A National Model for Disaster Recovery: Growing Green Jobs in the Age of Energy Efficiency

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# A NATIONAL MODEL FOR DISASTER RECOVERY: GROWING GREEN JOBS IN THE AGE OF ENERGY EFFICIENCY

JONATHAN C. AUGUSTINE*

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ABSTRACT

President Barack Obama challenged the American people in his January 2011 State of the Union Address to become less dependent on the oil and gas industry and move toward growing energy-efficient jobs. In addition to his challenge, President Obama also gave significant financial support by allocating funds to various states and/or state agencies charged with assisting in job training and development as part of the American Recovery and Reinvestment Act of 2009 (ARRA).

While the president’s State of the Union charge drew loud applause from some, others had pause. In states like Louisiana and Texas, for example, “Crude is King” and the economy remains largely dependent on offshore drilling and refining. In fact, both political and litigious firestorms erupted in Louisiana in the wake of the July 2010 Deepwater Horizon/British Petroleum oil spill (BP Disaster) in the Gulf of Mexico, when the Obama Administration issued a moratorium on offshore drilling. Regardless of the past, however, growth toward green industries and green jobs is arguably poised to do extremely well in years to come.

This Article, part of the 2012 Thurgood Marshall Law Review symposium on energy efficiency and energy-efficient job growth, chronicles the Louisiana Workforce Commission (LWC)’s administration of a $2.3 million dollar grant from the U.S. Department of Labor (USDOL) in helping to effectuate President Obama’s challenge by growing green jobs. The Article also shows how LWC sets the benchmark as a public sector agency by collaboratively working with sister agencies in state government and private sector businesses to help train an environmentally friendly job corps as a model for other states to follow. Further, this Article also chronicles LWC’s pro-active public sector steps toward “growing green” in the wake of Hurricanes Katrina and Rita, as well as the BP Disaster, and provides insight into ongoing green growth operations, with a forecast of things to come, as Louisiana sets the national model for green growth after disaster recovery.
INTRODUCTION

We’ve already faced a moratorium, followed by a ‘permitorium’ and now we are threatened again by a possible judicial moratorium. This not only threatens thousands of jobs in Louisiana and along the Gulf Coast, but also hurts our efforts to bring down rising energy prices. Everybody in America is connected to exploration in the Gulf of Mexico because of prices at the gas pump. That’s why what happens in Louisiana and along the Gulf Coast matters to the rest of the country. While the President just recently decided to release fuel from the Strategic Petroleum Reserve in an effort to bring down energy prices, it makes more sense to us to use the resources we already have along our coast.++

President Barack Obama challenged the American people in his January 2011 State of the Union Address to become less dependent on the oil and gas industry of yesteryear and move toward growing energy-efficient jobs.1 President Obama also gave financial support to his “green challenge” by allocating significant funds as part of the American Recovery and Reinvestment Act of 2009 (ARRA),2 for distribution to various states

++ Louisiana Governor Bobby Jindal (detailing the state of Louisiana’s anticipated intervention, along with the states of Mississippi and Alabama, into litigation challenging the federal government’s approval of the first Exploration Plan since the Deepwater Horizon’s explosion), June 8, 2011, available at http://gov.louisiana.gov/index.cfm?md=newsroom&tmp=detail&articleID=2907 (last visited Nov. 18, 2011).
and/or state agencies charged with assisting in job training and development.\footnote{\textsection 703, 123 Stat at 172–73. \textit{La Workforce Comm'N, The Greening of Louisiana's Economy: Summary of Survey Results} iv (2011) [hereinafter \textit{Summary Results}], available at http://lwc.laworks.net/sites/LMI/GreenJobs/Reports/Louisiana_Survey_Results.pdf#Intro. Definitions of “green” vary, as no commonly accepted definition has emerged. For this Article’s purposes, however, “green jobs” are defined as those that have a primary job function wherein more than 50 percent of the employee’s time is spent in one or more of seven green activity categories: Renewable Energy; Energy Efficiency; Greenhouse Gas Reduction; Pollution Reduction and Clean-up; Recycling and Waste Reduction; Sustainable Agriculture, Natural Resource Conservation and Costal Restoration; and Education, Compliance, Public Awareness and Training Supporting Other Categories. \textit{Id.} The usage surge of terms like “green economy” and “green jobs” indicates the direction in which American law and policy are evolving as communities across the United States are intentionally using renewable energy technology, a green infrastructure, and recycling and brownfield redevelopment to not only create jobs and improve the economy, but also to make themselves more attractive places to live and work. John C. Dernbach, \textit{Creating the Law of Environmentally Sustainable Economic Development}, 28 \textit{PACE ENVTL. L. REV.} 614, 615 (2011) (internal citations omitted). The U.S. Department of Labor’s Employment and Training Administration encouraged research on the economy’s greening through ARRA-funded Labor Market Information improvement grants. \textit{See \textit{Summary Results}}, supra at iv. \textit{The Louisiana Green Jobs Survey} was made possible through said funding and was conducted by a regional consortium including LWC and its counterpart in Mississippi, the Mississippi Department of Employment Security, along with Louisiana State University and Mississippi State University. \textit{Id.} Additional input for the \textit{Louisiana Green Jobs Survey} was sought from Workforce Investment Boards—local advisory committees comprised of community stakeholders with a majority of business and industry as designated by the Workforce Investment Act of 1998, 29 U.S.C. \textsection 2801(51) (2012)—as well as university and technical college systems, trade associations, employers, and environmental advocacy groups. \textit{Id.}

4. Although the expression “Crude is King” can have a pejorative connotation, it speaks to the reality that Texas leads the United States in oil crude oil production. For example, according to the University of Texas’ Bureau of Economic Geology: [\textit{Id.}] Incremental oil recovery from mature oil fields continues to make Texas the state that leads in oil production. In terms of year 2002 oil and natural gas production, Texas produced 17 percent and 30 percent, respectively of the U.S. total. Indeed, if Texas were a nation, it would rank as one of the top 10 producers in the world. \textit{Bureau of Econ. Geology, Oil and Gas Production in Texas} (2005), available at http://www.beg.utexas.edu/UTOpia/images/pagesizezooms/oilgas.pdf.

5. In terms of on-going economic development in the Southwest, with respect to Louisiana, the state Office of Statewide Reporting and Accounting Policy notes the following:
litigious firestorms erupted in Louisiana in the wake of the April 20, 2010 Deepwater Horizon/British Petroleum oil spill (BP Disaster) in the Gulf of Mexico,6 when the Obama Administration issued a moratorium on offshore drilling.7 Regardless of the past, however, growth toward green and green jobs is arguably poised to do extremely well in years to come.

Although the national economy is experiencing a lethargic recovery, Louisiana should enjoy nice prospects in most areas of growth. For example, Louisiana’s economic forecast greatly improves with the potential development of the Tuscaloosa Marine Shale. Exploration companies expect to harvest an estimated 7 billion barrels of oil from shale deposits. In addition, over $24.5 billion in future construction projects are planned in 2012-2013 in the New Orleans, Lake Charles, and Baton Rouge metropolitan statistical areas.

POPULAR REPORT, supra note 2, at 1 (emphasis added). Moreover, an integral part of the United States’ economy, natural gas exploration and production accounts for almost one-fifth of the country’s power generation, as well as being the major source of energy for residential heating. David Schwartz, The Natural Gas Industry: Lessons for the Future of the Carbon Dioxide Capture and Storage Industry, 19 STAN. L. & POL’Y REV. 550, 550 (2008). Moreover, the United States’ major production areas for natural gas, as regulated by the Federal Energy Regulatory Commission, are the Southwestern states of Louisiana and Texas. See id. at 556. Notwithstanding the obvious move away from an oil and gas economy, the practical reality is that

[t]oday, the world annually burns about 3.4 billion tons of oil, 4.5 billion tons of coal (2.22 billion tons of oil equivalent), natural gas in the amount equivalent to 2.02 billion tons of oil; and wood and other forms of traditional biomass at a rate equivalent to 0.9 billion tons of oil. Taken all together, the burning of these forms of collected, mostly ancient, sources of energy accounts for more than eighty-nine percent of all human energy use . . . .


7. The initial moratorium was issued on Friday, May 7, 2010, in an announcement by Department of the Interior Secretary Ken Salazar. Heidi Avery, The Ongoing Administration-Wide Response to the Deepwater BP Oil Spill, WHITE HOUSE BLOG (May 25, 2010, 3:56 PM), http://www.whitehouse.gov/blog/2010/05/05/ongoing-administration-wide-response-deepwater-bp-oil-spill. Further, on May 28, 2010, Secretary Salazar exercised his office’s authority, pursuant to applicable provisions of sections 1332(6), 1334(a), and 1348
The Louisiana Workforce Commission (LWC), a member of the National Association of State Workforce Agencies (NASWA),\(^8\) is administering a $2.3 million dollar grant from the U.S. Department of Labor (USDOL) to help effectuate President Obama’s energy-efficient challenge and grow green jobs.\(^9\) In doing so, the LWC continues to collaboratively work with sister agencies in state government, private sector businesses, and education providers to help train an environmentally friendly job corps as a model for other states to follow.\(^10\)

In highlighting the LWC’s proactive public sector steps toward growing green jobs in the BP Disaster’s wake and providing insight into ongoing green growth operations as a forecast of things to come, this Article’s thesis is that green economic opportunities arise from disaster and bolster already-emerging markets. In addition to the $2.3 million green jobs ARRA funds the LWC received from USDOL, to grow green jobs, LWC also received a USDOL $10 million National Emergency Grant (NEG) to retrain and retool workers for Louisiana’s future job industries, while financially incentivizing business and business growth in the BP Disaster’s wake.\(^11\) Accordingly, the LWC has successfully placed

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\(^8\) For information about NASWA and its member agencies, see the NAT’L ASS’N OF ST. WORKFORCE AGENCIES, http://www.naswa.org/ (last visited Dec. 22, 2011).

\(^9\) See supra note 3 and accompanying text. Further, from a policy perspective on green job growth, it is important to note that “the consensus view internationally and domestically is that climate solutions should be developed mindful of their prospects for contributing to economic development, security, and human rights and dignity, in addition to protecting our environment and health . . . .” David L. Markell, Greening the Economy Sustainably, 1 WASH. & LEE J. ENERGY, CLIMATE & ENV’T 49, 54 (2010).

\(^10\) Upon information and belief, the Louisiana Green Jobs Survey, a report produced from research conducted during the fourth quarter of 2010, is the first of its kind in the United States. SUMMARY RESULTS, supra note 3, at iii. Consequently, it establishes a benchmark in gauging current green jobs and a vantage point from which future green employment can be projected. Id. at iv.

Louisiana at the forefront of America’s national job growth in the green job creation movement.

In detailing the LWC’s green job growth efforts and supporting the aforementioned thesis, this Article is organized into four parts. Part I is divided along a “past, present, and future” rubric by providing a recent history overview of Louisiana’s economy prior to the BP Disaster, looking at current green jobs in the state’s economy, and examining the anticipated green jobs growth from the perspective of a public sector workforce agency that proactively works to support changing private sector demands. Further, Part I also details the BP Disaster’s aftermath, including the Obama Administration’s moratorium on offshore drilling, the federal lawsuit challenging the same, and the associated effect on Louisiana’s economic transition toward energy efficiency. Part II builds upon Part I’s foundation by discussing the definition of green jobs, with emphasis on three key industry sectors: (1) Administrative and Support and Waste Management and Remediation; (2) Construction; and (3) Professional, Scientific and Technical Services. Further, Part II also overviews several of the seven primary activity categories that provide a working definition of green employment.

Part III moves from the working definition and parameters of “green” into how the LWC’s 2008 enabling legislation allows for model-setting collaborative efforts with sister public sector agencies and private sector entities, working together with a demand-driven philosophy undergirded by

http://www.laworks.net/Downloads/WFD/WIAAnnualReport_2010.pdf. Further, in issuing the $10 million NEG funds to the LWC, USDOL’s program participant eligibility requirements included individuals that were dislocated, either permanently or temporarily, or unable to work because of the disaster. An individual is considered “dislocated” if they were terminated or laid-off, eligible for or has exhausted their unemployment insurance benefits, ineligible for unemployment insurance benefits because of insufficient earnings or having worked for an employer covered by the corresponding state law, or unlikely to return to their previous occupation or job. Workforce Investment Act of 1998, 29 U.S.C. § 2801(9) (2012).

12. See infra notes 20–41 and accompanying text in Part I.A.
13. See supra note 7; see also infra note 54 and accompanying text.
14. See infra notes 50–59 and accompanying text.
15. See supra note 3; see also infra note 68 and accompanying text (detailing the seven primary green jobs activity categories).
16. See infra Part II.A–C.
17. See supra note 3; see also infra note 68 and accompanying text (detailing the seven primary green jobs activity categories).
the LWC’s occupational forecasting. 18 Finally, Part IV of this Article serves as a conclusion and synthesis, based on the LWC’s success as a

18. See infra Part III. Prior to the 2008 Louisiana legislative session, the LWC was known as the Louisiana Department of Labor. 2008 La. Acts 743 (codified as La. Rev. Stat. Ann. § 23:1 (2012)). In an effort to move toward a more business-friendly atmosphere, however, the reform-oriented administration of then-newly elected Governor Bobby Jindal supported legislation to rename the former Department of Labor to the current Louisiana Workforce Commission, while also changing some of the agency’s functional operation. Id. Part of the functional changes included an occupational forecasting charge to the state Workforce Investment Council (WIC), a majority-business statewide board of gubernatorial appointees statutorily charged with advising the governor on the needs of the state’s employers and workforce. § 23:2042(2). For a description of WIC’s composition, see section 23:2043(A). In relevant part, WIC supervises the LWC’s labor market information occupational forecasting as follows:

For the forecasting information component of the system, there shall be information on projected workforce growth and job growth and demand. The workforce and job growth and demand information shall also reflect occupational information related to those targeted cluster industries identified by the Department of Economic Development.

The information on projected workforce growth shall include the number of individuals employed and the number of individuals able and available for employment at present and projected at a future date certain, both statewide and by geographic regions.

Occupational information on targeted cluster industries shall include occupational requirements for those industries, training and education levels required for those occupations, and salary information.

For the purpose of projecting job growth and demand, the Occupational Forecasting Conference is hereby established as a committee of the council. The conference shall develop such official information with respect to the statewide and regional workforce development needs of current, new, and emerging industries as the council determines is necessary for both state and regional workforce development system planning processes and state planning and budgeting. Such information, using quantitative and qualitative research methods, shall include at least short-term and long-term forecasts of employment demand for jobs by occupation and industry; entry and average wage forecasts for those occupations; and estimates of the supply of trained and qualified individuals available for employment in those occupations, with special focus upon those occupations and industries which require high skills and have high entry wages and previous experience wage levels. In the development of workforce estimates, the conference shall use, to the fullest extent possible, local occupational and workforce forecasts and estimates.

The conference shall review data concerning the local and regional demands for short-term and long-term employment primarily in high-skills/high-wage jobs, as well as other jobs, which data is generated through surveys conducted as part of the state’s Internet-based job matching and labor market information system. The conference shall consider such data in developing its forecasts for statewide employment demand, including reviewing the local and regional data for common trends and conditions among localities or regions which may warrant inclusion of a particular occupation on the statewide occupational forecasting list developed by
national public sector model for America’s energy future and shows how this Article’s thesis has been proven true. Indeed, this Article’s intent is to highlight some best practices of how public sector entities can lead the way in working collaboratively and proactively with private sector employers in fulfilling President Obama’s energy efficient challenge by growing green jobs. In doing so, the LWC shows its leadership as a NASWA member in helping lead America’s economic recovery.

I. LOUISIANA’S ECONOMY: A SNAPSHOT PRIOR TO DEEPWATER HORIZON, THE EXPLOSION AND SUBSEQUENT MORATORIUM

A. A Look at the Past: From Where Have We Come?

Louisiana has long been reputed as a state with an economic infrastructure heavily dependent on oil and gas, especially in the 1980s. As recent as 2009, a report issued by the Federal Reserve Bank of Kansas City showed that Louisiana remains as dependent on oil and gas today as it did in 1982. Indeed, the economic reality that “crude is still king” in the Gulf South is arguably the reason for the varied reactions to President Obama’s 2010 State of the Union Address.

In proving a cursory overview of Louisiana’s recent economic history, it is helpful to look chronologically at six specific periods: (1) 1975 to 1981; (2) 1982 to 1987; (3) 1988 to 1998; (4) 1999 to 2002; (5) 2003 to
mid-2005; and (6) post-Katrina recovery. The summary information which served as a basis for this (recent) historical outlook was provided in an annual report, *Louisiana Economic Outlook*, written by some of state’s most highly reputed economists.24

1. 1975 to 1981

From 1975 to 1981, the prices of crude oil increased from only $7.09 a barrel to $37.48.25 Consequently, south Louisiana was like a mining town during the gold rush with employment in the oil and gas extraction sector skyrocketing from about 50,000 jobs in 1975 to more than 102,000 at one point in 1981.26 As overall non-farm employment jumped, rising at an average rate of 4.1 percent from 1975–1981, employment surged in 1978 alone by 7.2 percent in one year.27

2. 1982 to 1987

From 1982 to 1987, Louisiana went through a deep recessionary period wherein approximately 148,000 jobs vanished within the state, equating to almost 9 percent of the state’s workforce.28 As the economic experts write:

Plunging energy prices cut the extraction workforce in half, and a huge run up in the value of the dollar virtually destroyed the export markets for [the state’s] chemicals, prompting that industry to layoff a third of its workers. The negative multiplier effects of these firings added to the misery.29

3. 1988 to 1998

In 1988, Louisiana began a long economic climb out of the abyss into which it had fallen in the previous six years. The primary driver behind this

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25. Id. at 15.
26. Id.
27. Id.
28. Id.
29. Id.
economic recovery was the chemical industry, with a strong resurgence in the demand for Louisiana chemicals that caused several Louisiana-based chemical firms to begin large-scale expansion projects. Additionally, there was also significant related growth in industrial construction and textile production. Further, as a means of economic diversity, the transportation industry—once closely tied to oil and gas production—significantly benefited from defense contracting and general ship construction.

4. 1999 to 2002

The period of 1999 to 2002 was slow. The oil and gas industry suffered as the price of oil dropped to below $10.00 per barrel, with a similar decline in extraction as many blue-color jobs were eliminated when the state’s rig count dropped from 218 to 125. Moreover, 2,300 jobs decreased in 2001 and an additional 19,800 jobs were eliminated in 2002, for a two-year decline of 1.2 percent. Indeed, the years 2001 to 2002 were Louisiana’s second economic recession in three decades.

5. 2003 to mid-2005

From 2003 to 2005, Louisiana’s economy began to grow again, albeit at a slow rate. The state’s non-farm employment only grew by 0.5 percent in 2003 and 0.7 percent in 2004. Further, by August 2005, Louisiana’s non-farm employment was only rising by 1.9 percent. With these economic problems causing Louisiana’s recovery to be less than a dream state, August and September 2005 became a living nightmare. Hurricanes...
Katrina and Rita changed the state forever. As detailed herein, however, with tragedy comes opportunity.\textsuperscript{38} Louisiana is now poised to be a national leader in growing green jobs as part of economic development.

6. \textit{Post-Katrina Recovery}

In addressing the significance of how Hurricanes Katrina and Rita adversely affected Louisiana’s offshore oil and gas industry, in relevant part, economists note the following:

Shut-in oil and natural gas refers to output that was being produced but is not now because of damaged platforms, pipelines or onshore receiving units. In the case of Katrina, 95.2 percent of the crude oil and 88 percent of the natural gas production was shut-in by August 30th. By September 9th, the shut-in rates had dropped to about 56-58 percent for oil and about 33-37 percent for natural gas. Then the improvement stabilized. When Rita appeared, because it made landfall further to the west and more into the center of the GOM production region, 100 percent of crude and 80 percent of natural gas was shut-in. The last shut-in statistics released by the Minerals Management Service show that 12.1 percent of oil and 9.3 percent of natural gas production was still shut-in as of June 6, 2006.\textsuperscript{39}

After such devastation, the optimism that fueled and continues to fuel Louisiana’s economic recovery is led by a construction boom and congressional Gulf Opportunity Zone (GO Zone) tax incentives.\textsuperscript{40} Additionally, the state has seen another boost in oil and gas extraction, as the oil and gas industry remains a staple in Louisiana’s economy.\textsuperscript{41}

\begin{footnotesize}
\begin{itemize}
\item See \textit{infra}, Part II.B.
\item LOUISIANA ECONOMIC OUTLOOK, \textit{supra} note 24, at 21.
\item See id. at 24.
\item See \textit{supra} note 4 and accompanying text.
\end{itemize}
\end{footnotesize}
B. Other Sector Economic Stability

However, in addition to the oil and gas industry, Louisiana has also been and remains a state for stable employment and economic development in other industries and sectors. For example, according to the LWC’s Office of Occupational Information Service’s occupational forecasting, as of March 2010, the month prior to the BP Disaster, jobs in general medical and surgical hospitals led the state in nonfarm employment. Moreover, medical and medical-related jobs could have been anticipated as leading nonfarm employment, as Louisiana’s leading employment industry has been health care and social assistance. Moreover, according to the LWC’s 2009 Employment and Wages Report, health care and social assistance continued to lead the state in nonfarm industry employment numbers.

C. A Look at the Present: Where Are We Now?

The federal government has been forward-thinking in encouraging and incentivizing green jobs research as a means to transition from oil and gas dependence. As of now, however, because America’s transition is obviously in flux, whitepapers like the Louisiana Green Jobs Report and published scholarship like the 2012 symposium of which this Article is a part play a huge role in analyzing current data and anticipating future trends. Louisiana’s citizens have reason to be proud as the state moves

45. See Dernbach, supra note 3, at 615–16 and accompanying text. As evidence of energy efficiency’s clear international importance in economic development, one of the themes of the June 2012 Rio de Janeiro World Summit on Economic Development is “a green economy in the context of sustainable development and poverty eradication.” Id. at 616. Further, for an excellent summary perspective on similar international efforts at transitioning toward energy efficiency, see Peter M. Crofton, Alternative Fuels and Developing Nations: Who Will Pay the Piper?, 24 EMORY INT’L L. REV. 185 (2010).
46. See generally SUMMARY RESULTS, supra note 3.
ahead of the national economic recovery with unemployment rates that are lower than the national average.\textsuperscript{47}

In the wake of the BP Disaster, less than two-years prior to the Thurgood Marshall Law Review’s 2012 symposium, the Obama Administration issued an order halting offshore drilling.\textsuperscript{48} The moratorium was unpopular as it stymied economic growth and increased the amount of unemployed Americans, particularly in the Gulf South.\textsuperscript{49} Indeed, after lawsuits were filed in New Orleans’ U.S. District Court for the Eastern District of Louisiana (Eastern District), a judge enjoined the order’s enforcement, citing potential economic harm to businesses and workers.\textsuperscript{50}

\begin{itemize}
\item As the state Office of Statewide Reporting and Accounting writes:
Louisiana’s recovery from the ‘Great Recession’ continues on a positive track. As in the past, Louisiana’s lesser dependency on durable goods production protected the state from a serious decline. The state was protected further by the still lingering benefits of extra construction activity due to the GO Zone legislation.

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\item On a positive note, Louisiana’s unemployment rate in fiscal year 2011 was 1.4\% below the U.S. unemployment rate of 9.3\%. Louisiana is expected to add 14,200 jobs in 2012 and another 14,800 jobs in 2013. At the end of 2013, Louisiana will be only 3,600 jobs below its previous peak reached in 2008.
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\end{itemize}

\textsuperscript{48} Memorandum, \textit{supra} note 7 and accompanying text.


\textsuperscript{50} Hornbeck Offshore Servs., L.L.C. v. Salazar, 696 F. Supp. 2d 627, 639 (E.D. La. 2010); Charlie Savage, \textit{Drilling Ban Blocked; U.S. Will Issue New Order}, \textit{N.Y. Times}, June 23, 2010, at A1, available at http://www.nytimes.com/2010/06/23/us/23drill.html. According to Louisiana State University College of Business Professor Joseph Mason, the proposed moratorium would have cost loses of more than $2.1 billion in output, $487 million in wages, $98 million in forfeited tax revenues for the Gulf states alone, and approximately 8,169 jobs. \textit{Joseph R. Mason, The Economic Cost of a Moratorium on Offshore Oil and Gas Exploration to the Gulf Region} 3 (July 2010), available at http://www.noia.org/website/download.asp?id=40016. While the Mason report’s methodology was based on an empirical analysis, as a counter argument, it is also important to note that although almost all of the nation’s refineries are located in the Gulf South, other scholarship informs that “there have been no new oil refinery constructions in the United States since the late 1970s.” David Hodas, \textit{Imagining the Unimaginable: Reducing U.S. Greenhouse Gas Emissions by Forty Percent}, \textit{26 Va. Envtl. L.J.} 271, 280 (2008).
In the days immediately following the BP Disaster, President Obama formed the bipartisan National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling and tasked it with investigating the facts and circumstances that caused the explosion. The president also ordered Interior Secretary Ken Salazar (the Secretary) to conduct a comprehensive review of the blowout and to report, within thirty days, “what, if any, additional precautions and technologies should be required to improve the safety of oil and gas exploration and production operations on the outer continental shelf.” On May 27, 2010, pursuant to the president’s directive, the Secretary issued a report recommending a six month moratorium on permits for new wells and an immediate halt to drilling operations on thirty-three permitted wells. The following day, May 28, 2010, the Secretary issued a memorandum that included the following language:

I find at this time and under current conditions that offshore drilling of new deepwater wells poses an unacceptable threat of serious and irreparable harm to wildlife and the marine, costal, and human environment as that is specified in 30 C.F.R. 250.172(b). I also have determined that the installation of additional safety or environmental protection equipment is necessary to prevent injury or loss of life and damage to property and the environment.

Therefore, I am directing a six-month suspension of all pending, current, or approved offshore drilling operations of new deepwater wells in the Gulf of Mexico and the Pacific regions.

In response to the foregoing, on June 7, 2010, Hornbeck Offshore Services (Plaintiffs) filed suit in the Eastern District, seeking declaratory and injunctive relief against the Secretary and the Obama Administration’s order. Within two days thereof, additional plaintiffs joined the litigation.

51. Hornbeck Offshore Servs., 696 F. Supp. 2d at 630. With respect to this effort, as other recent scholarship references, “[o]ver the . . . spring and summer of 2010, the government managed an unprecedented response to the largest oil spill in U.S. history. The U.S. Coast Guard . . . directed BP, the responsible party, in mobilizing more than 800 specialized skimmers, 120 aircraft, 8,000 vessels, [and] nearly 50,000 responders . . . to drill relief wells.” Joseph E. Aldy, Real-Time Economic Analysis and Policy Development During the BP Deepwater Horizon Oil Spill, 64 VAND. L. REV. 1795, 1796 (2011).
52. Hornbeck Offshore Servs., 696 F. Supp. 2d. at 631.
53. Id. at 631.
54. Id. See also Memorandum, supra note 7.
and moved for a preliminary injunction prohibiting the Secretary from enforcing the moratorium. In finding for the Plaintiffs and enjoining the Secretary’s issuance of the moratorium as arbitrary and capricious, while also noting potential irreparable injury, the court wrote that:

\[\text{The Deepwater Horizon oil spill is an unprecedented, sad, ugly and inhumane disaster. What seems clear is that the federal government has been pressed by what happened on the Deepwater Horizon into an otherwise sweeping confirmation that all Gulf deepwater drilling activities put us all in a universal threat of irreparable harm. . . . The blanket moratorium, with no parameters, seems to assume that because one rig failed and although no one yet fully knows why, all companies and rigs drilling new wells over 500 feet will universally present an imminent danger.}\]

\[\ldots\ldots\ldots\]

\[\ldots\ldots\text{The [P]laintiffs have established a likelihood of successfully showing that the Administration acted arbitrarily and capriciously in issuing the moratorium.}\]

\[\text{The [P]laintiffs assert that they have suffered and will continue to suffer irreparable harm as a result of the moratorium. The Court agrees. . . . The effect on employment, jobs, loss of domestic energy supplies caused by the moratorium as the [P]laintiffs (and other suppliers, and the rigs themselves) lose business, and the movement of the rigs to other sites around the world will clearly ripple throughout the economy and this region.}\]

Accordingly, by the previously noted standards for the issuance of a preliminary injunction, the court enjoined the Secretary’s moratorium and reinstated offshore drilling.

56. *Id.* As a matter of well-settled law, a preliminary injunction is an extraordinary remedy that should only be granted when the moving party “clearly carry[s] [its] burden of persuasion.” *E.g., Bluefield Water Ass’n v. City of Starkville, Miss.*, 577 F.3d 250, 253 (5th Cir. 2009) (quoting *Lake Charles Diesel, Inc. v. Gen. Motors Corp.*, 328 F.3d 192, 196 (5th Cir. 2003)). Further, it is also well-settled that a district court can only issue an injunction if the moving party shows: (1) a substantial likelihood of success on the merits; (2) a substantial threat of irreparable injury if the injunction is not granted; (3) that the threatened injury outweighs any harm that will result to the non-moving party if the injunction is issued; and (4) that the injunction will not disserve the public interest. *Ridgely v. FEMA*, 512 F.3d 727, 734 (5th Cir. 2008) (citing *Karaha Bodas Co. v. Perusahaan Pertambangan Minyak Dan Gas Bumi Negara*, 335 F.3d 357, 363 (5th Cir. 2003)).


58. See cases cited *supra* note 56 and accompanying text.

From the perspective of an entire industry—particularly in a geography that has been so heavily dependent on oil and gas for so many years—because of the BP Disaster’s continued effects, notwithstanding the temporary loss of economic activity cited by scholars and the court, the nature of both primary and support green jobs has been changed forever. Indeed, as highlighted in the graph below, Pollution Prevention and Cleanup is cited in each of the three industry sectors discussed herein.

60. As a result of the Deepwater Horizon’s explosion, “the rig burned and then sank into approximately 5000 feet of water over the Mississippi Canyon Outer Continental Shelf Block 252 area.” Sam Kalen et al., Lingering Relevance of the Coastal Zone Management Act to Energy Development in our Nation’s Coastal Waters?, 24 Tul. Envtl. L.J. 73, 74 (2010). Moreover, the BP Disaster caused shrimpers, crabbers, and deckhands to lose their jobs, while devastating seafood processors, an entire culture, and a way of life in South Louisiana. Denise M. Pilie, Satisfying Deepwater Horizon Oil Spill Claims: Will Ken Feinberg’s Process Work?, 58 La. B.J. 177, 177 (2010). Most tragically, however, as result of the BP Disaster:

Eleven crewmembers aboard the Deepwater Horizon lost their lives in the initial blast that led to the fire. The sinking of the blast caused the drill pipe, which ascended from the ocean floor to the surface rig, to break off, precipitating what would become the largest oil spill in United States history. It would be eighty-six days and several failed attempts before BP would plug the well on the ocean floor. Estimates of the volume of crude oil that leaked from the broken drill pipe ranged from 1,000 barrels per day to 62,000 barrels per day, with definitive volumes still in dispute.

61. E.g., Mason, supra note 50, at 3.

62. See Savage, supra note 50 and accompanying text.

63. In noting the BP Disaster’s impact, the Louisiana Office of Statewide Reporting and Accounting Policy reports that “[t]o date, Louisiana businesses and individuals have received $1.6 billion dollars in claim payments from the Gulf Coast Claims Facility and BP.” Popular Report, supra note 2, at 2. Further, in analyzing Louisiana’s economic future, nationally noted economists write that “[a]dditional regulations arising from the oil spill will drive up costs of operation in the Gulf of Mexico, leading to a decline in economic activity in the Gulf over 2011–2012. If President Obama’s proposed $36 billion tax on the industry is passed, that activity will be even further arrested.” Louisiana Economic Outlook, supra note 24, at i, iii.
Source: SURVEY RESULTS supra note 3.

Pollution, Prevention and Clean Up
D. Color Me Green for Years to Come: the Future of Green Job Growth in Louisiana

Part of the reason the Louisiana Green Jobs Survey was conducted in the fall of 2010 was to develop a baseline of where the state was in energy efficiency, but also to logically forecast where energy-efficient employment opportunities and associated training would be in years to come. Indeed, being a wise environmental and economic steward means not treating future generations any less valuable than the current generation. In helping to enable a state-of-the-art workforce, therefore, the LWC prides itself on promoting “green” at every opportunity.

In looking toward the future and trying to understand how to lead the public sector efforts in preparing a world-class workforce equipped with the requisite skills to continue growing green, the LWC surveyed businesses with employees performing primary job functions in the green activity categories. Specifically, the survey sought to determine whether primary green job workers within a green job activity category required any special skills, training, certificates, or licenses, compared with workers with the same job titles that did not work within the activity categories. The graph on the next page depicts the percent of survey respondents with requirements for workers by green activity category.

66. Summary Results, supra note 3, at 1–7. See also supra note 65 and accompanying text.
67. Summary Results, supra note 3, at 15.
**GRAPH #2**

Requirements for Workers with Primary Green Jobs by Activity Category

<table>
<thead>
<tr>
<th>Activity Category</th>
<th>Percent Requiring Unique Skills</th>
<th>Percent Requiring Special Licenses, Certificates or</th>
</tr>
</thead>
<tbody>
<tr>
<td>Renewable Energy</td>
<td>54.5</td>
<td>32.7</td>
</tr>
<tr>
<td>Energy Efficiency</td>
<td>48.2</td>
<td>32.9</td>
</tr>
<tr>
<td>Greenhouse Gas Reduction</td>
<td>89.9</td>
<td>29.8</td>
</tr>
<tr>
<td>Pollution Reduction and Clean-up</td>
<td>46.9</td>
<td>45.2</td>
</tr>
<tr>
<td>Recycling and Waste Reduction</td>
<td>32.1</td>
<td>30.8</td>
</tr>
<tr>
<td>Sustainable Agriculture, Natural Resource Conservation and Coastal Restoration</td>
<td>40.0</td>
<td>42.4</td>
</tr>
<tr>
<td>Education, Compliance, Public Awareness and Training Supporting the Other Categories</td>
<td>42.2</td>
<td>39.6</td>
</tr>
<tr>
<td>Total</td>
<td>48.9</td>
<td>44.6</td>
</tr>
</tbody>
</table>

Source: SURVEY RESULTS *supra* note 3.
II. DEFINING GREEN JOBS IN LOUISIANA: THE PRESENT AND FUTURE

While the logical assumption is that green jobs are environmentally friendly, there is no standardized set of criteria defining the parameters of “green.” For the purpose of the Article, however, green jobs are divided into two categories: (1) primary; and (2) support.

Primary green jobs are those with a primary job function in one of seven activity categories: Renewable Energy; Energy Efficiency; Greenhouse Gas Reduction; Pollution Prevention and Clean-Up; Recycling and Waste Reduction; Sustainable Agriculture, Natural Resource Conservation and Coastal Restoration; and Education, Compliance, Public Awareness and Training Supporting the Other Categories.

Support green jobs are those essential to an organization’s involvement in a primary green activity category, but do not require more than 50 percent of an employee’s effort.68

In Louisiana, during the time of the associated survey,69 there were an estimated 30,205 primary green jobs, representing approximately 1.6 percent of the state’s employment, and 67,591 support positions, totaling 97,796 green jobs, 5.3 percent of Louisiana’s employment.70 While these figures provide room for optimism in Louisiana’s future, it is important to note they were not inflated in any way due to the green pollution control activity after the BP Disaster.71

Furthermore, as previously mentioned in highlighting the green activity categories,72 this Article selectively focuses on three industry sectors; Administrative and Support and Waste Management and

68. Id. at iii.
69. The associated survey was conducted during the fourth quarter of 2010. Id.
70. Id.
71. See id. at 13 (emphasis added). There are at least three reasons why the job figures reported do not include green jobs resulting from the BP Disaster. First, the Louisiana Green Jobs Survey was taken from a database of employers that were covered by the state’s unemployment insurance tax law prior to the BP Disaster. Id. Consequently, if new employers began operations in Louisiana to take advantage of the large amount of work that was available after the BP Disaster, they would not have been included within the sampling frame. Id. Second, a large amount of people hired to perform work after the disaster were contracted through out-of-state employers that, again, would not have been included in the sampling frame. Id. Finally, Louisiana residents that were hired by in-state businesses through contingent or alternative employment arrangements, opposed to traditional and/or permanent employment, were not included in the survey process either. See id.
72. Id. at 9–12 (noting primary and support green jobs and the two categories at issue).
Remediation; Construction; and Professional Scientific and Technical Services. 73 In visual terms, the intended overlap of this Article’s focus is depicted below in Graph 3.

![Graph #3](image)

Source: SURVEY RESULTS supra note 3.

73. Of all the industry sectors, Administrative and Support and Waste Management and Remediation Services had the greatest number of primary green jobs—4,992. Id. at 12. Construction had the second greatest number—3,646. Id. Further, Professional, Scientific and Technical Services included 2,783 primary green jobs, as well. Id. Consequently, said categories were included in this Article. Although the Educational Services Sector is not discussed herein because of its small percentage of primary green jobs during the period of the survey, its opportunity for green growth is significant as educational reform and curriculum redesign remain areas of national interest, especially in the wake of Hurricane Katrina and New Orleans’ well-documented educational rebuilding efforts. See, e.g., Jonathan C. Augustine, America’s New Civil Rights Movement: Education Reform, Public Charter Schools and No Child Left Behind, 59 La. L.J. 340 (2012); Jonathan C. Augustine & Craig M. Freeman, Grading the Graders and Reforming the Reform: An Analysis of the State of Public Education Ten Years After No Child Left Behind, 57 Loy. L. Rev. 237 (2011); Nghana Lewis, After Katrina: Poverty, Politics, and Performance in New Orleans Public Schools, 11 Loy. J. Pub. Int. L. 285 (2010); see also Danielle Holley-Walker, The Accountability Cycle: The Recovery School District Act and New Orleans’ Charter Schools, 40 Conn. L. Rev. 125 (2007). Accordingly, green jobs growth in secondary and post-secondary level educational services should be monitored in years to come.
A. Administrative and Support and Waste Management and Remediation

The Louisiana Workforce Commission noted in its Administrative and Support and Waste Management and Remediation (ASWMR) Services Sector report that, “[t]he North American Industry Classification System (NAICS) describes the Administrative and Support and Waste Management and Remediation Services Sector, NAICS 56, as providing commonplace support activities for the [daily] operations of other organizations.”74 Examples of such services provided under NAICS 56 include office administration, human resource management, clerical services, cleaning, and waste disposal.75 In Louisiana, the Management of Companies and Enterprises sector “employs 90,942 people representing 4.9 percent of the total nonfarm employment.”76

The ASWMR Sector provides a wide range of ongoing support services to businesses in other industries, many of which may have previously been performed in-house but are often contracted-out to increase efficiency.77 Examples include: landscaping, cleaning, clerical support, security, and human resource assistance.78 Many of the businesses within the ASWMR Sector “collect, treat, dispose of and remediate the wide variety of waste products created by residential, commercial, medical, construction, and industrial activities.”79

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75. Id. As a matter of industry distinction, it is important to note that firms within NAICS 56 do not engage in strategic decision-making. Id. Instead, such responsibilities fall within NAICS 55, the Management of Companies and Enterprises Sector. Id. (footnote omitted).
76. Id. (footnote omitted). Additionally, it bears noting that as of 2009, this sector was also responsible for $4.76 billion, or 2.3 percent of Louisiana’s gross state product. Id. (footnote omitted).
77. Id. at 1.
78. Id. For the sake of precision, in highlighting the ASWMR Sector, this portion of the ASWMR Report is deliberately limited to environmentally beneficial activities that are categorically described as either goods and services or business practices. Id.
79. Id.
1. Green Goods and Services

The green goods and services offered through the ASWMR Sector are primarily concentrated in the areas of renewable energy, pollution prevention and clean-up, and waste reduction and recycling. The ASWMR Sector, as the primary manager of waste and recycling materials, is an industry leader in the development of more sustainable practices and goods provided by other agencies. Indeed, establishments within the ASWMR Sector are able to distinguish themselves, from their competitors, by paying special attention to the environmental impacts associated with their services. For example, cleaning companies and landscaping operations are particularly well-suited to assist their clients in creating a more environmentally friendly workplace with, for example, their selection of cleaning materials and fertilizers.

The expanding availability of renewable energy and the increasing numbers of businesses providing renewable energy to customers creates specialized workforce needs. Consequently, some firms within the ASWMR Sector offer staffing services to meet business’ renewable energy needs. In Northern California, for example, Certified Green Technologies is a staffing agency exclusively serving the needs of solar, wind, and biofuel businesses. In offering “green services” to its clients, the company can boast of a variety of hiring options. Arguably, similar ventures will likely emerge in Louisiana as renewable energy needs continue to increase.

Furthermore, waste management and remediation organizations provide renewable energy goods and services by converting captured gases from landfills into usable methane and by operating specialized facilities that convert waste directly into energy. In relevant part, the ASWMR report provides as follows:

80. Id. at 2.
81. Id.
82. Id.
83. Id.
84. Id.
85. Id.
87. ASWMR REPORT, supra note 74, at 3.
Landfill operations create energy when the buried treasure decompresses and releases methane gas. That gas can be collected, filtered and piped to users. According to the Environmental Protection Agency, there were 526 operational projects generating landfill gas in the United States as of October 2010. These facilities produced enough energy to power 1.7 million homes. In Louisiana, there are seven fully operational facilities producing energy from landfill gas . . . . Louisiana is also home to seven other facilities the EPA has classified as ‘candidates’ . . . which means landfill gas-to-energy projects are either planned, being investigated, or that the facility meets certain waste volume requirements.  

With the foregoing as a guide, the LWC is poised to lead Louisiana’s energy efficiency initiatives by identifying national industry leaders and training a cutting-edge workforce within the state of Louisiana. As such technology moves into the state, LWC will be well-positioned to train an environmentally conscience and friendly workforce.

2. Green Business Practices

With landfills as the most recognizable example, the largest contributor to the environmental footprint in the ASWMR Sector is the creation and management of waste management and remediation facilities. The size and location of such facilities makes them candidates for the development of wind energy and wildlife protection. Moreover, “[t]he natural byproducts of waste management can also be harnessed as another renewable power source for onsite use or resale.”

In addition to producing energy from landfills, waste management and remediation companies also have the capacity to use such energy as a power source for their own operations. The ASWMR Report notes that, “[a]ccording to the Environmental Industry Association, garbage trucks are adopting alternative fuels at a faster rate than any other truck sector in the country. A growing number of these vehicles are being fueled by natural

88. Id. (footnote omitted).
89. As discussed herein, LWC also works collaboratively with sister agencies in state government, including the state’s Department of Economic Development, Community & Technical College System, Department of Education, and Board of Regents in working to grow Louisiana green. See infra Part III.
90. ASWMR REPORT, supra note 74, at 7.
91. Id.
92. Id.
93. Id.
gas created inside landfills, known as biomethane.94 Indeed, cities like New York, Chicago, Denver, Fort Worth, and Houston have all begun testing hybrid garbage trucks and recycling trucks with special systems of regenerative braking technologies and automatic engine start/stop systems to conserve fuel or change batteries during their frequent collection stops.95

B. The Construction Sector

According to the NAICS, the Construction Sector, NAICS 23, is primarily comprised of establishments that erect buildings or are engaged in engineering projects like building highways.96 Moreover, in addition to working with new projects, firms in the Construction Sector are often engaged to perform additions, remodels, and repairs.97 The Louisiana Workforce Commission reported that, “[i]n Louisiana, this sector employs 131,504 people representing 7.1 percent of total nonfarm employment.”98

The USDOL’s Standard Occupational Classification System reports that the Construction Sector accounted for the largest number of primary green jobs in Louisiana, 6,333, which correlates to 5.3 percent of the state’s employment.99 Although homes, offices, and other buildings are constructed with the expectation they will last for many years, Louisiana, as well as other states that have suffered through destruction and devastation in recent times, stand to benefit from the greening of the construction industry.100 Unquestionably, the state has had significant national attention
and opportunities to “build green” because of Hurricanes Katrina and Rita in 2005 and Hurricane Gustav in 2008.

Heat during cold months, air conditioning in the summer, year-round computer and electronic equipment usage, as well as the electricity used by appliances and cooking, amounts to approximately 40 quadrillion BTUs of annual energy use in the United States. Consequently, “[c]ommercial and residential buildings use more energy than either the transportation sector or industrial sector and account for 40 percent of the nation’s total energy use.” Accordingly, the Construction Sector is an area of vital importance as Americans holistically more toward more energy-efficient living in years to come. Because of the previously highlighted recent

mitigate the impacts of offshore oil and gas production. On October 5, 2010, President Obama issued Executive Order 13554 that directed the creation of a Gulf Coast Ecosystem Restoration Task Force. The task force’s mandate is to build on the ongoing spill response and Natural Resource Damage Assessment effort, as well as achieve overall recovery for the Gulf of Mexico through coordinating federal, state, and local initiatives.


101. According to recent scholarship, “[g]reen buildings, as they are commonly known, are high performance buildings that (1) use energy, water, and materials more efficiently; and (2) use measures related to sitting, design construction, operation maintenance, and removal to reduce the building’s impacts on the environment.” Edna Sussman, Reshaping Municipal and County Laws to Foster Green Building, Energy Efficiency, and Renewable Energy, 16 N.Y.U. ENVTL. L.J. 1, 8 (2008). Clearly, therefore, “[t]he large use of energy and other resources by buildings demonstrates the compelling need to use green building practices to foster sustainability.” Id.

102. In making a distinction between “green buildings” and “traditional buildings,” in the context of considering energy efficiency, the following data from the United States Department of Energy (DOE) is compelling. In relevant part, DOE provides that traditional buildings:

- Use about 40% of all the energy consumed and 72% of all the electricity used in the country;
- Are responsible for about 40% of the country’s carbon dioxide emissions;
- Account for 52% of sulfur dioxide emissions, 19% of nitrous oxide emissions, and 12% of particulate emissions, all of which degrade air quality; and
- Produce 136 million tons of construction and demolition waste annually.


103. CONSTRUCTION REPORT, supra note 96, at 2.

104. Id. (emphasis added).
devastation in the state, Louisiana is well-positioned to be a national leader in environmentally friendly building reform.

There are multiple rating systems used by the construction industry to evaluate the environmental benefits of buildings, with considerable overlap in design features used to assign rankings.

In 1989, the American Institute of Architects formed a Committee on the Environment and published their Environmental Resource Guide in 1992. The EPA and Department of Energy’s ENERGY STAR program was started in 1992 as was the first local green building program, which began in Austin, Texas. And in 1993, the United States Green Building Council (USGBC) and a ‘Greening the Whitehouse’ Initiative of the Clinton Administration were both started. Finally, the USCBG’s Leadership in Energy and Environmental Design (LEED) pilot program was introduced in 1998.105

When a construction project qualifies as a “green building,” it obviously conforms to well-defined criteria for environmental improvement and performance.106

As interest in energy efficient building has increased in the United States in recent years, it has arguably increased even more so in Louisiana; especially since Hurricanes Katrina and Rita.107 Indeed, since 2005, the number of LEED-accredited professionals has increased dramatically, with two high-profile examples of LEED-certified building being in New Orleans’ Lower 9th Ward, an area almost completely destroyed by Hurricane Katrina.108

105. Id. at 3 (footnote omitted).
106. Id.
107. With population increases, both residential and commercial construction is expected to significantly increase over the coming years. For example, “[b]y the year 2015 the nation is projected to add over 15 million households and 11 billion square feet of commercial space.” Sussman, supra note 101, at 9 (footnotes omitted). Clearly, therefore, green construction of these buildings could make a huge environmental impact. Id.
108. CONSTRUCTION REPORT, supra note 96, at 5. With respect to the two high-profile ventures, Global Green’s Holy Cross Neighborhood Development Project and the Make It Right Foundation, Inc., the following is of material note:
The Holy Cross neighborhood development consist of five single-family homes, one 18-unit apartment building and a community center that will double as a sustainable design and climate action center all with the goal of achieving LEED Platinum standards. Through the use of solar panels, efficient design, HVAC systems, energy and resource monitoring systems and efficient appliances, the buildings in the project are aiming to be self-sufficient in terms of their energy
Furthermore, Louisiana’s “construction industry is being presented with new [economic] opportunities for pollution reduction through advances in common building materials.” For example, at Louisiana State University, Louisiana’s flagship research institution,

[P]ollution-absorbing concrete is being laid and tested for the first time in the United States. Professor Marwa Hassan in the Construction Management and Industrial Engineering Department has teamed with Pureti, Inc., a company known for pioneering products that benefit the environment . . . to install and monitor photocatalytic pavement.

Such advances in the state’s construction industry, along with the associated jobs, will make Louisiana a standard-bearer and industry leader in years to come. Moreover, such technological advances will obviously help further define Louisiana’s professional, scientific and technical services sector.

C. The Professional, Scientific and Technical Services Sector

With respect to job growth and workforce development, considering primary and support jobs, green employment in the Professional, Scientific, and Technical Services sector is projected to increase 16.4 percent over the
ten year period including 2010 through 2020. \textsuperscript{112} NAICS describes the sector, NAICS 54, as providing specific services for businesses, and occasionally households, with examples including law, accounting, engineering, architectural and advertising firms.\textsuperscript{113}

In Louisiana, the Professional, Scientific and Technical Services sector currently employs 82,950 people, representing approximately 4.5 percent of total nonfarm employment.\textsuperscript{114} Indeed, “the projected increase in green employment [...] is expected to outpace growth in total employment within the sector.”\textsuperscript{115} According to a Pew Charitable Trust study of the clean energy economy, there is significant room for optimism in Louisiana because, although the state has a smaller number of jobs by national comparisons, its job growth in the Professional, Scientific and Technical Services sector is expected to outpace the national average.\textsuperscript{116}

The Professional, Scientific and Technical Services sector includes a wide range of highly trained professionals that work to design, develop and produce goods and services with a positive impact on the environment.\textsuperscript{117} Firms in this sector may offer services including legal counsel for compliance with environmental regulations and assistance with policy development, architectural, engineering and design services, marketing environmental services, and providing the scientific assistance to investigate new green technologies.\textsuperscript{118}

Furthermore, because large portions of the individual professionals working in the Professional, Scientific and Technical Services Sector belong to professional organizations,

[Whole categories of professionals working in this sector are being encouraged to recognize their role in producing environmental improvements. Among those professional organizations highlighting their environmental commitments are the American Institute of

\textsuperscript{113} Id. at ii.
\textsuperscript{114} Id. (footnote omitted). Moreover, as of 2009, private entities within this sector were also responsible for $9.73 billion, or 4.7 percent of Louisiana’s gross state product. Id.
\textsuperscript{115} Id. at 13.
\textsuperscript{116} Id. (footnote omitted).
\textsuperscript{117} Id. at 1.
\textsuperscript{118} Id.
Architects (AIA), the American Society of Landscape Architects (ASLA) and the American Society of Civil Engineers (ASCE).\textsuperscript{119}

In Louisiana, individuals within this sector will see the most opportunity to provide environmentally beneficial expertise when they can support, improve, or re-image existing industry, like Louisiana’s large chemical manufacturing presence, oil and gas extraction services, and agricultural economy.\textsuperscript{120}

With respect to renewable energy, for example, Louisiana is becoming an important contributor to such national projects by collaboratively building upon existing technology within its universities.\textsuperscript{121}

The potential in Louisiana for the development of hydrokinetic power and its impact on the Professional, Scientific and Technical Services sector is being investigated at ‘RiverSphere,’ an industry-neutral testing, development, research, demonstration and business incubation site on the Mississippi River. RiverSphere is being jointly run by Tulane and Xavier Universities and hopes to engage academic, industry, public agencies and nonprofits in the growth and development of Louisiana’s river resources as a source of renewable energy and economic development. . . .

One less traditional source of renewable energy that Louisiana is poised to take advantage of is, should the technology develop, is biofuels from algae. Algae are simple, plant-like organisms that show promise as a biofuel because they can produce more biomass per unit of growing area than other biofuel sources while also capturing carbon dioxide. Louisiana has an excellent climate to grow algae – good sunlight, relatively affordable and available land and a wide range of carbon dioxide sources. . . . During 2008-2009, Louisiana Economic Development [the state’s Department of Economic Development] partnered with KEMA, an energy consulting, testing and certification firm, to evaluate algae-to-energy potentials in Louisiana. This study found that the state’s capacity for algae-to-energy production could be up to 1.5 billion gallons of fuel per year, which would mean 25 facilities capable of producing 60 million gallons of fuel a year and $4.5 billion in added revenue.\textsuperscript{122}

\textsuperscript{119}. Id.
\textsuperscript{120}. Id. at 2.
\textsuperscript{121}. See id. at 3.
\textsuperscript{122}. Id. at 3–4 (footnotes omitted).
The foregoing clearly shows Louisiana’s lead in energy efficiency by using an indigenous natural resource to potentially change fuel manufacturing as it is currently known.123

Furthermore, as of 2011, in looking at the future of green job growth within the Professional, Scientific and Technical Services Sector, Louisiana and other states along the Gulf Coast are continuing to recover from the BP Disaster.124 In doing so, with more and more anticipated federal and state environmental regulations, there will presumably be more and more of a need for professionals, like lawyers, to be advocates in litigious matters as well as counselors to ensure compliance with governmental regulations.125

III. COLLABORATIVE WORKFORCE TRAINING EFFORTS SUPPORTED BY OCCUPATIONAL FORECASTING

The LWC prides itself in being a leading public sector agency committed to long-term collaborative work-relationships with private sector business and industry to produce a state-of-the art workforce, such that the state’s economy can thrive. In order to achieve its mission of delivering the workforce that current and future Louisiana employers need,126 the LWC works collaboratively with sister agencies in state and local government.

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123. See generally Tulane’s Nickname and Mascot, TULANEGREENWAVE.COM, http://www.tulanegreenwave.com/trads/tul-trads.html (last visited Jan. 22, 2012) (referring to the indigenous resource of algae, the mascot of Louisiana’s oldest institution of higher learning, Tulane University, is the Green Wave. The mascot was formerly depicted by a pelican (the state bird) riding a surfboard. Upon information and belief, a 1920 football song, “The Rolling Green Wave,” had to do with the Tulane football team rolling over its opponents, like the green algae-laden waters rolling in Louisiana’s many bayous. The name stuck since that time, with the Tulane University mascot officially becoming the “Green Wave”).

124. PROFESSIONAL SERVICES REPORT, supra note 112, at 8.

125. See id. Louisiana has a solid foundation to meet such a need. The state is currently host to four accredited law schools: 1) Tulane University School of Law, 2) Loyola University College of Law, 3) Louisiana State University Paul M. Hebert Law Center, and 4) Southern University Law Center. It is anticipated that a fifth school, Louisiana College Law School, will open in Shreveport, Louisiana in the near future. Moreover, in the field of environmental law, Tulane University enjoys an outstanding national reputation because of its acclaimed Environmental Law Clinic and the Tulane Environmental Law Journal.

LWC’s green jobs activity, along with its occupational forecasting and strategic alliances with the Louisiana Department of Economic Development (LED) and Louisiana Community and Technical College System (LCTCS) set a best practices model for similarly situated public entities to follow. Further, as part of using occupational forecasting to help those who will be job seekers in years to come, LWC also works with local school districts to help prepare, for example, high school freshmen, for college and career readiness. Indeed, as recognized by the Center for American Progress, LWC’s collaborative work with LCTCS is part of a national education model to better prepare a skilled workforce for high-wage and high-skill jobs.


130. For information on the Louisiana School Boards Association, see http://www.lsba.com/ (last visited Jan. 20, 2012).

131. See generally LOUIS SOARES, CTR. FOR AM. PROGRESS, THE POWER OF THE EDUCATION-INDUSTRY PARTNERSHIP: FOSTERING INNOVATION IN COLLABORATION BETWEEN COMMUNITY COLLEGES AND BUSINESSES 2 (Oct. 4, 2010), available at http://www.americanprogress.org/issues/2010/09/pdf/community_colleges.pdf. Of particular note, with regard to education and industry collaborative partnerships, the type of synergistic relationship LWC maintains with LCTCS, the Center for American Progress provides that: c]ommunity colleges have the scale and pedagogical diversity to improve post-secondary attainment for many Americans. But they must find ways to integrate their three missions in order to accomplish that goal. Collaboration between community colleges and business is a new vocationalism innovation that holds the promise of leveraging these assets and combining them with partners to promote institutional innovations the [sic] yield better results in terms of relevant knowledge and skills, and degree attainment.

Id. at 3.
Furthermore, the LWC also publishes a joint report with LCTCS, the Louisiana Department of Education (LDOE),\textsuperscript{132} and the Louisiana Board of Regents (BOR),\textsuperscript{133} to help both employers and potential employees find the match that’s right for them while increasing employment opportunities within the state.\textsuperscript{134} This collaborative model is also part of the LWC’s role in establishing and working at best practices to move Louisiana’s economy forward.

IV. CONCLUSION

Louisiana is poised to be a national leader in the growing green jobs movement. An optimist might argue that whenever there is tragedy, there is also corresponding opportunity. In recent years, Louisiana has indeed had its share of tragedies. In setting a benchmark for green economic development, however, Louisiana has fortunately proven the forgoing cliché true.

The devastation of Hurricanes Katrina, Rita and Gustav has given Louisiana the opportunity to lead the country in several green jobs industry sectors, including construction. Moreover, the scientific exploration of Louisiana’s indigenous green algae and the hydro potential from the Mississippi River has the potential to literally remodel the growing energy efficient movement. Consequently, Louisiana is well-poised to not only meet President Obama’s 2010 State of the Union Address challenge, but also set the benchmark for other states to follow. Indeed, the LWC’s initiative in using the Louisiana State University’s research capacity capital, along with its counterpart in Mississippi, the Mississippi Department of Employment Security, and Mississippi State University, sets a national model of best practices in training a state of the art workforce and leading the growing green wave.

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\textsuperscript{132} For information about the LDOE, see LA. DEP’T OF EDUC., \url{http://doe.louisiana.gov} (last visited Jan. 23, 2012).
\textsuperscript{133} For information about BOR, see BD. OF REGENTS: ST. OF LA., \url{http://regents.state.la.us} (last visited Jan. 23, 2012).
\textsuperscript{134} See generally LOUISIANA CAREERS: CAREER PLANNING GUIDE (2010), \textit{available at} \url{http://www.laworks.net/downloads/LMI/LouisianaCareerPlanningGuide.pdf}.
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