State leaders should expect energy and environmental issues to largely stay in the regulatory and legal arena in 2013 as fiscal issues will most dominate the attention of Congress. Market forces will also likely put upward pressure on the development of the country’s oil and natural gas resources, but could pose potentially complex oversight and budget issues for states. The substantial increase in natural gas supply and the current cheap price it enjoys could have long-lasting implications for the nation’s electricity mix as the use of coal-fired power declines and more stringent EPA air regulations are enforced. Lastly, as many states will continue to recover from the ravages caused by Hurricane Sandy opportunities will be presented to apply lessons learned to improve the resiliency of their energy infrastructure.

Top Five Issues in 2013: Energy and Environment

The Future of Coal
The precipitous decline of coal-fired power in the nation’s electricity power generation has been stunning. A combination of historically cheap prices for once expensive natural gas used mainly for peak demand in the past and a series of stringent EPA air regulations will provide incredible challenges to the coal industry and the states that rely on it for power and revenue – especially severance taxes. Although coal still provides the largest source of electric power for the country, federal data showed that last year’s warm winter and historically cheap natural gas prices reduced coal’s portion of the electric power mix to only 34 percent in March 2012. The US electric generation market has typically been 50 percent or more reliant on coal-fired power. A huge amount of natural gas brought on by the rapid increase of hydraulic fracturing pushed prices below $2 per thousand cubic feet in April 2012, where only four years ago the price was near $13 or $14 per thousand cubic feet. The substantial decline in prices has led to increased fuel-switching by utilities to run power plants with natural gas to meet baseload requirements.

To better illustrate the potential long-term implications for the industry, an analysis released by the Energy Information Administration in July 2012 estimated that up to 17 percent of the nation’s coal fleet could be retired by 2020. Further, tough rules to improve air quality issued by the EPA could also accelerate the decline of coal in the nation’s energy mix. For example, the Mercury and Air Toxics Rule is expected to impact up to 600 power plants and by the agency’s own estimates will carry $9.6 billion in compliance costs and would remove up to 4.7 gigawatts of coal-fired power from the electric grid prompting industry reliability concerns. Domestic market and regulatory limits have many in the coal mining industry looking to overseas export markets, like China and India where coal-fired power plant construction is booming, to make up for lost revenue. By the end of 2012, the coal industry is expected to break its export record set in 1981 of 113 million tons. However, substantial opposition has built in communities along the Pacific Coast in Oregon and Washington over concerns raised advocacy organizations that increased barge and rail traffic caused by the shipments to the export terminals, as well as excess coal dust, would lead to unwarranted environmental degradation. Companies are now looking to ports along the Gulf of Mexico as a potential alternative to the west coast where shipments could access the Panama Canal and export markets in Asia, Latin America, and Europe. Unresolved and unknown economic and cultural impacts remain for states in coal country and Appalachia that have depended on mining and the
severance tax revenue it generated. Coal severance tax revenues for Kentucky alone were down over $28 million in 2012.

**Clean Water Act Legal Action and States**

2013 is shaping up to be a big year for water issues and the states. Oral arguments have already been heard on two cases where CSG has supported friend of the court briefings filed by the State and Local Legal Center that deal with stormwater runoff in Decker v. Northwestern Environmental Defense Center and LA County v. Natural Resources Defense Council which will be ruled on by the Supreme Court. At issue in the Decker case is whether states will be required to obtain a Clean Water Act permit for ditches and channels on every logging road they manage. The brief supported by CSG argues that the Court should uphold EPA’s longstanding regulations that exempt silvicultural (logging) activity from federal Clean Water Act permitting requirements. The scope of the potential impacts to state regulatory agencies and their budgets would be immense if the requirement was upheld. According to the U.S. Forest Service, there are approximately 386,000 miles of forest roads on forest lands owned by the federal government, and this figure does not include logging roads on forest lands owned by state and local governments which manage roughly 25 percent of all forested land in the country.

In LA County v. Natural Resources Defense Council, the Court must decide whether the Los Angeles County Flood Control District has violated its Clean Water Act permit due to the level of pollutants from stormwater that it gathers in municipal separate storm sewer systems located in two rivers. The legal brief supported by CSG urges the justices to uphold a precedent set in a 2004 Supreme Court case which found that an addition of a pollutant only occurs if a pollutant is transferred from one “meaningfully distinct” water body into another. In essence this means transporting water between two sections of the same water body does not constitute a “discharge” that requires a permit under federal law. Under a ruling by the 9th Circuit Court, the county would be solely responsible for pollution from storm water runoff it has little control over - including the discharges of dozens of upstream municipalities.

Other water-related court cases and regulatory actions could have ripple effects throughout 2013. On December 5, 2012, the Supreme Court ruled 8-0 in favor of the Arkansas Game and Fish Commission determining that temporary flooding events caused by the federal government can be considered a “ takings” under the Fifth Amendment of the Constitution. The decision resolved a longstanding legal dispute between the state agency and the Army Corps of Engineers over temporary flooding from water releases at a federal dam which killed timber in the Black River Wildlife Management Area in Northeast Arkansas. Although lower courts must determine if compensation is owed and actual property damages occurred, the ruling in favor of the state removes the blanket exemption the federal government was granting itself from “ takings” as a result of temporary flooding. In July 2012, ten states intervened in a lawsuit brought by environmental groups against the EPA regarding agricultural run-off of nutrients like phosphorus and nitrogen in the Mississippi River. The advocacy groups contend that the run-off contributes to hypoxic or “dead” zones in the Gulf of Mexico which are areas in the ocean deprived of oxygen and marine life. Under the suit brought by the environmental advocacy groups, the EPA would force states in the watershed to institute specific numeric criteria for total nitrogen and phosphorus discharges and impose total maximum daily load (TMDL) requirements within the watershed. Under the federal Clean Water Act, states may use either “narrative” or “numeric” standards as a method for determining water quality. Many states in the Mississippi River basin use a narrative standard rather than a one-size-fits-all numeric standard to prevent excessive nutrient pollution. Agribusiness groups and many municipalities worry about the potential costs associated with a stringent numeric nutrient standard that the court may set - especially for new infrastructure upgrades for water treatment and overall permitting costs. Lastly, “interim guidance” is still in place at the EPA and with the Army Corps of
Engineers which has drawn significant controversy by states and other stakeholders over the definition of “waters of the U.S.” to determine federal jurisdiction under the Clean Water Act permitting process. Over 230,000 public comments have been submitted for the draft rules and any final rulemaking issued by the administration will draw substantial scrutiny and interest by states.

Energy Infrastructure Hardening
The toll on communities in the Northeast and mid-Atlantic states is still being felt as a result of Hurricane Sandy, but total economic losses have been estimated to be roughly $50 billion and insured losses have exceed $20 billion. Tens of thousands were still without power weeks after the storm in the New York area, prompting many customers to push for greater resiliency in their electric power systems. However, expensive upgrades like burying power lines are extremely expensive and cost more than $2 million a mile in urban areas based on industry estimates. Expect many states to consider new requirements for electric generators at critical infrastructure including key gas stations to prevent future fuel shortages. In addition, states will continue to grappling with the high cost of upgrading energy infrastructure because of the potentially contentious debate generated over rate increases. Some positive lessons learned from Sandy showed that areas with distributed generation, like combined heat and power plants, which are independent of the electric grid showed remarkable resiliency and kept the lights on while large utilities struggled to restore service.

Another potential outcome in the aftermath of Sandy is an expected review of the mutual assistance agreements used by utilities to respond to natural disasters. There are nine mutual assistance groups across the country that come to the aid of companies and communities to help speed restoration work, restore power, trim trees limbs, repair power lines, and more. Nearly 70,000 utility workers from across the country responded to Sandy, but many company executives are looking for a better approach to improve coordination to get personnel, trucks, and tree trimmers mobilized. Some industry personnel suggest better IT technology is needed to assist volunteer field crews unfamiliar with a state or region and that response efforts overall are too reliant on a system of paper hard copies to place and set work orders. Another idea is pre-positioning expensive trucks and equipment in regional depots as many personnel had to physically drive their company trucks to help respond, causing delays and additional expense. Critics of the mutual aid agreements note that some are nearly 60 years old and the current system may be outdated when responding to natural disasters when they impact largely populated areas across multiple states rather than localized power outages.

Effectively Managing the Energy Wave
Domestic crude oil production surged to a 15-year high in the fall of 2012 and a high-profile report issued by the International Energy Agency in November 2012 estimated that the U.S. could become a net exporter of natural gas by 2020 and essentially energy independent by 2035. At a more granular level, the effects on communities and states dealing with this energy surge can be uneven and sometimes overwhelming. Expanded horizontal drilling and hydraulic fracturing is occurring in many rural areas of the country unaccustomed to the strain and stress put on local roads, housing, schools, and infrastructure. Historic road budgets, often determined years in advance, did not take into account the substantial increases in truck traffic that comes with increased drilling.

The Bakken Shale region of western North Dakota provides a compelling example of the increasing and unexpected demands being placed on once quiet, rural municipalities. North Dakota’s oil production has increased more than fivefold since 2006 and the state recently passed Alaska as the second-largest producer in the country. According to a July 2012 Washington Post article, North Dakota issued more than 236,000 permits for oversize or overweight trucks needed to haul water and supplies to and from fracking sites. Much of that increased traffic is occurring in places like
McKenzie County with less than 7,000 permanent residents but needed more than $200 million to repair roads damaged from substantially increasing truck traffic. One solution implemented in Pennsylvania was the passage of legislation creating a shale-impact fee generated from increased drilling revenues that was designed to assist municipalities that have seen increased stress placed on their infrastructure and services as a result of increased hydraulic fracturing activity. Governor Tom Corbett announced in October 2012 that $204 million would be disbursed directly to cities, counties, and townships for various expenses related to impacts from natural gas development including road and bridge repair, state safety and regulatory oversight, housing, job training, and other programs.

States should be prepared for the cyclical nature of price fluctuations during energy boom periods and think carefully about the impacts new found oil and gas revenue will have both in good times and lean budget years.

**More EPA Air Regulations in Store**

State policymakers should be on the lookout for potential final rulemakings from the EPA related to ozone, greenhouse gas emissions at fossil fuel plants, and particulate matter emissions. Public health and environmental groups have strenuously pushed for the new rules which they contend will help prevent thousands of deaths and respiratory illness annually.

Ozone is created by chemical reactions between oxides of nitrogen (NOx) and volatile organic compounds (VOCs) that are emitted from industrial facilities like electric utilities, motor vehicle exhaust, gasoline vapors, and chemical solvents. According to the EPA, even small amounts of ground level ozone that is inhaled can cause harmful impacts to people, especially children with developing lungs and weak respiratory systems. The Clean Air Act requires a review of covered “criteria pollutants” like ozone every five years under the auspices of its National Ambient Air Quality Standards (NAAQS) program. The current regulatory standard for ozone is set at 75 parts per billion. The EPA proposed a more stringent standard of 70 parts per billion in 2010, however, President Obama decided to delay that rulemaking in 2011 citing the economic impact it would have on the country and directed the agency to review the standard in 2013. For example, the EPA’s own fiscal estimates predicted the ozone rule could cost up to $90 billion annually, but it also stated that tighter standards would save 12,000 lives per year.

Fine particulate matter (PM2.5), or soot, is another covered criteria pollutant under the Clean Air Act NAAQS program. Particulate matter is a collection of extremely small particles and liquid droplets which is made up of a number of complex components, including acids like nitrates and sulfates, organic chemicals, metals, and soil or dust particles. According to the EPA, “fine particulate matter” such as those found in smoke and haze, are 2.5 micrometers in diameter and smaller. To provide some context on how small a micrometer is, the average human hair is 70 micrometers in diameter. These particles can be directly emitted from sources such as forest fires, or they can form when gases emitted from power plants, industries and automobiles react in the air. EPA’s proposed regulation would reduce the current standard of 15 micrograms per cubic meter of air (µg/m3) to 12 micrograms per cubic meter. A fact sheet provided by the agency states that increasing the standard is necessary to reduce public health problems that are associated with exposure to fine particulate matter like asthma and heart and lung disease in addition to improving air quality by reducing haze. Numerous industry groups and trade associations have expressed opposition to the tightening of the standard and have suggested that the agency’s assumption of billions in public health benefits are over-estimated and the economic cost to communities and businesses have been underestimated at only $350 million per year. Further, industry groups contend that new particulate matter regulations will put dozens of new counties into what is called “non-attainment” and will limit the ability of manufacturers to expand or construct new operations.
because their local municipalities do not meet the tougher air quality standards.

States should also be aware that EPA is contemplating whether to issue a final rulemaking to follow up on its March 2012 notice to issue “New Source Performance Standards” that would limit greenhouse gas emissions from power plants. Conventional wisdom from electricity policy observers speculate that if the proposed rule is actually implemented it could potentially halt the construction of traditional coal-fired units. In essence, it requires the emissions of coal-fired power plants to mirror those of efficient natural gas units by either through capturing or storing its CO2 emissions. Industry advocates opposed the new rule because of cost impacts to states heavily reliant on coal for electricity production, and they also suggest that the administration is essentially mandating new technology (carbon capture and storage) which is not yet commercially feasible. The agency’s new rule would not apply to power plants currently in operation or those that begin construction before March 2013, and it would apply only to future fossil-fuel power plants that are 25 megawatts or larger in size. In addition, the rules would not apply to proposed power plants in Hawaii or US Territories, biomass projects, or units that are part of a federal demonstration project. New fossil-fuel plants would be required to meet an output-based standard of 1,000 pounds of CO2 per megawatt-hour, a standard that nearly 95 percent of the nation’s natural gas units can meet. EPA's rationale for issuing the proposal "reflects the ongoing trend in the power sector to build cleaner plants that take advantage of American-made technologies, including new, clean-burning, efficient natural gas generation, which is already the technology of choice for new and planned power plants."

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