

THE IOWA POWER FUND: MAKING IOWA THE ENERGY CAPITAL OF THE WORLD

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I. INTRODUCTION

On May 23, 2007, Iowa Governor Chet Culver signed the Power Fund Policy Bill in the Food Sciences Building at Iowa State University in Ames.¹ Later that afternoon, the Governor signed the Power Fund Appropriations Bill in the Center for Energy and Environment Education at the University of Northern Iowa in Cedar Falls.² These bills constitute the Iowa Power Fund, a \$100 million state fund designed to expand Iowa's renewable energy industry and to make Iowa "the energy capital of the world."³ The Iowa Power Fund directly establishes the Office of Energy Independence as well as the Power Fund Due Diligence Committee and Power Fund Board.⁴ It further calls for the establishment of an Iowa Energy Independence Plan that shall provide for achieving independence from foreign sources of energy by the year 2025.⁵

With the signing of the Iowa Power Fund, Governor Chet Culver declared, "Our 21st Century Iowa Expedition starts now!"⁶ This Note explores Iowa's 21st Century Expedition by looking at background information and statistics on renewable energy in Iowa. This segues into a discussion of the innovative legislation that Iowa has developed to become a benchmark in the promotion of renewable energy. It then directly focuses on the Iowa Power Fund and its provisions. Finally, this Note concludes with an analysis of the Iowa Power Fund, and its possible effects on Iowa's future.

II. TYPES OF RENEWABLE ENERGY IN IOWA

The combination of Iowa's agricultural expertise, strong education system, central location, and copious natural resources, including strong winds, fertile soil, and vegetation, clearly position the state as a natural leader in the development of a national renewable energy industry.⁷ Using these strengths, Iowa

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1. Press Release, Governor Chet Culver, Governor Culver Signs Historic Power Fund into Law (May 23, 2007), *available at* http://www.governor.iowa.gov/news/2007/05/23_1.php [hereinafter Press Release].

2. *Id.*

3. *Id.*

4. IOWA CODE §§ 469.2, 469.6, 469.7 (2007).

5. *Id.* § 469.4.

6. Press Release, *supra* note 1.

7. IOWA DEP'T OF NATURAL RES., IOWA RENEWABLE ENERGY RESOURCE GUIDE 5 (2002) (on file with the Drake Journal of Agricultural Law) [hereinafter RESOURCE GUIDE].

has developed a substantial renewable energy portfolio centered on wind, biomass, and hydropower.⁸

A. Wind Energy

Iowa is well-positioned to generate wind energy. This is mainly because Iowa is exposed to the wind with a relatively flat terrain consisting of cropland with few trees to reduce wind speeds near the ground.⁹ As a result, Iowa is the tenth windiest state in the nation, with a wind energy potential of 551 billion kilowatt hours.¹⁰ Of Iowa's 144,950 square kilometers of total land area, 39.1% or 56,700 square kilometers offers wind generation capabilities.¹¹ According to the U.S. wind power class ratings,¹² most of Iowa is rated as a class three, with average wind speeds of 14.3 to 15.7 miles per hour; however, a majority of Northwest Iowa is rated as a class four with wind speeds of 15.7 to 16.8 miles per hour.¹³ This is important because the wind power in a class four area is twenty-seven percent greater than in a class three area.¹⁴

Another important factor for wind generation is the air density of the wind.¹⁵ The air density of the wind tends to change with the seasons.¹⁶ For Iowa, the wind is more powerful during the winter because prevailing winds from the northwest bring in colder temperatures.¹⁷ As a result, when the temperature decreases, air density increases, allowing the same wind speed to deliver more air, and thus more power.¹⁸ Conversely, in the summer, prevailing winds from the southeast bring warmer temperatures and lower air density.¹⁹ Therefore, on an

8. *See id.* at 5-6.

9. Iowa Energy Center, Wind Energy Manual, <http://www.energy.iastate.edu/Renewable/wind/wem/windpower.htm> (last visited Apr. 19, 2009).

10. AM. WIND ENERGY ASS'N, WIND ENERGY: AN UNTAPPED RESOURCE (2006), http://www.awea.org/pubs/factsheets/Wind_Energy_An_Untapped_Resource.pdf.

11. Iowa Energy Center, *supra* note 9.

12. *See generally* Office of Energy Efficiency and Renewable Energy, U.S. Dep't of Energy, Wind Energy Resource Potential, http://www1.eere.energy.gov/windandhydro/wind_potential.html (last visited Apr. 19, 2009) (stating that estimates of the wind potential in the United States are "expressed in wind power classes ranging from Class 1 [the lowest] to Class 7 [the highest], with each class representing a range of mean wind power density or equivalent mean speed at specified heights above the ground").

13. RESOURCE GUIDE, *supra* note 7, at 16.

14. *Id.*

15. Iowa Energy Center, *supra* note 9.

16. *Id.*

17. *Id.*

18. *Id.*

19. *Id.*

annual basis, July and August are the lowest wind density months, while November through March are the highest.²⁰

Although wind speeds are naturally intermittent and air density is naturally inconsistent, Iowa is still an especially attractive state for wind power development.²¹ Wind power has quickly become Iowa's fastest growing renewable energy resource.²² From 1999 to 2007, Iowa has seen its wind power capacity increase from 242 megawatts to 1,273 megawatts.²³ From 2006 to 2007 alone, Iowa's wind power capacity increased by more than thirty-five percent.²⁴ This progressive promotion of wind energy has fueled Iowa to become the state with the second most cumulative wind power capacity in operation or under construction at approximately 2,810 megawatts.²⁵

The growth of Iowa's wind power capacity has been accompanied by new investments, jobs and business opportunities within the wind energy industry across the state. Currently, ten major companies have opened wind turbine component manufacturing facilities in Iowa.²⁶ With these facilities, Iowa is one of only two states to manufacture every component needed for a wind turbine.²⁷ These facilities have also provided almost \$250 million in initial investment, and when fully operational, they will directly employ nearly 2,000 people.²⁸

In addition to the manufacturing of wind turbine components, installation and maintenance of wind turbines provides an additional revenue source for the state. Current installations in Iowa produce approximately \$500 million in local tax revenue and an additional \$100 million in royalty payments for landowners.²⁹

20. *Id.*

21. *Id.*

22. RESOURCE GUIDE, *supra* note 7, at 13.

23. Office of Energy Efficiency and Renewable Energy, U.S. Dep't of Energy, Installed U.S. Wind Capacity and Wind Project Locations, http://www.eere.energy.gov/windandhydro/windpoweringamerica/wind_installed_capacity.asp (last visited Apr. 19, 2009).

24. *Id.* (stating in 2006, Iowa had a wind power capacity of 932).

25. Am. Wind Energy Ass'n, U.S. Wind Energy Projects, <http://www.awea.org/projects/> (last visited Apr. 19, 2009).

26. See Chet Culver, *Iowa: The Nation's Capital for Renewable Energy Careers*, ICOSA MAG., Mar./Apr. 2009, at 88, 88-89 (the companies are Clipper Windpower, John Deere Wind Energy, Siemens Power Generation Wind Power, Acciona Energy North America, TPI Composites, Sector 5 Technologies, Heartland Energy Systems, Trinity Structural Towers, Generation Repair and Service, and Elevadores Goian).

27. Iowa Dep't of Econ. Dev., Renewable Energy, http://www.iowalifechanging.com/business/renewable_energy.html (last visited Apr. 19, 2009).

28. Jeff Rossate, Iowa Dep't of Econ. Dev., Wind Energy in Iowa (May 14, 2008), available at <http://www.iawind.org/presentations/idedwind051408.pdf>.

29. *Id.*

B. Biomass

Biomass, as a renewable energy source, represents energy from organic material, including crops, wood, animal by-products, residues, and wastes.³⁰ Biomass can be separated into three main categories: biofuels, bioproducts, and methane recovery.

1. Biofuels

Biofuels are sources of energy that can replace traditional, petroleum-based fuel in vehicles.³¹ This includes both ethanol and biodiesel.³²

Ethanol is produced by refining or milling corn into starch and then converting the starch into glucose through a process called saccharification.³³ The glucose is then fermented, distilled, purified and mixed with gasoline for vehicle fuel.³⁴ Although ethanol has long been considered the “corn” fuel, ethanol can also be developed from other cellulosic feedstocks, including wood waste, switchgrass, straw, corn stover, crop residues and other plant materials.³⁵ With cellulosic ethanol, fermenting, distilling, purifying and mixing are all the same as with corn-based ethanol; rather, the sole difference is that cellulose chains must first be converted to sugars by hydrolysis before conversion to ethanol can occur.³⁶

Iowa is the largest producer of ethanol in the United States, representing approximately twenty-six percent of all ethanol produced.³⁷ Iowa has twenty-eight ethanol plants with capacity of producing 2,059 million gallons per year.³⁸ This is more than double Illinois, the next highest producing state.³⁹ In addition, Iowa is in the process of constructing or expanding five more ethanol production facilities.⁴⁰ When completed, Iowa will have an additional 700 million gallons of new annual production capacity.⁴¹

30. RESOURCE GUIDE, *supra* note 7, at 6.

31. *Id.* at 29.

32. *Id.*

33. *Id.* at 31.

34. *Id.*

35. *Id.*

36. *Id.*

37. Energy Info. Admin., State Energy Profiles: Iowa, http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=IA (last visited Apr. 19, 2009).

38. *Id.*

39. *Id.*

40. Iowa Renewable Fuels Ass'n, Iowa Renewable Fuels – At a Glance, <http://www.iowarfa.org/ataglance.php> (last visited Apr. 19, 2009).

41. *Id.*

Biodiesel is commonly produced from soybean oil, and is commonly used in heavy-duty transportation vehicles such as trucks, buses, and farm equipment.⁴² Along with the increase in ethanol production, Iowa has seen a dramatic increase in biodiesel production.⁴³ In 2002, Iowa had only two biodiesel production facilities.⁴⁴ However, by 2008, Iowa had increased to fourteen biodiesel refineries with nearly 320 million gallons of annual production capacity.⁴⁵ Furthermore, Iowa has two biodiesel refineries under construction with an estimated thirty-five million gallons of new annual production capacity.⁴⁶

Like wind energy, Iowa's growth in biofuels has led to significant growth in capital and jobs within the biofuels industry across the state. It is estimated that for every ethanol job, there is a linkage to approximately 4.38 additional jobs in the rest of the Iowa economy.⁴⁷ As a result, it is estimated that Iowa's biofuels industry supports nearly 83,000 jobs generating \$2.8 billion in household income for Iowa families.⁴⁸ The state also benefits by receiving about \$576 million in corporate and personal income and sales tax revenue.⁴⁹ Overall, the biofuels industry adds about \$10.9 billion to Iowa's gross domestic product.⁵⁰

2. Bioproducts

Bioproducts are renewable plant-based manufactured industrial and consumer goods that can replace petroleum-based materials.⁵¹ Bioproducts industrial and consumer goods include polymers, lubricants, solvents, adhesives, herbicides, and pharmaceuticals.⁵²

In 2003, petroleum and natural gas dominated the U.S. economy as plant matter only provided about seven percent of inputs to organic chemical prod-

42. RESOURCE GUIDE, *supra* note 7, at 33.

43. Iowa Renewable Fuels Ass'n, *supra* note 40.

44. RESOURCE GUIDE, *supra* note 7, at 33.

45. Iowa Renewable Fuels Ass'n, *supra* note 40.

46. *Id.*

47. DAVID SWENSON, IOWA STATE UNIV., THE ECONOMIC IMPACT OF ETHANOL PRODUCTION IN IOWA 8 (2008), http://www.econ.iastate.edu/research/webpapers/paper_12865.pdf.

48. JOHN M. URBANCHUK, IOWA RENEWABLE FUELS ASS'N, CONTRIBUTION OF THE BIOFUELS INDUSTRY TO THE ECONOMY OF IOWA 2 (2009), *available at* <http://www.iowarfa.org/documents/2008IowaBiofuelsEconomicImpact.pdf>.

49. *Id.*

50. *Id.*

51. RESOURCE GUIDE, *supra* note 7, at 26.

52. MARK PASTER ET AL., U.S. DEP'T OF ENERGY, INDUSTRIAL BIOPRODUCTS: TODAY AND TOMORROW 27 (2003), *available at* <http://www.brdisolutions.com/pdfs/BioproductsOpportunitiesReportFinal.pdf>.

ucts.⁵³ However, if this dominance can be overcome, the value of bioproducts has been estimated to be about eight billion dollars per year.⁵⁴ This shows the potential for bioproducts is substantial, most notably the plastics market, which has an annual production of 101.1 billion pounds.⁵⁵

3. *Methane Recovery*

Methane recovery is a renewable energy technology that helps livestock operations and landfills turn waste into assets by capturing biogas from bacteria during the decomposition of organic materials in an anaerobic or oxygen-free environment.⁵⁶ Biogas contains approximately sixty to eighty percent methane, which can be used to power an engine generator to produce electricity or to operate a boiler for heat.⁵⁷ In addition to producing energy, methane recovery helps limit pollution by reducing odors, methane emissions (a greenhouse gas), and surface and groundwater contamination.⁵⁸

As a leader in many agricultural categories, methane recovery from livestock offers a substantial energy source for Iowa. In 2001, Iowa had almost 93,500 farms.⁵⁹ These farms comprised of 3,306,618 feedlot cattle, 222,142 dairy cows, 14,651,919 swine, 25,894,058 poultry layers and broilers, and 2,552,624 turkeys.⁶⁰ These animals produced nearly 24,668 tons of total solids per day.⁶¹ If captured, the daily technical potential energy capacity from this amount of waste is approximately 94.4 megawatts.⁶²

The first farm-based anaerobic methane recovery system installed in the United States was on a small family-farm outside of Mount Pleasant, Iowa in 1972.⁶³ Since that time technologies have improved, but implementation of methane recovery systems remains expensive and continues to be site-specific and

53. *Id.* at 12.

54. *Id.* at 3.

55. *Id.* at 27.

56. Paul Miller, *Methane Recovery from Manure: Control Odor and Produce Energy*, ODOR & NUTRIENT MGMT., Fall 1999, available at <http://www.extension.iastate.edu/Pages/communications/EPC/F99/methane.html>.

57. *Id.*

58. *Id.*

59. NAT'L AGRIC. STATISTICS SERV., USDA, FARMS AND LAND IN FARMS 4 (2002).

60. LORI BIRD ET AL., IOWA RENEWABLE RESOURCE ASSESSMENT 7 tbl. 8 (2005).

61. *Id.*

62. *Id.*

63. Miller, *supra* note 56.

dependent upon factors such as the type and amount of livestock, manure management methods, and permitting requirements.⁶⁴

Landfill gases can also represent a substantial energy source. Municipal solid waste landfills are the second largest source of human-related methane emissions in the United States, accounting for about twenty-three percent of these emissions in 2006.⁶⁵ Landfill gas energy projects operate either as an electrical generator for on-site use or sale or as a direct-use facility to offset the use of another fuel like natural gas or coal.⁶⁶ Iowa currently has four operational landfill gas energy projects consisting of two direct-use facilities and two electrical generation facilities that provide almost 11.2 megawatts of power to the electrical grid.⁶⁷ In addition, the U.S. EPA Landfill Gas Methane Outreach Program has determined that there are twelve landfills in Iowa that are candidates for possible electric generation as well as eleven landfills that may have the potential for electric generation.⁶⁸ Collectively, the twelve candidate landfills in Iowa have 20,537,237 tons of waste in place.⁶⁹ If converted, this represents a potential generating capacity of 15.98 megawatts.⁷⁰

C. Hydropower

In 2007, Hydropower generated six percent of the U.S. electricity capacity providing 247,510 gigawatt-hours.⁷¹ However, in Iowa, there are only ten hy-

64. See Donald L. Van Dyne & J. Alan Weber, *Biogas Production from Animal Manures: What is the Potential?*, INDUS. USES OF AGRIC. MATERIALS SITUATION & OUTLOOK, Dec. 1994, at 20, 21, available at <http://www.ers.usda.gov/publications/IUS4/ius4.pdf>.

65. See Landfill Methane Outreach Program, EPA, Basic Information, <http://www.epa.gov/lmop/overview.htm> (last visited Apr. 19, 2009).

66. *Id.*

67. LANDFILL METHANE OUTREACH PROGRAM, EPA, LMOP DATABASE – IOWA (2009), <http://www.epa.gov/lmop/proj/xls/lmopdataia.xls>.

68. *Id.*

69. *Id.*

70. See Landfill Methane Outreach Program, EPA, Interactive Conversion Tool, <http://www.epa.gov/landfill/res/converter.htm> (last visited Apr. 19, 2009) (This conversion is based on the assumptions that 300 standard cubic feet per minute of landfill gas is available for utilization for every million tons of waste in place, the methane content of the landfill gas is fifty percent, the methane heat content is 1,012 British thermal units per standard cubic feet methane, and the weighted average heat rate for the land fill gas-fired engines, turbines, and boiler/steam turbines is 11,700 British thermal units per kilowatt hour.).

71. ENERGY INFO. ADMIN., ELECTRIC POWER ANNUAL 2007, 11 tbl. ES1 (2007), available at <http://www.eia.doe.gov/cneaf/electricity/epa/epaxlfiles1.pdf>.

dropower plants with a capacity of only 134,035 kilowatts.⁷² This represents just 1.4% of Iowa's total electricity capacity.⁷³

Iowa's hydropower industry is an aging one. "Many of Iowa's hydropower plants were constructed on dams built in the 1800's, or were constructed in the 1930's and 1940's as part of the Civilian Conservation Corps Program."⁷⁴ As a consequence, "hydroelectric energy production has experienced little growth in Iowa over the last thirty years, as many power plants have become too old to produce electricity economically."⁷⁵

The decline of hydropower in Iowa is compounded by the fact that Iowa's water resources are not conducive to hydropower. First, Iowa's topography is very flat with an elevation change of only 1,190 feet.⁷⁶ This makes maintaining a constant flow of water difficult.⁷⁷ In addition, Iowa's rivers are erratic, and may range from flood stages to bare trickles.⁷⁸ Erratic flow limits hydropower production because all of Iowa's hydropower plants are "run of river" operations,⁷⁹ meaning the plants utilize the natural flow and elevation of the river to generate electricity, requiring little or no impoundment.⁸⁰

However, Iowa still has potential for hydropower production. There are sixty-nine projected sites that have some type of developed impoundment or diversion structure, but no developed hydropower generating capability.⁸¹ If these sites were fully developed, they would have a capacity of 310,027 kilowatts.⁸² Moreover, there are three additional sites which are completely undeveloped, meaning that the site does not have power generation capability nor a developed

72. RESOURCE GUIDE, *supra* note 7, at 17; Daniel Otto & Mark D. Imerman, *Analysis of Energy Supply and Usage in the Iowa Economy* 26 tbl. 11 (Iowa State Univ. Dep't of Econ., Working Paper No. 06001, 2006), available at http://www.econ.iastate.edu/research/webpapers/paper_12493_06001.pdf.

73. Otto & Imerman, *supra* note 72, at 26 tbl. 11.

74. RESOURCE GUIDE, *supra* note 7, at 17.

75. *Id.*

76. Iowa Dep't of Natural Res., Topography of Iowa, <http://www.igsb.uiowa.edu/browse/images/topo3.htm> (last visited Apr. 19, 2009) (The lowest elevation in Iowa is 480 feet above sea level in the southeast corner of the state in Lee County at the confluence of the Des Moines and Mississippi Rivers. The highest elevation is 1670 feet in Osceola County in Northwest Iowa.).

77. RESOURCE GUIDE, *supra* note 7, at 17.

78. *Id.*

79. *Id.*

80. Idaho Nat'l Lab., Hydropower Program: Hydrofacts, http://hydropower.id.doe.gov/hydrofacts/hydropower_facilities.shtml (last visited Apr. 19, 2009).

81. JAMES E. FRANCFORT, U.S. DEP'T OF ENERGY, U.S. HYDROPOWER RESOURCE ASSESSMENT FOR IOWA app. A (1995), available at <http://www.osti.gov/bridge/servlets/purl/228414-RMkWbs/webviewable/228414.pdf>.

82. *Id.*

impoundment or diversion structure.⁸³ If these sites were also fully developed, Iowa could increase its capacity an additional 29,980 kilowatts.⁸⁴

As these statistics show, by creating a renewable energy portfolio based around Iowa's natural strengths, Iowa has successfully cultivated a blossoming renewable energy industry. It is this blossoming industry that the Iowa Power Fund must seek to further develop.

III. IOWA'S COMMITMENT TO RENEWABLE ENERGY

Even prior to the Iowa Power Fund, the State of Iowa had nurtured renewable energy by dedicating itself to the promotion, expansion, and use thereof. The State's commitment is founded in all levels of its government, as seen through the enactment of several groundbreaking renewable energy policies, including a renewable portfolio standard, Executive Order 41, and alternative energy purchase programs.

A. Renewable Portfolio Standard

A renewable portfolio standard is a legislative policy requiring electricity providers to generate or obtain a specific percentage of their power from renewable energy resources.⁸⁵ In 1991, Iowa became the first state to enact a renewable portfolio standard.⁸⁶ Since then, twenty-four states plus the District of Columbia have enacted renewable portfolio standards.⁸⁷

Iowa's standard requires the state's two investor-owned utilities⁸⁸ to purchase 105 megawatts of electricity produced from renewable resources.⁸⁹ Unfor-

83. *Id.*

84. *Id.*

85. Office of Energy Efficiency and Renewable Energy, U.S. Dep't of Energy, States With Renewable Portfolio Standards, http://www.eere.energy.gov/states/maps/renewable_portfolio_states.cfm (last visited Apr. 19, 2009) [hereinafter States With Renewable Portfolio Standards].

86. BARRY G. RABE, PEW CTR. ON GLOBAL CLIMATE CHANGE, RACE TO THE TOP: THE EXPANDING ROLE OF U.S. STATE RENEWABLE PORTFOLIO STANDARDS 3 (2006), <http://www.pewclimate.org/docUploads/RPSReportFinal.pdf>.

87. States with Renewable Portfolio Standards, *supra* note 85.

88. See IOWA ADMIN. CODE r. 199-15.11(1) (2009) (stating that there are only two investor-owned utilities in Iowa, MidAmerican Energy and Interstate Power and Light, a subsidiary of Alliant Energy).

89. IOWA CODE § 476.44(2) (2007); see also IOWA ADMIN. CODE r. 199-15.11(1)(2009) (requiring MidAmerican Energy to provide 52.57% or 55.2 megawatts of Iowa's peak demand, while Interstate Power and Light is required to provide 47.43% or 49.8 megawatts of Iowa's peak demand).

tunately, Iowa's renewable portfolio standard is no longer a factor in the promotion of renewable energy resources, because it has not been updated to reflect the advances already made by the utility companies. The 55.2 megawatts required from MidAmerican Energy is approximately one percent of their total accredited net generating capacity of 5,304 megawatts,⁹⁰ while the 49.7 megawatts required from Alliant's subsidiary, Interstate Power and Light, is slightly less than one percent of their total generation output of over 5,000 megawatts.⁹¹

Iowa has made recent attempts to update its renewable portfolio standard. In 2007, a Senate bill attempted to provide that an electric utility shall be required to own or purchase ten percent of its total annual Iowa retail electric sales from alternative energy production facilities or small hydro facilities by December 31, 2010.⁹² This percentage is increased to fifteen percent by December 31, 2015, and to twenty percent by December 31, 2020.⁹³ However, this bill was tabled in the Commerce Subcommittee and never reached the floor for a vote.⁹⁴ Despite support from Governor Culver,⁹⁵ the Senate's renewed attempt to update Iowa's renewable portfolio standard in the 2008 session also failed to reach the floor for a vote.⁹⁶

Iowa must update its renewable portfolio standard because it promotes the same energy, environmental, and economic benefits as the Iowa Power Fund. Renewable portfolio standards guarantee a market for electricity generated from renewable energy resources, thereby helping to stimulate market and technological advances, assisting renewable energy in becoming more competitive with conventional forms of electric power, and increasing the renewable energy industry's chance at sustainability.⁹⁷ Furthermore, an updated renewable portfolio standard will help show Iowa's unfaltering support for renewable energy and allow Iowa to remain a leader in renewable energy production.

90. MidAmerican Energy Co., Facts at a Glance, <http://www.midamericanenergy.com/html/aboutus2.asp> (last visited Apr. 19, 2009).

91. Alliant Energy Corp., Electric Power Generation, <http://www.alliantenergy.com/UtilityServices/UtilityRatesFacts/014819> (last visited Apr. 19, 2009).

92. S. File 241, 82nd Gen. Assem., Reg. Sess. (Iowa 2007).

93. *Id.*

94. *Id.*

95. Governor Chet Culver, Condition of the State Address (Jan. 15, 2008), *available at* <http://www.governor.iowa.gov/administration/speeches/080115-condition-of-the-state.pdf>.

96. S. File 2071, 82nd Gen. Assem., Reg. Sess. (Iowa 2008).

97. Am. Wind Energy Ass'n, Renewable Portfolio Standard, http://www.awea.org/policy/renewables_portfolio_standard.html (last visited Apr. 19, 2009).

B. *Executive Order 41*

The executive branch has further sought to have the state government assume a leadership role in renewable energy use and development.⁹⁸ On April 22, 2005, Governor Tom Vilsack issued Executive Order 41.⁹⁹ Order 41 was a milestone for Iowa as it provided the state an opportunity to lead by example through the initiation of energy efficiency programs within state-owned facilities, the purchase of low life cycle cost equipment within state facilities, and the requirement that ten percent of the state's electric bills be provided by alternative energy sources.¹⁰⁰ Further, Order 41 requires state agencies to ensure that one hundred percent of their non-law enforcement, light duty vehicles are alternative fuel vehicles or hybrid electric vehicles, and that the state's flexible fuel vehicles use E85 ethanol whenever available.¹⁰¹

C. *Alternative Energy Purchase Programs*

Iowa citizens have also directly helped spur the promotion and use of renewable energy through alternative energy purchase programs.

Iowa utility companies are required to offer alternative energy purchase programs to their customers, based on energy produced by alternate energy production facilities in Iowa.¹⁰² These programs are voluntary, with the choice whether to participate made on an individual basis, not collectively through the customers' utilities' governing body.¹⁰³ By establishing these voluntary programs, Iowa brings the development of renewable energy to a personal level by allowing its citizens to have direct control over its funding.

In compliance with this legislation, MidAmerican Energy instituted the Renewable Advantage Program, while Interstate Power and Light Company instituted the Second Nature Program.

98. Exec. Order No. 41 (April 22, 2005), available at http://publications.iowa.gov/archive/00002619/01/EO_41.pdf.

99. *Id.*

100. *Id.*

101. *Id.*

102. IOWA CODE § 476.47 (2007); see also *id.* § 476.42(1)(a) (stating that an alternative energy production facility is a solar facility, wind turbine, waste management, resource recovery, refuse-derived fuel, agricultural crops or residues, or wood-burning facility).

103. In re Alternative Energy Purchase Programs, 228 P.U.R. 4th 570, 571 (Iowa Util. Bd. Aug. 29, 2003).

MidAmerican's Renewable Advantage Program has resulted in \$173,000 in voluntary customer contributions being used to help fund a portion of a 0.5 megawatt wind turbine that was installed on the Iowa State Fairgrounds.¹⁰⁴

Interstate Power and Light Company's Second Nature Program has more than 16,500 residential and business customers in Iowa, Minnesota, and Wisconsin.¹⁰⁵ During 2008, Second Nature participants supported more than fifty-eight million kilowatt-hours of renewable energy.¹⁰⁶

These legislative, executive, and citizen-led policies show Iowa's continued commitment to renewable energy and technology. Further, they demonstrate Iowa's persistent approach to be a national leader and a laboratory for the development and implementation of renewable energy policies.

IV. THE IOWA POWER FUND

A. *The Beginnings*

The Iowa Power Fund started during candidate Chet Culver's run for governor in 2006 as a main part of his "Eight Point Culver Plan to Fuel Iowa's Future."¹⁰⁷ Culver advocated for the \$100 million Iowa Power Fund proclaiming that it would put "Iowa on the map for the 'Next Generation' power and fuel investors and entrepreneurs" and leverage more than \$250 to \$300 million in new private sector investments in Iowa.¹⁰⁸

As a central campaign promise, the Iowa Power Fund helped Culver gain support across Iowa, and set him on course for his ultimate election as the state's fortieth governor on January 12, 2007.¹⁰⁹ In his inaugural address, Governor Culver reemphasized his promise declaring that it was Iowa's time "to become the first state in the nation to declare energy independence!"¹¹⁰

104. MidAmerican Energy Co., Renewable Advantage: Just the Facts, <http://www.midamericanenergy.com/wind/pdf/radvfacts.pdf> (last visited Apr. 19, 2009).

105. Alliant Energy Corp., Facts about Second Nature, <http://www.alliantenergy.com/Environmental/SecondNature/010561?isSecondary=1&prtFriendly=true> (last visited Apr. 19, 2009).

106. *Id.*

107. See Chet Culver, Leading Iowa Forward: Building on our Strengths in Agriculture, Manufacturing & Education 2 (2006), <http://www.chetculver.com/docs/energyplan.pdf>.

108. *See id.*

109. See *Culver Takes Oath as Iowa's 40th Governor*, KCCI.COM, Jan. 12, 2007, <http://www.kcci.com/news/10732902/detail.html>.

110. Governor Chet Culver, Inaugural Address (Jan. 12, 2007), available at <http://www.governor.iowa.gov/administration/speeches/070112-inaugural.php> [hereinafter Inaugural Address].

Governor Culver launched the Iowa Power Fund on March 29, 2007.¹¹¹ The Iowa Power Fund was introduced to the Iowa House of Representatives on April 19, 2007, and was quickly passed by a vote of eighty-eight to ten on April 24, 2007.¹¹² The Iowa Senate immediately followed passing the bill thirty-nine to eleven on April 27, 2007.¹¹³ With Governor Culver's signature, the Iowa Power Fund became law on May 23, 2007.¹¹⁴

The Iowa Power Fund is historic legislation, not only because it establishes an actual agency to coordinate policies concerning renewable energy,¹¹⁵ but because it is one of the largest state renewable energy funds in the nation.¹¹⁶ The Iowa Power Fund will allow the Office of Energy Independence to appropriate almost \$100 million dollars in grants and loans over a four year span.¹¹⁷ In addition, the Iowa Power Fund does not provide funding for any specific projects or industries. According to Governor Culver, this was a crucial aspect of the Iowa Power Fund because the energy field is "one of the most dynamic and rapidly changing," and Iowa's "priorities will change and. . .will need to adapt to the realities of the market."¹¹⁸

The Iowa Power Fund was enacted to:

Increases the research, development, production, and use of biofuels and other sources of renewable energy, improve energy efficiency, and reduce greenhouse gas emissions, and shall encourage, support, and provide for research, development, commercialization, and the implementation of energy technologies and practices . . . to sustain the environment and develop business in this state.¹¹⁹

To understand how the Iowa Power Fund is to achieve this legislative mandate and maintain Iowa's leadership and commitment in the renewable energy industry, we first must understand the infrastructure it developed and how this infrastructure is used to encourage the growth of renewable energy.

111. Governor Chet Culver, Power Fund Rollout Address (Mar. 29, 2007), available at <http://www.governor.iowa.gov/administration/speeches/070329-power.php> [hereinafter Power Fund Rollout Address].

112. H. File 918, 82nd Gen. Assem., Reg. Sess. (Iowa 2007) (enacted).

113. *Id.*

114. *Id.*

115. IOWA CODE § 469.2 (2007).

116. Compare *id.* § 469.9(2), with KY. REV. STAT. ANN. § 154.20-410 (West 2007), MASS. GEN. LAWS ch. 40J, § 4E (2008), FLA. STAT. § 377.804 (2008), HAW. REV. STAT. § 304A-2169 (2007), and DEL. CODE ANN. tit. 29, § 8057 (2007).

117. IOWA CODE § 469.10(1) (2007).

118. Power Fund Rollout Address, *supra* note 111.

119. IOWA CODE § 469.9(2) (2007).

B. *The Office of Energy Independence*

With the enactment of the Iowa Power Fund, the Office of Energy Independence became the first legislatively created state agency in the nation with the sole purpose of coordinating state activities concerning energy independence.¹²⁰ By making the Office of Energy Independence its own distinct and comprehensive agency, Iowa has echoed its commitment and desire to be at the forefront of renewable energy policy.

The mission of the Office of Energy Independence clearly states that its purpose is to “achieve a clean and sustainable future by providing leadership through education, research, planning, and investment” as well as “developing policies and resources to produce market transformation.”¹²¹ The Office of Energy Independence is able to meet this mission through the efforts of a Director, the Power Fund Due Diligence Committee, and the Power Fund Board.

C. *The Director of the Office of Energy Independence*

The Office of Energy Independence is led by a governor-appointed director who is subject to confirmation by the senate, and serves at the pleasure of the governor.¹²² The governor bases his selection primarily upon administrative ability and knowledge concerning renewable energy, renewable fuels, and energy efficiency.¹²³

The Director of the Office of Energy Independence is charged not only with the responsibility of coordinating the Iowa Power Fund administration, but also coordinating and monitoring all existing state and federal renewable energy, renewable fuels, and energy efficiency grants, programs, and policies.¹²⁴ The Director must also lead outreach and public education efforts, pursue new research and investment funds from federal and private sources, and establish performance measures for determining the effectiveness of renewable energy, renewable fuels, and energy efficiency efforts.¹²⁵

The Director is also charged with the duty of developing Iowa's Energy Independence Plan.¹²⁶ The Director generates the Iowa Energy Independence

120. *Id.* § 469.2.

121. Iowa Office of Energy Independence, Iowa Plan for Energy Independence: Charting Iowa's Course in the New Energy Economy 18 (2007), http://www.energy.iowa.gov/OEI/docs/Final_Plan.pdf.

122. IOWA CODE § 469.3(1) (2007).

123. *Id.*

124. *Id.* § 469.3(2)(b), (e).

125. *Id.* § 469.3(2)(c), (d), (g).

126. *Id.* § 469.3(2)(i).

Plan with the assistance of the Department of Natural Resource, and in association with public and private partners, including representatives from the energy industry, environmental interests, agricultural interests, business interests, and members of the general public.¹²⁷ By allowing the Director to bring together a broad-based coalition of interested parties; the Iowa Power Fund seeks to ensure the Director receives and considers all possible energy policies, which in turn provides the Iowa Power Fund insulation from a singular political agenda. To provide further insulation, the Energy Independence Plan must be approved by the Power Fund Board.¹²⁸

The purpose of the Iowa Energy Independence Plan is to “provide cost-effective options and strategies for reducing the state’s consumption of energy, dependence on foreign sources of energy, use of fossil fuels, and greenhouse gas emissions” so that Iowa may “achiev[e] energy independence from foreign sources of energy by the year 2025.”¹²⁹

D. The Power Fund Due Diligence Committee

The Due Diligence Committee consists of seven members.¹³⁰ The members include two members of the Power Fund Board designated by the chairperson, as well as one member designated by each of the following: the Director of the Office of Energy Independence, the President of the State Board of Regents, the Director of the Department of Economic Development, the Director of the Iowa Energy Center, and a single bioscience development organization.¹³¹

The Due Diligence Committee was created to review applications for financial assistance from the Iowa Power Fund.¹³² The Committee’s purpose is to determine whether a proposed project is practical, economically feasible, and furthers the goals of the Iowa Power Fund.¹³³ After a thorough review, the Due Diligence Committee provides a recommendation to the Power Fund Board regarding any proposed expenditures.¹³⁴

127. *Id.* § 469.4(1).

128. *Id.*

129. *Id.* § 469.4(2).

130. *Id.* § 469.7(1).

131. *Id.* § 469.7(1)(a)-(f).

132. *Id.* § 469.7(1).

133. *Id.*

134. *Id.*

E. *The Power Fund Board*

The Power Fund Board has eighteen members.¹³⁵ The members comprise of leaders of other agencies including the Chairperson of the Utilities Board, the Director of the Department of Economic Development, the Director of the Department of Natural Resources, and the Secretary of Agriculture.¹³⁶ The Governor also appoints seven members, subject to senate confirmation, representing nonpublic organizations or businesses, or research institutions.¹³⁷ Finally, the remaining seven members serve *ex officio*, or in a non-voting capacity.¹³⁸ These members include two members of the Senate, one appointed by the majority leader and the other appointed by the minority leader, two members from the house, with one appointed by the speaker, and the other by the minority leader, and single members appointed from the state board of regents, the community colleges, and the independent colleges and universities.¹³⁹

Upon receiving recommendations from the Due Diligence Committee, the Power Fund Board has the final authority to approve, defer, or deny grants, loans, or investments and other financial incentives made from the fund.¹⁴⁰

V. DETERMINING ELIGIBILITY UNDER THE IOWA POWER FUND

Eligible applicants for the Iowa Power Fund include entities conducting, proposing, or partnering for business, research, or programs in Iowa.¹⁴¹ To make the Iowa Power Fund open to a wide variety of applicants, "entities" was given a very broad definition to include, but not be limited to "businesses, nonprofit organizations, educational institutions, units of state and local government, and [even] individuals."¹⁴² Further, an entity may be a single person or a collaboration of multiple groups.¹⁴³

To determine those most fitting of financial assistance from the Iowa Power Fund, the Office of Energy Independence has established a two-stage process in assessing viable applicants.¹⁴⁴

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135. *Id.* § 469.6(1).
 136. *Id.* § 469.6(1)(a)-(d).
 137. *Id.* § 469.6(1)(e).
 138. *Id.* § 469.6(1)(f).
 139. *Id.* § 469.6(1)(f)(1)-(7).
 140. *Id.* § 469.6(5)(a).
 141. IOWA ADMIN. CODE r. 350-4.5 (2009).
 142. *Id.* r. 350-1.1.
 143. *Id.* r. 350-4.5.
 144. *See id.* r. 350-4.8.

A. Pre-Application

All eligible applicants seeking financial assistance must first submit an elaborate pre-application.¹⁴⁵ The pre-application begins with an executive summary, which includes a statement of the problem being addressed, the goals and objectives of the project, a budget summary with the sources and the uses of the funds, and an evaluation of the project, specifically, the expected return-on-investment in jobs, environmental impact, and financial savings.¹⁴⁶

The pre-application then requires a description of how the project meets the eligibility criteria for financial assistance.¹⁴⁷ The eligibility criteria are split into both general criteria¹⁴⁸ and categorical criteria.¹⁴⁹

In order to meet the general criteria, all applicants are required to show documentation relating to the actual or potential development of the utilization of crops and products grown or produced in the state that maximizes their value, the reduction of greenhouse gas emissions, the commercialization of technology and product development for sale in national and international markets, the alternative and renewable energy and increased energy efficiency, and the private or federal matching funds.¹⁵⁰

After a determination of the general criteria, the applicant must then determine whether the project can be categorically summarized as research, commercialization, education, or an undesignated project.¹⁵¹ Each category requires its own distinct documentation.¹⁵²

For assistance in a research project, documentation must show the technical feasibility of the proposal, the extent to which the proposed research builds on already existing research, and the extent to which the proposed research meets a market need and demonstrates viability for commercialization.¹⁵³ A commercialization project requires documentation showing the extent to which the technology has been proven, the technology sought to be commercialized, and the current scale-up status of the project.¹⁵⁴ An education project only requires do-

145. *Id.* r. 350-4.8(1).

146. Iowa Office of Energy Independence, Pre-Application for Iowa Power Fund 2 (Jan. 11, 2008), http://www.energy.iowa.gov/Legislation/docs/preapp_new.doc [hereinafter Pre-Application].

147. *See* IOWA ADMIN. CODE r. 350-4.6 (2009).

148. *Id.* r. 350-4.6(1).

149. *Id.* r. 350-4.6(2)-(5).

150. *Id.* r. 350-4.6(1).

151. Pre-Application, *supra* note 146.

152. IOWA ADMIN. CODE r. 350-4.6(2)-(5) (2009).

153. *Id.* r. 350-4.6(2).

154. *Id.* r. 350-4.6(3).

documentation of the target audience and an estimate of the energy savings possible if the target audience implements the methods presented.¹⁵⁵ Applicants seeking funding for undesignated projects need only include information that explains how the project meets the statutory goals of the Iowa Power Fund.¹⁵⁶

Once a pre-application is received by the Office of Energy Independence, the Director and the Due Diligence Committee makes a determination whether the project appears to meet the eligibility criteria and statutory goals of the fund.¹⁵⁷ If the proposal is satisfactory, then the second stage of the application process is initiated by requesting the applicant to complete a full application.¹⁵⁸

B. Full Application

A full application calls for all of the information in the pre-application, as well as a description of all sources and uses of funding, a submission of a business plan, and a release of information to permit the agents of the Iowa Power Fund to reasonably evaluate the application.¹⁵⁹ Additionally, the Power Fund Board may request financial information including information about the applicant's owners, investors, and business structure.¹⁶⁰

Full applications are submitted in writing and are followed by an oral presentation to the Due Diligence Committee.¹⁶¹ The full application is then reviewed by the Power Fund Board, who makes the final determination on financial assistance.¹⁶²

In addition to the detailed documentation required during the application process, the Office of Energy Independence, the Due Diligence Committee, or the Power Fund Board may at any time request additional information or other caveats be satisfied before further review will be undertaken.¹⁶³ Caveats can be either "no, but" or "yes, if."¹⁶⁴ The distinction between these two caveats can be substantial. If a "no, but" caveat is met, the application will revert back to the

155. *Id.* r. 350-4.6(4).

156. *Id.* r. 350.4.6(5).

157. *Id.* r. 350-4.8(1).

158. *Id.*

159. *Id.* r. 350-4.10(3), (5), (8).

160. *Id.* r. 350-4.10(9).

161. See Iowa Office of Energy Independence, Iowa Power Fund Application Process, <http://www.energy.iowa.gov/applications/docs/Visio-Applicationprocess.pdf> (last visited Apr. 19, 2009) [hereinafter Iowa Power Fund Application Process].

162. IOWA CODE § 469.6(5)(a) (2007).

163. IOWA ADMIN. CODE r. 350-4.8(2) (2009).

164. Iowa Power Fund Application Process, *supra* note 161.

agency group that requested the caveat to be reviewed again.¹⁶⁵ On the other hand, if a “yes, but” caveat is met, it proceeds immediately to the next step in the application process.¹⁶⁶

The Power Fund Board or the Due Diligence Committee may also request an applicant obtain a technical, scientific or financial review of the proposal.¹⁶⁷ A review must be made by a reviewer recommended by or approved by the Power Fund Board or Due Diligence Committee and may be required to be wholly or partially funded at the applicant’s expense.¹⁶⁸

C. Concerns within the Application Process

There is no doubt that the detailed application process allows the Office of Energy Independence, the Due Diligence Committee, and the Power Fund Board to receive the most information possible so that they can make an informed decision. However, this detailed application process can have many potential unintended consequences. A long and in-depth application may prevent small entrepreneurs and individuals from applying. The time, effort, and research required on an application may easily outweigh the benefits of a project that only provides for a limited class. Further, these small groups may be deterred by the possibility of being required to pay for a technical, scientific or financial review on top of the costs associated with the pre and full applications. Another possible consequence is that the more detailed the applications are, the more time that must be spent analyzing their feasibility. This increases the bureaucracy in the Office of Energy Independence, which may limit and frustrate one of the crucial aspects of the Iowa Power Fund: its flexibility to “change and . . . adapt to the realities of the market.”¹⁶⁹

However, these concerns can be dismissed by looking at the purpose and intent of the Iowa Power Fund. First, the application process is a necessary evil to ensure that the Iowa Power Fund meets the dual statutory goals of “sustain[ing] the environment *and* develop[ing] business in the state.”¹⁷⁰ Therefore, although many individual and small-scale projects may help sustain the environment, they may not have the necessary impact to help develop business within the state. As a result, the detailed application process ensures that only the projects with the largest potential impact on the environment and business within

165. *Id.*

166. *Id.*

167. IOWA ADMIN. CODE r. 350-4.8(3) (2009).

168. *Id.*

169. Power Fund Rollout Address, *supra* note 111.

170. IOWA CODE § 469.9(2) (2007) (emphasis added).

the state are considered in full and undertaken. Further, although the detailed application process may increase the amount of time taken to analyze a project's feasibility, it can actually decrease the bureaucracy in the Office of Energy Independence. By having a two-stage application process, the Director and Due Diligence Committee are able to funnel out pre-applications that do not meet the eligibility criteria and statutory goals of the fund. Therefore, the Power Fund Board is only analyzing the most credible projects, thereby lessening bureaucratic delays.

Another issue raised by the detailed application process is possible confidentiality and privacy concerns when an applicant must submit trade secrets in their application or when an Iowa Power Fund agent requests financial information pertaining to business owners and investors.

To mitigate any confidentiality or privacy concerns, an exception from Iowa's Open Records Law¹⁷¹ may be utilized for information possessed by the Office of Energy Independence, the Due Diligence Committee, and the Power Fund Board.¹⁷² Under this exception, if information contained in an application is determined to be confidential then it shall remain confidential throughout the entire process, including while the agency is reviewing an application, negotiating terms with an applicant, and even following the signing of a contract with a successful applicant.¹⁷³

To determine whether information is confidential, the Office of Energy Independence has established a process by which any person who would be aggrieved or adversely affected by disclosure can request that a record be withheld from public inspection.¹⁷⁴ These requests must be made in writing and must set forth the legal and factual basis justifying the need for confidentiality.¹⁷⁵ If the request is granted, a redacted record and a copy of the decision to grant confidentiality will be made available in lieu of the original record.¹⁷⁶ However, if a request is denied, the applicant may withdraw the record from the application,¹⁷⁷ or seek injunctive relief.¹⁷⁸

171. *Id.* § 22.2(1) (providing every person "the right to examine and copy a public record and to publish or otherwise disseminate a public record or the information contained in a public record").

172. *Id.* § 469.6(6)(b).

173. *Id.*

174. IOWA ADMIN. CODE r. 350-51.5(1) (2009).

175. *Id.* r. 350-51.5(2).

176. *Id.* r. 350-51.5(5).

177. IOWA CODE § 469.6(6)(d) (2007).

178. IOWA ADMIN. CODE r. 350-51.5(6) (2009).

VI. ASSISTANCE FROM THE IOWA POWER FUND

If a party survives the application process and is approved for financial assistance, they still must negotiate the terms of the agreement with the Power Fund Board.¹⁷⁹

Financial assistance from the Iowa Power Fund may come in the form of loans, forgivable loans, grants, investments, loan guarantees, and any other form of assistance the Power Fund Board finds appropriate to the application.¹⁸⁰ With such agreements, the Power Fund Board is capable of including provisions requiring interest payments, loan repayments, and royalty payments.¹⁸¹ Further, these payments are re-deposited in the Iowa Power Fund so they can be reinvested in future proposals.¹⁸²

The Iowa Power Fund is a venture-capitalist fund seeking to make money available for projects with exceptional growth potential.¹⁸³ Although these projects are usually riskier, Iowa seeks to temper this risk by determining whether the applicant has available financial resources in addition to the Iowa Power Fund its primary factor in determining the amount of financial assistance to provide.¹⁸⁴ An applicant's "available financial resources" may include both private and public funds, any contributions of in-kind resources, and any possible fund-matching.¹⁸⁵

Once the Power Fund Board has determined an amount of financial assistance, the Power Fund Board still has broad discretion to limit how the funds may be used.¹⁸⁶ As a general rule, funds may not be used to purchase land or buildings, and no more than ten percent may be used for indirect costs.¹⁸⁷

In addition, all recipients must report to the Power Fund Board on a periodic basis to show that they are using the money granted effectively.¹⁸⁸ If a recipient fails to in their commitments, the Power Fund Board has the discretion to reclaim any moneys loaned or granted.¹⁸⁹

179. Iowa Power Fund Application Process, *supra* note 161.

180. IOWA ADMIN. CODE r. 350-4.7(1) (2009).

181. IOWA CODE § 469.9(4)(e) (2007).

182. *Id.*

183. *See id.* § 469.9(2) (stating one of the goals of the Iowa Power Fund is to develop businesses, technologies, and practices that can be marketed to the world).

184. *See* IOWA ADMIN. CODE r. 350-4.11(2) (2009).

185. *Id.* r. 350-4.11(2)(a)(1)-(3).

186. *Id.* r. 350-4.7(2).

187. *Id.*

188. IOWA CODE § 469.9(4)(d) (2007).

189. *Id.* § 469.9(4)(c).

VII. CHALLENGES TO THE IOWA POWER FUND

Opponents to the Iowa Power Fund have two central challenges: (1) the fiscal responsibility of the Iowa Power Fund, and (2) the flexibility in its spending.

Former House Minority Leader Christopher Rants (R – Sioux City) argued that the Iowa Power Fund could only receive the requisite spending by increasing taxes, most notably, a new one-dollar per pack cigarette tax.¹⁹⁰ Initial estimates show that the Iowa Power Fund may cause Iowa a significant amount of short-term fiscal stress.¹⁹¹ According to Dave Vaudt, the Auditor of the State of Iowa, despite the projected \$130 million of additional revenue from raising the cigarette and tobacco tax, Iowa will still have a budget deficit of over \$300 million in 2009.¹⁹² Further, Vaudt has warned that a \$764 million, or 12.7 percent, revenue increase would be necessary to cover increased cost commitments.¹⁹³ Although Governor Culver's 2009 budget proposal made significant progress in reducing the spending gap and lowering spending growth, it still called for a 5.7 percent increase in spending over the next year, setting Iowa up with at least a spending gap of \$361 million.¹⁹⁴

Although Rants' concerns are legitimate and deserve acknowledgement, especially in lieu of the additional stresses the floods of 2008 and the concurrent economic recession have caused, they fail to appreciate the long-term planning and long-term mindsets that are the strengths of the Iowa Power Fund. By making the immediate expenditures necessary to promote the renewable energy industry, Iowa will establish the foundation for an industry that can provide a significant return on investment.

There is no doubt that the well-being of rural and small towns in Iowa depend upon the availability of good paying jobs, strong communities, and a healthy natural environment. By encouraging the renewable energy industry to make investments into rural Iowa now, the Iowa Power Fund will help nurture the adolescent renewable energy industry as it continues to grow and develop.

190. Charlotte Eby, *Power Fund OK'd by Iowa House*, QUAD-CITY TIMES, Apr. 25, 2007, at B4.

191. See Press Release, Auditor of State David A. Vaudt, State Auditor Vaudt Reviews Fiscal Year 2008 General Fund Budget (June 6, 2007), http://auditor.iowa.gov/press/Briefing_06-06-07.pdf.

192. *Id.*

193. *Id.*

194. Press Release, Auditor of State David A. Vaudt, State Auditor Reviews Governor's Fiscal Year 2009 Budget (Feb. 12, 2008), http://auditor.iowa.gov/press/Briefing_02-12-08.pdf.

The Iowa Power Fund has also been brought under fire for its flexibility in its spending. Representative Jamie Van Fossen (R – Davenport) believed that the Iowa Power Fund was a bad idea because it was too broad and unfocused.¹⁹⁵

Although the Iowa Power Fund is not riddled with multiple earmarks for specific spending provisions, this does not mean that the Iowa Power Fund lacks guidance. The key to the Iowa Power Fund is its ability to strike a proper balance between flexibility and its fiscal responsibility in its spending.

As discussed previously, the Iowa Power Fund establishes an application process that ensures that the members are provided with the most information possible. This enables the members to whittle down the field of possible recipients to those projects that would provide Iowa the greatest possible long-term benefits, thereby ensuring fiscal responsibility. At the same time, the Iowa Power Fund establishes an infrastructure comprised of the legislative branch, the executive branch and agencies, and industry leaders and professionals.¹⁹⁶ By including as many voices as possible in the decision-making process, the Iowa Power Fund ensures that multiple ideas are brought forth and discussed, thereby providing the requisite flexibility.

VIII. THE FUTURE OF THE IOWA POWER FUND

In order for the Iowa Power Fund to accomplish its goals, the primary focus must be on developing business within the state. This can be done by encouraging new inventions and helping foster additional processing and distribution systems of renewable energy. These activities add value to Iowa's natural resources, which helps substantiate and stabilize regional production.¹⁹⁷

While wind and ethanol have provided the Iowa Power Fund with the foundation needed to promote the continued growth of renewable energy technologies; for the Iowa Power Fund to be successful, it cannot focus solely on wind and ethanol. The present development and production of wind and ethanol provides Iowa with the greatest short-term benefit, but long-term planning must also encourage the development of new technologies within other energy sources, like a self-sustaining closed-loop methane recovery system, ethanol from cellulosic feedstocks, and innovations in the bountiful field of bioproducts. Only through the development of a complete renewable energy portfolio can Iowa truly "become the first state in the nation to declare energy independence!"¹⁹⁸

195. Eby, *supra* note 190.

196. IOWA CODE § 469.4(1) (2007).

197. SWENSON, *supra* note 47, at 1.

198. Inaugural Address, *supra* note 110.

Due to advances in technologies, rural Iowa seemed to be in a freefall of dwindling capital and jobs.¹⁹⁹ However, with innovative laws and a continued commitment to its natural resources, Iowa has used technology to become a national leader in the renewable energy industry restoring capital and jobs to the state. With the \$100 million Iowa Power Fund, Iowa is now reinforcing the renewable energy industry and supporting new and innovative projects to insure that Iowa remains in the forefront of renewable energy policy into the future.

199. See Dirk Johnson, *Population Decline in Rural America: A Product of Advances in Technology*, N.Y. TIMES, Sept. 11, 1990, at A20, available at 1990 WLNR 2932043.