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## Sundown and You Better Take Care: Why Sunset Provisions Harm the Renewable Energy Industry and Violate Tax Principles

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# SUNDOWN AND YOU BETTER TAKE CARE: WHY SUNSET PROVISIONS HARM THE RENEWABLE ENERGY INDUSTRY AND VIOLATE TAX PRINCIPLES

**Abstract:** The production tax credit (“PTC”) is the primary government incentive to promote renewable energy. In fact the PTC is necessary to make renewable energy cost competitive, to account for positive externalities, and to encourage private investment. These tax credits, however, are often subject to “sunset” or expiration dates, a trend in tax legislation. As a result, the PTC is only renewed for one to three years at a time. This renewal period is often shorter than the typical development cycle of a renewable energy project—for example, it is shorter than the three to seven years required to develop a wind farm. As such, the uncertainty of the PTC’s existence chills long-term investment. Further, to the extent that the PTC spurs growth, it occurs in “boom and bust” cycles that lead to higher costs and an unsustainable domestic renewable industry. These negative impacts on the renewable energy industry, however, are not offset by any countervailing tax policy. In fact, the complexity, inequity, and inefficiency that sunset provisions produce, particularly with respect to rent-seeking and enhanced lobbying, actually frustrate the fundamental goals of a tax system.

## INTRODUCTION

In the 2011 State of the Union Address, President Obama proposed “reinventing” the nation’s economy by making America a leader in clean energy innovation.<sup>1</sup> The President proposed government investment in clean energy innovation: “We’re telling America’s scientists and engineers that, if they assemble teams of the best minds in their fields and focus on the hardest problems in clean energy, *we’ll fund* the Apollo Projects of our time.”<sup>2</sup>

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<sup>1</sup> President Barack Obama, 2011 State of the Union Address (Jan. 25, 2011), *in* 157 CONG. REC. H459 (daily ed. Jan. 25, 2011).

<sup>2</sup> *Id.* (emphasis added).

For supporters of renewable energy like President Obama, one major hurdle to the development of clean, renewable energy is funding.<sup>3</sup> The U.S. government often uses the tax system to promote long-term investment in certain industries, one being renewable energy.<sup>4</sup> Clean energy ameliorates climate change, lessens environmental derogation, and spurs economic growth, particularly in the manufacturing and construction sectors.<sup>5</sup> Also, it reduces dependence on fossil fuels, which have become increasingly dangerous and controversial to extract from the earth.<sup>6</sup> The high costs of developing the clean energy industry, however, detract from these social benefits.<sup>7</sup> Siting, grid access, and permitting processes can be expensive and inhibiting.<sup>8</sup> Most important high project risks chill such investment and raise the cost of capital.<sup>9</sup> To close this price gap and incentivize investment, Congress crafted renewable energy incentives within the framework of the tax system, the most im-

<sup>3</sup> *Id.*; JOINT COMM. ON TAXATION, PRESENT LAW AND BACKGROUND RELATING TO TAX CREDITS FOR ELECTRICITY PRODUCTION FROM RENEWABLE SOURCES 17 (2005) [hereinafter JOINT COMMITTEE REPORT].

<sup>4</sup> PAUL R. MCDANIEL, FEDERAL INCOME TAXATION 2 (6th ed. 2010); see, e.g., Electricity Produced from Certain Renewable Sources, 26 U.S.C.A. § 45 (West 2010).

<sup>5</sup> AM. WIND ENERGY ASS'N, WIND ENERGY FOR A NEW ERA: AN AGENDA FOR THE NEW PRESIDENT AND CONGRESS 2 (2009) [hereinafter WIND AGENDA], available at [http://www.newwindagenda.org/documents/Wind\\_Agenda\\_Report.pdf](http://www.newwindagenda.org/documents/Wind_Agenda_Report.pdf); Max Wei et al., *Putting Renewables and Energy Efficiency to Work: How Many Jobs Can the Clean Energy Industry Generate in the U.S.?*, 38 ENERGY POL'Y 919, 919 (2010); *Renewables*, ENERGY.GOV, <http://www.energy.gov/energysources/renewables.htm> (last visited Apr. 22, 2011).

<sup>6</sup> Thomas Merrill & David Schizer, *Energy Policy for an Economic Downturn: A Proposed Petroleum Fuel Stabilization Plan*, 27 YALE J. ON REG. 1, 17–21 (2010) (indicating three “familiar” reasons to reduce consumption of petroleum: environmental degradation, national security, and urban sprawl/congestion); Christopher Riti, Comment, *Three Sheets to the Wind: The Renewable Energy Production Tax Credits, Congressional Political Posturing, and an Unsustainable Energy Policy*, 27 PACE ENVTL. L. REV. 783, 784 (2010). Recent unrest in the Middle East and the 2010 Gulf oil spill are examples of the danger and controversy surrounding fossil fuel extraction. Ruwantissa Abeyratne, *The Deepwater Disaster—Some Liability Issues*, 35 TUL. MAR. L.J. 125, 125, 130 (2010) (describing the inherent dangers of deepwater drilling and the Gulf oil spill in the summer of 2010); Clifford Krauss, *Uncertainty Drives Up Oil Prices*, N.Y. TIMES, Mar. 1, 2011, at B1 (describing recent political unrest in the Middle East as a catalyst for higher oil prices).

<sup>7</sup> JOINT COMMITTEE REPORT, *supra* note 3, at 16–17; John P. Garcia, ‘Green’ Corporate Tax Incentives—Wind Technologies, CORP. TAX'N, Nov.–Dec. 2009, at 16, 16.

<sup>8</sup> ENERGY EFFICIENCY & RENEWABLE ENERGY, U.S. DEP'T OF ENERGY, 20% WIND BY 2030, at 99 (2008) [hereinafter DOE REPORT], available at [http://www.20percentwind.org/20percent\\_wind\\_energy\\_report\\_revOct08.pdf](http://www.20percentwind.org/20percent_wind_energy_report_revOct08.pdf); Jeffrey S. Hinman, Note, *Green Economic Recovery Wind Energy Tax Policy After the Financial Crisis and the American Recovery and Reinvestment Tax Act of 2009*, 24 J. ENVTL. L. & LITIG. 35, 45 (2009).

<sup>9</sup> Adam C. Kobos, *ARRA Alters the Landscape of Renewable Energy Project Finance*, CORP. TAX'N, Nov.–Dec. 2009, at 35, 35; Hinman, *supra* note 8, at 45.

portant of which is the Production Tax Credit (the “PTC”).<sup>10</sup> The PTC is necessary to the renewable energy industry because it makes renewable projects more cost competitive and provides incentives for third-party investors with taxable income to invest in such projects.<sup>11</sup>

Despite this success, however, the PTC is not a permanent feature of the tax code.<sup>12</sup> Instead, the PTC has been enacted subject to expiration, or sunset, that requires periodic extensions every one to three years, a period far shorter than the typical development cycle of a renewable energy project.<sup>13</sup> This Note argues that the frequency of sunset provisions in the PTC damages the renewable energy industry in the United States.<sup>14</sup> When the credit expires, added renewable capacity drops precipitously.<sup>15</sup> Sunset dates lead to a “boom and bust” cycle, increasing demand before the sunset dates and increasing the cost of renewable energy in the manufacturing and construction sectors.<sup>16</sup> Sunset also creates investment risk, as the availability of the credit upon completion of the project is seldom certain.<sup>17</sup>

This Note argues that the PTC’s sunset provisions frustrate the policy of creating an equitable, simple, and efficient tax system, as they lead to inequitable lobbying battles, complicated amendments, and increased transactional costs.<sup>18</sup> These provisions also reduce the effectiveness of the incentivizing function credit to correct the positive externalities of renewable energy production.<sup>19</sup> Additionally, scholarly commentary suggesting that sunset provisions promote long-term investment does not apply to the PTC and renewable energy.<sup>20</sup>

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<sup>10</sup> 26 U.S.C.A. § 45 (West 2010); JOINT COMMITTEE REPORT, *supra* note 3, at 17–18.

<sup>11</sup> See WIND AGENDA, *supra* note 5, at 8; Kobos, *supra* note 9, at 35.

<sup>12</sup> 26 U.S.C.A. § 45(d).

<sup>13</sup> See *infra* notes 169–180 and accompanying text.

<sup>14</sup> See RYAN WISER ET AL., USING FEDERAL PRODUCTION TAX CREDIT TO BUILD A DURABLE MARKET FOR WIND POWER IN THE UNITED STATES 5 (2007); Riti, *supra* note 6, at 788; *infra* notes 215–350 and accompanying text.

<sup>15</sup> See WIND AGENDA, *supra* note 5, at 8.

<sup>16</sup> See WISER ET AL., *supra* note 14, at 5.

<sup>17</sup> Edward D. Kleinbard, Professor of Law, Univ. of S. Cal. Gould Sch. of Law, The Congress Within the Congress: How Tax Expenditures Distort Our Budget and Our Political Process, Woodworth Memorial Lecture (May 7, 2009), in 36 OHIO N.U. L. REV. 1, 23–24 (2010).

<sup>18</sup> See WILLIAM D. ANDREWS, BASIC FEDERAL INCOME TAXATION 8–10 (Aspen 6th ed. 2009) (1969); MCDANIEL, *supra* note 4, at 2–3; *infra* notes 293–350 and accompanying text.

<sup>19</sup> See JOINT COMMITTEE REPORT, *supra* note 3, at 17–18; Kleinbard, *supra* note 17, at 23.

<sup>20</sup> See George K. Yin, *Temporary-Effect Legislation, Political Accountability and Fiscal Restraint*, 84 N.Y.U. L. REV. 174, 245 (2009).

The Low-Income Housing Credit (the “LIHTC”) is an analogous credit that promotes affordable housing, and which this Note uses as a tool for comparison with the PTC.<sup>21</sup> This credit, unlike the PTC, is a permanent feature of the tax code.<sup>22</sup> Its permanency enhances its success, primarily because real estate developers and investors can rely on its continued existence.<sup>23</sup>

This Note argues that promotion of the renewable energy industry requires a permanent extension of the PTC, similar to the extension of the LIHTC.<sup>24</sup> This credit is necessary to make renewable projects cost competitive, and investors financing renewable projects need to be sure of the PTC’s continued existence to minimize investment risks.<sup>25</sup> Without the PTC, renewable energy production would drop significantly, and manufacturing and construction industries would suffer.<sup>26</sup> Without its extension, the incentivizing function of the tax credits cannot reach its full potential.<sup>27</sup>

Part I of this Note establishes the importance of renewable energy production.<sup>28</sup> It further provides the statutory details of the PTC and its monetization.<sup>29</sup> Part II gives an overview of the use of sunset provisions in tax policy and their impact on the renewable energy industry; the Part then discusses how eliminating such provisions from the LIHTC enhanced investment in low-income housing.<sup>30</sup> Part III establishes that sunset dates frustrate the PTC’s ability to promote long-term investment in the renewable industry; the Part then utilizes the LIHTC and the affordable housing industry to illustrate the potential benefits of

<sup>21</sup> 26 U.S.C.A. § 42 (West 2010).

<sup>22</sup> Compare *id.* (indicating no expiration date of the credit), with 26 U.S.C.A. § 45(d) (West 2010) (indicating an expiration date for wind facilities of January 1, 2013).

<sup>23</sup> Kirk McClure, *The Low Income Housing Tax Credit as an Aid to Housing Finance: How Well Has It Worked?*, 11 HOUSING POL’Y DEBATE, no. 1, 2000, at 91, 96.

<sup>24</sup> See WIND AGENDA, *supra* note 5, at 8; Kleinbard, *supra* note 17, at 23; *infra* notes 215–350 and accompanying text.

<sup>25</sup> Kleinbard, *supra* note 17, at 23.

<sup>26</sup> ENERGY INFO. ADMIN., ANALYSIS OF FIVE SELECTED TAX PROVISIONS OF THE CONFERENCE ENERGY BILL OF 2003, at 4 (2003) [hereinafter EIA REPORT], available at [http://tonto.eia.doe.gov/oiaf/servicerpt/ceb/pdf/sroiaf\(2004\)01.pdf](http://tonto.eia.doe.gov/oiaf/servicerpt/ceb/pdf/sroiaf(2004)01.pdf) (noting that the PTC “supports significant growth in generation from wind” and that “[b]y 2025, the level of wind generation with the PTC extension is 50% more”); NAVIGANT CONSULTING, INC., ECONOMIC IMPACTS OF TAX CREDIT EXPIRATION 3, 20–22 (2008) [hereinafter ECONOMIC IMPACTS], available at <http://www.solar-nation.org/pdf/Navigant-Tax-Credit-Impact.pdf>.

<sup>27</sup> WISER ET AL., *supra* note 14, at 5; Kleinbard, *supra* note 17, at 23.

<sup>28</sup> See *infra* notes 39–69 and accompanying text.

<sup>29</sup> See *infra* notes 70–111 and accompanying text.

<sup>30</sup> See *infra* notes 112–214 and accompanying text.

making the PTC permanent.<sup>31</sup> Finally, Part IV argues that sunset provisions in the PTC undermine the tax system's goals of simplicity, equity, and efficiency.<sup>32</sup>

## I. INCENTIVIZING RENEWABLE ENERGY IN THE UNITED STATES

Rather than promote certain behavior through mandates or direct subsidies, the federal government often uses the tax system to promote long-term investment in industries that serve important social functions but suffer significant economic barriers to market entry and participation.<sup>33</sup> This Part establishes why and how Congress promotes renewable energy through the tax system.<sup>34</sup> Part I.A first addresses the policy reasons for incentivizing renewable energy, given both the benefits of and barriers to the industry.<sup>35</sup> Part I.B details the two tax credits that incentivize renewable energy development and how they operate in the industry.<sup>36</sup> Because renewable energy is a broad concept, this Note focuses on the production of wholesale electricity from renewable sources.<sup>37</sup> Furthermore, most of the discussion refers to wind power, as it has become the most widespread and cost-competitive renewable energy source.<sup>38</sup>

### A. *The Policy Rationale for Incentivizing Renewable Energy*

#### 1. The Effects of Renewable Energy

Congress incentivizes long-term investment in renewable energy to promote environmental protection, economic growth, and national se-

<sup>31</sup> See *infra* notes 215–292 and accompanying text.

<sup>32</sup> See *infra* notes 293–350 and accompanying text.

<sup>33</sup> See ANDREWS, *supra* note 18, at 7; MCDANIEL, *supra* note 4, at 2. Some tax scholars consider tax incentives problematic. See ANDREWS, *supra* note 18, at 9 (“Creating special incentives not generated by the market alone . . . is more problematic.”); Eric T. Laity, *The Corporation as Administrative Agency: Tax Expenditures and Institutional Design*, 28 VA. TAX REV. 411, 468 (2008) (criticizing the lack of government oversight when private investment serves public needs).

<sup>34</sup> See *infra* notes 39–111 and accompanying text.

<sup>35</sup> See *infra* notes 39–69 and accompanying text.

<sup>36</sup> See *infra* notes 70–111 and accompanying text.

<sup>37</sup> Other sources of electricity, like coal and petroleum, rely on a finite amount of fuel, whereas renewable sources are replenished through Earth's natural processes, namely wind, solar, geothermal, and biomass. *Clean Energy Glossary: Renewable Energy*, EPA.GOV, <http://www.epa.gov/cleanenergy/energy-and-you/glossary.html#R> (last visited Apr. 22, 2011). This Note does not discuss renewable fuel for transportation.

<sup>38</sup> See DOE REPORT, *supra* note 8, at 7.

curity.<sup>39</sup> Clean, renewable energy likely reduces pollution and mitigates climate change because renewable energy sources do not emit toxins or carbon dioxide (the main cause of climate change) into the air or water, unlike coal and other fossil fuels.<sup>40</sup>

Furthermore, some posit that developing domestic renewable energy promotes energy security.<sup>41</sup> Increased investment in domestic renewable energy projects may also reduce fossil fuel dependence and foreign oil imports.<sup>42</sup> Currently, U.S. energy production is highly dependent on fossil fuels: 83% of electricity consumed derives from fossil fuels and the United States imports 37% of this fossil fuel energy.<sup>43</sup> As such, these energy sources may be susceptible to unstable political situations and price volatility.<sup>44</sup> Increased domestic renewable sources could ameliorate this dependence.<sup>45</sup>

Finally, and of particular interest in the current economic recession, renewable energy investment creates economic growth.<sup>46</sup> Renew-

<sup>39</sup> See *infra* notes 40–49 and accompanying text. Promoting renewable energy in the United States has garnered support across the political spectrum. Clifford Krauss, *Alternative Energy Suddenly Faces Headwinds*, N.Y. TIMES, Oct. 21, 2008, at B1.

<sup>40</sup> *Clean Energy Glossary: Renewable Energy*, *supra* note 37; *Renewables*, *supra* note 5. Coal, which makes up twenty-nine percent of U.S. energy production, emits sulfur, nitrogen oxides, and particulate matter into the atmosphere, causing a host of environmental and health repercussions. U.S. ENERGY INFO. ADMIN., MARCH 2011: MONTHLY ENERGY REVIEW 5 (2010) [hereinafter ENERGY REVIEW], available at <http://www.eia.doe.gov/totalenergy/data/monthly/pdf/mer.pdf>; see Robert B. Finkelman et al., *Health Impacts of Coal and Coal Use: Possible Solutions*, 50 INT'L J. COAL GEOLOGY 425, 425 (2002). See generally *Scientific Consensus on Global Warming*, UNION OF CONCERNED SCIENTISTS, <http://ucsusa.org/ssi/climate-change/scientific-consensus-on.html> (last visited Apr. 19, 2011) (describing consensus among scientists that human emissions of carbon dioxide and other heat-trapping emissions is causing climate change).

<sup>41</sup> See, e.g., Garcia, *supra* note 7, at 16 (“These renewable energy sources are not only cleaner, but also much less susceptible to the uncertainties of trade embargos, production limitations, natural disasters such as hurricanes, and general price speculation and manipulation.”).

<sup>42</sup> *Id.*; see ENERGY REVIEW, *supra* note 40, at 3, 8.

<sup>43</sup> ENERGY REVIEW, *supra* note 40, at 3.

<sup>44</sup> Riti, *supra* note 6, at 784 (noting that foreign oil dependence makes the United States vulnerable to “political posturing, price volatility, and technological instability”). The United States expends a lot of resources securing energy in the Persian Gulf region. See CNA CORP., POWERING AMERICA’S DEFENSE: ENERGY AND THE RISKS TO NATIONAL SECURITY 7 (2009), available at <http://www.cna.org/sites/default/files/Powering%20Americas%20Defense.pdf>. The recent unrest in Libya particularly illustrates the fragile nature of the fossil fuel market and oil prices. Jad Mouawad & Clifford Krauss, *Tremors from Libya Contribute to Oil Price Cycles*, N.Y. TIMES, Feb. 27, 2011, at B1.

<sup>45</sup> See Garcia, *supra* note 7, at 16 (establishing that the price of renewable energy is more predictable and the sources are less susceptible to political uncertainties, evidenced by the gas price spike in 2008).

<sup>46</sup> See Wei et al., *supra* note 5, at 919.

able energy creates more jobs per unit of energy than coal and natural gas; aggressive development of renewable projects could yield over four million full-time-equivalent job years by 2030.<sup>47</sup> Furthermore, because of increased gains in global investment, some refer to renewable energy as a “new worldwide industry.”<sup>48</sup> As such, domestic production of renewable energy and manufacturing of components may assist the United States in maintaining its globally competitive status.<sup>49</sup>

Environmental protection, climate change mitigation, energy security, and job creation all represent positive externalities to the development of renewable energy.<sup>50</sup> Because monetary gains from renewable energy projects do not compensate for these positive externalities, and because high costs and risks frustrate profitability of renewable energy development, there is arguably a market failure that may warrant government intervention.<sup>51</sup>

## 2. Barriers to the Development of Renewable Energy

As with any nascent technology, many impediments exist to the development of renewable energy.<sup>52</sup> High costs and high risks chill investment in renewable energy, creating a need for government incen-

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<sup>47</sup> *Id.* Four million job years represents 400,000 jobs per year for ten years. *See id.* According to the American Wind Energy Association, achieving twenty percent wind energy by 2030 (the DOE’s goal) would stimulate 150,000 domestic jobs, including manufacturing, installation, operations, maintenance, and management. WIND AGENDA, *supra* note 5, at 8. Furthermore, the industry would indirectly generate 350,000 domestic jobs, through steel workers, electrical manufacturing workers, accountants, lawyers, and other positions due to local spending. *Id.* As of March 2011, of the 14,060,000 unemployed persons, 1,475,000 are in the manufacturing industry and 1,695,000 are in construction. News Release, Bureau of Labor Statistics, U.S. Dep’t of Labor, The Employment Situation—March 2011, tbls.A-13, A-14 (Apr. 1, 2011), *available at* <http://www.bls.gov/news.release/pdf/empsit.pdf>. Both classes of workers would benefit from these domestic jobs. *See* WIND AGENDA, *supra* note 5, at 8. A capable work force and empty factories could easily transition to wind energy component production. *See id.*

<sup>48</sup> PEW CHARITABLE TRUSTS, WHO’S WINNING THE CLEAN ENERGY RACE? GROWTH, COMPETITION AND OPPORTUNITY IN THE WORLD’S LARGEST ECONOMIES 4 (2009), *available at* [http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/Global\\_warming/G-20%20Report.pdf](http://www.pewtrusts.org/uploadedFiles/wwwpewtrustsorg/Reports/Global_warming/G-20%20Report.pdf). In 2009, the United States slipped into second place behind China in overall renewable energy investment. *Id.*

<sup>49</sup> *See id.*

<sup>50</sup> *See* JOINT COMMITTEE REPORT, *supra* note 3, at 17–18.

<sup>51</sup> *See id.*

<sup>52</sup> *See* DOE REPORT, *supra* note 8, at 99; Hinman, *supra* note 8, at 44–46 (enumerating many impediments to renewable energy development including local opposition, siting difficulties, and other risk-enhancing factors).



tives.<sup>53</sup> The high initial investment in the infrastructure is prohibitive to many developers.<sup>54</sup> Additionally, siting of renewable projects introduces costly obstacles: wind farms, for example, are often in remote, rural, or offshore areas, and connecting to the power grid requires substantial infrastructure investment and permitting requirements.<sup>55</sup> Furthermore, local opposition often impedes the development of both transmission lines and wind farms.<sup>56</sup> State agencies are hesitant to approve projects if they do not afford substantial benefit to intrastate residents.<sup>57</sup> On top of all this, environmental review of renewal projects can be extremely long: if the National Environmental Policy Act (NEPA) applies, permitting may involve a multi-year process or even longer if opposed.<sup>58</sup> For these reasons, the length of a commercial-scale terrestrial wind project could take three to five years to complete, and offshore projects take approximately five to seven years, meaning there will be significant delays in an investor's realization of profit.<sup>59</sup>

The high risk of renewable projects can also impede industry investment and make capital costs prohibitively high.<sup>60</sup> First, intermittency in energy production due to natural processes threatens some renewable energy sources and causes trepidation in the investment of these projects.<sup>61</sup> Second, when the price of fossil fuels is relatively low,

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<sup>53</sup> Hinman, *supra* note 8, at 44–46 (establishing that renewable energy projects introduce a number of risk elements).

<sup>54</sup> *Investing in Wind Powered Systems*, HOUSE-ENERGY, <http://www.house-energy.com/Wind/Costs-Wind.htm> (last visited May 17, 2011) (indicating that a single 1.5 megawatt turbine costs \$1 million, a typical wind farm costs \$20 million, and offshore wind projects can be 30–50% higher).

<sup>55</sup> See DOE REPORT, *supra* note 8, at 95, 99, 106; Hinman, *supra* note 8, at 45.

<sup>56</sup> See DOE REPORT, *supra* note 8, at 99, 106.

<sup>57</sup> See *id.* at 99.

<sup>58</sup> E-mail from Dennis Duffy, Vice President of Regulatory Affairs, Energy Mgmt. Inc., to author (Jan. 21, 2011, 12:52 EST) (on file with author). Duke Energy abandoned its three-turbine offshore wind “demonstration project” off the Carolinas once an Environmental Impact Statement was required under NEPA. John Downey, *Duke Energy Will Not Build Wind Turbines in Pamlico Sound*, OFFSHOREWIND.BIZ (Aug. 20, 2010), <http://www.offshorewind.biz/2010/08/20/duke-energy-will-not-build-wind-turbines-in-pamlico-sound-usa/>.

<sup>59</sup> E-mail from Dennis Duffy to author, *supra* note 58; David Vander Leest, *How Long Does It Take to Build a Wind Farm?*, PRELUDE LLC WIND FARMS, <http://preludellcwindfarms.com/faq.html> (last visited May 17, 2011).

<sup>60</sup> Clifford Krauss, *Alternative Energy Suddenly Faces Headwinds*, N.Y. TIMES, Oct. 21, 2008, at B1. Weak capital markets can also be a major obstruction. *Id.*

<sup>61</sup> See DOE REPORT, *supra* note 8, at 93–94, 99. Wind and solar in particular are subject to conditions beyond human control. *Id.* at 93.

economic incentives to develop non-fossil fuel energy sources decline.<sup>62</sup> Furthermore, in today's deregulated power markets, the variable costs of the marginal provider of electricity in each hour, typically natural gas-fired plants, dictates the market price of all electricity; therefore, when the marginal providers can provide electricity at much lower prices, the market revenues available to renewable energy also decline, threatening its economic viability.<sup>63</sup>

Third, selling renewable electricity to public utilities also poses challenges and risks.<sup>64</sup> Most public utilities attempt to minimize the near-term cost of electricity to consumers, but the price per kilowatt hour of electricity for renewable energy is often more expensive than the short-term market price, particularly during periods with low fossil fuel prices.<sup>65</sup> As such, it may be difficult to procure a long-term contract with public utilities to distribute and sell the renewable power, and, without the revenue certainty that such a commitment provides, it is difficult to obtain construction financing.<sup>66</sup> Lastly, inconsistent political incentives to promote renewable energy introduce additional risk by creating uncertainty regarding the continued existence of tax credits, which are necessary to make renewable projects economically viable.<sup>67</sup>

Clearly, increased risk, cost, and length of renewable projects may chill private investment.<sup>68</sup> Given the social utility of a strong renewable

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<sup>62</sup> See Hinman, *supra* note 8, at 36 (establishing that low fossil fuel prices and limited political support thwarted renewable energy development); Matthew L. Wald & Tom Zeller Jr., *Cost of Green Power Makes Projects Tougher Sell*, N.Y. TIMES, Nov. 8, 2010, at A1.

<sup>63</sup> JOINT COMMITTEE REPORT, *supra* note 3, at 10.

<sup>64</sup> See *id.*; *infra* notes 65–67 and accompanying text.

<sup>65</sup> Federal Power Act, 16 U.S.C. § 824d(a) (2006) (“All rates and charges made, demanded, or received by any public utility for or in connection with the transmission or sale of electric energy . . . shall be *just and reasonable* . . .” (emphasis added)); see, e.g., Mass. Elec. Co. v. Dep’t of Pub. Utils., 643 N.E.2d 1029, 1033–34 (Mass. 1994) (holding that the Department of Public Utilities exceeded its power when it considered environmental externalities in the selection of contracts with wholesale electricity companies, when such consideration resulted in higher costs to consumers).

<sup>66</sup> See JOINT COMMITTEE REPORT, *supra* note 3, at 10. State renewable portfolio standards may serve to ameliorate this problem by requiring public utilities to purchase a certain amount of electricity from renewable sources. See Timothy Duane, *Greening the Grid: Implementing Climate Change Policy Through Energy Efficiency, Renewable Portfolio Standards, and Strategic Transmission System Investments*, 34 VT. L. REV. 711, 712 (2010).

<sup>67</sup> See WIND AGENDA, *supra* note 5, at 8 (indicating drops in installed wind capacity during expired production tax credits); Kleinbard, *supra* note 17, at 23–24; *infra* notes 112–350 and accompanying text.

<sup>68</sup> Hinman, *supra* note 8, at 36.

energy industry, these obstructions to development justify tax incentives that encourage investment in the renewable energy industry.<sup>69</sup>

### B. *Use of the Income Tax System to Incentivize Private Investment in Renewable Energy*

Congress can use either tax credits or deductions to promote investment in a particular industry: tax credits provide dollar-for-dollar reductions in income tax liability, whereas tax deductions only reduce taxable income and lower tax liability in proportion to the applicable tax rate.<sup>70</sup> U.S. incentives for renewable energy take the form of tax credits, specifically the PTC<sup>71</sup> and the Investment Tax Credit (ITC).<sup>72</sup> The PTC is the dominant tax incentive in the industry and is thus the principal subject of this Note; the ITC has only recently played a more major role.<sup>73</sup>

These tax credits offset the higher costs of producing renewable energy, reducing the cost gap between renewable energy and traditional power generation sources, such as coal and natural gas.<sup>74</sup> For example, under certain conditions, use of the PTC can cause wind-generated electricity to be sold at approximately six cents per kilowatt hour, which is approaching cost competitiveness with coal-fired electricity (with a typical short-term price of three to five cents per kilowatt hour).<sup>75</sup> As a result of this reduced after-tax price, investors may be more willing to commit long-term to renewable projects.<sup>76</sup> A carbon tax would have the

<sup>69</sup> WIND AGENDA, *supra* note 5, at 2; Hinman, *supra* note 8, at 36; Riti, *supra* note 6, at 784.

<sup>70</sup> General Business Credit, 26 U.S.C.A. § 38 (West 2010); Adjusted Gross Income, 26 U.S.C.A. § 62(a), (b) (West 2010).

<sup>71</sup> 26 U.S.C.A. § 45 (West 2010).

<sup>72</sup> *Id.* § 48. These are not the only methods of incentivizing renewable energy. See, e.g., New Clean Renewable Energy Bonds, 26 U.S.C.A § 54(C) (West 2010). Certain qualified energy property may also be eligible for accelerated depreciation, which allows the taxpayer to depreciate its tax basis in qualifying investments over a five-year period. 26 U.S.C.A. § 168(k) (West 2010). As such, losses accumulate quickly and these losses decrease the taxpayer's taxable income. See Roberta F. Mann, *Back to the Future: Recommendations and Predictions for Greener Tax Policy*, 88 OR. L. REV. 355, 388 (2009).

<sup>73</sup> See Kobos, *supra* note 9, at 35 (indicating that Congress made the ITC available for PTC-qualifying facilities in 2009, providing more options for renewable energy investors).

<sup>74</sup> See Riti, *supra* note 6, at 788.

<sup>75</sup> John Goff, *How a Fresh Crop of CFOs Is Propelling the Alternative-Fuels Industry*, CFO (Jul. 1, 2006), [http://www.cfo.com/article.cfm/7108959/1/c\\_7129649](http://www.cfo.com/article.cfm/7108959/1/c_7129649).

<sup>76</sup> JOINT COMMITTEE REPORT, *supra* note 3, at 13 ("If investors in wind facilities . . . can expect to contract for prices close to those of natural gas facilities or coal facilities, the existence of the production tax credit may make investments in renewable resource electric generation facilities attractive to potential investors.").

same economic impact of filling the gap between the marginal cost of renewable energy and fossil fuels while also raising revenue.<sup>77</sup> Political opposition to the carbon tax, however, could result in a less than “optimal” tax and therefore decreased efficacy in closing the gap in marginal costs.<sup>78</sup>

Nonetheless, wind energy has had an annual growth rate of thirty percent since 1990.<sup>79</sup> Many in the industry attribute this growth in renewable projects to the PTC.<sup>80</sup> During the years that the PTC was allowed to expire, new wind project installations dropped precipitously; studies indicate that future expirations would result in similar, drastic reductions.<sup>81</sup>

## 1. Tax Credits for the Production of Renewable Energy

Congress created the PTC in 1992 to reduce dependence on foreign oil and incentivize the production of renewable energy.<sup>82</sup> The PTC is available for renewable electricity produced for sale to a third party from qualified renewable energy resources, such as wind and solar.<sup>83</sup> The credit is equal to the product of 2.2 cents (adjusted for inflation) and the kilowatt hours of electricity (1) produced by the taxpayer, (2) from “qualified energy resources,” (3) during the ten-year credit period beginning on the date the facility was placed in service, and (4) sold in

<sup>77</sup> Gilbert E. Metcalf & David Weisbach, *The Design of a Carbon Tax*, 33 HARV. ENVTL. L. REV. 499, 500 (2009).

<sup>78</sup> Brian Galle & Manuel Utset, *Is Cap-and-Trade Fair to the Poor? Shortsighted Households and the Timing of Consumption Taxes*, 79 GEO. WASH. L. REV. 33, 93 n.301 (2010).

<sup>79</sup> See Austin Conner, *Twenty Percent Wind Energy by 2030: Keys to Meeting the DOE’s Goal*, 5 ENVTL. & ENERGY L. & POL’Y J. 130, 130 (2010).

<sup>80</sup> See WIND AGENDA, *supra* note 5, at 8; Kobos, *supra* note 9, at 35. Although those in the renewable energy industry have an interest in promoting the PTC, data regarding the impact of the PTC on added capacity of wind energy provide support for their view. See EIA REPORT, *supra* note 26, at 4; U.S. *Installed Wind Capacity and Wind Project Locations*, U.S. DEPT. OF ENERGY, [http://www.windpoweringamerica.gov/wind\\_installed\\_capacity.asp](http://www.windpoweringamerica.gov/wind_installed_capacity.asp) (last visited May 17, 2011) [hereinafter *Wind Capacity and Projects*].

<sup>81</sup> ECONOMIC IMPACTS, *supra* note 26, at 20–22; EIA REPORT, *supra* note 26, at 4; WIND AGENDA, *supra* note 5, at 8; see also *infra* notes 181–188 and accompanying text (describing added wind capacity over the past decade).

<sup>82</sup> Energy Policy Act of 1992, Pub. L. No. 102-486, § 1914, 106 Stat. 2776, 3020–22 (codified as amended at 26 U.S.C.A. §§ 38–39, 45 (West 2010)); *In Support of the Conference Report to H.R. 776, The Comprehensive National Energy Policy Act*, 138 CONG. REC. E3214 (daily ed. Oct. 5, 1992) (statement of Hon. Harris W. Fawell of Illinois).

<sup>83</sup> 26 U.S.C.A. § 45(a). “[Q]ualified energy resources” for the PTC include: wind, closed and open loop biomass, geothermal, solar, small irrigation power, municipal solid waste, qualified hydropower, and marine/hydrokinetic. *Id.* § 45(c)(1).

a qualified sale to a third party.<sup>84</sup> This amount directly reduces the taxpayer's income tax liability.<sup>85</sup> For instance, if a qualified renewable energy company produces ten thousand kilowatt hours of renewable energy and sells it to a public utility (or other the third party), it would receive a tax credit of twenty-two thousand dollars.<sup>86</sup> A similar calculation could occur each year for ten years.<sup>87</sup>

The PTC encourages investment in wind projects that operate successfully over the long term, as the electricity must actually be produced and sold to a third party to realize the tax credit, and so construction alone is not sufficient to obtain the PTC.<sup>88</sup> This requirement shifts project risk away from the federal government to the owners and developers of the facilities.<sup>89</sup> Therefore, the tax credit may not be fully utilized if production dwindles or project complications occur, such as long-term production outages or inability to deliver energy to the grid.<sup>90</sup>

The ITC is another renewable energy tax credit that was previously only available for smaller projects but has recently become important to large, PTC-qualifying renewable energy facilities.<sup>91</sup> An ITC amounts to thirty percent of the eligible cost of any renewable energy property placed in service during a taxable year—this amount directly reduces income tax liability.<sup>92</sup> Furthermore, this credit reduces the depreciable basis of the property.<sup>93</sup> The availability of the ITC to PTC-qualifying facilities provides additional options for investors.<sup>94</sup> By electing to claim the ITC, rather than the PTC, investors are not exposed to the risks of

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<sup>84</sup> *Id.* § 45(a). The cents-per-kilowatt-hour figure is adjusted for inflation yearly. *Id.* § 45(b)(2). The price indicated (2.2 cents) and the ten-year credit period, however, are reduced by half for certain types of generation. *Id.* § 45(b)(4)(A)–(B).

<sup>85</sup> Business Tax Credit, 26 U.S.C.A. § 38(a) (West 2010).

<sup>86</sup> *See* 26 U.S.C.A. § 45(a).

<sup>87</sup> *See id.*

<sup>88</sup> *Id.* § 45(a)(2)(B); *see* Hinman, *supra* note 8, at 56–57.

<sup>89</sup> *See* Hinman, *supra* note 8, at 56.

<sup>90</sup> *See* 26 U.S.C.A. § 45(a). This provision was drafted with the tax credit abuses of the wind boom in California in mind and was designed to avoid frivolous tax shelters. *See* Hinman, *supra* note 8, at 55.

<sup>91</sup> American Relief and Reinvestment Tax Act, Pub. L. No. 111–5, § 1102, 123 Stat. 115, 320 (2009) (codified as amended at 26 U.S.C.A. § 45) (making the ITC available to PTC-qualifying facilities). Additionally, a grant in lieu of the ITC was also offered for particularly capital-starved projects. *Id.* § 1603, 123 Stat. at 364.

<sup>92</sup> Energy Credit, 26 U.S.C.A. § 48(a)(1)–(2).

<sup>93</sup> *Id.* § 48(d)(3)(B). Basis is the taxpayer's recoverable capital investment in an asset and is used to determine gain or loss realized with respect to that asset. McDANIEL, *supra* note 4, at 479. Depreciation is the reduction of the basis of an asset used in a trade or business (e.g., a wind turbine) through amortization, and this depreciation may be deducted from taxable income. 26 U.S.C. § 167(a) (2006).

<sup>94</sup> *See* Garcia, *supra* note 7, at 18.

decreased demand or production complications, as the sale of electricity is not required to realize the ITC.<sup>95</sup> Furthermore, the time commitment to the project need only be five years to capture the full credit, as compared to the ten-year commitment necessary under the PTC.<sup>96</sup> Although this Note focuses on the PTC, the ITC may have increasing importance to renewable energy projects if it remains applicable to larger facilities.<sup>97</sup>

## 2. Monetization Challenges

Typically, the PTC requires private equity investment to be monetized, specifically through tax equity investors.<sup>98</sup> To realize fully the benefit of a tax credit, the taxpayer must have sufficient tax liability.<sup>99</sup> Developers of renewable energy, however, may not expect to have sufficient federal income tax liability for the next ten years, and yet equity is necessary at the beginning stages of the project.<sup>100</sup> Therefore, utilization of these tax credits typically requires a third-party investor, called a tax equity investor.<sup>101</sup> The tax equity investor provides equity to the project and becomes the “taxpayer” benefitting from the tax credit over the ten-year credit period.<sup>102</sup> To maintain their “taxpayer” status, tax equity investors must maintain an ownership interest in the renewable project.<sup>103</sup> Therefore, investors and developers structure special deals to ensure that tax equity investors obtain ownership of the property to become the “taxpayer,” and developers, the experts in renewable energy, maintain

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<sup>95</sup> See Conner, *supra* note 79, at 134. Compare 26 U.S.C.A. § 48(a) (requiring the taxpayer place the facility in service), with *id.* § 45(a) (requiring the taxpayer sell the electricity to a third party). This difference, however, frustrates the PTC’s purpose of ensuring successful renewable projects. See Hinman, *supra* note 8, at 56–57.

<sup>96</sup> Compare 26 U.S.C.A. § 45(a)(2)(A)(ii) (permitting the PTC to be collected over a ten-year period), with 26 U.S.C. § 50(a) (2006) (mandating a five-year vesting period for business tax credits).

<sup>97</sup> See Kobos, *supra* note 9, at 35; Hinman, *supra* note 8, at 68.

<sup>98</sup> See *infra* notes 99–106 and accompanying text.

<sup>99</sup> Business Tax Credit, 26 U.S.C.A. § 38(a) (West 2010).

<sup>100</sup> See Kobos, *supra* note 9, at 37–38.

<sup>101</sup> See *id.*

<sup>102</sup> *Id.* Typically, the parties will create a limited partnership or limited liability company for tax purposes because neither form is recognized as a taxable entity; as such, partners are treated as owners of their allocable share. *Id.*

<sup>103</sup> *Id.* As such, only the owner of the facility is able to receive the PTC, and tax equity investors who want to take advantage of the PTC must maintain an ownership interest in the facility. Rev. Proc. 2007-65, 2007-45 I.R.B. 967, 967; Kobos, *supra* note 9, at 37–38. Leasing or debt transactions will not qualify the lessee or lender to receive the tax credit because the lessee or lender would not have an ownership interest in the facility. See 26 U.S.C.A. § 45(a)(2)(A) (West 2010); Rev. Proc. 2007-65, 2007-45 I.R.B. 967, 968.

operational control over the project.<sup>104</sup> With respect to renewable energy, only a few dozen investors execute these complicated deals.<sup>105</sup> The industry and the Internal Revenue Service (IRS) developed complex ownership agreements allowing the project to monetize the PTC by effectively allocating the tax benefit to an equity investor.<sup>106</sup>

Because these programs encourage private investment by third-party investors, the effectiveness of the tax credits is vulnerable to weaknesses in the capital market and to factors that compromise the certainty of investments.<sup>107</sup> The recession in 2008, with depleted credit markets, a weakened financial sector, and decreased energy prices, revealed some of the limitations of tax credits to spur development in renewable energy.<sup>108</sup>

Furthermore, investors require the continued existence of the PTC in order to invest in renewable projects with confidence that the benefits will be available when the project is operational and connected

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<sup>104</sup> See Rev. Proc. 2007-65, 2007-45 I.R.B. 967, 967-69; Kobos, *supra* note 9, at 38.

<sup>105</sup> Patrick E. Groomes & Paul J. Astolfi, Kirkland & Ellis LLP, *Treasury Grants for Renewable Energy Projects*, LAW 360 (2009), available at <http://www.kirkland.com/siteFiles/Publications/3B81385AC3D517333AC64EEE3DD0EF35.pdf>. Monetizing the ITC, however, can be achieved with more traditional syndication structures, as the ITC does not require that the taxpayer produce and sell electricity over a credit period. See Kobos, *supra* note 9, at 39. Compare 26 U.S.C.A. § 45(a)(1) (requiring that the taxpayer produce electricity to capture the credit), with *id.* § 48(a) (requiring that the taxpayer place property in service to receive tax credit). Restrictions in 26 U.S.C. § 50(a), however, require that the taxpayer cannot sell the facility for five years. 26 U.S.C. § 50(a) (2006).

<sup>106</sup> See Hinman, *supra* note 8, at 59. The IRS approved one type of syndication structure in Revenue Procedure 2007-65, specifically for wind energy projects, and provides guidance and a “safe harbor” in structuring these deals. Rev. Proc. 2007-65, 2007-45 I.R.B. 967, 967. To comply with Revenue Procedure 2007-65, the tax equity investor becomes a limited partner in the development, but typically with a maximum of 99% ownership interest. *Id.* at 968. The investor, therefore, receives 99% of the PTC benefits and 99% of the depreciation benefits. *Id.* at 968-69. The developer, who will be operating and maintaining the project, becomes a general partner with a 1% ownership interest. *Id.* According to 2007-65, the developer must maintain a minimum 1% interest in income, gain, loss, deduction, and credit throughout the term of the partnership. *Id.* As a result, the investor is the taxpayer, satisfying the statutory requirement under § 45. *Id.* The developer, however, maintains a stake in the company, and therefore it is an equity infusion, not a debt transaction. *Id.* Then, after the PTC’s ten-year statutory period, the ownership will “flip”: the investor now maintains a 5% ownership in the project and the owner takes on the remaining 95%. *Id.* In accordance with Revenue Procedure 2007-65, the investor cannot flip down to less than 5%. *Id.* After the flip, the developer typically has a purchase option at fair market value for the remaining 5%. *Id.*

<sup>107</sup> Mann, *supra* note 72, at 388.

<sup>108</sup> See BUS. CYCLE DATING COMM. OF THE NAT’L BUREAU OF ECON. RESEARCH, DETERMINATION OF THE DECEMBER 2007 PEAK IN ECONOMIC ACTIVITY 1 (2008), available at <http://www.nber.org/dec2008.pdf> (establishing that the recession began in 2008); Mann, *supra* note 72, at 387.

to the grid.<sup>109</sup> Todd Raba, the president of MidAmerican Energy Company, has articulated this point: “We [could not] risk final acquisition and installation of the turbines without the PTC being restored, as the project would not have met the cost requirements of the Iowa Utility Board.”<sup>110</sup> Other risks as well may chill investment, such as unpredictable market shifts in costs and revenues, local opposition, and change in government policies.<sup>111</sup>

## II. SUNSET PROVISIONS IN TAX POLICY

Despite the necessity of the PTC to investors, it is not a permanent feature of the tax code and has been subject to frequent expirations and renewals due to sunset dates.<sup>112</sup> Sunset dates are built-in expiration dates for laws that mandate affirmative congressional action to renew that law.<sup>113</sup> Section A of this Part provides a history of sunset dates in Congress, their theoretical justifications, and the scholarly debate surrounding them.<sup>114</sup> Next, Section B discusses the successive use of sunset dates in the PTC and the effects of sunset dates on the industry’s use of the PTC.<sup>115</sup> Finally, Section C introduces the Low-Income Housing Tax Credit (LIHTC), which, despite sunseting in the nascent stages of the credit, has become a permanent feature in the tax code.<sup>116</sup>

<sup>109</sup> See WIND AGENDA, *supra* note 5, at 8; Kleinbard, *supra* note 17, at 23–24.

<sup>110</sup> *Clean Energy: From the Margins to the Mainstream: Hearings of the S. Finance Comm.*, 110th Cong. 13 (2007).

<sup>111</sup> See *supra* notes 52–69 and accompanying text (describing risks of renewable projects).

<sup>112</sup> American Relief and Reinvestment Tax Act, Pub. L. No. 111-5, § 1101, 123 Stat. 115, 319 (2009) (codified as amended at 26 U.S.C.A. § 45 (West 2010)) (renewing the PTC for three years); Tax Relief and Health Care Act of 2006, Pub. L. No. 109-432, § 201, 120 Stat. 2922, 2944 (codified as amended at 26 U.S.C.A. § 45) (renewing the PTC for one year); Energy Policy Act of 2005, Pub. L. No. 109-58, § 1301, 119 Stat. 594, 986–87 (codified as amended at 26 U.S.C.A. § 45) (renewing the PTC for two years); Working Families Tax Relief Act of 2004, Pub. L. No. 108-311, § 313, 118 Stat. 1166, 1181 (codified as amended at 26 U.S.C.A. § 45) (renewing the PTC for one year); Job Creation and Worker Assistance Act of 2002, Pub. L. No. 107-147, § 603, 116 Stat. 21, 59 (codified as amended at 26 U.S.C.A. § 45) (renewing the PTC for less than two years); Tax Relief Extension Act of 1999, Pub. L. No. 106-170, § 507, 113 Stat. 1860, 1922 (codified as amended at 26 U.S.C.A. § 45) (renewing the PTC for two years); Energy Policy Act of 1992, Pub. L. No. 102-486, § 1914, 106 Stat. 2776, 3020 (codified as amended at 26 U.S.C.A. §§ 38–39, 45 (West 2010)) (establishing the PTC initially for six and a half years).

<sup>113</sup> THEODORE J. LOWI, THE END OF LIBERALISM: IDEOLOGY, POLICY, AND THE CRISIS OF PUBLIC AUTHORITY 309 (1969). Sunset dates were formerly called “duration clauses.” Jacob Gersen, *Temporary Legislation*, 74 U. CHI. L. REV. 247, 247 (2007).

<sup>114</sup> See *infra* notes 117–163 and accompanying text.

<sup>115</sup> See *infra* notes 164–204 and accompanying text.

<sup>116</sup> See *infra* notes 205–214 and accompanying text.



### A. *History and Debate over Sunset Dates*

Sunset dates have a long history in U.S. legislation, both in theory and in practice.<sup>117</sup> The recent surge of sunset provisions in the past decade has sparked much debate about their value.<sup>118</sup>

#### 1. Political Theory of Sunset Provisions

Sunset provisions are expiration dates on laws—a “sunsetting” law is only effective for a certain period of time.<sup>119</sup> The concept and controversy of expiring legislation in the United States harkens back to the founding fathers.<sup>120</sup> Theorists understood sunset provisions to subject laws to periodic review.<sup>121</sup> Such a built-in review mechanism would hold the legislature accountable and shift the legislative burden to those who sought to renew the law, rather than to those who sought to overturn it.<sup>122</sup>

Over the past forty years Congress has increasingly used sunset provisions, particularly in tax legislation.<sup>123</sup> The contemporary theory of sunsetting originates with the political theorist Theodore Lowi, who in 1969 proposed that all laws creating federal agencies be subject to expiration after five to ten years.<sup>124</sup> Lowi also posited that sunsetting encourages innovative legislation and replacement of stagnant, ineffective programs and decreased special interest influence.<sup>125</sup> This theory, however, proved unsuccessful particularly at the state level due to lack of public participation, enhanced special interest lobbying, and costly

<sup>117</sup> Rebecca M. Kysar, *The Sun Also Rises: The Political Economy of Sunset Provisions in the Tax Code*, 40 GA. L. REV. 335, 338 (2006).

<sup>118</sup> Compare *id.* at 340 (criticizing sunset provisions), with Yin, *supra* note 20, at 180 (supporting sunset provisions).

<sup>119</sup> Manoj Viswanathan, *Sunset Provisions in the Tax Code: A Critical Evaluation and Prescriptions for the Future*, 82 N.Y.U. L. REV. 656, 657 (2007).

<sup>120</sup> See Kysar, *supra* note 117, at 350 (quoting Letter from Thomas Jefferson to James Madison (Sept. 6, 1789), in 6 THE WORKS OF THOMAS JEFFERSON 3, 8–9 (Paul Leicester Ford ed., 1904)) (indicating that Thomas Jefferson advocated for the sunset system, as “no society can make a perpetual constitution, or even a perpetual law”).

<sup>121</sup> See *id.*

<sup>122</sup> See *id.* at 354.

<sup>123</sup> See Elizabeth Garrett, *Harnessing Politics: The Dynamics of Offset Requirements in the Tax Legislative Process*, 65 U. CHI. L. REV. 501, 562 (1998).

<sup>124</sup> LOWI, *supra* note 113, at 309. President Carter in particular adopted this philosophy. See Kysar, *supra* note 117, at 353. Judge Guido Calabresi, however, criticized sunset law as “a mechanical doctrine linked solely to time.” GUIDO CALABRESI, A COMMON LAW FOR THE AGE OF STATUTES 61 (1982).

<sup>125</sup> Kysar, *supra* note 117, at 352.

review processes.<sup>126</sup> Furthermore, it was primarily used in the tax code on the federal level, rather than for agency legislation.<sup>127</sup>

The use of sunseting has grown even more prolifically since 2000.<sup>128</sup> Congress initially used sunset provisions narrowly for targeted tax credits; extenders or sunset clauses, however, have become ingrained in the tax code.<sup>129</sup> Extensive sunseting in the tax code began with the Economic Growth and Tax Reconciliation Act of 2001—all of that act's tax provisions were "sunsetted" by Congress.<sup>130</sup>

Scholars posit that a primary reason for increased use of sunseting is to achieve budgetary goals, as temporary tax provisions have less impact on tax expenditures.<sup>131</sup> This increase in sunseting, then, appears to have taken place for reasons not predicted by Lowi's theory of sunset provisions.<sup>132</sup> Supporters argue that the provisions reduce spending, encourage political accountability, and promote consideration of the actual cost of legislation, thereby preventing flaws in accounting for

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<sup>126</sup> See *id.* at 353–55 (summarizing state programs that utilized widespread sunseting of all legislation and indicating the failure of those programs, mostly on account of lack of public participation).

<sup>127</sup> *Id.* at 358.

<sup>128</sup> See Viswanathan, *supra* note 119, at 657. This trend commenced with the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism (USA PATRIOT) Act of 2001, Pub. L. No. 107-56, 115 Stat. 272 (codified in scattered sections of 8, 12, 15, 18, 21–22, 28, 31, 42, 47, and 49–50 U.S.C.). Congress sunsetted this Act because it was emergency legislation, and presumably would be repealed when no emergency existed. Rosa Ehrenreich Brooks, *War Everywhere: Rights, National Security Law, and the Law of Armed Conflict in the Age of Terror*, 153 U. PA. L. REV. 675, 696 (2004).

<sup>129</sup> Kysar, *supra* note 117, at 358–59 (characterizing the ITC and the work opportunity tax credit as targeted tax credits temporarily enacted to "combat interim needs and difficulties"); Viswanathan, *supra* note 119, at 657 ("The majority of the tax cuts enacted in 2001, 2002, and 2003 will expire before 2011.").

<sup>130</sup> Economic Growth and Tax Reconciliation Act of 2001, Pub. L. No. 107-16, 115 Stat. 38 (codified as amended in scattered sections of 26 U.S.C.); Kysar, *supra* note 117, at 338; see also Jobs and Growth Tax Relief Reconciliation Act of 2003, Pub. L. No. 108-27, § 103, 117 Stat. 752, 754 (codified as amended at 26 U.S.C.A. §§ 1, 63 (West 2010)) (sunsetting Alternative Minimum Tax provisions). The estate tax was also subject to a sunset provision and consequently expired in 2010, causing a "train wreck" in the estate planning industry. Beth Shapiro Kaufman, *2010: The Anatomy of a Train Wreck*, 37 EST. PLAN. 42, 42 (2010).

<sup>131</sup> See Kysar, *supra* note 117, at 359. One such budgetary rule is the pay-as-you-go (PAYGO) rule. *Id.* at 360. By implementing sunset provisions, fewer offsetting revenues are required if the tax cut/credit has a shorter life. *Id.* at 360–61; see also Cheryl D. Block, *Pathologies at the Intersection of the Budget and Tax Legislative Processes*, 43 B.C. L. REV. 863, 874 (2002) (noting that taxation is an integral part of the budgetary process).

<sup>132</sup> Lowi, *supra* note 113, at 352 (theorizing that sunset dates would cause greater legislative oversight and more innovative legislative programs).

permanent legislation.<sup>133</sup> Further, sunset provisions impact budget forecasting: by sunsetting the PTC, the budget forecast need only account for projects likely to come into service during the one or two years of the current credit extension period, rather than the total cost of all projects placed in service over the ten-year budgetary process.<sup>134</sup> Critics, however, argue that sunset provisions reduce political accountability by underestimating revenue needs and reducing reliability of revenue projections, and that they encourage congressional misconduct by introducing with each renewal lobbying opportunities for potential campaign contributions and rent extraction.<sup>135</sup>

## 2. Critics' Arguments that Sunset Provisions Frustrate Long-Term Investment

Many scholars argue that sunset provisions, and the implicit risk of expiration that they represent, frustrate long-term investment due to the increased uncertainty and increased costs of rent extraction.<sup>136</sup> Sunset dates introduce a greater chance of legislative change and thus create uncertainty in the industry.<sup>137</sup> Even though repeal or revision is always possible with respect to legislative acts, each at least requires affirmative congressional action whereas expiration of a provision upon the sunset date does not.<sup>138</sup> As Judge Guido Calabresi has noted, "getting a statute enacted is much easier than getting it revised."<sup>139</sup> Furthermore, even if incentives are renewed regularly, the renewals are

<sup>133</sup> See William G. Gale & Peter R. Orszag, *An Economic Assessment of Tax Policy in the Bush Administration, 2001–2004*, 45 B.C. L. REV. 1157, 1178 (2004) (illustrating how permanent tax cuts, unlike the expiring tax provisions imposed by the Bush administration, threaten fiscal stability); Yin, *supra* note 20, at 192–93, 199, 208.

<sup>134</sup> See Yin, *supra* note 20, at 192–93. For example, assuming one year of the PTC cost \$1 billion, a permanent tax credit would require Congress to report \$10 billion in the budget, whereas sunsetting the PTC after one year only requires Congress to report \$1 billion in the budget. *See id.*

<sup>135</sup> *See id.*; Kysar, *supra* note 117, at 339–41, 394. A well-organized minority could defeat a majority when it comes to renewing provisions. Kysar, *supra* note 117, at 339–41, 394. Some suggest also that Congress promotes sunset provisions due to campaign finance laws limiting contributions temporally. *See* Rebecca Kysar, *Lasting Legislation*, 159 U. PA. L. REV. 1007, 1053 (2011) [hereinafter Kysar, *Lasting Legislation*]; Edward J. McCaffery & Linda R. Cohen, *Shakedown at Gucci Gulch: The New Logic of Collective Action*, 84 N.C. L. REV. 1159, 1164–65 (2006). Therefore, rather than a large campaign contribution for one permanent law, sunset provisions permit smaller, more frequent contributions. *See* Kysar, *Lasting Legislation*, *supra*, at 1053.

<sup>136</sup> *See, e.g.*, Kleinbard, *supra* note 17, at 23; Kysar, *supra* note 117, at 368 & nn.223, 225.

<sup>137</sup> *See* Kysar, *supra* note 117, at 368.

<sup>138</sup> *Id.*

<sup>139</sup> CALABRESI, *supra* note 124, at 6.

often not seamless and instead leave expiration gaps in the life of the tax credit.<sup>140</sup> These gaps impose additional costs on taxpayers utilizing the credits because they have to resubmit tax forms to reflect expired or retroactively renewed tax provisions.<sup>141</sup> The long-term benefit of the tax cut is diminished due to these increased planning costs.<sup>142</sup>

Given these impediments to long-term investment, it is perhaps unsurprising that participants in the renewable energy industry complain of the uncertainty caused by PTC's frequent sunseting.<sup>143</sup> According to critics, sunset provisions further frustrate the incentivizing function of a tax credit because taxpayers will not consider the tax credit in their planning due to uncertainty.<sup>144</sup> As such, any benefit received from the credit is not the motivating factor for the investment activity, and the credit becomes a windfall.<sup>145</sup>

### 3. Supporters' Arguments that Sunset Provisions Promote Investment

Other tax scholars maintain that sunset provisions do not discourage and may in fact encourage long-term investment, as increased uncertainty may actually stimulate investment, the argument goes.<sup>146</sup> Initially, if the investment is reversible, greater uncertainty in the future existence of a tax benefit will further incentivize investment.<sup>147</sup> Reversible investments are those that "allow an economic actor to change

<sup>140</sup> See, e.g., 26 U.S.C.A. § 45 (West 2010); *infra* notes 167–179 and accompanying text; see also Kysar, *supra* note 117, at 368–69 (describing the complexities that arise from retroactive renewals of expired tax provisions).

<sup>141</sup> Kysar, *supra* note 117, at 368–69. Professor Rebecca Kysar argues that these disadvantages of a staggered renewal chain are precisely what constitute the main reasons for including sunset provisions. *Id.* Increases in cost and uncertainty encourage increased lobbying, providing opportunity for more rent extraction. *Id.* at 369.

<sup>142</sup> *Id.* at 396 ("Uncertainty hurts economic performance by diminishing the incentive effects of the tax cut. In addition, uncertainty creates economic waste by increasing planning, administration, and compliance costs." (internal citations omitted)).

<sup>143</sup> See WIND AGENDA, *supra* note 5, at 8. Other businesses consider sunseting provisions as a legitimate business risk. See Kysar, *Lasting Legislation*, *supra* note 135, at 1064 (citing a General Electric annual report that details the risk of sunset provisions to the business).

<sup>144</sup> See Kysar, *supra* note 117, at 396; Viswanathan, *supra* note 119, at 669–70.

<sup>145</sup> See Kysar, *supra* note 117, at 396.

<sup>146</sup> See Yin, *supra* note 20, at 245 (arguing that short-term investment is certainly served by sunset provisions, as fear that the tax incentive will not be renewed will spur investment more quickly).

<sup>147</sup> See *id.*; see also Andrew B. Abel, *Optimal Investment Under Uncertainty*, 73 AM. ECON. REV. 228, 231–32 (1983) (establishing an economic theory of how uncertainty promotes investment).

course without significant cost.”<sup>148</sup> If the investment is reversible, the taxpayer will feel free to invest notwithstanding the fear that the tax incentive will expire because in the event that the tax provision sunsets, the investment is easily retracted.<sup>149</sup> This principle, however, may not hold true with irreversible investments, investments that are illiquid, or investments that cannot be reversed without significant cost.<sup>150</sup> In such cases, the taxpayer may refrain from investing until the uncertainty of expiration is reduced for fear of investing in less than optimal conditions.<sup>151</sup>

Even with irreversible investments, some economic theorists suggest that uncertainty increases investment.<sup>152</sup> These theorists posit that when uncertain tax policy exists, taxpayers may speed up or increase their investment to evade the possibility of expiration altogether.<sup>153</sup> This theory particularly holds true if the uncertainty concerns an enhancement in an existing incentive, as opposed to the existence of the incentive itself.<sup>154</sup> For instance, bonus depreciation provisions, which incentivize development or procurement of certain property, have sunset dates.<sup>155</sup> If, however, the investor taxpayer acquires property after the sunset date without renewal of the provision, the taxpayer still benefits from the default depreciation deductions afforded to taxpayers.<sup>156</sup> With this knowledge in mind, the taxpayer will be spurred to acquire the property before the sunset provision, resulting in increased investment.<sup>157</sup> This argument may be classified as the “use it or lose it” effect.<sup>158</sup>

Scholars also argue that sunset provisions are renewed so frequently that they achieve the same degree of certainty as permanent legislation,<sup>159</sup> which is also subject to change through revision or re-

<sup>148</sup> Yin, *supra* note 20, at 245.

<sup>149</sup> *See id.*

<sup>150</sup> *Id.* (“The opposite may be true, however, if an investment is irreversible.”).

<sup>151</sup> *Id.* at 246.

<sup>152</sup> *Id.*

<sup>153</sup> Kevin A. Hassett & Gilbert E. Metcalf, *Investment with Uncertain Tax Policy: Does Random Tax Policy Discourage Investment?*, *ECON. J.*, July 1999, at 372, 388.

<sup>154</sup> *See id.* (“[W]hen tax policy follows a stationary and discrete jump process . . . increasing uncertainty can have the opposite effect, speeding up the time to investment, and increasing the amount of capital purchased . . .”).

<sup>155</sup> 26 U.S.C. § 168(k) (2006).

<sup>156</sup> *See* Yin, *supra* note 20, at 246 & n.266 (arguing that greater uncertainty can spur investment, particularly when the provision will revert to the mean, like bonus depreciation provisions).

<sup>157</sup> *Id.* at 246.

<sup>158</sup> *Id.*

<sup>159</sup> *See id.* at 246–47.

peal.<sup>160</sup> Finally, permanent legislation may actually create a “certainty illusion,” whereby taxpayers are not mindful of the frequent changes to legislation:

Conversely, if one effect of greater use of temporary-effect laws is to improve the perceived fiscal sustainability of all laws, then the decrease in uncertainty should enhance the effectiveness of all economic incentives. Temporary-effect laws may also be viewed in a positive light because they create realistic benchmarks for the reexamination of policy direction.<sup>161</sup>

Government action, therefore, should not be taken as certain, as it is always subject to change.<sup>162</sup> Sunsets remind those who benefit from tax incentives of this truth.<sup>163</sup>

### B. *Sunsetting the Production Tax Credit*

Despite disagreement among scholars regarding the value of sunset dates generally, those in the renewable energy industry agree that sunseting of the PTC has impacted the industry and that a permanent PTC would result in more long-term investment in renewable energy.<sup>164</sup> Despite the success of the PTC, the credit has not become a permanent feature of the Internal Revenue Code and has been subject to the current sunset trend in Congress.<sup>165</sup> When the PTC was originally adopted in 1992, the taxpayer could only receive the credit if the qualifying facility was placed in service after December 31, 1993 and before July 1, 1999.<sup>166</sup> The latter date was the sunset date, at which point Congress would decide whether to renew the PTC.<sup>167</sup> Taxpayers that placed a facility in service prior to the sunset date would enjoy the full ten-year credit period.<sup>168</sup>

As such, Congress initially gave investors a six-and-a-half-year window to begin to develop and construct projects to claim the credit be-

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<sup>160</sup> *Id.*

<sup>161</sup> *Id.* at 248.

<sup>162</sup> See Yin, *supra* note 20, at 248.

<sup>163</sup> See *id.*

<sup>164</sup> See WIND AGENDA, *supra* note 5, at 8.

<sup>165</sup> See *infra* notes 166–180 and accompanying text.

<sup>166</sup> Energy Policy Act of 1992, Pub. L. No. 102-486, § 1914, 106 Stat. 2776, 3020 (codified as amended at 26 U.S.C.A. §§ 38–39, 45 (West 2010)).

<sup>167</sup> *Id.*

<sup>168</sup> 26 U.S.C.A. § 45(a), (d).

fore the PTC expired on July 1, 1999.<sup>169</sup> Five months after the credit expired, Congress extended it for two more years; the credit then expired for a second time on January 1, 2002.<sup>170</sup> Two months later, in March 2002, Congress renewed the PTC for qualifying facilities placed in service before 2004.<sup>171</sup> Again, in January 2004, the PTC expired for a third time, and Congress renewed it in October 2004 until the end of 2005.<sup>172</sup> At this point, the Energy Policy Act of 2005 renewed the PTC for facilities placed in service before 2008.<sup>173</sup> Congress then extended it for an additional year in December of 2008.<sup>174</sup> Finally, the American Recovery and Reinvestment Tax Act extended the PTC once again until the end of 2012 for wind energy.<sup>175</sup>

Therefore, beyond the initial six-and-a-half-year period, the PTC has been extended only for one to three years at a time and only with frequent expirations.<sup>176</sup> It was effective for two years, and then two more years, and then one year, and then two years again, and then three years.<sup>177</sup> On three separate occasions, in 1999, 2001, and 2003, Congress let the PTC expire.<sup>178</sup> Political disagreements have contrib-

<sup>169</sup> Energy Policy Act of 1992 § 1914. The Committee on Ways and Means justified the initial six and a half year window to provide an opportunity to assess the effectiveness of the credit and to evaluate its need with respect to energy prices. H.R. REP. NO. 102-474, pt. 6, at 3364 (1992). Some have lauded this experimental value of sunset provisions. See Gersen, *supra* note 113, at 275.

<sup>170</sup> Tax Relief Extension Act of 1999, Pub. L. No. 106-170, § 507, 113 Stat. 1860, 1922 (codified as amended at 26 U.S.C.A. § 45).

<sup>171</sup> Job Creation and Worker Assistance Act of 2002, Pub. L. No. 107-147, § 603, 116 Stat. 21, 59 (codified as amended at 26 U.S.C.A. § 45).

<sup>172</sup> Working Families Tax Relief Act of 2004, Pub. L. No. 108-311, § 313, 118 Stat. 1166, 1181 (codified as amended at 26 U.S.C.A. § 45).

<sup>173</sup> Energy Policy Act of 2005, Pub. L. No. 109-58, § 1301, 119 Stat. 594, 986–87 (codified as amended at 26 U.S.C.A. § 45).

<sup>174</sup> Tax Relief and Health Care Act of 2006, Pub. L. No. 109-432, § 201, 120 Stat. 2922, 2944 (codified as amended at 26 U.S.C.A. § 45).

<sup>175</sup> American Relief and Reinvestment Tax Act, Pub. L. No. 111-5, § 1101, 123 Stat. 115, 319 (2009) (codified at 26 U.S.C.A. § 45).

<sup>176</sup> See *supra* notes 166–175 and accompanying text.

<sup>177</sup> Section 1101, 123 Stat. at 319 (renewing the PTC for three years); § 201, 120 Stat. at 2944 (renewing the PTC for one year); § 313, 118 Stat. at 1181 (renewing the PTC for one year); § 1301, 119 Stat. at 986–87 (renewing the PTC for two years); Job Creation and Worker Assistance Act of 2002, Pub. L. No. 107-147, § 603, 116 Stat. 21, 59 (codified as amended at 26 U.S.C.A. § 45) (renewing the PTC for less than two years); Tax Relief Extension Act of 1999, Pub. L. No. 106-170, § 507, 113 Stat. 1860, 1922 (codified as amended at 26 U.S.C.A. § 45) (renewing the PTC for two years); Energy Policy Act of 1992, Pub. L. No. 102-486, § 1914, 106 Stat. 2776, 3020 (codified as amended at 26 U.S.C.A. §§ 38–39, 45 (West 2010)) (establishing the PTC initially for six and a half years).

<sup>178</sup> See *supra* notes 170–177 and accompanying text.

uted to this staggered expiration and extension schedule.<sup>179</sup> Clearly, even though the PTC has been consistently renewed since 2005, uncertainty over its continuation still exists because each renewal in Congress has introduced political posturing and debate.<sup>180</sup>

The American Wind Energy Association states that the “on-again, off-again” production tax credit causes uncertainty, which discourages long-term investment in wind power manufacturing and development.<sup>181</sup> This impact is evidenced in Table 1, below.

Year	Net Installed Wind Capacity in Megawatts	Percent change from previous year	Status of PTC
1999	659.00	—	Expired on 7/1/1999
2000	66.845	-899%	Renewed and set to expire 1/1/2002
2001	1692.45	2432%	Set to expire 1/1/2002
2002	455.588	-73%	Expired and then renewed on 3/1/2002 until 2004
2003	1662.581	265%	Set to expire 1/1/2004
2004	373.182	-78%	Expired 1/1/2004, renewed 10/2004
2005	2423.94	550%	Set to expire 1/1/2006
2006	2427.441	0.14%	Set to expire 1/1/2007
2007	5332.545	120%	Set to expire 1/1/2008
2008	8502.992	59%	Set to expire 1/1/2009
2009	9453.311	11%	Set to expire 1/1/2013

Notably, Table 1 demonstrates that newly installed wind capacity dropped precipitously in the years in which the PTC expired.<sup>183</sup> This drop is particularly evident in 2002 and 2004, where the newly installed capacity dropped by over 1200 megawatts each year.<sup>184</sup> This trend suggests that the PTC is essential to the wind industry.<sup>185</sup> Conversely, con-

<sup>179</sup> See Riti, *supra* note 6, at 791.

<sup>180</sup> See generally *id.* (detailing the political squabbling that took place with the PTC renewal, particularly post-2000).

<sup>181</sup> See WIND AGENDA, *supra* note 5, at 8; WISER ET AL., *supra* note 14, at 5.

<sup>182</sup> See *Wind Capacity and Projects*, *supra* note 80; *supra* notes 170–180 and accompanying text.

<sup>183</sup> See *Wind Capacity and Projects*, *supra* note 80; *supra* notes 170–180 and accompanying text.

<sup>184</sup> See *Wind Capacity and Projects*, *supra* note 80; *supra* notes 170–180 and accompanying text.

<sup>185</sup> *Wind Capacity and Projects*, *supra* note 80; see WIND AGENDA, *supra* note 5, at 8 (industry experts at the American Wind Energy Association demonstrate that the dips in added wind capacity can be attributed totally to the PTC expiration).



tinuity in the availability of the PTC promoted steady growth from 2005 to 2009, albeit at an inconsistent growth rate.<sup>186</sup> Furthermore, one study indicates that expiration could result in \$19 billion of lost investment and 116,000 lost jobs.<sup>187</sup> If the PTC expired in 2009, this study projected that only 500 megawatts of wind energy would have been produced, compared with 6500 megawatts with the PTC in place; another study projected that the lack of the PTC would result in fifty percent less added wind capacity by 2025.<sup>188</sup>

Even though the PTC has spurred investment in renewable energy, it appears that the credit has been unable to reach its full potential.<sup>189</sup> It is possible that the drops in added capacity represent mere timing shifts, such that no change in added capacity results.<sup>190</sup> Nonetheless, staggered renewals have caused investors to rush to complete projects before the PTC expiration, leading to a “boom-and-bust” investment cycle, particularly since 1999, whereby the PTC was renewed only on a 1–3 year basis and was repeatedly allowed to expire.<sup>191</sup> As a result of this, wind production has occurred in “tight and frenzied windows of development,” leading to a number of negative outcomes for the U.S. wind industry.<sup>192</sup>

Industry experts suggest that this “boom-and-bust” cycle leads to decreased renewable energy development.<sup>193</sup> First, it increases the cost of renewable projects.<sup>194</sup> A “herd effect” results when all developers strive to finish renewable projects at the same time: the resulting concurrent added demand increases the cost of materials and construction services.<sup>195</sup> Second, this increased cost in manufactured components may result in greater reliance on foreign manufacturing and may decrease foreign investment in U.S. manufacturing facilities of renewable

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<sup>186</sup> See *Wind Capacity and Projects*, *supra* note 80.

<sup>187</sup> ECONOMIC IMPACTS, *supra* note 26, at 22.

<sup>188</sup> *Id.* (indicating that only 500 MW of wind energy would be produced without the PTC, compared with 6500 MW with its extension); EIA REPORT, *supra* note 26, at 4 (indicating a 50% more wind capacity by 2025 with PTC extension). Lack of PTC extension beyond 2008 would have cost the U.S. economy \$11.5 billion of decreased economic activity. ECONOMIC IMPACTS, *supra* note 26, at 22.

<sup>189</sup> See WISER ET AL., *supra* note 14, at 5 (detailing the secondary impacts of the inconsistency of PTC availability on the wind energy industry in the United States).

<sup>190</sup> See Hassett & Metcalf, *supra* note 153, at 388; *Wind Capacity and Projects*, *supra* note 80.

<sup>191</sup> WISER ET AL., *supra* note 14, at 5.

<sup>192</sup> *Id.*

<sup>193</sup> *Id.*

<sup>194</sup> *Id.* (noting that the “boom-and-bust” cycle increases the cost of wind energy projects).

<sup>195</sup> See Riti, *supra* note 6, at 795.

components.<sup>196</sup> Third, the rush to complete a project may lead to smaller projects because to meet the “placed in service” date and be eligible for the credit, developers settle for smaller projects that can be finished on time.<sup>197</sup> Currently, development has been slowing because lenders will not loan money if the project is not comfortably scheduled to be in service within the year the PTC sunsets.<sup>198</sup>

Furthermore, the renewable projects suffer from the enhanced risk of sunsetting tax credits during the riskiest phase of the project.<sup>199</sup> Typically the first financial phase of a project is the development and permitting phase, which requires equity funding.<sup>200</sup> Second, the construction phase occurs upon full permitting and relies on both debt and equity.<sup>201</sup> Lastly, the least risky phase is operation which requires only a construction loan refinanced with long-term, low rates.<sup>202</sup> The first financial stage requires commitments of high risk equity, including tax equity investors; uncertainty over whether the PTC will be available makes investors unwilling to commit to the project.<sup>203</sup> As a result, it is unlikely that projects would receive sufficient financing at the construction or operating stages.<sup>204</sup>

### C. *The Sun Rises on the Low-Income Housing Credit*

This Section discusses the LIHTC, a tax credit to promote investment in low-income housing that is a useful tool for comparison to the PTC because: (1) unlike the PTC, it has become a permanent feature of the tax code and escaped the recent sunset trend in Congress, and

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<sup>196</sup> WISER ET AL., *supra* note 14, at 5. Increased reliance on foreign manufacturing prompted senators to introduce “Make It in America” or “Buy American” legislation, which would require stimulus spending to be used on domestic construction materials. John M. Broder, *Senators Want ‘Buy American’ Rule in Stimulus*, N.Y. TIMES GREEN (Mar. 3, 2010, 3:27 PM), <http://green.blogs.nytimes.com/2010/03/03/senators-want-buy-american-rule-in-stimulus/>.

<sup>197</sup> AARON SEVERN ET AL., AM. WIND ENERGY ASS’N, WIND ENERGY PRODUCTION TAX CREDIT (PTC) 4 (2008).

<sup>198</sup> Telephone Interview with James Duffy, Partner, Nixon Peabody LLP (Mar. 1, 2011).

<sup>199</sup> See E-mail from Dennis Duffy, Vice President of Regulatory Affairs, Energy Mgmt. Inc., to author (Mar. 26, 2011, 2:34 EST) (on file with author); Mark Weitzel & Les Sherman, Partners, Orrick, Herrington & Sutcliffe LLP, Presentation: Financing Renewable Energy Projects 11 (May 2009) [hereinafter Financing Projects], available at [http://reaction.orrick.com/reaction/event\\_pdfs/OrrickCleantechEvent050609\\_ProjectFinancingHandout.pdf](http://reaction.orrick.com/reaction/event_pdfs/OrrickCleantechEvent050609_ProjectFinancingHandout.pdf).

<sup>200</sup> See Financing Projects, *supra* note 199, at 12.

<sup>201</sup> See E-mail from Dennis Duffy to author, *supra* note 199; Financing Projects, *supra* note 199, at 12.

<sup>202</sup> See Financing Projects, *supra* note 199, at 12; E-mail from Dennis Duffy to author, *supra* note 199.

<sup>203</sup> See E-mail from Dennis Duffy to author, *supra* note 199.

<sup>204</sup> See *id.*

(2) it incentivizes private investment in low-income housing, a socially beneficial but relatively unprofitable industry, like renewable energy.<sup>205</sup> Congress created the LIHTC in 1986, and it has since become the primary federal program to incentivize the production of affordable housing.<sup>206</sup> Like the PTC and renewable energy, the program has resulted in private investment in poor communities and promoted a public-private partnership in the development of low-income housing.<sup>207</sup> The LIHTC amounts to a certain percentage of the “qualified basis of each qualified low-income building.”<sup>208</sup>

The LIHTC was subject to a few sunset provisions during the nascent stages of the program, but it eventually became permanent.<sup>209</sup> Originally, it was slated to expire in 1989.<sup>210</sup> Subsequently, Congress extended the LIHTC program for a year at a time in 1989, 1990, and 1991.<sup>211</sup> Finally, in 1993, the tax provision became a permanent part of the tax code through the Omnibus Budget Reconciliation Act.<sup>212</sup> One expert in the program writes the following of the period prior to permanent codification of the LIHTC:

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<sup>205</sup> 26 U.S.C.A. § 42 (West 2010); *see supra* notes 39–69 (establishing the benefits and barriers to renewable energy); *supra* notes 169–180 and accompanying text (indicating the sunseting trend with respect to the PTC); *infra* notes 209–212 and accompanying text (indicating the permanency of the LIHTC). The LIHTC was created in a time when a great deal of emphasis was placed on the private market as a mechanism to incentivize certain behavior. *See* Janet Stearns, *The Low Income Housing Tax Credit: A Poor Solution to the Housing Crisis*, 6 YALE L. & POL’Y REV. 203, 205–06 (1988).

<sup>206</sup> Janet Thompson Jackson, *Can Free Enterprise Cure Urban Ills?: Lost Opportunities for Business Development in Urban, Low-Income Communities Through the New Markets Tax Credit Program*, 37 U. MEM. L. REV. 659, 659, 683 (2007).

<sup>207</sup> *See id.* at 684–85; *see also* WIND AGENDA, *supra* note 5, at 8 (indicating that the PTC has resulted in private investment in the renewable industry). Also like the PTC, there have been some criticisms of the LIHTC program. *Id.* Some scholars report that most housing is developed in metropolitan areas with a high levels of poverty, yet the housing is only available to low-income households with a relatively high income. *Id.* Also, critics suggest that the financing costs of these developments discourage the production of housing for very low-income households. *Id.*

<sup>208</sup> 26 U.S.C.A. § 42(a).

<sup>209</sup> David Philip Cohen, *Improving the Supply of Affordable Housing: The Role of the Low-Income Housing Tax Credit*, 6 J.L. & POL’Y 537, 537 (1998); *see infra* notes 210–212 and accompanying text.

<sup>210</sup> Tax Reform Act of 1986, Pub. L. No. 99-514, § 252(a), 100 Stat. 2085, 2189–90 (codified as amended at 26 U.S.C.A. § 42).

<sup>211</sup> Tax Extension Act of 1991, Pub. L. No. 102-227, § 107, 105 Stat. 1686, 1687 (codified as amended at 26 U.S.C.A. § 42); Omnibus Budget Reconciliation Act of 1990, Pub. L. No. 101-508, § 11407, 104 Stat. 1388, 1388–474 (codified as amended at 26 U.S.C.A. § 42); Omnibus Budget Reconciliation Act of 1989, Pub. L. No. 101-239, § 7108, 103 Stat. 2106, 2307 (codified as amended at 26 U.S.C.A. § 42).

<sup>212</sup> Omnibus Budget Reconciliation Act of 1993, Pub. L. No. 103-66, § 13142, 107 Stat. 312, 437–38 (1993) (codified as amended at 26 U.S.C.A. § 42).

Up to this point, the LIHTC program was making *halting progress*, given that the development community could not be sure of its future existence. With the 1993 Act, Congress finally made the program permanent. As a result, developers could begin to prepare proposals with the knowledge that the program would survive from year to year.<sup>213</sup>

In fact, the House Committee on Ways and Means corroborated this rationale for a permanent extension, requiring the permanency of the tax credit in the interest of certainty for investment and efficiency.<sup>214</sup>

### III. SUNSETTING THE PTC FRUSTRATES THE POLICY GOAL OF LONG-TERM INVESTMENT

The PTC's sunset provisions frustrate the congressional policy of promoting long-term investment in renewable energy.<sup>215</sup> This Part first establishes that the theoretical argument favoring sunset dates as a means to promote long-term investment does not apply to the PTC and the renewable energy industry.<sup>216</sup> Next, this Part utilizes the LIHTC to illustrate how permanent tax credits enhance long-term investment and efficiency.<sup>217</sup> Other than its permanency, the LIHTC has many features analogous to the PTC: the structure of the credit, the syndication requirements, and the incentivized industry.<sup>218</sup> Therefore, it serves as an appropriate lens to analyze what impact the PTC's incessant sunset has on long-term investment.<sup>219</sup>

#### A. *Sunset Dates Do Not Promote Long-Term Investment in the Renewable Energy Industry*

The example of the PTC contradicts any contention by tax scholars that sunset dates promote long-term investment in the renewable energy industry.<sup>220</sup> First, renewable energy projects are irreversible in-

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<sup>213</sup> McClure, *supra* note 23, at 96.

<sup>214</sup> H.R. REP. NO. 102-631, pt. A, at 20 (1992) ("Further, the committee believes that a permanent extension of the low-income housing credit will provide the greater planning certainty needed for the efficient delivery of this Federal subsidy without sacrificing Congress' ability to exercise appropriate oversight of the administration of, and need for, programs such as the tax credit.").

<sup>215</sup> See Kleinbard, *supra* note 17, at 23.

<sup>216</sup> See *infra* notes 220–256 and accompanying text.

<sup>217</sup> See *infra* notes 258–292 and accompanying text.

<sup>218</sup> See *infra* notes 258–292 and accompanying text.

<sup>219</sup> See *infra* notes 258–292 and accompanying text.

<sup>220</sup> See *infra* notes 221–256 and accompanying text.

vestments with long lead times, and therefore investors cannot easily retract their investments upon expiration of the PTC.<sup>221</sup> Second, the sunset dates deal with complete abrogation of the credit, not mere lessening of the incentive.<sup>222</sup> Finally, the PTC does not have an “illusion of certainty.”<sup>223</sup>

The argument that uncertainty in tax incentives promotes investment in reversible investments does not apply to renewable energy projects, which are not reversible investments.<sup>224</sup> Renewable energy investment often requires specialized syndication agreements to monetize the PTC and large amounts of debt and equity.<sup>225</sup> Furthermore, electricity generation is a specialized industry, rendering the equipment, property, and investments relatively illiquid.<sup>226</sup> Also, the length of time required to develop renewable projects, particularly wind, makes such investments irreversible.<sup>227</sup> Therefore, the argument that sunset dates are beneficial for reversible investments simply does not apply to the PTC.<sup>228</sup>

The “use it or lose it” phenomenon, whereby investment increases as taxpayers seek to utilize the credit prior to expiration, also does not apply to renewable energy projects, nor to their respective tax credits.<sup>229</sup> Again, the assumption underlying this phenomenon is that expiration would merely revert to a less beneficial, yet still existent, tax incentive.<sup>230</sup> With the PTC, expiration due to sunset provisions results in the abrogation of the credit altogether; indeed, the PTC has expired on three separate occasions.<sup>231</sup> Such uncertainty about the actual existence of the PTC (which is required to make renewable projects cost competitive) chills private investment in the renewable energy industry.<sup>232</sup>

<sup>221</sup> See Yin, *supra* note 20, at 245; *supra* notes 52–69 (indicating barriers to renewable development); *supra* notes 98–111 and accompanying text (indicating monetization challenges).

<sup>222</sup> See Yin, *supra* note 20, at 245–46.

<sup>223</sup> See *id.* at 248.

<sup>224</sup> See *id.* at 245.

<sup>225</sup> See *supra* notes 98–111 and accompanying text (describing the monetization process for renewable energy credits).

<sup>226</sup> MARGOT FREEMAN SAUNDERS & NANCY BROCKWAY, ACCESS TO UTILITY SERVICE 27 (1996).

<sup>227</sup> See E-mail from Dennis Duffy to author, *supra* note 58 (indicating the long length of renewable projects); Leest, *supra* note 59.

<sup>228</sup> See Yin, *supra* note 20, at 245.

<sup>229</sup> See *id.* at 246.

<sup>230</sup> See *id.* at 245–46.

<sup>231</sup> See *supra* notes 166–179 and accompanying text.

<sup>232</sup> See Kleinbard, *supra* note 17, at 23–24; *supra* notes 166–179 and accompanying text.

The “use it or lose it” argument further does not apply because renewable energy projects typically take longer to plan and facilitate than the actual renewal period.<sup>233</sup> The behavior incentivized is not merely acquiring certain property or investing money (investment activities that can be done in a short period of time); rather, the PTC aims to incentivize placing a renewable energy project in service, an activity that entails investment, permitting, long-term contracts with utilities, construction, grid access, and NEPA review, all of which take three to seven years rather than the one to four years offered by the renewal period.<sup>234</sup> Furthermore, for the PTC, the electricity must be sold to a third party, which introduces more challenges.<sup>235</sup> Investors may endeavor to place a wind farm in service during the proper year to benefit from a tax credit, but there are a number of factors that may slow this process and prevent the ability of the investor to “use it.”<sup>236</sup> Therefore, the unpredictability and length of renewable energy project timelines may prevent the taxpayer from “using” the credit before it sunsets.<sup>237</sup>

The argument that sunsetted tax credits are essentially permanent does not apply to the PTC,<sup>238</sup> which has in fact expired on three different occasions.<sup>239</sup> Those in the industry continually doubt the PTC’s renewal by Congress, due to political posturing during renewals.<sup>240</sup> Any

<sup>233</sup> See E-mail from Dennis Duffy to author, *supra* note 58 (indicating the long length of renewable projects); Leest, *supra* note 59; *supra* notes 167–179 and accompanying text (describing the frequent two- to four-year renewal periods for the PTC).

<sup>234</sup> See 26 U.S.C.A. § 45(a) (West 2010); *supra* notes 52–69 and accompanying text (describing obstacles to renewable energy development); *supra* notes 167–179 and accompanying text (describing the frequent two- to four-year renewal periods for the PTC); see also Yin, *supra* note 20, at 245–46.

<sup>235</sup> 26 U.S.C.A. § 45.

<sup>236</sup> See *supra* notes 52–69 and accompanying text (discussing obstructions to renewable development, including enhanced risk, siting difficulties, grid access, and high costs). Arguably, notwithstanding the “use it or lose it” theory’s applicability to the PTC, the frequent expiration and renewal of tax incentives do not increase usage of the credit but instead shift the timing of the usage to prior to expiration. See Hassel & Metcalf, *supra* note 153, at 388; Yin, *supra* note 20, at 245–46.

<sup>237</sup> See *supra* notes 52–69 and accompanying text (establishing the unpredictability of the length of projects); see also Hassel & Metcalf, *supra* note 153, at 388; Leest, *supra* note 59.

<sup>238</sup> See Yin, *supra* note 20, at 248 (arguing that some sunsetted tax credits are renewed so frequently that they are essentially permanent).

<sup>239</sup> See *id.*; *supra* notes 167–179 and accompanying text.

<sup>240</sup> See WIND AGENDA, *supra* note 5, at 8 (illustrating industry doubt regarding PTC renewal); Riti, *supra* note 6, at 788 (describing political posturing that occurred during PTC renewals and indicating the difficulties of PTC renewal).

spurring of growth that does occur may actually hurt the renewable industry as a whole due to its irregular nature.<sup>241</sup>

The “illusion of certainty” argument is also misguided.<sup>242</sup> Although all investments that result from tax credits suffer from some degree of repeal risks, it is more likely that Congress will fail to renew a provision than take affirmative action to change or repeal a provision, as has been established by Calabresi.<sup>243</sup> Scholars refer to this tendency towards inaction as “legislative inertia.”<sup>244</sup> After all, repeal and amendment require passage in both houses and presidential signature, whereas expiration requires no action at all.<sup>245</sup> As such, it is riskier for investors to rely on a tax provision with a sunset date than a permanent tax provision, even though the permanent provision is subject to repeal or revision.<sup>246</sup> Again, such lapse in availability is precisely what occurred with the PTC.<sup>247</sup>

In sum, none of the arguments suggesting that sunset provisions actually promote long-term investment apply to the PTC and renewable energy industry.<sup>248</sup> Instead, the frequent sunset provisions of the PTC discourage long-term investment because those in the industry cannot rely on its continued existence; to the extent that it does spur investment, the resultant “boom-and-bust” cycle harms the industry by raising manufacturing and capital costs.<sup>249</sup>

These concerns over long-term investment are felt by those in the renewable energy industry.<sup>250</sup> Many recommend a more permanent PTC to promote steadier growth.<sup>251</sup> The American Wind Energy Asso-

<sup>241</sup> WISER ET AL., *supra* note 14, at 5; *supra* notes 193–198 and accompanying text (establishing how inconsistent development raises the costs of renewable industry and harms domestic manufacturing).

<sup>242</sup> See CALABRESI, *supra* note 124, at 6; Yin, *supra* note 20, at 245–48 (arguing that sunset clauses promote long-term investment).

<sup>243</sup> CALABRESI, *supra* note 124, at 6.

<sup>244</sup> Brian Galle & Mark Seidenfeld, *Administrative Law’s Federalism: Preemption, Delegation, and Agencies at the Edge of Federal Power*, 57 DUKE L.J. 1933, 1983 (2008) (“Because of legislative inertia, Congress passes statutes infrequently.”).

<sup>245</sup> See U.S. CONST. art. I, § 7.

<sup>246</sup> See CALABRESI, *supra* note 124, at 6.

<sup>247</sup> See *supra* notes 166–179 and accompanying text (detailing the expiration and renewal timeline of the PTC).

<sup>248</sup> See Yin, *supra* note 20, at 248; *supra* notes 224–247 and accompanying text.

<sup>249</sup> See WIND AGENDA, *supra* note 5, at 8 (communicating the need for a more permanent PTC); Kleinbard, *supra* note 17, at 23 (arguing that temporary legislation harms the renewable industry and increases capital and manufacturing costs).

<sup>250</sup> See *infra* notes 251–256 and accompanying text.

<sup>251</sup> See, e.g., *First in Series on Effect of Federal Tax Laws on the Production, Supply, and Conservation of Energy: Hearing Before the Subcomm. on Select Revenue Measures of the Comm. on Ways*

ciation recommends that the credit be extended for at least five more years.<sup>252</sup> The House Ways and Means Committee and the Senate Finance Committee both mirrored this recommendation in the 110th Congress.<sup>253</sup> Those in the industry have consistently testified to Congress regarding the importance of a predictable tax incentive policy to the industry.<sup>254</sup> Dean Gosselin, of Business Development for Wind Power, stated:

Unfortunately in this instance, two plus one plus one plus one does not necessarily equal five predictable years. . . . Business thrives on the known and fails on the unknown. The unpredictable nature of the credit has prevented the needed investment in U.S.-based facilities that will drive economies of scale and efficiencies.<sup>255</sup>

As such, the uncertainty, despite continuous renewal, may discourage investment in the renewable industry.<sup>256</sup>

### B. *Success of the Permanent LIHTC as a Lesson for the PTC*

The LIHTC is a valuable tool to assess the impact of sunset provisions on the effectiveness of the PTC because it similarly incentivizes private investment in the low-income housing industry, but, unlike the PTC, has become a permanent feature of the tax code.<sup>257</sup>

*and Means*, 107th Cong. 78, 96 (2001) [hereinafter *2001 Hearing*] (statement of Robert Morrison, Vice President, FPL Energy) (recommending a five- to seven-year extension of the PTC in order to promote more steady growth in the wind energy industry); WIND AGENDA, *supra* note 5, at 8 (suggesting a more permanent PTC).

<sup>252</sup> See WIND AGENDA, *supra* note 5, at 8.

<sup>253</sup> See *2001 Hearing*, *supra* note 251, at 78, 96; WIND AGENDA, *supra* note 5, at 8.

<sup>254</sup> *2001 Hearing*, *supra* note 251, at 78.

Since the PTC is directly linked to energy production, the credit is inextricably tied to the financing, permitting and construction of new facilities. With the credit due to expire in only a few months, it is very difficult to adequately plan for anything but the most immediate projects. Longer-term plans are simply prevented by the budgeting, permitting and project construction cycles, all of which are at least 12–18 months long. *The immediate extension of the PTC is critical to the continued development of wind power in the United States.*

*Id.* (emphasis added).

<sup>255</sup> *Tax Credits for Electricity Production from Renewable Sources Before the Subcomm. on Select Revenue Measures of the Comm. on Ways and Means*, 109th Cong. 24–25 (2005) (statement of Dean Gosselin, Vice President of Business Development for Wind Power, FPL Energy).

<sup>256</sup> See *id.*; WIND AGENDA, *supra* note 5, at 8; Kleinbard, *supra* note 17, at 23–24.

<sup>257</sup> 26 U.S.C.A. § 42 (West 2010); see *supra* notes 39–69 (establishing the benefits and barriers to renewable energy); *supra* notes 169–180 and accompanying text (indicating the



## 1. Similarities Between the PTC and the LIHTC

Like renewable energy, low-income housing is an important social concern, particularly since the recession, as the gap has widened between the number of renting households and the availability of affordable units to rent.<sup>258</sup> Currently, twelve million households spend over fifty percent of household income on housing.<sup>259</sup> A family with only one full-time, minimum wage earner cannot afford a fair-market, two-bedroom rental anywhere in the United States.<sup>260</sup> The production of low-income housing is therefore necessary, much like the production of renewable energy.<sup>261</sup>

Furthermore, affordable housing development, like renewable energy production, faces barriers to market entry.<sup>262</sup> Renting or selling housing units for below market rates would be a less profitable, perhaps even unprofitable, venture for developers and investors.<sup>263</sup> Furthermore, there tend to be many objections to siting affordable housing developments.<sup>264</sup>

The PTC and LIHTC share many structural similarities: both require that the project comply with certain guidelines during the life of the tax credit, and both are based on production, not just initiation.<sup>265</sup> For the PTC, the electricity must be produced and sold, and for the LIHTC the units must be consistently occupied by low-income tenants.<sup>266</sup> As such, the investment is necessarily long term and irreversible for both the LIHTC and the PTC.<sup>267</sup>

sunsetting trend of the PTC); *supra* notes 210–212 and accompanying text (indicating the permanency of the LIHTC).

<sup>258</sup> Melissa Kresin & Mary Schwartz, *Rental Housing Market Condition: 2009*, AM. CMTY. SURVEY BRIEFS (U.S. Census Bureau, Washington, D.C.), Oct. 2010, at 1, available at <http://www.census.gov/prod/2010pubs/acsbr09-7.pdf>.

<sup>259</sup> *Affordable Housing*, HUD.gov, <http://www.hud.gov/offices/cpd/affordablehousing/> (last visited May 17, 2011).

<sup>260</sup> *See id.*

<sup>261</sup> *See id.*; *supra* notes 39–51 and accompanying text (listing the social and environmental benefits of renewable energy).

<sup>262</sup> *Affordable Housing*, *supra* note 259 (describing affordable housing as below-market housing).

<sup>263</sup> *See id.*; *supra* notes 52–69 and accompanying text.

<sup>264</sup> *See* DANIEL R. MANDELKER ET AL., *PLANNING AND CONTROL OF LAND DEVELOPMENT: CASES AND MATERIALS* 446–47 (7th ed. 2008). The “not in my backyard” philosophy creates much local resistance to affordable housing projects. *Id.*

<sup>265</sup> *See* 26 U.S.C.A. §§ 42(a), § 45(a) (West 2010); McClure, *supra* note 23, at 104 (noting that tax credits are not provided if a project does not comply with LIHTC guidelines).

<sup>266</sup> *See* 26 U.S.C.A. §§ 42(c), 45(a).

<sup>267</sup> *See id.*

Additionally, like the renewable energy tax credits, the LIHTC requires that developers monetize the tax credits by entering financing agreements with tax equity investors.<sup>268</sup> If real estate developers do not expect to have such income tax liability and require capital investment, then tax equity investors will infuse the projects with capital and capture the tax credits during the ten-year period.<sup>269</sup>

Finally, both programs have been successful.<sup>270</sup> Due to the LIHTC, millions of affordable units have been built and restored over the past twenty-five years.<sup>271</sup> The PTC has similarly led to increased production of renewable energy projects, and leaders in the industry opine that most such projects would not be built without the PTC program.<sup>272</sup>

## 2. Promoting Permanency for Long-Term Investment

The LIHTC's success after becoming permanent supports the conclusion that permanent extension of tax credits can promote long-term investment in certain industries.<sup>273</sup> Both the LIHTC and the PTC, over the course of their legislative histories, have been subject to sunset provisions; unlike the PTC, which Congress continues to sunset, however, LIHTC was made permanent in 1993.<sup>274</sup> Those in the real estate development industry communicated the same need that those in the wind industry are communicating: certainty that the tax credit will exist is needed for long-term planning and investment.<sup>275</sup> Real estate developers began to make long-term plans more frequently once the LIHTC became permanent and certain.<sup>276</sup> In fact, the very rationale for making the LIHTC permanent was to accommodate the long-term investment interests of real estate developers.<sup>277</sup> A report from the House Committee on Ways and Means stated:

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<sup>268</sup> See McClure, *supra* note 23, at 104.

<sup>269</sup> See *id.*

<sup>270</sup> John A. Powell, *Reflections on the Past, Looking to the Future: The Fair Housing Act at 40*, 18 J. AFFORDABLE HOUS. & CMTY. DEV. L. 145, 154 (2009); see WIND AGENDA, *supra* note 5, at 8.

<sup>271</sup> Powell, *supra* note 270, at 154. Some concern exists, however, over the disparate production of low-income housing in segregated areas. *Id.*

<sup>272</sup> See EIA REPORT, *supra* note 26, at 4; WIND AGENDA, *supra* note 5, at 8.

<sup>273</sup> See *infra* notes 274–292 and accompanying text.

<sup>274</sup> See *supra* notes 167–179 and accompanying text (detailing the renewal and expiration history of the PTC); *supra* notes 210–212 and accompanying text (detailing the renewal and expiration history of the LIHTC).

<sup>275</sup> See WIND AGENDA, *supra* note 5, at 8; McClure, *supra* note 23, at 96.

<sup>276</sup> McClure, *supra* note 23, at 96.

<sup>277</sup> H.R. REP. NO. 102-631, pt. A, at 20 (1992).

[T]he committee believes that a permanent extension of the low-income housing credit will provide the greater planning certainty needed for the efficient delivery of this Federal subsidy without sacrificing Congress's ability to exercise appropriate oversight of the administration of, and need for, programs such as the tax credit.<sup>278</sup>

The committee addressed the need for better "planning certainty" to promote the efficiency of the credit to incentivize low-income housing.<sup>279</sup>

Furthermore, corporate investors in low-income housing were rare before 1993, but when the program became permanent, more large-scale corporate investors began to utilize the credits.<sup>280</sup> Prior to 1992, most low-income projects raised equity through individual investors by way of broker-organized retail funds.<sup>281</sup> The permanency of the credit, however, attracted larger investors to the low-income housing market.<sup>282</sup>

Year Placed in Service	Number of Units	Status of LIHTC
1987	17,514	Slated to expire in 1989
1988	35,742	Slated to expire in 1989
1989	48,269	Extended for one year
1990	49,088	Extended for one year
1991	49,537	Extended for one year
1992	52,299	Slated to expire in 1993
1993	63,512	Made permanent
1994	63,714	Permanent
1995	81,319	Permanent
1996	83,775	Permanent
1997	88,449	Permanent
1998	94,760	Permanent
1999	112,092	Permanent

<sup>278</sup> *Id.*

<sup>279</sup> *See id.*

<sup>280</sup> Jean L. Cummings & Denise DiPasquale, *The Low-Income Housing Tax Credit: An Analysis of the First Ten Years*, 10 HOUSING POL'Y DEBATE, no. 2, 1999, at 251, 291; Telephone Interview with James Duffy, *supra* note 198.

<sup>281</sup> *See* Cummings & DiPasquale, *supra* note 280, at 291.

<sup>282</sup> *See id.*

<sup>283</sup> OFFICE OF ECON. AFFAIRS, U.S. DEP'T OF HOUSING & URBAN DEV., UPDATING THE LOW-INCOME HOUSING CREDIT (LIHTC) DATABASE: PROJECTS PLACED IN SERVICE THROUGH 2006, at 176 (2009), available at [http://www.huduser.org/Datasets/lihtc/report\\_9506.pdf](http://www.huduser.org/Datasets/lihtc/report_9506.pdf); *supra* notes 210–212 and accompanying text.

During the six-year period in which Congress renewed the LIHTC for one to three years at a time, the credit was less successful.<sup>284</sup> Since being made permanent, the total allocation has steadily increased without drastic spikes and drops.<sup>285</sup>

Similarly, the PTC has experienced only halted and inconsistent progress due to its frequent sunset provisions.<sup>286</sup> Therefore, the PTC, unlike the LIHTC, has not had the opportunity to reach its full potential as a result of frequent sunset dates.<sup>287</sup> Production dropped during the expirations and the rate of growth has been inconsistent in the past six years.<sup>288</sup> To the extent that the PTC has increased renewable capacity in the United States, the “boom-and-bust” investment cycle that results from rushing projects prior to sunset dates actually harms the renewable energy industry.<sup>289</sup>

Congress should therefore apply the same certainty and efficiency rationale to permanently extend the PTC in order to promote long-term investment.<sup>290</sup> The wind industry and development of renewable energy suffer from the uncertainty of the renewable tax credits due to the frequent expirations and need for renewals.<sup>291</sup> Furthermore, those in the renewable energy industry strongly advocate for a more permanent tax credit for planning purposes, like those in the low-income housing industry.<sup>292</sup>

#### IV. THE SUNSETTING OF RENEWABLE ENERGY TAX CREDITS UNDERMINES THE GOALS OF THE TAX SYSTEM

The sunseting feature of the PTC contravenes the underlying principles of the U.S. tax system.<sup>293</sup> The extensive use of sunseting in

<sup>284</sup> See OFFICE OF ECON. AFFAIRS, *supra* note 283, at 176; *supra* notes 210–212 and accompanying text; *supra* Table 2.

<sup>285</sup> See OFFICE OF ECON. AFFAIRS, *supra* note 283, at 176; *supra* notes 210–212 and accompanying text; *supra* Table 2.

<sup>286</sup> See *Wind Capacity and Projects*, *supra* note 80.

<sup>287</sup> See WIND AGENDA, *supra* note 5, at 8; Kleinbard, *supra* note 17, at 23–24; *Wind Capacity and Projects*, *supra* note 80.

<sup>288</sup> See *Wind Capacity and Projects*, *supra* note 80.

<sup>289</sup> See WISER ET AL., *supra* note 14, at 12; Riti, *supra* note 6, at 795.

<sup>290</sup> EIA REPORT, *supra* note 26, at 4; WIND AGENDA, *supra* note 5, at 8; WISER ET AL., *supra* note 14, at 12.

<sup>291</sup> See *supra* notes 181–204 and accompanying text (establishing the uncertainty of the PTC and its resultant impact on the renewable energy industry).

<sup>292</sup> See WIND AGENDA, *supra* note 5, at 8.

<sup>293</sup> See *infra* notes 294–350 and accompanying text.

the tax code and with respect to the PTC warrants a policy analysis.<sup>294</sup> This Part analyzes the frequent sunseting of the PTC as a feature of the tax system within the framework of the three goals of a tax system: simplicity, equity, and economic efficiency.<sup>295</sup> Because budgetary manipulation and special interest involvement is the primary motivating factor of sunset provisions, the inefficiencies and complexities that these provisions create are not offset by any countervailing tax policy.<sup>296</sup>

Analyses of tax proposals and policy, including renewable energy incentives, traditionally consider the following criteria: equity, simplicity, and efficiency.<sup>297</sup> Ideally, tax collection will be fair, simple to administer, and easy to understand.<sup>298</sup> Finally, tax collection should limit unintended distortions of the economy.<sup>299</sup>

Creating a simple, easily understood tax system has been a public policy objective of legislators and courts for years.<sup>300</sup> Simplicity is typically evaluated based on the ease of taxpayer understanding and the costs of compliance.<sup>301</sup> Nonetheless, some scholars maintain that complexity is a necessary trade-off for achieving equity.<sup>302</sup> The equity analysis of tax collection falls into two categories, horizontal equity and vertical equity.<sup>303</sup> The former concerns equally situated taxpayers paying

<sup>294</sup> Kysar, *supra* note 117, at 338 (enumerating all of the broad public laws that have been extensively sunsetted).

<sup>295</sup> Lily L. Batchelder et al., *Efficiency and Tax Incentives: The Case for Refundable Tax Credits*, 59 STAN. L. REV. 23, 42 (2006) (enumerating the principles of a tax system); *see infra* notes 310–350 and accompanying text.

<sup>296</sup> *See* Riti, *supra* note 6, at 798. In 2007, for instance, the need to offset the renewable energy credits by repealing other subsidies thwarted the renewal of the PTC. *See id.*

<sup>297</sup> ANDREWS, *supra* note 18, at 8–10; MCDANIEL, *supra* note 4, at 2–3.

<sup>298</sup> ANDREWS, *supra* note 18, at 10; MCDANIEL, *supra* note 4, at 2–3.

<sup>299</sup> ANDREWS, *supra* note 18, at 9; MCDANIEL, *supra* note 4, at 2–3.

<sup>300</sup> *See, e.g.,* Sonneborn Bros. v. Cureton, 262 U.S. 506, 522 (1923) (“Logic and taxation are not always the best of friends.”) (McReynolds, J., concurring). The 2001 Joint Committee on Taxation presented a study in 2001 regarding the simplification of the tax code. *See generally* STAFF OF JOINT COMM. ON TAXATION, 107TH CONG., STUDY OF OVERALL STATE OF FEDERAL TAX SYSTEM AND RECOMMENDATIONS FOR SIMPLIFICATION, PURSUANT TO SECTION 8022(3)(B) OF THE INTERNAL REVENUE CODE OF 1986 (Comm. Print 2001).

<sup>301</sup> JOEL SLEMROD & JON BAKIJA, TAXING OURSELVES: A CITIZEN’S GUIDE TO THE GREAT DEBATE OVER TAX REFORM 163–64 (4th ed. 2008) (establishing that the complexity of the tax code creates higher compliance costs and that, consequently, only sophisticated taxpayers can benefit from the advantages (loopholes and the like) that the layers of sophistication offer).

<sup>302</sup> *See, e.g.,* Samuel A. Donaldson, *The Easy Case Against Tax Simplification*, 22 VA. TAX REV. 645, 650–53 (2003) (establishing that complexity is an inevitable trade-off for achieving equity and efficiency, whereas complexity causes little harm).

<sup>303</sup> ANDREWS, *supra* note 18, at 9; MCDANIEL, *supra* note 4, at 2–3.

equal amounts of tax.<sup>304</sup> The latter concerns appropriate differences among taxpayers who are different.<sup>305</sup>

Finally, economic efficiency measures the extent to which a tax interferes with economic behavior.<sup>306</sup> Taxes reduce economic efficiency to the extent that price distortion results.<sup>307</sup> Some scholars, however, ascribe to the “Pigouvian” theory, whereby the tax system can achieve economic efficiency by actually correcting market inefficiencies, such as positive and negative externalities.<sup>308</sup> As such, a higher level of economic efficiency is attained through the tax system than through imperfect, albeit natural, market activity.<sup>309</sup>

#### A. *Sunset Provisions Frustrate the Simplicity Goal of the Tax System*

Sunset provisions make the tax code more complex, violating the simplicity goal, by increasing the costs of compliance and frustrating taxpayer understanding.<sup>310</sup> Non-seamless extensions and retroactive renewals further impose administrative costs in the form of reissued tax forms.<sup>311</sup> Also, the consistent threat of expiration creates transactional waste, as interest groups must lobby for extension to realize the benefits of the tax credit.<sup>312</sup> For instance, the American Wind Energy Association and other renewable energy companies frequently lobby for PTC renewal.<sup>313</sup> Furthermore, temporal gaps result from expired and then

<sup>304</sup> ANDREWS, *supra* note 18, at 9; MCDANIEL, *supra* note 4, at 2–3.

<sup>305</sup> ANDREWS, *supra* note 18, at 9; MCDANIEL, *supra* note 4, at 2–3.

<sup>306</sup> RONALD C. FISHER, *STATE AND LOCAL PUBLIC FINANCE* 298–99 (3d ed. 2007).

<sup>307</sup> See ROBERT S. PINDYCK & DANIEL RUBINFELD, *MICROECONOMICS* 318–22 (1989) (indicating impact of taxes on buyers and sellers).

<sup>308</sup> ARTHUR CECIL PIGOU, *THE ECONOMICS OF WELFARE* 129 (Transaction Publishers 2002 ed. 2001) (1920) (“[E]ven in the most advanced States there are failures and imperfections. . . . [T]here are many obstacles that prevent a community’s resources from being distributed . . . in the most effective way.”); Kneave Rigall, *Comprehensive Tax Base Theory, Transaction Costs, and Economic Efficiency: How to Tax Our Way to Efficiency*, 17 VA. TAX REV. 295, 321 (1997).

<sup>309</sup> Batchelder et al., *supra* note 295, at 42 (indicating that a tax can achieve economic efficiency by correcting imperfect markets).

<sup>310</sup> Kysar, *supra* note 117, at 369 (illustrating the complexities of filing for taxes that are subject to frequent sunset provisions and the additional costs associated with those complexities).

<sup>311</sup> *Id.*

<sup>312</sup> *Id.* at 393; cf. Gersen, *supra* note 113, at 263 (noting that increased transaction costs impact economic efficiency but also arguing that temporary legislation does not necessarily mean increased transaction costs).

<sup>313</sup> See, e.g., 2001 Hearing, *supra* note 251, at 77–78; WIND AGENDA, *supra* note 5, at 8 (suggesting a five-year renewal of the PTC to encourage long-term investment).

renewed sunseting tax provisions, further complicating the code.<sup>314</sup> This has occurred with the PTC: the sunset provisions complicate the investment process for renewable energy because the credits are not certain until the project has been completed, such that additional care and expense must be taken to ensure to the degree possible that the project is placed in service prior to the sunset date.<sup>315</sup>

Sunset provisions complicate the code as a result of the potential multifarious amendments to substantive provisions each time the credits must be renewed, which creates opportunities for changes in the economic incentives themselves.<sup>316</sup> The PTC, particularly, has been amended seven times in the past fifteen years for renewals alone.<sup>317</sup> Furthermore, no trade-off in enhanced equity accompanies this increased complication; in fact, the sunset provisions create inequity, as discussed in the following Section.<sup>318</sup>

### B. *The Inequity of Sunset Provisions*

Frequent sunseting of the PTC also frustrates the vertical equity goal of the tax system.<sup>319</sup> Sunset dates and the consistent need for renewal introduce more opportunity for lobbying, which inequitably ad-

<sup>314</sup> WIND AGENDA, *supra* note 5, at 8.

<sup>315</sup> See, e.g., WIND AGENDA, *supra* note 5, at 8 (indicating that frequent expirations discourage renewable energy investment); WISER ET AL., *supra* note 14, at 5 (establishing that sunseting the PTC leads to a damaging “boom-and-bust” cycle of development); Riti, *supra* note 6, at 794–95 (establishing that the frequent expirations of the PTC have negative impacts on renewable energy investment).

<sup>316</sup> See *supra* notes 167–179 and accompanying text.

<sup>317</sup> American Relief and Reinvestment Tax Act, Pub. L. No. 111-5, § 1101, 123 Stat. 115, 319 (2009) (codified at 26 U.S.C.A. § 45 (West 2010)) (renewing the PTC for three years); Tax Relief and Health Care Act of 2006, Pub. L. No. 109-432, § 201, 120 Stat. 2922, 2944 (codified as amended at 26 U.S.C.A. § 45) (renewing the PTC for one year); Energy Policy Act of 2005, Pub. L. No. 109-58, § 1301, 119 Stat. 594, 986–87 (codified as amended at 26 U.S.C.A. § 45) (renewing the PTC for two years); Working Families Tax Relief Act of 2004, Pub. L. No. 108-311, § 313, 118 Stat. 1166, 1181 (codified as amended at 26 U.S.C.A. § 45) (renewing the PTC for one year); Job Creation and Worker Assistance Act of 2002, Pub. L. No. 107-147, § 603, 116 Stat. 21, 59 (codified as amended at 26 U.S.C.A. § 45) (renewing the PTC for less than two years); Tax Relief Extension Act of 1999, Pub. L. No. 106-170, § 507, 113 Stat. 1860, 1922 (codified as amended at 26 U.S.C.A. § 45) (renewing the PTC for two years); Energy Policy Act of 1992, Pub. L. No. 102-486, § 1914, 106 Stat. 2776, 3020 (codified as amended at 26 U.S.C.A. §§ 38–39, 45 (West 2010)) (establishing the PTC initially for six and a half years).

<sup>318</sup> See Donaldson, *supra* note 302, at 650–53 (establishing that complexity in the tax code may be a necessary evil when it achieves an equitable result); *infra* notes 320–335 and accompanying text (discussing the inequitable features of sunset provisions with respect to the PTC).

<sup>319</sup> See *infra* notes 320–335 and accompanying text.

vantages those who have more lobbying resources.<sup>320</sup> Often, the requirement for renewal creates a battle between special interest groups due to the budgetary rules.<sup>321</sup> The pay-as-you-go (PAYGO) budgetary rules require that Congress match each increase to the deficit with a corresponding increase in revenue or decrease in deficit.<sup>322</sup> As such, each renewal of a sunsetted PTC must be matched with a corresponding elimination of tax credit/subsidy or an increase in tax revenue.<sup>323</sup> Therefore, different policies and special interests are often pitted against each other in this budgetary battle; frequently, the group with greater lobbying power prevails.<sup>324</sup> For example, with respect to the sunsetted PTC, the renewable industry must be prepared to increase lobbying efforts each time a renewal date approaches and often must compete against the fossil fuel industry in this endeavor.<sup>325</sup> In 2007, during an attempt to renew the PTC, the bill's sponsors recommended repealing subsidies to more established energy industries, such as oil and gas.<sup>326</sup> This prompted a strong backlash by the powerful supporters of the oil and gas industry, resulting in a failure to renew the PTC, despite increased lobbying efforts.<sup>327</sup> The inequitable treatment of the renewable energy industry with respect to tax benefits is also apparent through a budgetary analysis: the total cost of the production tax credit from 1994 to 2007 amounted to \$2.7 billion and the amount of subsidies for fossil fuels in 2006 alone amounted to \$49 billion.<sup>328</sup>

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<sup>320</sup> See Kysar, *supra* note 117, at 364, 392. Sunset provisions are mutually beneficial to lobbyists and members of Congress, as legislators continue to receive “rent” each time an expired provision is up for renewal and lobbyists maintain their jobs. See Kysar, *Lasting Legislation*, *supra* note 135, at 1043–44. Many members of Congress have expressed an affinity towards sunset provisions for this very reason. *Id.*

<sup>321</sup> See Kysar, *supra* note 117, at 347, 364, 392.

<sup>322</sup> See *id.* at 347.

<sup>323</sup> See *id.*

<sup>324</sup> See Riti, *supra* note 6, at 798 (noting the necessity to pay for the PTC through offsetting costs with reductions in fossil fuel subsidies).

<sup>325</sup> Kysar, *supra* note 117, at 347, 364, 392 (establishing that frequent renewal requirements introduce increased special interest groups and rent extraction); Riti, *supra* note 7, at 798 (relating a particularly contentious renewal battle in 2007).

<sup>326</sup> See 153 CONG. REC. E151 (daily ed. Jan. 19, 2007) (statement of Rep. Tiahrt) (suggesting that renewal of the PTC and other measures and reduced fossil fuel subsidies would result in less energy security and harm to American businesses); Riti, *supra* note 6, at 798.

<sup>327</sup> Riti, *supra* note 6, at 798; see Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 Stat. 1492 (codified in scattered sections of 1–2, 5, 7, 15–16, 26, 40, 42, and 49 U.S.C.) (omitting PTC renewal). In fact, President Bush threatened to veto legislation that repealed oil and natural gas subsidies. See Riti, *supra* note 6, at 799.

<sup>328</sup> WISER ET AL., *supra* note 14, at 12.



This result is contrary to Lowi's theory that sunset legislation will weaken the power of special interest groups in the legislative process—instead, sunset dates enhance the role of special interest groups.<sup>329</sup> Lowi hypothesized that a periodic review would disrupt special interest group influence.<sup>330</sup> Sunsetting tax provisions in particular, however have introduced *more* special interest group influence.<sup>331</sup> One scholar writes of how the increased presence of special interests results in inequity:

Sunset provisions are problematic because they demand the expenditure of resources by interested parties on a continual basis (until, of course, the law is sunsetted). Thus, the well-connected and well-resourced players have a significant advantage, which increases across time, in the competition over sunsetted legislation. Indeed, the expansive use of sunset provisions may lead to more tax legislation that, from the outset, benefits such well-financed players, because legislators will want to engage those interest groups that contribute upon each sunset date.<sup>332</sup>

The experience of the PTC is inconsistent with Lowi's theory of sunset dates.<sup>333</sup> The PTC's sunset dates increase special interest lobbying inequitably because the powerful oil and gas industries can divert more lobbying resources to win budgetary battles.<sup>334</sup> Therefore, sunset provisions violate the vertical equity principle by failing to make appropriate differences between taxpayers who are different; instead they inequitably favor those with more resources to the detriment of the renewable energy industry.<sup>335</sup>

### C. *Economic Inefficiencies of Sunset Dates*

Sunset provisions in the PTC also violate the tax goal of economic efficiency.<sup>336</sup> Again, the "Pigouvian" theory permits the tax system to fix market inefficiencies, and therefore a tax system may attain a higher

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<sup>329</sup> LOWI, *supra* note 113, at 287.

<sup>330</sup> *Id.* at 309.

<sup>331</sup> Kysar, *supra* note 117, at 393 (establishing that sunset provisions result in more opportunities for rent extraction leading to more special interest lobbying activity).

<sup>332</sup> *Id.*

<sup>333</sup> Compare LOWI, *supra* note 113, at 287, with Kysar, *supra* note 117, at 393, and Riti, *supra* note 6, at 798.

<sup>334</sup> See Riti, *supra* note 6, at 798.

<sup>335</sup> See Kysar, *supra* note 117, at 393; Riti, *supra* note 6, at 798.

<sup>336</sup> See *infra* notes 337–350 and accompanying text.

level of economic efficiency than an imperfect, albeit natural, market.<sup>337</sup> One such inefficiency can be the failure of the market to correct for externalities or divergences between the private costs of an activity and the social costs of an economic activity.<sup>338</sup>

The PTC, by incentivizing the production of renewable energy, promotes efficiency because of the uncorrected positive externalities in the renewable energy market and negative externalities of non-renewable energy.<sup>339</sup> The positive externalities of renewable energy production include cleaner, domestic energy sources for electricity, and increased job growth.<sup>340</sup> These social returns of renewable energy arguably dwarf the monetary returns of investment, because high costs and risks frustrate the profitability of renewable energy projects.<sup>341</sup> As such, the production tax credit achieves economic efficiency by “paying for” those positive externalities through a deduction in income tax liability.<sup>342</sup> Furthermore, pollution from non-renewable energy sources creates negative externalities because the negative social costs of environmental degradation diverge from the cost of production for such energy.<sup>343</sup> Therefore, incentivizing renewable energy through tax credits leads to a more efficient outcome by accounting for such positive and negative externalities and closing the divergence between these costs/benefits and the cost of production of renewable energy.<sup>344</sup>

Sunset provisions, however, undermine this economic efficiency and decrease the potential social benefits attained by the PTC.<sup>345</sup> They frustrate these market-correcting features of the PTC, as they discourage long-term investment and therefore frustrate the externality-correcting potential of the tax credit.<sup>346</sup> Furthermore, the price of renewable energy will reflect this uncertainty, increasing the price and

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<sup>337</sup> PIGOU, *supra* note 308, at 129; *see* Rigall, *supra* note 308, at 321.

<sup>338</sup> *See* JOINT COMMITTEE REPORT, *supra* note 3, at 17–18; Batchelder et al., *supra* note 295, at 42.

<sup>339</sup> *See* JOINT COMMITTEE REPORT, *supra* note 3, at 17–18; Batchelder et al., *supra* note 295, at 42.

<sup>340</sup> *See supra* notes 39–52 and accompanying text (demonstrating the positive social and environmental benefits of renewable energy).

<sup>341</sup> *See* JOINT COMMITTEE REPORT, *supra* note 3, at 17–18; *supra* notes 40–52 and accompanying text (establishing the social and environmental benefits of renewable energy).

<sup>342</sup> *See* 25 U.S.C.A. § 45 (West 2010); JOINT COMMITTEE REPORT, *supra* note 3, at 17–18.

<sup>343</sup> JOINT COMMITTEE REPORT, *supra* note 3, at 17.

<sup>344</sup> *See id.*

<sup>345</sup> *See* Kleinbard, *supra* note 17, at 23–24 (noting that the uncertainty of the PTC results in higher capital costs and pricing of renewable energy); Kysar, *supra* note 117, at 369 (indicating increased transaction costs of sunsetted tax provisions).

<sup>346</sup> JOINT COMMITTEE REPORT, *supra* note 3, at 17–18; *see* Kleinbard, *supra* note 17, at 23–24.

decreasing the efficiency-promoting function of the credit.<sup>347</sup> One expert writes:

[W]e can capture economic efficiency gains by permitting taxpayers to count on [the credit's] continued availability. . . . [The reflection of uncertainty in price] is a phenomenon clearly visible, for example, in the wind and solar power industries, which rely on a "temporary" tax subsidy for their existence. Industry participants, including suppliers like wind turbine manufacturers, are subject to violent swings of fortune as the fate of the subsidy periodically teeters: the result is that the industry is smaller, and its cost of capital is higher, than would be true if there were greater certainty in the program.<sup>348</sup>

Thus, not only is the uncertainty of PTC availability transferred to the price of renewable energy, but also to the costs of capital and industry manufacturing.<sup>349</sup> Therefore, the credit's ability to account for positive externalities, and hence to promote economic efficiency, is offset by the increased uncertainty costs to a renewable project.<sup>350</sup>

#### CONCLUSION

The permanent extension of the PTC is necessary to promote renewable energy in the United States and to achieve President Obama's goal of "reinventing" the nation's clean energy economy. The frequent expiration of the PTC through sunset provisions of the PTC, by contrast, impedes these ends. Congress rationalizes PTC sunset provisions on political gain and budgetary manipulation alone; they are not offset by any countervailing tax policy. In fact, sunset dates frustrate all fundamental goals of tax collection. The financial incentive of the PTC spurs investment in renewable energy, making it cost-competitive with non-renewable energy sources. Investors and those in the renewable energy industry, therefore, require certainty with regards to the PTC's continued existence. Without such certainty, renewable projects will be substantially reduced and the renewable industry as a whole harmed. The LIHTC serves as an important example of how permanency can

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<sup>347</sup> Kleinbard, *supra* note 17, at 23–24.

<sup>348</sup> *Id.*

<sup>349</sup> *See id.*

<sup>350</sup> *See* Kleinbard, *supra* note 17, at 23 (establishing that frequent sunset provisions in the PTC lead to increased capital costs); Kysar, *supra* note 117, at 369 (illustrating the complexities of filing for taxes that are subject to frequent sunset provisions and the additional costs associated with those complexities).

positively affect the incentivizing feature of a tax credit. For the foregoing reasons, Congress should heed the renewable industry's recommendation to permanently extend the PTC in the interest of realizing the social and economic benefits of renewable energy.

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