Portman (R-OH), Sen. Patrick J. Toomey (R-PA), Sen. Max Baucus (D-MT), Sen. John F. Kerry (D-MA), Rep. James Clyburn (D-SC), Rep. Xavier Becerra (D-CA), and Rep. Chris Van Hollen (D-MD). The super committee must reach an agreement on how to cut \$1.5 trillion over the next 10 years by Thanksgiving or automatic, across-the-board cuts are enacted.

The six Republicans chosen have all been remarkably loyal to the party over the course of their careers (Tea Partiers like Sen. Jim DeMint of South Carolina and Rep. Eric Cantor of Virginia were unsurprisingly left off the invite list), and the exact same can be said of their Democratic counterparts. The go-to energy member for the Republicans will be Rep. Upton who Chairs the Energy and Commerce Committee, and for the Democrats it will likely be Sen. Kerry and Sen. Baucus. The six Republicans boast a history of attacking energy subsidies wherever possible and all voted against EPA climate change regulations. The Democrats will likely follow the lead of the two more experienced Senators on energy issues that arise, and will push hard for the elimination of oil-friendly sections of the tax code. With almost all the members on both sides being so beholden to their leadership, a deadlock seems just as likely as any genuine compromise, but the threat of the automatic cuts may spur action.

On the energy and environment issues, the debate will boil down to tax breaks and subsidies; Democrats seeking to strip the petrochemical industry of its long standing support and the Republicans trying to do away with support for renewable energy subsidies and R&D spending. That said, it is difficult to say how much play energy will get, given the enormity of the super committee's mandate. The energy issues are daunting enough, but the members also face tough choices on Medicare, social security, defense and a host of other issues.

While the super committee's work unfolds, the Democrats will be pushing a jobs agenda with a large energy component. The initiative will be largely centered on the Democratic-controlled Senate where Majority Leader Harry Reid (D-NV) has said – while eschewing specifics – that jobs related to clean energy will be one of the party's "signature issues." In the few concrete statements on what legislation might move, Sen. Reid has mentioned green buildings, energy efficiency, something related to electric

vehicles, and some of the legislation reported out of the Energy and Natural Resources Committee this summer. The White House has also come out in support of pushing bipartisan energy legislation with Deputy Asst. to the President for Energy and Climate Change Heather Zichal telling the media that she would be working closely with the Senate after recess. However, if any of the legislation is to survive the House, it will need to cost little to nothing, and have some kind of Republican support.

Congress

Defining Diesel will Guide Fracking Policy

On August 8, Reps. Henry Waxman (D-CA), Ed Markey (D-MA), Diana DeGette (D-CO), and Rush Holt (D-NJ) sent a letter to Lisa Jackson of EPA asking her to define diesel in such a way that is "broad enough to protect human health and to address the specific reason why Congress singled out diesel fuel in the law—because it often contains benzene, toluene, ethylbenzene, and xylenes (the BTEX compounds)." The Energy Policy Act of 2005 reversed a federal court ruling exempted fracking fluids from regulation under the Safe Drinking Water Act, except for diesel fuels, which the act did not actually define. EPA is currently working on the guidance which may resolve the issue, but did not offer a deadline.

House Republicans Skeptical of TVA/EPA Settlement

On August 5, Committee Chairman Fred Upton (R-MI) and Reps. Ed Whitfield (R-KY), chairman of the Energy and Power Subcommittee chairman, and Cliff Stearns (R-FL), chairman of the Oversight and Investigations Subcommittee sent a letter to Lisa Jackson of EPA expressing concerned and over the affect on jobs, electricity rates, and reliability of a recent consent decree agreed to by EPA and the TVA, and asked for details on the actual terms of the deal. Proposed in April and approved in June and filed in the Eastern District of Tennessee, the decree will require TVA to spend \$3 billion to \$5 billion on air pollution controls and retire eleven of its coal-fired generating units, and will resolve alleged violations of the Clean Air Act at one-third of its coal-fired power plants in Alabama, Kentucky, and Tennessee. Furthermore, clean energy projects in Alabama, Kentucky, North Carolina, and Tennessee will receive \$350 million in funding.

Administration

Up to 20 Percent Improvement by 2018 Required in Fuel Economy for Large Trucks

On August 9, the White House announced finalized GHG emissions and fuel economy standards for medium- and heavy-duty pickup trucks, delivery vehicles, and tractor-trailers. The regulations set standards for model years 2014-2018 and will require GHG reductions from as low as 10% to as high as 20% for different heavy vehicle classes. Manufacturers will have some flexibility in how they meet these new regulations.

Department of Energy

Poneman to Brazil to Launch Strategic Energy Dialogue

On August 17, Deputy Secretary of Energy Daniel Poneman is travelling to Brazil with officials from the departments of State and Commerce, the U.S. Trade and Development Agency, and the Overseas Private Investment Corp to launch the U.S.-Brazil Strategic Energy Dialogue, announced by President Obama and Brazilian President Dilma Rousseff in March. The strategic dialogue will foster development of safe, secure, and affordable energy in an environmentally sound way, including energy from oil, natural gas, biofuels, alternative energy sources, and civilian nuclear energy.

DOE Offers \$175 Million to Support Advanced Fuel Economy Technology

The Department of Energy awarded over \$175 million to assist construction of advanced fuel economy technologies for the future of cars and trucks. The awards were distributed by the Department of Energy's advanced vehicles technology program. The funds will be dispersed over the next three to five years to support 40 projects. The total value of projects is \$300 million, as participating companies have contributed. Projects include advanced fuels and lubricants to improve engine performance, new

lightweight materials, new batteries for electric vehicles, advanced power electronics and electric motors, technology to convert engine heat to electricity, and improvements to fleet efficiency.

DOE to Update Energy Efficiency Standards for Federal Buildings

Under a final rule published August 10, the Department of Energy will revamp energy efficiency standards for federal government buildings. Under the rule, the standards that will be updated for new federal buildings should reflect revisions to the voluntary American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Standard 90.1-2007, as well as the 2009 International Conservation Code (IECC). The standards apply to federal buildings developed for industrial or public purposes, government residential buildings, and low-rise residential buildings. ASHRAE Standard 90.1 applies to federally owned office buildings and other public buildings, and the IECC applies to low-rise residential buildings. According to the final rule, under Section 305 of the Energy Conservation and Production Act, as amended by the Energy Policy Act of 2005, the Department of Energy must ensure federal building energy efficiency performance standards for new federal buildings are 30 percent below the levels set in the ASHRAE and IECC standards.

New DOE Study Cites Capability of Bioenergy Growth

The Department of Energy released a study August 10 entitled, "2011 U.S. Billion-Ton Update: Biomass Supply for a Bioenergy and Bioproducts Industry." The report examines the nation's ability to produce a billion dry tons of biomass resources annually for energy uses without using other vital U.S. farm and forest products, such as food, feed, and fiber crops. The biomass energy resources cited in the study could be used to create renewable biofuels and biopower. The data from the report will be used by the public and private sectors to help advance the bioenergy industry and will help support the Obama Administration's mission in expanding renewable energy and alternative fuels for motor vehicles.

DOE Shale Gas Advisory Group Releases Fracking Report

On August 11, the Natural Gas Subcommittee of the Secretary of Energy Advisory Board at DoE issued draft recommendations calling for greater chemical disclosure, better tracking of water use during drilling, and emissions controls in fracking. The panel's draft report stressed the need for a cooperative and voluntary industry system for defining and promulgating best practices. The full report will be reviewed by the full advisory board at a public teleconference on August 15, and pending approval will then go to Energy Secretary Steven Chu on August 18.

Department of Interior

Department of Interior Approves Solar Power Project in California

The Secretary of the Department of Interior, Ken Salazar, confirmed the development of a solar power project on August 10, which will produce 550 megawatts and will be located on public land adjacent to the Joshua Tree National Park in California. The solar developer will be Desert Sunlight Holdings LLC, a subsidiary of First Solar Inc., and will be in charge of constructing and operating the facility for a period of 30 years. The Interior Department has approved 12 large scale solar projects in the last year and a half. The solar installation will be in full operation by 2014 and is expected to create over 600 jobs, pump \$336 million into the local economy, and generate enough electricity to power 165,000 homes.

Environmental Protection Agency

EPA, NHTSA Fuel Economy Standards

On August 9, The EPA and National Highway Traffic Safety Administration published a supplemental notice to its recent fuel economy and emissions standards stating that the new regulations will include a midterm review process for the new regulations. The review, which will go through a public notice and comment period, is designed to evaluate the standards for model years 2022 through 2025. NHTSA will make a final decision on fuel economy standards at least 18 months before the 2022 model year begins, while EPA will decide on the GHG emissions portion of the rule by April 1, 2018. The rule itself, only proposed at this point, contains provisions for trading credits between vehicle manufacturers and a swath of HEV incentives. This all follows on the administration's July 29 announcement that EPA and NHTSA will propose increasing the corporate average fuel economy (CAFE) requirements for cars and light trucks

to 54.5 miles per gallon by 2025. The administration's current goal is to propose the new fuel economy and GHG standards by September 28 with a final rule expected by July 31, 2012.

Interest Groups Seek Court Order on EPA Issuance of Ozone Standards

On August 8, the American Lung Association, the Environmental Defense Fund, the Natural Resources Defense Council, the National Parks Conservation Association, and the Appalachian Mountain Club filed a motion with the U.S. Court of Appeals for the D.C. Circuit to order the Environmental Protection Agency to immediately sign revised air quality standards for ozone, which the agency has delayed four times. Then, on August 11, thirteen states filed a motion supporting the interest groups, with New York, California, Connecticut, Delaware, Illinois, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New Mexico, Oregon, and Rhode Island, as well as the District of Columbia and New York City filing together. When a rule was proposed in January 2010 to revise the standards, EPA said it intended to issue the final rule by August 2010, but delayed it further in announcement this July.

NRDC Finds 2,000 'Code Orange' Alerts Issued for Unsafe Ozone Levels This Year

On August 11, the National Resource Defense Council announced that more than 2,000 "Code Orange" alerts, which mean air is unhealthy for "people with lung disease, older adults, and children were issued this year in around 250 communities nationwide. The environmental group used the same air quality index as EPA, which includes green, yellow, orange, red, purple, and maroon designations for air quality. NRDC argues that this is further proof that EPA should rush to finalize ozone standards.

Miscellaneous

China, considering Carbon Capture and Storage

China's vice-minister of the National Development and Reform Commission (NDRC), Xie Zhenhua, said on July 29, on that matter of carbon capture and storage (CCS), that only if the issues on financing, technology transfer, intellectually property issues, and international support can be resolved, than China would consider the implementation of CCS, a critical measure in reducing carbon dioxide emissions. China is currently considering various CCS projects and carbon capture, use, and storage pilot projects (CCUS). There are 15 CCS, CCUS, and other pilot projects currently under development. The Asian Development Bank and the Global CCS Institute are considering a \$5 billion fund to assist CCS projects in developing countries; however, they are currently waiting to hear from other interested parties to join. NRDC will soon unveil plans on how the country intends to reach its goal of reducing Carbon emissions by 17 percent compared to 2005 levels by 2015. A draft plan completed earlier this year cited that more developed areas in the eastern region would have goals to reduce carbon intensity up to 18 percent, while undeveloped areas, mainly in the western half of the country, would reduce intensity only up to 10 percent.

Illinois "Wind Energy Council" to Study Offshore Wind Power Development in Lake Michigan
Governor Pat Quinn (D-IL) signed two bills on August 7 that intend to advance wind energy, including
offshore wind farms in Lake Michigan. House Bill 1558 creates a Lake Michigan Offshore Wind Energy
Advisory Council. The council, which is part of the Illinois Department of Natural Resources, will examine
siting and engineering issues related to wind energy developments in Lake Michigan. The council will also
look into the impacts that wind energy projects could have on the local environment, commercial fishing,
and recreational activities. House Bill 1558 directs the council to make recommendations based on their
findings to the Office of the Governor and the General Assembly by June 30, 2012. The other piece of
legislation, H.B. 1487, allows counties to develop renewable energy districts. These districts will be
allowed to construct and operate renewable energy projects. H.B. 1487 includes not only wind and solar
projects, but also anaerobic digestion of livestock or food processing waste, fuel cells or microturbines
powered by renewable fuels, or hydroelectric energy, and crops grown for electricity generation.

NY Independent System Operator Announces Development of Smart Grid Project

The New York Independent System Operator (NYISO) announced on August 8 that it will construct a smart grid project involving the installation of capacitor banks and phasor measurement units on the bulk transmission system throughout the state. The project will cost a total of \$74 million. Half of the cost is funded from a smart grid grant from the U.S. Department of Energy. The project will help save \$9 million

in energy costs per year when completed. Capacitor banks will enhance the efficiency of the transmission system by reducing the amount of electricity that is lost when carried over long distances. Phasor measurement units (PMU), which help detect abnormal waveforms in the transmission system, will strengthen the visualization capabilities and situational awareness of grid operators. The federal funding for this NYISO project and others is allowing for the opportunity for independent system operators, transmission companies, and other utilities throughout the country to install more than 800 networked PMUs. As a result of the funding, operators and utilities are getting a better sense of the status of the grid infrastructure allowing them to respond more rapidly when unintended disruptions take place. The smart grid plan was established along with an announcement of the development of a new NYISO control center near Albany.

NYISO to Undertake Large Smart Grid Project with DOE

On August 8, The New York Independent System Operator (NYISO) announced a \$74 million "smart grid" project involving the installation of capacitor banks and phasor measurement units on the bulk transmission system throughout the state. The project, half of its funding coming from DOE, is expected to save the state \$9 million in energy costs per year once finished by improving the efficiency of the transmission system thereby reducing the amount of electricity that is lost when carried over long distances. These phasor measurement units (PMU), used to detect abnormal waveforms in the transmission system, will improve the visualization capabilities and situational awareness of grid operators. DOE's funding for these kinds of projects is allowing independent system operators, transmission companies, and other utilities across the U.S. to install over 800 networked PMUs. The smart grid initiative will coincide with the construction of a new NYISO control center outside of Albany.

Public-Consultations for Canadian Truck Rule

On August 9, Canadian Environment Minister Peter Kent released a consultation paper detailing proposed regulations focused on limiting GHG emissions in heavy-duty vehicles. Everything from full-size pickup trucks to tractor-trailers, (including freight, delivery, service, cement, garbage, dump trucks, and buses) would be required to reduce emissions and improve fuel efficiency under the rule – which is to be available for 60 days of public comment in early 2012. The proposed regulation would promote the roll-out of advanced technology vehicles such as hybrid and electric vehicles as well.

CRS Questions Regulatory 'Train Wreck,' Suggests Utility Concerns May Be Overstated

On August 8, the Congressional Research Service released *EPA's Regulation of Coal-Fired Power: Is a 'Train Wreck' Coming?* countering industry attempts to characterize new rules as a "train wreck" that will derail coal-fired power plants and raise electricity prices. The report argues that industry concerns about the cost of the rules and their impact on electricity prices may be exaggerated because the rules are likely to be significantly revised and could be delayed by the courts. The CRS report highlighted nine pending EPA rules expected over the next 18 months and conceded that at least some of those regulations will have a large impact on coal-fired plants, but will hit the least efficient units the hardest, those more than 40 years old without modern pollution controls. The report went on to say that electricity generated from coal (currently about 45% of US electric generation, will remain at current levels for decades.

Investment and Jobs Likely Outcome of Fuel Economy, Pollution Standards

On August 9, the Natural Resources Defense Council, The National Wildlife Federation, and the United Auto Workers released *Supplying Ingenuity: U.S. Suppliers of Clean, Fuel-Efficient Vehicle Technologies* arguing that stricter fuel economy and pollution performance standards will drive supplier investment in fuel-saving technologies, leading to job creation and economic growth. Advanced internal combustion engines, hybrid powertrains, plug-in electric vehicles, and electric vehicle-charging infrastructure, were all mentioned as targeted new technologies.

Private Funds Sought for Renewable Energy Transmission Projects in Mexico

On August 8, the Mexican government welcomed participation from companies wishing to partner with the government to build transmission lines and transformation plants for wind and hydropower energy in Oaxaca, Tamaulipas, and Baja California states and hydroelectric projects in Puebla State. The states are seeking to "program in a coordinated manner the expansion or modification of infrastructure for

transmission and transformation of the National Electrical System." Companies were given 10 business days from the announcement to submit an application.

Retired Coal-Fired Plant Sites Good for Reuse

On August 10, the American Clean Skies Foundation released *Repurposing Legacy Power Plants: Lessons for the Future* arguing that coal-fired power plants set to close in the coming decade present "tremendous" redevelopment opportunities like riverfront housing, shops, offices, museums, and parks. Industry analysts predict that 15-20% of US coal plants might retire by 2020 due to age, EPA toxic emissions rules, and natural gas competition. The report says at least 20 of the dozens of plants may be good candidates for redevelopment, and this kind of redevelopment frequently takes several years due to potentially huge upfront costs, cleanup, working with old buildings, meeting requirements for historic preservation, and special financing challenges.

Large Truck, Bus Regulations to be Studied by Japanese Special Committee

On August 5, for the first time the Japan's Ministry of the Environment and the Ministry of Land, Infrastructure, and Transport convened the Study Committee on Vehicle Emissions in Off-Cycle to study stricter regulation of large truck and bus emissions for introduction in 2016. The meeting was held earlier than originally scheduled after the government learned some truck and bus manufacturers have been exploiting the previous JEO5 regulations by configuring mechanisms to emit more noxious gases in off-cycle driving conditions, thus increasing horsepower. The committee's meetings are scheduled to conclude by the end of the year and results will be incorporated into the next generation of regulations applying to both domestic and foreign manufacturers.

<u>Duke Energy Plans to Retire 20 Percent Of Coal-Fired Generating Capacity by 2015</u>

On August 12, Duke Energy announced plans over the next three-and-a-half years to close 20 percent of its coal-fired generating capacity, 3,500MW, over the next three-and-a-half years, as a result of new and impending EPA regulations. The company said that a significant impetus to the closures is EPA's pending MACT rule for utility emissions.

Japan's Draft Plan Recommends Aggressive Expansion of Renewable Energy Development
Japan's Ministry of the Environment draft plan released August 9 said the country faces a potential
permanent power shortage, unless Japan can reduce its dependency on nuclear power. The draft plan
noted that Japan should focus more on developing renewable energy and enhance energy efficiency
measures in order to produce products that use less energy, such as air conditioners and computers. The
draft plan will be implemented as a fourth, five-year basic environment plan this fall following a public
comment period ending September 7. The draft also discussed the importance of Japan's biodiversity by
maintaining its ecosystem and combatting pollution. The plan also emphasized the need for Japan to
safeguard its water sources by improving its oversight on chemicals.

Michigan Makes Changes to the Brownfield Tax Credit

Michigan implemented changes into the total amount of the brownfield tax credit. The tax credit was amended to eliminate the option of taking a credit as either a refund for 90 percent of the amount of the credit, or any remaining from the credit, in which ever was less, and allow for the credit to be refundable for 90 percent of the amount. The bill went into effect July 12.

Solar Companies and Environmental Groups Agree to Expand Wildlife Protection in California On August 9, solar energy developers Sunpower Corp. and Topaz Solar Farms LLC, a subsidiary of First Solar Inc., and environmental groups have ended a dispute through a settlement. As a result, both parties have agreed to expand protection for wildlife in the San Luis Obispo County, where two large photovoltaic installations are planned for development. The agreement directs the two solar energy developers to provide further protection for various wildlife species and their habitats beyond the requirement of federal and state permits for proposed projects.

CRS Report Finds Tax Code Supports Renewables More Than Fossil Fuels

A report conducted by the Congressional Research Service on August 10, noted that the federal tax code allows for renewable energy to receive greater financial support than fossil fuels, relative to their stake in

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total domestic energy production. The report entitled, "Energy Tax Incentives: Measuring Value Across Different Types of Energy Resources," identified that most of the domestic primary energy production was drawn from fossil fuels in 2009. Moreover, the fossil fuel industry drew 77.9 percent, while nuclear energy drew 11.4 percent, and 10.6 percent went to renenwables. However, \$12.5 billion of the government's \$20 billion in tax support went to renewables in 2009 and another \$2.9 billion went to tax incentives for renewable energy technologies that year. As a result, only \$2.5 billion was given to fossil fuels.