Commentators believe that programs in China promoting development of new renewable energy capacity have produced astonishing achievements in a short period of time. Evoking the “space race” between the United States and the U.S.S.R. after the launch of the Sputnik satellite in 1957, observers contend that the United States and China are in a “greentech race” to secure international leadership in the development and deployment of renewable energy. As U.S. Energy Secretary Chu has put it, many believe this is a modern “Sputnik moment.” This Article finds that China’s programs and initiatives are indeed leading to considerable success, but, using three different metrics (growth of China’s greentech industry, levels of government support and financing, and installed capacity figures), finds that claims that China is “winning” the “greentech race” are currently overstated. Continuing on to discuss the link between climate change and national security, the Article concludes that the “greentech race” metaphor is counterproductive, and the “race” rhetoric should be downplayed for two major reasons. First, it would hamper continued cooperation between the United States and China on climate matters, which is essential given the world’s pressing needs to address climate change. Second, using a detailed description of the security threat posed in each situation, the Article finds that the national security background to the growth of renewable energy is considerably different from that which prompted the growth of the United States’ space industry after the Sputnik launch, and concludes that the “race” metaphor is an inappropriate fit to the present situation. Finally, the Article finds that the most productive response to concerns about the growth of renewable energy sector in China would be stronger programs and initiatives to encourage the renewable energy industry in the United States.
Modern oil and gas production takes place in environments that are increasingly challenging, environments that pose very high levels of technical risk, as well as political, social, environmental, health and safety risks. The people of the oil-rich nations of the world are growing more assertive politically and more sensitive to the environmental, health, and safety risks posed by oil and gas development. Governments, nongovernmental organizations (NGOs), and local people seek the means to control oil and gas development so as to minimize the risk of harm and provide redress in the event harm is done. Oil and gas companies have had to adapt to this new political and social environment, in part by developing sophisticated corporate social responsibility (CSR) programs. Learning from some of the industry’s high-profile mistakes, oil and gas companies have begun to embrace levels of environmental and social performance that often exceed what is legally required in the host nation. Central to that process is the task of managing relationships with external stakeholders, and incorporating stakeholder interests into company plans. Consequently, oil and gas companies have also begun to participate in multilateral arrangements with NGOs, international organizations such as the World Bank, and national governments to address issues like environmental protection, workers rights, human rights, and corruption. Critics of CSR argue that it undermines the regulatory process and/or cheats shareholders, but oil and gas companies justify these efforts as a way of managing social and political risk over the long term and, thereby, maximizing shareholder return.

Farming, ranching, and other agricultural activities are in a relatively unique position amongst all human-caused sources of global warming. Unlike fossil fueled power plants and vehicles, for example, agriculture will suffer direct economic losses from the impacts of global warming on its products, such as through reduced crop yields. Also unlike other causes of global warming, agriculture can both mitigate global warming and increase revenue through a range of different practices, such as carbon sequestration and investments in carbon-friendly renewable energy. This article explains how global warming affects agriculture, especially in the Midwest and Great Plains, and how agriculture contributes to global warming. The article also summarizes proposed federal climate change legislation and the Farm Bill’s carbon-cutting energy programs. Finally, the article explains why agriculture would do well to support comprehensive action to fight global warming, since the risks of inaction far outweigh any benefits.

The purpose of this article is to scrutinize legal barriers to state aid instruments in transforming fuel-based electricity into renewable energy, the subsidy prerequisites by which the national state may champion fuel free power production. Subsidy is illustrated by the 2004 Official Norwegian Report’s (NOU) disapproval of the Norwegian Reversion Institute (NRI), as a result of a waiver clause to the benefit of municipal power plants. A licensing period of sixty years is final. Relicensing is not possible; only private leasing may occur.

As outlined, my basic criticism is that the NOU confuses interstate distortion of competition as it is regulated in Article 61 of the European Economic Area
Agreement (EEA) with company-specific discrimination, which is the focus of Articles 53 and 54. The 2004 report's view is that public companies (national, state, or municipal) are the beneficiaries of NRI exemption and thus bolstered in relation to privately-owned power plants. This is ill-focused because Article 61 prompts Norwegian producers into benefits resulting from national state aid. As the 2004 perspective is subsidization due to exemption for public companies only, my position is that the NRI represents no subsidy at all; to the contrary, it is detrimental to the Norwegian industry. While foreign plants do not suffer from the NRI, Norwegian private producers do, which frustrates their ability to compete.

The NRI does not result in financial disadvantages to foreign electricity producers caused by dumping, which manipulates the market. The 2004 NOU focus is additional production costs due to reversion, which results in selling below cost to intimidate competition. Why? Because the producer's focus is to draw from the market what the market is willing to pay. Profit margins are extensive with no negative return, and production costs burden investors. The main objective of investing in electricity companies?shares, futures, derivates, etc.?is not related to the price of electricity, but to the calculation of short term speculative trading gains.

Another criticism of the NOU is its ignorance of the fact that the initial private owners of hydroelectric power plants paid less than public entrepreneurs—due to the reversion clause—at the time of the initial development. Accountability is also the focus. A tax regime to the release of private investments. According to Norwegian tax law the depreciation period is shorter for privately owned plants. Further, nationalization at the sixtieth year countervails initial subsidies. Member states to the EEA may always, by reversion, efficiently put an end to subsidy accusations.

SMART-GRID: TECHNOLOGY AND THE PSYCHOLOGY OF ENVIRONMENTAL BEHAVIOR CHANGE

Stephanie M. Stern

There is a schism in the legal scholarship between scholars who argue that value, norm, and information campaigns can induce pro-environmental behavior and those who contend that structural, psychological, and social forces sharply constrain behavior change. Both sides of this debate have neglected the critical and ever-increasing role of technology in addressing residential pollution. The example of electricity “smart grids” illustrates how technology engineered to overcome cognitive and behavioral limitations can comprehensively reduce household consumption and emissions. Electricity conservation suffers from multiple barriers to collective action, including large numbers of geographically dispersed polluters, low financial payoffs, and, the contribution of this Essay, the high behavioral demands of reducing consumption. By bringing into sharper analytical focus what is likely to be effective in households, smart grid enhances our understanding of the psychology of individual behavior and underscores the importance of technology to environmental behavior change.

PRIVACY IMPLICATIONS OF SMART METERS

Cheryl Dancey Balough

Many people worry about the erosion of privacy in our society given developments in technology, but that loss of privacy may take a quantum leap as electric “smart meters” make it possible for strangers to know on a real-time basis what is occurring in our houses and apartments. Perhaps the greatest concern is that current laws and regulations do not fully protect us from this unprecedented threat to two of our most basic rights—to be left alone in our own homes and to control personal information. Utility companies across the country are replacing conventional electric meters with smart meters designed to be connected to smart appliances and home area networks with the goal of managing, and ultimately reducing, energy usage. These smart meters and their networks can enable not only the utility companies but also third parties and law enforcement agencies to know what appliances and energy-consuming devices we are using throughout the day and night. Because we rely on electricity and public utility commissions continue to grant permission to electric utilities to install smart meters, we cannot
escape this intrusion into our homes. Congress has enacted over the past forty years several laws—like the Privacy Act of 1974 and the Electronic Communications Privacy Act of 1986—to protect individual privacy, but these laws do not adequately address the threats posed by smart meters. Even the Fourth Amendment might not protect us given how seminal and recent case law requires—yet narrowly construes what qualifies as—a reasonable expectation of privacy.

**OF NESTING DOLLS AND TROJAN HORSES:**
**A SURVEY OF LEGAL AND POLICY ISSUES ATTENDANT TO VEHICLE-TO-GRID BATTERY ELECTRIC VEHICLES**

Bryan Lamble

2010 will not be remembered as the year when the domestic energy landscape changed, dominated as it was by environmental catastrophe and human calamity and tragedy caused by the search for and extraction of traditional fossil fuels. In fact, clean(er) energy and greater efficiency seem, in some ways, to be less of a reality at the beginning of the second decade of the twenty-first century than many would have predicted (and hoped). Furthermore, a contentious mid-term election season (stoked by fears of massive deficits, rising national debt and ballooning government) dominated the headlines at the expense of what could prove to be a watershed moment in domestic life—the release of the first two (of several) electricity-powered light-duty passenger vehicles with range enough to allow for travel without petroleum.

More than a novelty, automakers (and the U.S. government and most developed nations) are betting on, and investing in, the transition to a future automotive transportation sector with an increasingly larger number of plug-in electric vehicles. The legal and policy questions that face the automotive industry and the governments that plan to facilitate and regulate this transition are the subject of this article. Part I discusses the possibility that such a transition holds for twenty-first century life: cleaner skies, more energy efficient appliances, increasing use of renewable energy to produce electricity, investment in electricity infrastructure, and cheaper electricity. Part II directs the discussion toward the potential pitfalls of an automotive sector dominated by electricity (and, therefore, computers): huge capital costs to remake the electrical grid, imbalanced reliance on digital gadgetry which could increase domestic vulnerabilities to cyber attack, and greater institutional control over an individual’s daily life.

Part III then introduces the primary legal and policy issues of the debate, which range in scope from individual to community to state to federal to international; involve hard questions of exactly how to invest scarce funds and when to do so; and will undoubtedly require international agreement and cooperation. Part III concludes by examining recent legislative efforts to facilitate the transition, including Senate bill 3442 (Electric Vehicle Deployment Act), and the American Recovery and Reinvestment Act (a.k.a. the stimulus package). Finally, the article briefly imagines what an America infused with electric vehicles might look like.

**BIOTECH BIOFUELS: HOW PATENTS MAY SAVE BIOFUELS AND CREATE EMPIRES**

Adam Wolek

The United States’ primary transportation energy sources are fossil fuels, namely, gasoline and diesel. These products have high environmental, security, and financial costs. A strong emphasis has been placed on biofuels, especially ethanol and biodiesel, to lessen reliance on fossil fuels. Historically, high production costs, lack of infrastructure, return on investment anxieties, and concerns about scaling-up production have slowed the development of these alternative technologies. Today, biotechnological solutions are lowering production costs and making large scale production more economically feasible. Patents can lessen anxieties about investment as they can provide longer-term protection and market exclusivity for patented technologies. As biofuels production is a relatively new field, there are many opportunities for companies to patent technologies that become industry standards, thereby increasing their chances of becoming dominant players in the field. Various patent approaches can maximize these chances. Moreover, replacing a significant portion of the fuel supply with biofuels would require vast
quantities to be made, and this will require technologies that can reliably produce a uniform product on a large scale. The uniformity necessitated by large scale production facilities will likely be a product of a few patented biotech platforms. Thus, the first to patent platform technologies will likely emerge as one of the leading companies in the field and may even create a dominating market presence.

THE LEGAL-POLITICAL BARRIERS TO RAMPING UP HYDRO

Hydroelectric energy is the oldest major source of non-carbon, renewable energy and is the only conventional renewable resource in the current energy mix. Increased hydro capacity would seem to be a key element of any United States energy policy designed to promote the greater use of renewable resources. However, for several decades hydro has been perceived as a mature, fully developed technology. This article argues that any effort to stimulate substantial new hydro capacity will face a series of environmental legal and policy constraints. Efforts to adapt to global climate change will further complicate efforts to increase hydroelectric generation. Beginning in the late 1960s, the United States stopped building new, large dams. A host of environmental laws such as the Clean Water Act and the Endangered Species Act do not displace hydropower generation, but these laws impact individual dam operations and can result in the partial or even total subordination of power generation to downstream flow regulation. These laws reflect a deeper shift in our thinking about river functions. The idea of a “normative river” has emerged. The “normative river” accepts the reality that many rivers have been fundamentally altered by dams but seeks to create a new managed hydrograph that performs a reasonable range of pre-dam river functions.

MERCURIAL BUT NOT SWIFT—U.S. EPA’S INITIATIVE TO REGULATE COAL PLANT MERCURY EMISSIONS CHANGES COURSE AGAIN AS IT ENTERS A THIRD DECADE

The effort to establish national standards to control mercury air pollution from coal-fired power plants now spans twenty years, four presidential administrations, and remains undone. This note will briefly describe the failed twenty-year effort to regulate mercury emissions from coal-fired power plants. It will show how United States Environmental Protection Agency (U.S. EPA) efforts during the (first) Bush and Clinton Administrations to construct mercury regulations were dismantled during the Administration of George W. Bush. During the second Bush Administration, U.S. EPA substituted a new regulatory approach that was ultimately repudiated by the federal judiciary as plainly inconsistent with the Clean Air Act. The Obama Administration now proposes to initiate yet another rulemaking process, but acknowledges final regulations will not be issued until the end of 2011 at the earliest. In the absence of federal standards, some states attempted state-specific requirements to control mercury from coal-fired power plants, but with limited success. Consequently, after twenty years of regulatory attention, most coal-fired power plants continue to emit mercury without legal restriction.

GREEN DIESEL: FINDING A PLACE FOR ALGAE OIL

The prospect of obtaining domestically-produced biodiesel from algae has attracted wide investor interest. Although many analysts predict that economic production is five to ten years away, the production process involves such a wide range of environmental and land use issues that it is not premature to begin thinking about the kinds of places in which “green biodiesel” could be efficiently made in the United States. Our land use and environmental laws were all drafted by people who never imagined the possibility that huge volumes of algae would be an important energy resource; nor could they have known that the location of algae
farms would be dependent on a wide range of factors including terrain, climate and neighboring uses. This essay is a very preliminary examination of the potential legal issues posed by this potentially valuable resource.

STUDENT NOTES

HIGH-INCOME CHILD SUPPORT GUIDELINES:
HARMONIZING THE NEED FOR LIMITS WITH THE BEST INTERESTS OF THE CHILD 
Laura Raatjes 317

Providing for the needs of children of separated parents lies at the heart of state child support laws. But what about providing for the special needs of children of high-income obligors and ensuring consistency in a system often marked by unpredictability and high emotions? This Note examines the manifold problems that discretionary high-income child support decisions can cause: inequitable settlement, increased litigation, injured family structures, and inconsistent decisions. This Note also proposes a solution: to set higher thresholds for triggering a high-income analysis and to require high-income parents to contribute to post-secondary educational trusts. Finally, this Note explains that, as a result of disparate parental resources and fixed costs concerns, the solution should also apply to parents who share physical custody of their children.

DEFILING THE RETALIATION DOCTRINE:
KASTEN V. SAINT-GOBAIN AND THE ANTI-RETALIATION PROVISION OF THE FAIR LABOR STANDARDS ACT 
Madeline Engel 351

The anti-retaliation provision of the Fair Labor Standards Act makes it unlawful for an employer to retaliate against an employee who has "filed any complaint" under the FLSA. In Kasten v. Saint-Gobain Performance Plastics Corp., the Seventh Circuit declared its position in a growing circuit split as to whether an employee can "file" a verbal complaint of an alleged FLSA violation. Kasten answered the question in the negative, holding that verbal complaints are not protected activity under the Act. This note analyzes relevant Supreme Court precedent and the evolution of the circuit split, as well as principles of statutory interpretation and policy concerns implicated in determining whether one can "file" a verbal complaint under the FLSA. Drawing upon that analysis, this note questions the reasoning on which Kasten relies in reaching its result and examines the practical consequences the opinion may have on the proper functioning of the Act.

TWITTERING AWAY THE RIGHT OF PUBLICITY:
PERSONALITY RIGHTS AND CELEBRITY IMPERSONATION ON SOCIAL NETWORKING WEBSITES
Andrew M. Jung 381

Within the past couple of years, social networking websites have become an immensely popular destination for people from all walks of life. Websites like Facebook and Twitter now count tens of millions of worldwide users, including world leaders and a number of celebrities. Eventually, users realized that social networking websites lent themselves to the quick and easy impersonation of celebrities through the creation of fake social networking accounts, often as a form of parody. One subject of such impersonation was professional baseball manager Tony La Russa, who took the then-unprecedented step of suing his impersonators and Twitter over the incident. While La Russa’s case was ultimately dismissed before a judge could rule on any claims, the suit did raise a couple of interesting—and largely unresolved—issues. This note examines one such issue—namely how the right of publicity interfaces with social networking sites. The right of publicity
is predominantly considered an economic property right and is generally defined as the right to control the use of a person's image, likeness, or name. This note traces the development of the right of publicity, as well as the workings of some of the most popular social networking websites, with a particular emphasis on Twitter. Next, this note argues that the right of publicity may be an effective avenue to prevent unauthorized and harmful impersonation on the internet, but because of a recent trend of celebrity over-protection, the right still needs competing First Amendment principles to control its reach. Finally, this note looks to “fair use” concepts borrowed partly from copyright law to help determine where the limits of publicity rights on the internet should lie.

DEPENDENT ON THE JURY: ANTICIPATION AND OBVIOUSNESS OF DEPENDENT PATENT CLAIMS AND IRRECONCILABLE JURY VERDICTS

A jury verdict finding an independent claim valid but a related dependent claim either anticipated or obvious is irreconcilable. However, the Federal Circuit has used the inconsistencies between regional circuits on the issue of jury verdicts to reach different outcomes in similar cases based solely on the region in which the patent case originated. This note advocates a modification to the Federal Circuit's rule of deference to consider irreconcilable verdicts of independent and dependent claims under its own independent analysis. A consistent approach allowing for appellate review regardless of post-verdict motions is advocated, although a more modest position of requiring a post-verdict motion regardless of circuit rules would promote many of the goals.
SYMPOSIUM ON ENERGY LAW

Fred Bosselman
Symposium Editor