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## Fighting the Good Fight: Why the So-Called “War on Coal” is Beneficial for Pittsburgh’s Future

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## Fighting the Good Fight: Why the So-Called “War on Coal” is Beneficial for Pittsburgh’s Future

James Lee\*

Coal is found everywhere on earth and has been used as an energy source since ancient civilizations realized its immense potential for heating and industrial uses.<sup>1</sup> In the United States, very few, if any, places have been shaped by coal more than the Pittsburgh region. A town does not earn the nickname “The Steel City” without relying heavily on coal. Coal’s impact on Pittsburgh cannot be overstated. Not only did coal rapidly urbanize the area, but it also ushered in unprecedented wealth and new technologies to the Pittsburgh region. These radical and new changes did not come without costs; Pittsburgh quickly became known as “hell with the lid off” for its blazing furnaces and its smoke choking the air.<sup>2</sup> While, certain effects were readily noticeable, such as the smog and grime covered buildings, other even more sinister effects, such as environmental decay and adverse health effects, are just now being understood.

The following article recognizes the massive impact, both positive and negative, of coal on the Pittsburgh region. Part I addresses Pittsburgh’s tumultuous relationship with coal, by discussing both the effects of coal mining and burning in the region, while also addressing emerging health concerns associated with coal. This section also gives background to the issues, both for and against, the use of coal as an energy source. Part II looks at existing and proposed regulations on coal; discusses the so-called “War on Coal” and President Obama’s strides to regulate coal more heavily; and the President’s initiatives to embrace cleaner energy. Part III discusses cleaner and renewable energy options for Pittsburgh and how the region can benefit from the Federal Government’s plan to move away from fossil fuels, especially coal. The article debates the pros and cons of renewable energy on the Pittsburgh region, and argues that although at first the costs may be high, both monetarily and through loss of jobs, the planned sanctions will be advantageous to

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<sup>1</sup> Patrick Charles McGinley & The Honorable Charles H. Haden II, *Climate Change and the War on Coal: Exploring the Dark Side*, 13 VT. J. ENVTL. L. 255, 262 (2011) [hereinafter McGinley & Haden].

<sup>2</sup> *Meet Andrew Carnegie: Welcome to Pittsburgh*, PBS, [http://www.pbs.org/wgbh/amex/carnegie/sfeature/meet\\_pittsburg.html](http://www.pbs.org/wgbh/amex/carnegie/sfeature/meet_pittsburg.html) (last visited Oct. 24, 2013).

Pittsburgh. This section also discusses forthcoming legal issues facing coal-powered plants in the region. The purpose of this article is not to condemn coal or its history with the Pittsburgh area, but rather to advocate a brighter, cleaner future for the region. The hope for the argument, furthered in this article, is that Pittsburgh can be a green energy frontrunner in the future.

## I. PITTSBURGH'S TUMULTUOUS RELATIONSHIP WITH COAL

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Captain Adam Stephen was one of the first explorers to take note of the abundance of coal in Pittsburgh.<sup>3</sup> The Captain noted on his expedition with the then Colonel George Washington, stating: “[m]ost of the hills on both sides of the Ohio are filled with excellent coal and a coal mine was in the year 1760 opened opposite Fort Pitt on the River Monongahela for the use of the Garrison.”<sup>4</sup> Captain Stephen had no way of knowing how exceptional or massive the coal seam was or the impact it would have on the region.<sup>5</sup> Although coal mining in Pittsburgh would begin in the mid-1700s, it would not hit its peak until after the Civil War, with the invention of the incandescent light bulb and adoption of coal-based coke to make steel.<sup>6</sup> With the introduction of these new technologies, coal demand skyrocketed, and with it came coal’s time to power not only Pittsburgh, but also the whole country.<sup>7</sup>

### A. *Coal’s Rise to Dominance in Western Pennsylvania*

Coal was not always the preferred energy source for Western Pennsylvania. Before the massive increase in demand for coal, it was mined and used sparingly, as wood was favored because of its cleanliness and abundance.<sup>8</sup> Yet, as the need for electricity to power the new light bulbs in the late-1800s increased, coal began to be the favored power source.<sup>9</sup> Hydropower was a viable option for some cities and towns, but they were limited by location and water flow.<sup>10</sup> This left coal as the clear winner to generate the power this nation needed to fuel its rapid

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<sup>3</sup> *First Mining of Pittsburgh Coal Historical Marker*, EXPLORE PA HISTORY, <http://explorepahistory.com/hmarker.php?markerId=1-A-2C5> (last visited Oct. 23, 2013).

<sup>4</sup> *Id.*

<sup>5</sup> *Id.*

<sup>6</sup> *Id.*

<sup>7</sup> McGinley & Haden, *supra* note 1, at 264.

<sup>8</sup> *Id.* at 262.

<sup>9</sup> William L. Andreen, *Of Fables and Federalism: A Re-examination of the Historical Rationale for Federal Environmental Regulation*, 42 ENVTL. L. 627, 639 (2012).

<sup>10</sup> *Id.*

modernization.<sup>11</sup> Pittsburgh's abundant coal seam, unlike the large coal seams in northeastern Pennsylvania, which is comprised of anthracite, is made of bituminous coal.<sup>12</sup> The increased need for coal rapidly changed western Pennsylvania.<sup>13</sup> Pittsburgh itself went from being the "Gateway to the West" to the "Iron City," and rural homesteads in the area were abandoned for the hurriedly built mining towns sprouting up all over the region.<sup>14</sup> The once "Great forests of oak, ash, and poplar" were being swiftly cut down in favor of coalmines and mining towns to house the workers.<sup>15</sup> What was once a quiet rural life was gone, in its place were ramshackle houses hastily put together and the simple farming days were replaced by the back-breaking labor and life of coal mining towns.<sup>16</sup>

Coal mining, for better or worse, urbanized the Pittsburgh region at an unprecedented rate.<sup>17</sup> This rapid urban growth brought with it extreme costs, horrendous living conditions in mining towns, extremely dangerous working environments, and poor occupant health.<sup>18</sup> Coal brought wealth and prosperity to the region, but not to everybody. The owners of the mines, more often than not, also owned the towns.<sup>19</sup> The mining companies controlled all aspects of life including: "houses, schools, churches, the stores, everything."<sup>20</sup> This dramatic change of lifestyle was hard on the miners, one miner stated: "[y]ou didn't even own your own soul in those damnable places."<sup>21</sup> Miners were forced to work for currency that was only redeemable at the stores owned by the mining company.<sup>22</sup> While coal was powering the cities and the industries, the miners and their families

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<sup>11</sup> DAVID STRADLING, *SMOKESTACKS AND PROGRESSIVES: ENVIRONMENTALISTS, ENGINEERS, AND AIR QUALITY IN AMERICA, 1881–1951*, at 12 (1999).

<sup>12</sup> Andreen, *supra* note 9, at 639 (stating anthracite is a harder, cleaner burning coal, while bituminous coal is softer and created more smoke).

<sup>13</sup> *Id.*

<sup>14</sup> McGinley & Haden, *supra* note 1, at 266.

<sup>15</sup> *Id.*

<sup>16</sup> RONALD D. ELLER, *MINERS, MILLHANDS, AND MOUNTAINEERS: INDUSTRIALIZATION OF THE APPALACHIAN SOUTH, 1880–1930*, at 161 (Univ. Tenn. Press 1st ed. 1982).

<sup>17</sup> McGinley & Haden, *supra* note 1, at 267.

<sup>18</sup> *Id.* at 268.

<sup>19</sup> *Id.*

<sup>20</sup> *Id.* (citing DAVID ALAN CORBIN, *THE WEST VIRGINIA MINE WARS: AN ANTHOLOGY 1* (Univ. Pitt. Press 1990)).

<sup>21</sup> McGinley & Haden, *supra* note 1, at 267 (stating "[a]n elderly miner reminisces about life in coal towns.").

<sup>22</sup> *Id.*

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were paying a heavy price for the region's rapid modernization.<sup>23</sup> Coal had risen to power in America.<sup>24</sup> Its heavy burdens would not only be felt in the mining communities, soon consequences would be felt in the very cities coal was powering.<sup>25</sup>

### **B. Coal's Inherent Dangers to Miners and Public Health**

Coal may be the natural resource that thrust the United States into the modern age, but at what cost? Even today, coal mining remains one of the top ten most dangerous jobs in the country.<sup>26</sup> To date, there has been over 600 mine disasters in the last 100 years, resulting in the loss of over 100,000 coalminers' lives.<sup>27</sup> While Coal mining is still dangerous, many coal-mining industries have improved safety through enhancements in technology and regulation.<sup>28</sup> But, even with these updated safety regulations and technology, major disasters still occur.<sup>29</sup>

In January of 2006, the Sago Mine, located in north-central West Virginia was the site of such a disaster.<sup>30</sup> The Sago Mine, which had a history of more than 270 Mine Safety and Health Administration ("MSHA") violations, experienced an explosion that left 13 miners trapped.<sup>31</sup> Rescue efforts were delayed because of what was referred to as chaos and miners were left to fend for themselves.<sup>32</sup> Poor

<sup>23</sup> See *id.* at 269, 289.

<sup>24</sup> A *Brief History of Coal Use*, U.S. DEP'T OF ENERGY, [http://www.fossil.energy.gov/education/energylessons/coal/coal\\_history.html](http://www.fossil.energy.gov/education/energylessons/coal/coal_history.html) (last visited on Dec. 4, 2013).

<sup>25</sup> Abhishek Shah, *Disadvantages of Coal Energy—Biggest Contributor to Global Warming is Coal's Biggest Drawback* (Apr. 9, 2011), <http://www.greenworldinvestor.com/2011/04/09/disadvantages-of-coal-energy-biggest-contributor-to-global-warming-is-coals-biggest-drawback/>.

<sup>26</sup> *America's most Dangerous Jobs*, CNN MONEY (Aug. 26, 2011, 11:48 AM), [http://money.cnn.com/galleries/2011/pf/jobs/1108/gallery.dangerous\\_jobs/6.html](http://money.cnn.com/galleries/2011/pf/jobs/1108/gallery.dangerous_jobs/6.html).

<sup>27</sup> McGinley & Haden, *supra* note 1, at 296; see also CENTER FOR DISEASE CONTROL, *NIOSH Mining: Coal Mining Disasters*, <http://www.cdc.gov/niosh/mining/statistics/discoal.htm> (last visited Nov. 20, 2013) (stating "[r]egulators and historians arbitrarily define a mine disaster as an incident involving more than 5 deaths.").

<sup>28</sup> *Safety Issues*, WORLD COAL ASSOCIATION, <http://www.worldcoal.org/coal-society/safety-issues/> (last visited on Dec. 4, 2013).

<sup>29</sup> *Id.*

<sup>30</sup> McGinley & Haden, *supra* note 1, at 295.

<sup>31</sup> Editorial, *The Sago Mine Disaster*, N.Y. TIMES (Jan. 5, 2006), [http://www.nytimes.com/2006/01/05/opinion/05thu1.html?\\_r=0](http://www.nytimes.com/2006/01/05/opinion/05thu1.html?_r=0).

<sup>32</sup> Ken Ward Jr., *'Chaos' marred critical early hours after blast*, THE CHARLESTON GAZETTE (Jan. 15, 2006), <http://web.archive.org/web/20060117030550/http://www.wvgazette.com/section/News/2006011415>.

communication and response times exacerbated the already dire situation.<sup>33</sup> Sadly, the miners remained trapped underground for 41 hours and were exposed to lethal doses of carbon monoxide.<sup>34</sup> Of the 13 miners trapped, only one survived, making the Sago Mine incident the worst disaster for West Virginia in 45 years.<sup>35</sup>

Four short years later in 2010, another mine disaster in West Virginia killed 29 miners.<sup>36</sup> The Governor's independent investigation panel revealed the mining company was at fault and stated, "[t]he [Upper Big Branch] company broke faith with its workers by frequently and knowingly violating the law and blatantly disregarding known safety practices while creating a public perception that its operations exceeded industry safety standards."<sup>37</sup>

These are just two examples of the deadly and dangerous aspects of coal mining, which were often overlooked with America's growing need for cheap energy.<sup>38</sup> A popular coal-mining phrase says: "[a]ll coal mining safety laws have been written in miners' blood,"<sup>39</sup> as the regulations in place are only there in response to disasters and even then are loosely enforced.<sup>40</sup> This is evidenced by the fairly new regulations on the miner's exposure to coal dust, which is the leading cause of Black Lung, developing only after examinations of deceased coal workers.<sup>41</sup> Even with stricter regulations, many coal companies choose to pay the fines while continuing to operate unsafe mines, because it is cheaper than maintaining them at levels required by regulations.<sup>42</sup> While the dangers associated with coal mining have long been considered a part of the trade and are therefore overlooked, what are more recent and shocking are the extreme adverse effects on health, both to miners and the public.

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<sup>33</sup> *Id.*

<sup>34</sup> *Quecreek 'miracle' offered Sago families false hope*, CNN (Jan. 26, 2006), <http://www.cnn.com/2006/US/01/04/sago.quecreek/index.html>.

<sup>35</sup> Ellen Smith, *MSHA and Sago Mine Facts based on questions asked of Mine Safety and Health News*, MSHA, <http://web.archive.org/web/20060126203907/http://www.minesafety.com/pages/sagominefacts.html> (last visited Nov. 15, 2013).

<sup>36</sup> Norman G. Page et al., *Report of Investigation: Fatal Underground Mine Explosion*, U.S. DEP'T OF LABOR (Apr. 5, 2010), <http://www.msha.gov/Fatals/2010/UBB/FTL10c0331noappx.pdf>.

<sup>37</sup> McGinley & Haden, *supra* note 1, at 296.

<sup>38</sup> *Id.* at 301.

<sup>39</sup> Jeff Biggers, *What Killed the Miners? Profits Over Safety?*, HUFFINGTON POST (Apr. 6, 2010 8:04 AM), [http://www.huffingtonpost.com/jeff-biggers/who-killed-the-miners-pro\\_b\\_526602.html](http://www.huffingtonpost.com/jeff-biggers/who-killed-the-miners-pro_b_526602.html).

<sup>40</sup> McGinley & Haden, *supra* note 1, at 301.

<sup>41</sup> Biggers, *supra* note 39.

<sup>42</sup> *Id.*

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The negative health effects of mining and burning coal are only now being completely comprehended.<sup>43</sup> In addition to the obvious dangers of working in coalmines, the not so noticeable health hazards to miners and the surrounding public can be more sinister.<sup>44</sup> The most infamous health condition associated with coal mining operations is known as the “black lung” or medically known as “coal worker’s pneumoconiosis.”<sup>45</sup> Black lung is said to kill over 1,500 miners a year.<sup>46</sup> The disease, which is caused by coal dust settling into the lungs, may not cause noticeable symptoms until after the miner has ceased working in the mine.<sup>47</sup> Diseases such as “Black Lung” cause many more deaths than mining disasters, but until recently their widespread effects have not been completely comprehended.<sup>48</sup> Even miners that survive the disease must live with the “devastating effects of progressive, chronic lung disease.”<sup>49</sup> While recent efforts by certain politicians have attempted to make it easier for miners to receive benefits and damages for “black lung” it has been an uphill battle.<sup>50</sup> Despite evidence demonstrating that coal dust causes “black lung,” the government has not adopted any new or stricter regulations for safety equipment for modern miners since 1970.<sup>51</sup> Coal dust also causes other various lung disorders ranging from chronic obstructive pulmonary disease (“COPD”) to emphysema.<sup>52</sup> While the effects of coal dust on miners are relatively acknowledged today, the effects of burning coal on residents in the range of coal burning power plants continues to be ignored.

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<sup>43</sup> McGinley & Haden, *supra* note 1, at 301.

<sup>44</sup> *Id.*

<sup>45</sup> *Id.*

<sup>46</sup> *Black Lung*, UNITED MINE WORKERS OF AMERICA, <http://www.umwa.org/?q=content/black-lung> (last visited Oct. 24, 2013).

<sup>47</sup> *Pneumoconiosis (Black Lung Disease)*, AMERICAN LUNG ASS’N, <http://www.lung.org/lung-disease/pneumoconiosis/> (last visited Oct. 24, 2013).

<sup>48</sup> David C. Vladeck, *The Failed Promise of Workplace Health Regulation*, 111 W. VA. L. REV. 15, 19 (2008).

<sup>49</sup> *Id.*

<sup>50</sup> Ken Ward Jr., *The W. Va. Chamber of Commerce continues its misinformation campaign against Sen. Byrd’s effort to help disabled miners get black lung benefits*, THE CHARLESTON GAZETTE (Mar. 24, 2010), <http://blogs.wvgazette.com/coaltattoo/2010/03/24/the-w-va-chamber-of-commerce-continues-its-misinformation-campaign-against-sen-byrds-effort-to-help-disabled-miners-get-black-lung-benefits/>.

<sup>51</sup> Ken Ward Jr., *MSHA and black lung disease: Still no commitment to tighten the legal dust limit*, THE CHARLESTON GAZETTE (Mar. 26, 2013), <http://blogs.wvgazette.com/coaltattoo/2010/03/26/msha-and-black-lung-disease-still-no-commitment-to-tighten-the-legal-dust-limit/>.

<sup>52</sup> *Black Lung Disease—Topic Overview*, WEBMD (May 4, 2010), <http://www.webmd.com/lung/tc/black-lung-disease-topic-overview>.

Between 6,000 and 10,700 black lung related deaths could be attributed to 88 coal-fired power plants worldwide, to both miners and those who live in close proximity to the plants.<sup>53</sup> These are relatively low estimates and do not include infant deaths and various lung disease deaths.<sup>54</sup> Coal-fired plants exclusively in the U.S. have attributed to over 13,000 premature deaths and health costs of over 100 billion dollars annually.<sup>55</sup> This extreme negative effect on the quality of life has many people fighting back against coal.<sup>56</sup> The health effects of coal are staggering, but what may be even more troubling, is the disastrous effects coal has on the environment, both through destruction of land and contribution to the growing problem of climate change.

### *C. Coal's Devastating Effects on the Environment*

Coal mining and burning has caused environmental problems since it began to replace wood as the primary source of energy in Medieval England.<sup>57</sup> In 1306, the city of London was so clogged with smoke from blacksmith fires that King Edward I banned coal burning.<sup>58</sup> Wood was the primary source of energy up until the dawn of the industrial age in both England and newly formed America. Once the industrial age began, Pittsburgh began to choke on the effects of coal mining and burning.<sup>59</sup> Pittsburgh was cursed with large deposits of bituminous coal, which burns much smokier than its harder counterpart anthracite.<sup>60</sup> The Appalachian region was turned from a rural, untouched wilderness to a crowded cluster of mining towns and polluted streams.<sup>61</sup>

The acid mine drainage<sup>62</sup> resulting from improper disposal of mine waste is a problem that still plagues western Pennsylvania today, with an estimated 5,000

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<sup>53</sup> Sarah Penny & Jacob Bell, *Estimating the Health Impacts of Coal-Fired Power Plants Receiving International Financing*, at 4 (2009), [http://www.edf.org/sites/default/files/9553\\_coal-plants-health-impacts.pdf](http://www.edf.org/sites/default/files/9553_coal-plants-health-impacts.pdf).

<sup>54</sup> *Id.*

<sup>55</sup> *Id.*

<sup>56</sup> Mijin Cha, *State Protests Against Coal Erupt Across the U.S.*, DEMOS (Aug. 6, 2012), <http://www.demos.org/blog/state-protests-against-coal-erupt-across-us>.

<sup>57</sup> McGinley & Haden, *supra* note 1, at 262.

<sup>58</sup> *Id.*

<sup>59</sup> Andreen, *supra* note 9, at 639.

<sup>60</sup> *Id.*

<sup>61</sup> McGinley & Haden, *supra* note 1, at 267.

<sup>62</sup> Acid mine drainage is the formation and movement of highly acidic water rich in heavy metals. This acidic water forms through the chemical reaction of surface water (rainwater, snowmelt, pond



miles of polluted waterways in the state alone.<sup>63</sup> Strip mining<sup>64</sup> is one of the more infamous methods of turning landscapes to ruins and decimating local plant and wild life.<sup>65</sup> Not only are the effects clearly noticeable in the landscape, but also what causes more problems is the rapid pollution of the natural aquifers under the surface.<sup>66</sup> Once coal became king, strip mining and blasting went largely unregulated, causing rapid pollution and flooding as the underground support for the land was destroyed.<sup>67</sup> While recent innovations for coal mining, including new techniques and equipment have vastly improved efficiency in coal extraction, it came at extreme environmental costs.<sup>68</sup>

Besides the impact coal mining has on the environment, burning coal, which is harmful to humans and wildlife, produces vast amounts of carbon dioxide (“CO<sub>2</sub>”), a major cause of global warming.<sup>69</sup> Coal plants are the primary of (CO<sub>2</sub>) emissions in the United States, generating 1.7 billion tons of CO<sub>2</sub> in 2001. This is nearly 500 times the level of CO<sub>2</sub> generated from a typical coal plant in one year.<sup>70</sup> Coal burning therefore produces tremendous amounts of CO<sub>2</sub>.

While CO<sub>2</sub> is regarded as the main reason for global warming, CO<sub>2</sub> is not the only pollutant that coal-fired plants produce.<sup>71</sup> Burning coal also produces sulfur dioxide, nitrogen oxides, particulate matter, and mercury.<sup>72</sup> Sulfur dioxide is known

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water) and shallow subsurface water with rocks that contain sulfur-bearing minerals, resulting in sulfuric acid. Heavy metals can be leached from rocks that come in contact with the acid, a process that may be substantially enhanced by bacterial action. The resulting fluids may be highly toxic and, when mixed with groundwater, surface water and soil, may have harmful effects on humans, animals and plants. *Abandoned Mine Drainage*, EPA (Nov. 27, 2013), [http://water.epa.gov/polwaste/nps/acid\\_mine.cfm](http://water.epa.gov/polwaste/nps/acid_mine.cfm).

<sup>63</sup> *Acid Mine Drainage*, EARTH CONSERVATORY, [http://www.earthconservancy.org/html/acid\\_mine\\_drainage.html](http://www.earthconservancy.org/html/acid_mine_drainage.html) (last visited Oct. 24, 2013).

<sup>64</sup> Strip mining is a type of surface mining that involves excavating earth, rock, and other material to uncover a tabular, lens-shaped, or layered mineral reserve. Andrew Schissler, *Strip mining*, EOEEARTH, <http://www.eoearth.org/view/article/156280/> (last visited Dec. 7, 2013).

<sup>65</sup> Thomas Sipes, *Polluting of a Nation: Surface Coal Mining in America 2* (July 25, 2010) (unpublished manuscript) (on file with academia.edu).

<sup>66</sup> *Id.*

<sup>67</sup> McGinley & Haden, *supra* note 1, at 280.

<sup>68</sup> *Id.*

<sup>69</sup> *Environmental impacts of coal power: air pollution*, UNION OF CONCERNED SCIENTISTS (2012), [http://www.ucsusa.org/clean\\_energy/coalvswind/c02c.html](http://www.ucsusa.org/clean_energy/coalvswind/c02c.html) [hereinafter UCS].

<sup>70</sup> *Id.*

<sup>71</sup> *Id.*

<sup>72</sup> *Id.*

to cause major lung problems and acid rain.<sup>73</sup> Nitrogen oxides, produced by burning coal, are a major cause of ozone depletion. Nitrogen oxide pollution is also proven to cause severe lung damage.<sup>74</sup> Particulate matter, which is solid particles formed by burning coal, is a notorious source of asthma and premature death when coupled with prolonged exposure.<sup>75</sup> Further, coal plants cause 50% of human contact with mercury, which is widely recognized as a major cause of brain damage and overall health problems.<sup>76</sup>

Coal plants in the United States fail to use new pollutant reducing technology because the EPA does not require it.<sup>77</sup> The new technology currently available is only required for use in new coal plants. Even though existing ones could utilize it, the EPA has not extended this regulation to them.<sup>78</sup> While the new emission reducing technology was proposed to regulate existing coal plants, it was shot down by coal industry pressure.<sup>79</sup> Existing coal plants are left emitting mass amounts of pollutants, even though cleaner alternatives are available.<sup>80</sup> New regulations are being proposed to reduce coal consumption and move toward cleaner energy, but it is being hailed as a “war on coal” and being protested every step of the way.

## II. THE TRUTH BEHIND THE “WAR ON COAL”

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President Obama’s recent speeches on climate change and energy have many conservatives crying out that the President is waging a “war on coal.”<sup>81</sup> The question presented is not whether this is a war on coal rather, but what will these new regulations do to remedy the problems related to coal. The opponents of coal regulations argue that by increasing the standards in which coal fired plants must

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<sup>73</sup> *Id.*

<sup>74</sup> UCS, *supra* note 69.

<sup>75</sup> *Id.*

<sup>76</sup> *Id.* (stating just 1/70th of a teaspoon of mercury deposited on a 25-acre lake can make the fish unsafe to eat).

<sup>77</sup> *Id.*

<sup>78</sup> C.J. Ciaramella, *EPA Coal Regs Will Require Halving of Carbon Emissions in New Plants*, FREEBEACON (Sept. 20, 2013), <http://freebeacon.com/epa-coal-regs-will-require-halving-of-carbon-emissions-in-new-plants/>.

<sup>79</sup> *Id.*

<sup>80</sup> *Id.*

<sup>81</sup> Peter Hart, *Obama’s ‘War on Coal’ Isn’t Real—But It’s Really in the Newspaper*, FAIR (July 2, 2013), <http://www.fair.org/blog/2013/07/02/obamas-war-on-coal-isnt-real-but-its-really-in-the-newspaper/>.

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abide by, there will be a dramatic loss of jobs which will effectively shut down coal production and use in America.<sup>82</sup> Yet, critics have failed to realize the extreme cost of using coal, and that the proposed regulations actually ensure a “pathway forward for coal to continue to be part of a diverse mix in this country.”<sup>83</sup> The Obama Administration’s proposed plan will continue to allow coal to be a part of the American economy and a viable source for energy, but will also help curb the negative impacts that accompany coal mining and coal use.<sup>84</sup>

Coal is currently used to generate around 37% of the nation’s energy, more than any other source.<sup>85</sup> The Obama Administration plans to reduce greenhouse emissions by 17% below 2005 levels by 2020.<sup>86</sup> The plan also calls for new power plants to be built according to stricter EPA guidelines aimed at reducing harmful discharges with currently available technology and require existing plants to conform to these standards in the future.<sup>87</sup>

Still, opponents argue that increased EPA standards are effectively “killing” the coal sector and taking an already shaky economy to the brink of destruction.<sup>88</sup> The proposed sanctions, however would give money to coal-powered plants to implement new technology to make coal energy cleaner.<sup>89</sup> The new climate plan is an attempt by the current President to slow the process of Global Warming, place the United States as a top clean energy producer, and allows the United States to cut ties with other foreign energy importers.<sup>90</sup> When some of these sanctions are in

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<sup>82</sup> Julian Hattem, *EPA releases draft rules to cut emissions from power plants*, THEHILL (Sept. 20, 2013), <http://thehill.com/blogs/regwatch/energyenvironment/323597-epa-chief-emissions-limits-wont-kill-coal-industry>.

<sup>83</sup> *Id.*

<sup>84</sup> Bill Scher, *The New EPA Power Plants Rules Are Not a War On Coal*, OURFUTURE (Sept. 20, 2013), <http://ourfuture.org/20130920/the-new-epa-power-plants-rules-are-not-a-war-on-coal>.

<sup>85</sup> *What is U.S. electricity generation by energy source?*, U.S. ENERGY INFO. ASS’N (May 9, 2013), <http://www.eia.gov/tools/faqs/faq.cfm?id=427&t=3>.

<sup>86</sup> Ben Geman, *State: Obama plan hits climate target*, THEHILL (Sept. 26, 2013), <http://thehill.com/blogs/e2-wire/324841-state-department-obamas-climate-plan-will-hit-2020-emissions-target>.

<sup>87</sup> *The President’s Climate Action Plan*, THE WHITE HOUSE 6 (June 2013), <http://www.whitehouse.gov/sites/default/files/image/president27sclimateactionplan.pdf>.

<sup>88</sup> McGinley & Haden, *supra* note 1, at 315.

<sup>89</sup> Diane Cardwell, *U.S. Revives Aid Program for Clean Energy*, N.Y. TIMES (Sept. 19, 2013), <http://www.nytimes.com/2013/09/20/business/energy-environment/us-revives-aid-program-for-clean-energy.html?hpw>.

<sup>90</sup> *Factsheet: President Obama’s Climate Action Plan*, OFFICE OF THE PRESS SECRETARY (June 25, 2013), <http://www.whitehouse.gov/the-press-office/2013/06/25/fact-sheet-president-obama-s-climate-action-plan>. [hereinafter *Factsheet*].

place the United States carbon emission will be the lowest in 20 years.<sup>91</sup> The climate plan calls to cut carbon emissions in half by 2030, with subsidies to clean energy and cleaner coal.<sup>92</sup> Coal is not the only energy source targeted by the new regulations; the sanctions apply to all fossil fuels that emit harmful substances.<sup>93</sup> President Obama stated that the amounts of fossil fuels we are using are already costing the American people:

Farmers see crops wilted one year, washed away the next, and higher food prices get passed on to you, the American consumer. Mountain communities worry about what smaller snowpacks will mean for tourism. And then families at the bottom of the mountains wonder what it will mean for their drinking water. Americans across the country are already paying the price of inaction, in insurance premiums, state and local taxes, and the costs of rebuilding and disaster relief.<sup>94</sup>

The truth about the “war on coal” is that the war is on outdated technology and forms of energy. Obama’s climate plan hopes to put America in a leading role to address and help reverse the climate change currently happening in the world.<sup>95</sup>

### III. WHAT THE NEW CLIMATE PLAN MEANS FOR THE PITTSBURGH REGION

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Even though Pittsburgh and coal will forever be linked together, as early as the Civil War, Pittsburgh residents were advocating for a cleaner “smoky city.”<sup>96</sup> While most Pittsburgh residents are no longer steel workers and coal miners, many outlying towns still owe their livelihood to coal.<sup>97</sup> The new climate plan looms in the minds of the remaining steel and coal workers as an immediate threat to their

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<sup>91</sup> *Id.*

<sup>92</sup> *Id.*

<sup>93</sup> *See id.*

<sup>94</sup> Lauren Gardner, *Obama lays out wide-reaching climate plan*, CQ ROLL CALL (June 2013), 2013 WL 73196375.

<sup>95</sup> *Factsheet*, *supra* note 90.

<sup>96</sup> *See* Andreen, *supra* note 9, at 639.

<sup>97</sup> Wright Thompson, *Houston’s Pittsburgh faithful*, ESPN (Nov. 16, 2011 8:56 AM), [http://espn.go.com/nfl/story/\\_/id/7239692/nfl-displaced-steelers-fans-found-new-home-houston](http://espn.go.com/nfl/story/_/id/7239692/nfl-displaced-steelers-fans-found-new-home-houston).

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way of life and, in some respects, they may be right.<sup>98</sup> Pittsburgh will never again be known as the “steel capital of the world,” but that does not mean that Pittsburgh is doomed. Pittsburghers have always been resilient and this is just a minor obstacle that leaves the region to choose between its troubled past and a promising future. In embracing the new climate plan, Pittsburgh will move forward as an example to the rest of the nation. The climate plan will improve the Pittsburgh region, both in the health of the citizens and its environment. While jobs may initially be lost, it will not be as many as predicted and will lead to higher quality jobs for the future.<sup>99</sup> Maybe most importantly, the plan will also pave the way for Pittsburgh to become a green energy pioneer, since it is situated to take advantage of many different types of cleaner energy, especially wind power.<sup>100</sup>

#### A. *The “Health” of the Region Will Improve*

Coal has adverse effects that are spread across the nation, but more specifically to the region are the recent court cases that have been brought by citizens against the coal-fired plants.<sup>101</sup> In *Bell v. Cheswick Generation Station*, over 1,500 plaintiffs were residents of an area within a one mile radius of the “GenOn’s Cheswick Generating Station, a 570-megawatt coal-fired electrical generation facility in Springdale, Pennsylvania.”<sup>102</sup> The plaintiffs alleged claims against the electrical plant for nuisance, negligence, recklessness, and trespass caused by pollution generated by the plant.<sup>103</sup> The Third Circuit Court of Appeals, located in Pittsburgh, was tasked with deciding whether a coal plant that complied with EPA admissions standards could still be held liable for damage to private citizens.<sup>104</sup> The Court of Appeals overruled the District Court by finding that Congress did not mean for the Clean Air Act to preempt state tort actions and remanded the case back down to the District Court.<sup>105</sup> The Federal Court of

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<sup>98</sup> 2 coal-fired plants in SW Pa. to close next week, YAHOO! FINANCE (Oct. 4, 2013), <http://finance.yahoo.com/news/2-coal-fired-plants-sw-143833740.html>.

<sup>99</sup> Kristen Butler, *Two coal-fired power plants in PA shut down, some 380 jobs lost* (Oct. 4, 2013), <http://www.upi.com/blog/2013/10/04/Two-coal-fired-power-plants-in-PA-shut-down-some-380-jobs-lost/3561380919411/#ixzz2mLzH0RKt>.

<sup>100</sup> *Why Pa Wind*, CHOSEPAWIND, <http://www.choosepawind.com/why-pa-wind> (last visited Oct. 29, 2013) [hereinafter CHOSEPAWIND].

<sup>101</sup> *Bell v. Cheswick Generating Station*, No. 12-4216, 2013 WL 4418637, at \*1 (3d Cir. Aug. 20, 2013).

<sup>102</sup> *Id.*

<sup>103</sup> *Id.* at \*5.

<sup>104</sup> *Id.* at \*1.

<sup>105</sup> *Id.* at \*9.

Appeals effectively ruled that coal-fired plants must answer for their pollution; both to the land and to the people they affect by allowing the suit to continue.<sup>106</sup>

While the *Bell* case is just one step, it is a powerful one. This ruling will help the Pittsburgh region recover from the damage of centuries of coal use. Along with the recent court ruling, the proposed climate plan will make strides to improve air quality around the nation, which is still a lingering problem in Pittsburgh.<sup>107</sup> The air pollution in Pittsburgh has been linked to premature births, heart and lung disease, and makes the city 17th in the nation for cancer risk.<sup>108</sup> The climate plan policies set out to reduce emissions that cause air pollution, of which coal-fired plants cause 40% nationally.<sup>109</sup> Pennsylvania ranks as the third worst state for toxic air pollution, with a whopping 78% of the pollutants coming from coal-fired plants.<sup>110</sup> Even though Allegheny County has never met the federal clean air standards, since their adoption in 1997, with the climate plan as a guiding force they may do so soon.<sup>111</sup> While the decision may not be a voluntary one, coal is already losing ground to both natural gas and renewable energy in the area. The coal producers will have to enact an “adapt or die” strategy as the climate plan becomes law, and that alone will improve the health of the region.<sup>112</sup> Additionally, the climate plan will increase the number of green energy jobs in Pittsburgh.

### ***B. New Energy Job Opportunities***

The climate plan has been dubbed the “war on coal” and most assume that means the end of coal workers as well, but the truth is coal companies are the ones cutting the coal labor force down.<sup>113</sup> With innovation in mining technology the need for coal miners has dramatically decreased from their heyday in the 1970s.<sup>114</sup> Most people are unaware of the shrinking number of jobs for coals workers, and if

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<sup>106</sup> *Id.*

<sup>107</sup> Timothy Puko, *Experts: Air pollution still makes Pittsburgh area a riskier place to live*, TRIBLIVE (May 7, 2013), <http://triblive.com/news/allegheny/3970696-74/pollution-pittsburgh-allegheny#axzz2j3ZCTth7>.

<sup>108</sup> *Id.*

<sup>109</sup> Gardner, *supra* note 94, at 2.

<sup>110</sup> David Templeton, *Pennsylvania improves but remains near bottom in air quality rankings*, PITTSBURGH POST-GAZETTE (Aug. 10, 2012), <http://www.post-gazette.com/state/2012/08/10/Pennsylvania-improves-but-remains-near-bottom-in-air-quality-rankings/stories/201208100129>.

<sup>111</sup> Puko, *supra* note 107.

<sup>112</sup> Templeton, *supra* note 110.

<sup>113</sup> See McGinley & Haden, *supra* note 1, at 283–84 (discussing the decline in coal workers but an increase in coal production with the help of new mining technology).

<sup>114</sup> *Id.*

they are aware they are quick to blame the climate plan, rather than the inherent changes in the mining fields.<sup>115</sup> Yet this is nothing new, there has always been a sharp divide between environmentalists and big companies. Jeremy Brecher paraphrasing Abraham Lincoln stated:

(If God had intended some people to fight just for the environment for the economy and others to fight just for the economy, he would have made some people who could live without money and others who could live without water and air. There are not two groups of people, environmentalists and workers. We all need a livelihood and we all need a livable planet to live on. If we don't address both, we'll starve together while we're waiting to fry together.<sup>116</sup>

The conflict between the groups is not imaginary and it has been a part of American culture and life for centuries. What happens to the 380 coal workers and their families who will lose their jobs when two Greene County Coal plants shut down later this year?<sup>117</sup> The climate plan addresses these concerns and experts say that the climate plan, will net over 220,000 U.S. jobs.<sup>118</sup> These studies are useless without implementation. For the climate plan succeed and keep America working, gaps need to be filled. The government must adhere to its own plan and place a strong commitment, in not only green technology, but also to green jobs and the people who will perform them.

Just as the New Deal in the Great Depression of the 1930s put millions of unemployed people to work doing the jobs America's communities needed, today we need a 'Green New Deal' to rebuild our energy, transportation, building, and other systems to drastically

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<sup>115</sup> *Id.*

<sup>116</sup> Jeremy Brecher, *Five Ways to Bridge the Jobs vs. Environment Gap*, LABOR NETWORK FOR SUSTAINABILITY, <http://www.labor4sustainability.org/post/five-ways-to-bridge-the-jobs-vs-environment-gap/#more-2048> (last visited Oct. 28, 2013).

<sup>117</sup> Jessica Contrera, *Closing of Western Pennsylvania power plants leaves workers at a loss*, PITTSBURGH POST-GAZETTE (July 21, 2013), <http://www.post-gazette.com/region/2013/07/21/Closing-of-Western-Pennsylvania-power-plants-leaves-workers-at-a-loss/stories/201307210272>.

<sup>118</sup> Matt Twomey, *Obama's Climate Action Plan Will Create Jobs: Study*, CNBC (July 5, 2013), <http://www.cnbc.com/id/100861301>.

reduce the climate-destroying greenhouse gas pollution they pour into the air.<sup>119</sup>

This is a rare win for both sides of the argument on the climate plan, if the government upholds its vow to invest in new technologies, then it will be an investment in the American people. The argument against stricter regulation is a legitimate one. The loss of jobs, especially in this area, will be hard on the public at first but coal is, and always has been, a short-term investment, and the negative effects of that investment are shown throughout western Pennsylvania.<sup>120</sup>

### C. *If Not Coal, Then What?*

No single source of renewable energy will replace coal in Pennsylvania, which generates 44% of the state's electricity.<sup>121</sup> The state ranks as a top coal producer and user, although strides are being taken to reduce coal use, it remains the primary energy for Pennsylvania.<sup>122</sup> While coal stays at the top for now, the state legislature has begun to embrace renewable energy.<sup>123</sup> Pennsylvania's Alternative Energy Portfolio Standard, calls for 0.5% of the state's electricity to be generated by solar power in 2020.<sup>124</sup> In addition, the Pennsylvania Energy Development Authority invests over \$10 million per year in clean energy projects around the state.<sup>125</sup> These energy projects have already added over 1,400 jobs and saved over 10.9 billion kilowatt-hours of electricity.<sup>126</sup> While there are many different choices for renewable energy in our region, the clear winner is wind energy.

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<sup>119</sup> Brecher, *supra* note 116.

<sup>120</sup> Anya Litvak, *West Penn Power parent to close 2 coal-fired plants in Western Pennsylvania*, PITTSBURGH POST-GAZETTE (July 9, 2013), <http://www.post-gazette.com/businessnews/2013/07/09/West-Penn-Power-parent-to-close-2-coal-fired-plants-in-Western-Pennsylvania/stories/201307090181#ixzz2mLnF5e1Q>.

<sup>121</sup> *PENNSYLVANIA State Profile and Energy Estimates*, U.S. ENERGY INFO. ASS'N, <http://www.eia.gov/state/?sid=PA> (last visited Dec. 2, 2013).

<sup>122</sup> *Id.*

<sup>123</sup> *Renewable Energy for America*, NATURAL RESOURCES DEFENSE COUNCIL, <http://www.nrdc.org/energy/renewables/penn.asp> (last visited Oct. 29, 2013).

<sup>124</sup> *Id.*

<sup>125</sup> *Id.*

<sup>126</sup> *Id.*



Southwestern Pennsylvania has some of the best wind energy locations east of the Mississippi river.<sup>127</sup> The wind energy market in western Pennsylvania has the potential to power over a million homes within ten years.<sup>128</sup> Currently wind farms in Pennsylvania can produce enough energy to power over 330,000 homes.<sup>129</sup> Wind energy, like all energy, has its advantages and disadvantages but when considering homegrown energy for the Pittsburgh region, it is a superior alternative energy source.

While there are disadvantages associated with Wind power, they are greatly outweighed by overall advantages. One disadvantage is that wind power is much more expensive to establish than coal.<sup>130</sup> Additionally, coal plants and mining operations are already in use, where wind turbines and plants are relatively new and expensive to manufacture.<sup>131</sup> While wind power may have high start-up costs, after they are built they have relatively low maintenance fees, coupled with incentives from both the Federal and state governments, these high initial costs can be minimized.<sup>132</sup> Two other disadvantages with the implementation of more wind turbines are; the degradation of appearance for the land and the intermittence of wind. While wind turbines may not be the most ideal neighbor, they are not being built in highly populated areas and leave a much smaller footprint on the area than other energy sources (e.g. coal).<sup>133</sup> The intermittency of wind power is however a real concern, because as of right now, there is no reliable way to store wind energy for future use.<sup>134</sup> Advances in recent technologies are getting closer to dependable

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<sup>127</sup> PENNFUTURE, <http://www.pennfuture.org/content.aspx?SectionID=192> (last visited Oct. 29, 2013).

<sup>128</sup> *Id.*

<sup>129</sup> CHOOSEPAWIND, *supra* note 100.

<sup>130</sup> Tim Worstall, *Wind Power is just too expensive to use*, FORBES (Mar. 6, 2012), <http://www.forbes.com/sites/timworstall/2012/03/06/wind-powers-just-too-expensive-to-actually-use/>.

<sup>131</sup> *Wind Power: A Lucrative Renewable Energy Source*, DUKE UNIV., <http://sites.duke.edu/windenergy2012/comparison/> (last visited Oct. 29, 2013).

<sup>132</sup> *Id.*

<sup>133</sup> Mathias A. Maehlum, *Wind Energy Pros and Cons*, ENERGY INFORMATIVE, <http://energyinformative.org/wind-energy-pros-and-cons/> (last modified June 12, 2013).

<sup>134</sup> Mark Schwartz, *Stanford Scientists Calculate the Energy Required to Store Wind and Solar Power on the Grid*, STANFORD UNIV. (Sept. 9, 2013), <http://news.stanford.edu/news/2013/september/curtail-energy-storage-090913.html>.

storage solutions.<sup>135</sup> Without ways to store the energy that wind power produces, it will still lower the cost, both in price and on the environment, for power.<sup>136</sup>

Wind power is not perfect, but with the looming problem of climate change, it has become a leading choice for cleaner energy.<sup>137</sup> A single 75-megawatt (“MW”) wind farm can offset 170,000 metric tons of CO<sub>2</sub> emissions, which is equal to burning 900 railcars filled with coal.<sup>138</sup> Right now wind produces 1% of Pennsylvania’s power, but it has the opportunity to produce over 6% of the current need.<sup>139</sup> Coupled with other renewable energy, it can drastically improve the pollution levels in the state.<sup>140</sup> Wind turbines produce no pollution and are a free energy source to tap, unlike coal, which must be mined destroying not only the landscape by the eco-system for the region.<sup>141</sup> While wind turbines are not cheap to construct, prices are dropping rapidly as there has been an 80% reduction in price since 1980.<sup>142</sup> Investing in wind power will not only add jobs, but also will increase tax revenues for landowners and decrease energy costs for the region up to 10%.<sup>143</sup>

The advantages of wind energy over coal energy are clear. After wind turbines are constructed their pollution level is exactly zero, while mining and burning coal devastate local environments.<sup>144</sup> The waste caused by mining coal is startling; to extract one foot of coal fifteen feet of overburden waste is created.<sup>145</sup> The impact of wind energy is isolated in the idea that people do not want to see the turbines, but this is a shallow, if not, an ignorant reason to rebel against a clean and

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<sup>135</sup> Sami Grover, *These clever wind turbines store energy for when the wind’s not blowing*, MNN (Aug. 2, 2013), <http://www.mnn.com/earth-matters/energy/stories/these-clever-wind-turbines-store-energy-for-when-the-winds-not-blowing>.

<sup>136</sup> *Id.*

<sup>137</sup> Zachary Shahan, *Wind Power Has Dramatically Cut Global Warming Pollution In The U.S.*, CLEANTECHNICA, <http://cleantechnica.com/2013/10/28/wind-power-dramatically-cut-global-warming-pollution-u-s/#cqXqHU8IjaPXvsbb.99> (last visited on Dec. 2, 2013).

<sup>138</sup> CHOSEPAWIND, *supra* note 100.

<sup>139</sup> *Id.*

<sup>140</sup> Shahan, *supra* note 137.

<sup>141</sup> Maehlum, *supra* note 133.

<sup>142</sup> *Id.*

<sup>143</sup> CHOSEPAWIND, *supra* note 100.

<sup>144</sup> *Green Power: Wind as a non-polluting source of energy*, WORLD WILDLIFE FUND, [http://wwf.panda.org/about\\_our\\_earth/teacher\\_resources/project\\_ideas/green\\_power/](http://wwf.panda.org/about_our_earth/teacher_resources/project_ideas/green_power/) (last visited on Dec. 2, 2013).

<sup>145</sup> Tara Lohan, *Wind vs. Coal: False Choices in the Battle to Resolve Our Energy Crisis*, ALTERNET (Feb. 14, 2007) [http://www.alternet.org/story/47997/wind\\_vs.\\_coal%3A\\_false\\_choices\\_in\\_the\\_battle\\_to\\_resolve\\_our\\_energy\\_crisis](http://www.alternet.org/story/47997/wind_vs._coal%3A_false_choices_in_the_battle_to_resolve_our_energy_crisis).

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renewable energy source.<sup>146</sup> As one commentator puts it, “It is important to get turbines out there in the face of America so people don’t think the electricity comes from the electricity fairy.”<sup>147</sup> While no energy solution is perfect, to turn down wind power because of the appearance of the turbines is absurd when compared with the destruction caused by coal. Wind is not a complete replacement for coal or fossil fuels in general, but it is a step in the right direction for the Pittsburgh region and one that needs to be taken seriously. A commitment to green energy is what is needed for Pittsburgh, not a total dissolution of its relationship with coal, but a gradual breakup. Wind power is a great starting point, considering our prime location to harness its power, but it is only the beginning. Pittsburgh must join with state and federal programs to fund research for better green technologies, invest in green business, and give the many young pioneers the necessary means to achieve these goals. Only through this teamwork can Pittsburgh and the United States achieve what the climate plan sets out to accomplish.

#### IV. CONCLUSION

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Coal built the Pittsburgh region. There is no denying the enormous impact that coal has had on the area and, to that effect, made some parts of the region very wealthy. Yet, the health and environmental costs cannot not be overstated and ignored any longer. Coal will likely be used indefinitely; there is no way around it. While the proposed climate plan is not going to eliminate coal entirely, it proposes a smarter future when using fossil fuels. If coal is to remain one of the nation’s main power sources it needs to adapt to fit into American’s plans for the future. Hopefully, the days of wanton abuse by coal companies on the land and its people are in the past. “If coal is to play an important role in the energy future, pragmatism and demands of rational decision-making should lead to an inclusion of a full calculation of coal’s costs, not just its benefits.”<sup>148</sup> Coal cannot be looked at as just a cheap energy source when the costs are so high. This leaves Pittsburgh in unfamiliar territory, because Pittsburgh has relied on coal since its inception and the new climate plan leaves Pittsburgh with two choices; either hold on to the past or embrace the future and help lead the country in a new direction. Pittsburgh should embrace the new regulations set out by the Obama administration. The change will not be easy, jobs will be lost and lives will be transformed. However,

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<sup>146</sup> *Disadvantages of Wind Energy—Factors You Need To Consider*, ADVANTAGESOFSOLAREENERGY4ALL, <http://www.advantagesofsolarenergy4all.com/disadvantages-of-wind-energy.html#UpzeW8QWI8s> (last visited on Dec. 2, 2013).

<sup>147</sup> Lohan, *supra* note 145.

<sup>148</sup> McGinley & Haden, *supra* note 1, at 331.

Pittsburgh has faced challenges and prevailed, going from a city in rut to one of the most livable cities in America.<sup>149</sup> By embracing the changing energy landscape, Pittsburgh will become a leader in the field. With the application of cleaner power, energy pioneers will flock to the Pittsburgh region. A commitment to green energy, especially wind power, will propel the region into the future of energy and Pittsburgh can help lead way.

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<sup>149</sup> Francesca Levy, *America's Most Livable Cities*, FORBES (Apr. 29, 2010), <http://www.forbes.com/2010/04/29/cities-livable-pittsburgh-lifestyle-real-estate-top-ten-jobs-crime-income.html>.