

# WINDS OF CHANGE: USING THE TAX REGIME TO FACILITATE THE RENEWABLE ENERGY TRANSITION

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## I. INTRODUCTION

Renewable energy is flourishing both globally and within the United States. The United States has a \$64 billion market for renewables.<sup>1</sup> The renewables industry, composed mostly of solar, wind,

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1. Laura Shields, *State Renewable Portfolio Standards and Goals*, NAT'L CTR. OF STATE LEGISLATURES (Mar. 9, 2021), <https://www.ncsl.org/research/energy/renewable-portfolio-standards.aspx>.

biomass, and hydropower, is the fastest growing energy producer in the country, doubling from the year 2000 to 2018.<sup>2</sup> In 2019, renewables made up 17.5% of the total U.S. electricity generation, and 11% of the country's total consumption.<sup>3</sup> By 2030, it is projected that renewables will ultimately make up between 24% and 27% of the country's electricity generation.<sup>4</sup> The country's consumption of renewable energy is expected to grow over the next 30 years at an average of 1.8% annually.<sup>5</sup>

Large capacity additions and state-level policies like renewable energy portfolio standards are driving this increase.<sup>6</sup> Nearly half of the growth of the industry since the early 2000s can be credited to state renewable energy standards.<sup>7</sup> Seven states have renewable energy goals, and thirty states, Washington D.C., Puerto Rico, Northern Mariana Islands, and the Virgin Islands have renewable portfolio standards.<sup>8</sup> These standards act as a mandate, requiring certain percentages of the state's electricity to be produced only by renewable sources.<sup>9</sup> Most states have between a 10% and 45% standard.<sup>10</sup> However, fourteen states, and Puerto Rico, have a requirement of 50% or greater.<sup>11</sup> In 2015, Hawaii became the first state to pass a 100% renewable energy portfolio standard, and as of 2020 five more states, including California and New York, have passed laws committing to 100% zero-carbon energy by certain years.<sup>12</sup>

Other public factors driving renewable energy progress include market conditions like cost diversity, resource availability, policy decision, and specific regulations.<sup>13</sup> Private actions such as businesses setting sustainability goals, the privatization of solar panel installation on both commercial and personal property, and power purchase agreements have also significantly increased renewable production.<sup>14</sup>

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2. *Renewable Energy*, CTR. FOR CLIMATE & ENERGY SOLUTIONS, <https://www.c2es.org/content/renewable-energy/> (last visited Mar. 12, 2021).

3. *Id.*

4. *Id.* See also INT'L RENEWABLE ENERGY AGENCY, RENEWABLE ENERGY PROSPECTS: UNITED STATES OF AMERICA (2015), [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2015/Jan/IRENA\\_REmap\\_USA\\_summary\\_2015.pdf](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2015/Jan/IRENA_REmap_USA_summary_2015.pdf).

5. *Renewable Energy*, *supra* note 2.

6. Cara Marcy, *U.S. Renewable Electricity Generation Has Doubled Since 2008*, ENERGY INFO. ASS'N: TODAY IN ENERGY (Mar. 19, 2019), <https://www.eia.gov/todayinenergy/detail.php?id=38752>.

7. Shields, *supra* note 1.

8. *Id.*

9. *Id.*

10. *Id.*

11. *Id.*

12. *Six States Are Now Committed To 100% Clean Energy*, ENT. AM. (July 7, 2019), <https://environmentamerica.org/blogs/updates/ame/six-states-are-now-committed-100-clean-energy>.

13. *Renewable Energy*, CTR. FOR CLIMATE & ENERGY SOL., <https://www.c2es.org/content/renewable-energy/> (Mar. 12, 2021).

14. *Id.*

Environmental, Social, and Governance criteria (ESG) have also played a role in furthering the growth of the industry.<sup>15</sup> ESGs are “set standards ... that ... investors use to screen potential investments.”<sup>16</sup> The standards focus on sustainable and environmentally friendly investing, potentially encouraging investors to gravitate towards renewable energy, and away from carbon-related investments.<sup>17</sup> Even Chevron, a leading oil and gas company, employs ESG standards and publishes sustainability reports claiming to provide “affordable, reliable” and “ever-cleaner energy.”<sup>18</sup> However, the most significant drivers are two federal tax credits.<sup>19</sup>

This paper will argue that the renewable energy sector is an important part of the country’s future, and in order to meet production goals, the current tax credit structure is not enough, especially given COVID-19’s impact on the industry. To meet renewable production goals, the political stigma against renewables that favors oil and gas will have to vanish, allowing for more favorable tax credits, policies, and governmental action towards increasing renewable capacity, storage, and the development of offshore renewables.

The next section will give background on the renewable energy tax regime, discuss the original tax credits, the changes early in the COVID-19 pandemic, and compare the renewable energy industry to more traditional energy sources. Section three will discuss COVID-19 and its broad impact on the renewable industry. Section four will explain the most recent changes to the tax regime influenced by the pandemic, identifying both the victories and shortcomings of the new tax credit regime. Finally, section five will conclude with a summary of the renewable energy tax credits and suggestions as to what needs to happen should the country move to fully renewable energy consumption.

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15. Ben Warren, *Why Investors Are Putting Sustainability at The Top of the Agenda*, EY (May 19, 2020), [https://www.ey.com/en\\_us/power-utilities/why-investors-are-putting-sustainability-at-the-top-of-the-agenda](https://www.ey.com/en_us/power-utilities/why-investors-are-putting-sustainability-at-the-top-of-the-agenda).

16. James Chen, *Environmental, Social, and Governance (ESG) Criteria*, INVESTOPEDIA (Mar. 5, 2021), <https://www.investopedia.com/terms/e/environmental-social-and-governance-esg-criteria.asp>.

17. Warren, *supra* note 15.

18. *Sustainability*, CHEVRON, <https://www.chevron.com/sustainability> (last visited Mar. 15, 2021).

19. *Renewable Energy*, *supra* note 2.

## II. BACKGROUND

### A. Tax Credits & Incentives

A taxpayer generally has two options for renewable energy tax credits.<sup>20</sup> First, a Production Tax Credit (PTC) that can be applied at wind energy facilities, geothermal facilities, hydropower facilities, and other “qualified facilities.”<sup>21</sup> Second, an Investment Tax Credit (ITC) that can be applied at either solar energy facilities or “qualified facilities.”<sup>22</sup> While the PTC is generally used for wind facilities and the ITC is generally used for solar facilities, taxpayers can alternatively choose to claim the ITC instead of the PTC for wind energy facilities.<sup>23</sup>

### B. Wind Production Tax Credit

The PTC was first enacted in 1992 to promote the “development and utilization” of renewable energy sources.<sup>24</sup> The PTC is a corporate tax credit ranging from 1.0 cent to 2.5 cents per kilowatt hour (KWh) produced, for the first ten years of a renewable project’s operation.<sup>25</sup> However, the PTC is being phased out.<sup>26</sup> Under the original terms, facilities beginning construction after December 31, 2019 were not able to claim the credit.<sup>27</sup> The PTC was extended by two years due to the impacts of COVID-19.<sup>28</sup> Currently, the PTC is available for projects that begin construction before December 31, 2021.<sup>29</sup>

The PTC has been extremely important to the growth of the renewable energy industry in America.<sup>30</sup> The Joint Committee on Taxation estimates that tax expenditures from the PTC were around \$5.1 billion in 2019 alone.<sup>31</sup> The COVID-19 extension is estimated to produce around \$2.1 billion in tax expenditures.<sup>32</sup>

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20. ARMANDO GOMEZ ET AL., SKADDEN, *IRS PROVIDES RELIEF FOR RENEWABLE ENERGY DEVELOPERS ENCOUNTERING CONSTRUCTION DELAYS*, (2020) <https://www.skadden.com/insights/publications/2020/05/irs-provides-relief>.

21. *Id.* See also I.R.S. Notice 2020-41, 2020-25 I.R.B. 954 (explaining the ITC and PTC as well as defining “qualified facilities”).

22. GOMEZ ET AL., *supra* note 20.

23. *Id.*

24. Energy Policy Act of 1992 § 1202, 42 U.S.C. § 13311.

25. I.R.C. § 45(a).

26. *Id.*

27. *Id.*

28. MOLLY F. SHERLOCK, CONGR. RSCH. SERV., R43453, *THE RENEWABLE ELECTRICITY PRODUCTION TAX CREDIT: IN BRIEF* (2020).

29. *Id.* at 1.

30. *Id.*

31. *Id.*

32. *Id.*

The credit amount available under the PTC depends on project construction date and the type of renewable energy.<sup>33</sup> For wind energy, the 2.5 cent credit per kWh is available for 100% of a wind farm's production, if that project began construction before 2017. Then it drops down to a credit for 20% of output on projects beginning construction in 2018. The credit was supposed to be unavailable for projects beginning construction after 2018, but due to recent events, the PTC has been extended through 2021.<sup>34</sup>

Due to COVID-19, the Further Consolidated Appropriations Act of 2020 amended the PTC.<sup>35</sup> Under the PTC amendment, the qualifying construction start date was extended to include projects starting before December 31, 2020.<sup>36</sup> Wind projects beginning construction in 2020 are given a tax credit on 40% of production.<sup>37</sup>

While the credit qualification is being phased out, the PTC remains valuable for the future of the industry because the tax credit is available for the first 10 years of operation.<sup>38</sup> Any unused credits can be carried forward for up to 20 years after the credit was generated.<sup>39</sup> The wind industry is projected to remain strong once the PTC is fully phased out because the PTC has driven wind prices down by 70% and has established a reliable and profitable domestic industry.<sup>40</sup>

### C. Solar Investment Tax Credit

The Solar Investment Tax Credit (ITC) was enacted in 2006 to support the growth of the solar industry in the United States.<sup>41</sup> As of 2020, the ITC is a 26% tax credit for both residential and commercial solar systems and farms.<sup>42</sup> The tax credit is based on a percentage of basis or cost in the energy project property.<sup>43</sup> In 2015, the ITC was extended, but the credit was supposed to start phasing out in 2019 and eventually drop down to a permanent 10% after 2023.<sup>44</sup> The tax credit percentage step-down scheme is similar to the PTC, with the percentage

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33. *Id.*

34. *Id.* at 1-2.

35. I.R.S. Notice 2020-41, 2020-25 I.R.B. 954.

36. *Id.*

37. *Id.*

38. *Renewable Electricity Production Tax Credit (PTC)*, DATABASE OF STATE INCENTIVES FOR RENEWABLES & EFFICIENCY, N.C. CLEAN ENERGY TECHN. CTR., N.C. STATE U. (Jan. 27, 2021), <https://programs.dsireusa.org/system/program/detail/734>.

39. *Id.*

40. *Tax Policy*, AM. CLEAN POWER ASS'N (Mar. 17, 2021), <https://cleanpower.org/policy/tax-policy/>.

41. *Solar Investment Tax Credit (ITC)*, SOLAR ENERGY INDUS. ASS'N, (Mar. 16, 2021), <https://www.seia.org/initiatives/solar-investment-tax-credit-itc>.

42. *Id.*

43. I.R.S. Notice 2020-41, 2020-25 I.R.B. 954.

44. *Solar Investment Tax Credit (ITC)*, *supra* note 41.

going down each year a project is placed into construction.<sup>45</sup> For example, for projects starting construction in 2019, the full 30% tax credit is available so long as the project meets all requirements under the statute.<sup>46</sup> For projects starting construction in 2020, a 26% ITC is available.<sup>47</sup>

Since its enactment, the ITC has helped the solar industry grow by 10,000%, with an annual growth average of 52%.<sup>48</sup> The long-term stability of a tax credit on solar systems has incentivized the growth, investment, and low costs of solar energy.<sup>49</sup>

#### D. ITC & PTC Safe Harbor

Eligibility for both the ITC and PTC is based on whether or not construction has commenced.<sup>50</sup> A solar project can “commence construction” in one of two ways to qualify.<sup>51</sup> First, if 5% or more of the final project cost has been incurred, the project has commenced construction.<sup>52</sup> The second way to qualify is if “integral” physical work of a “significant nature” has begun on the site or on the project equipment.<sup>53</sup>

However, once the project has begun construction, progress must continue.<sup>54</sup> This is known as the continuity requirement.<sup>55</sup> There is a continuity safe harbor provision, which allows the taxpayer to maintain the full tax credit applicable when the project began construction, so long as the project is placed in service within four years.<sup>56</sup>

Due to COVID-19 shutdowns and delays, the IRS issued guidance that extended the safe harbor provision by an additional year for projects that began in 2016 and 2017.<sup>57</sup> Projects beginning construction in these years were eligible for a 100% tax credit if placed in service within 4 years.<sup>58</sup> Now, projects starting in 2016 and placed into service

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45. *See id.*

46. *Id.*

47. *Id.*

48. *Id.*

49. *Id.*

50. I.R.S. Notice 2018-59, 2018-28 I.R.B. 196.

51. *Id.*

52. U.S. DEP'T OF ENERGY, GUIDE TO THE FEDERAL INVESTMENT TAX CREDIT 1 (2020), <https://www.energy.gov/sites/prod/files/2020/01/f70/Guide%20to%20the%20Federal%20Investment%20Tax%20Credit%20for%20Commercial%20Solar%20PV.pdf>.

53. *Id.*

54. I.R.S. Notice 2018-59, 2018-28 I.R.B. 196.

55. *Id.*

56. Julia Pyper, *IRS Issues Favorable Tax Credit Guidance for New Solar Projects*, GREENTECH MEDIA (June 22, 2018), <https://www.greentechmedia.com/articles/read/irs-issues-favorable-tax-credit-guidance-for-new-solar-projects>.

57. I.R.S. Notice 2020-41, 2020-25 I.R.B. 954.

58. *Wind PTC and Solar ITC Gain COVID-19 Construction Relief From IRS*, MCGUIREWOODS (May 29, 2020), <https://www.mcguirewoods.com/client-resources/Alerts/2020/5/wind-ptc-and-solar-itc-gain-covid-19-construction-relief-from-irs>.

by the end of 2021, and projects starting in 2017 and placed into service by 2022, are still eligible for the 100% tax credit.<sup>59</sup>

To qualify for this continuity safe harbor, a project must make continuous progress towards completion.<sup>60</sup> Projects can meet this requirement in one of two ways.<sup>61</sup> First, if a project begins and continues physical work of a significant nature, it can satisfy the continuity requirement under the “Physical Worst Test.”<sup>62</sup> The satisfaction of this test is determined by the “relevant facts and circumstances.”<sup>63</sup> Second, the project can also meet the continuity requirement by incurring 5% of the cost of the project and makes “continuous efforts to advance” towards completion.<sup>64</sup>

#### *E. New Safe Harbor Added*

Due to COVID-19, the IRS established a new safe harbor for projects that began in late 2019.<sup>65</sup> There are two ways to meet the “commence construction” requirement to qualify for the credits: the “beginning of construction” with “continuous work” test, and the “five percent” expenditure test.<sup>66</sup> Most developers satisfy the 5% expenditure test by paying for equipment before the end of year in order to get that year’s tax credit.<sup>67</sup> The ITC has a “3 ½ month rule” that allows the purchase of equipment to meet the 5% test if that equipment is delivered less than 105 days after payment.<sup>68</sup> The IRS extended the “3 ½ month rule” for project purchases after September 15, 2019 to accommodate COVID-19 delays.<sup>69</sup> Now, these purchases will meet the “commence construction” requirement, and secure the 2019 30% tax credit, as long as the purchases are received before October 15, 2020.<sup>70</sup> After October 15, 2020 the previous “3 ½ month rule” will control.<sup>71</sup>

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59. *Id.*

60. *Id.*

61. I.R.S. Notice 2013-29, 2013-20 I.R.B. 1085.

62. *Id.*

63. *Id.*

64. *Id.* (Continuous efforts “as determined under section 5.02.”).

65. *Wind PTC and Solar ITC Gain COVID-19 Construction Relief From IRS*, *supra* note 58.

66. Philippe Hartley, *Understanding ‘Safe Harbor’ For Extending Your 30 Percent Solar ITC Qualification*, RENEWABLE ENERGY WORLD (Apr. 10, 2019), <https://www.renewableenergyworld.com/2019/04/10/understanding-safe-harbor-for-extending-your-30-percent-solar-itc-qualification/>.

67. *Wind PTC and Solar ITC Gain COVID-19 Construction Relief From IRS*, *supra* note 58.

68. *Id.*

69. *Id.*

70. See I.R.S. Notice 2020-41, 2020-25 I.R.B. 954.

71. *Id.*

### F. Comparison to Fossil Fuels

Unsurprisingly, fossil fuels dominate the US energy market. Approximately 60% of all the country's electricity generation in 2020 was from fossil fuels, and only about 20% came from renewable energy sources.<sup>72</sup>

However, in terms of projected growth and development, the renewable energy industry is expanding at a more rapid rate.<sup>73</sup> Solar power specifically has experienced the largest percentage growth of any other energy source.<sup>74</sup> In the first two months of 2020, new renewable energy provided almost 86% of the new electric capacity in the US.<sup>75</sup> The Federal Energy Regulatory Commission has also predicted that both wind and solar are expected to generate more new capacity than natural gas for the next three years.<sup>76</sup> And now, renewable energy sources have surpassed coal in generation capacity.<sup>77</sup>

In addition to rapid development and growth, renewables are now considered the cheapest source of energy generation, even compared to fossil fuels.<sup>78</sup> The International Renewable Energy Agency has reported that the cost of installation and maintenance of renewables has been on a downward trajectory and continues to decrease.<sup>79</sup> The low cost, furthered by tax incentives and subsidies, is considered the most important factor in transitioning to clean energy and meeting climate goals.<sup>80</sup>

From 2016 to 2018, the renewable energy industry had the highest employment growth in the energy sector at 5.37%.<sup>81</sup> In 2019, Texas, the oil and gas capital of the country, had a 4% increase in renewable energy

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72. *Frequently Asked Questions: What is U.S. Electricity Generation by Energy Source?*, U.S. ENERGY INFO. ADMIN., (Mar. 5, 2021), <https://www.eia.gov/tools/faqs/faq.php?id=427&t=3>.

73. Drew DeSilver, *Renewable Energy is Growing Fast in the U.S., but Fossil Fuels Still Dominate*, PEW RSCH. CTR.: FACT TANK (Jan. 15, 2020), <https://www.pewresearch.org/fact-tank/2020/01/15/renewable-energy-is-growing-fast-in-the-u-s-but-fossil-fuels-still-dominate/>.

74. *Id.*

75. Kelly Pickerel, *U.S. Renewable Energy Additions Completely Overwhelm Those by Natural Gas in First Months of 2020*, SOLAR POWER WORLD (Apr. 21, 2020), <https://www.solarpowerworldonline.com/2020/04/u-s-renewable-energy-additions-completely-overwhelm-those-by-natural-gas-in-first-months-of-2020/>.

76. *Id.*

77. *Id.*

78. James Ellsmoor, *Renewable Energy is now the Cheapest Option-Even Without Subsidies*, FORBES (June 15, 2019), <https://www.forbes.com/sites/jamesellsmoor/2019/06/15/renewable-energy-is-now-the-cheapest-option-even-without-subsidies/>.

79. *Id.*

80. *Id.*

81. Katie Schmeer & Anna McGinn, *Fact Sheet | Jobs in Renewable Energy, Energy Efficiency, and Resilience*, ENVTL. & ENERGY STUDY INST. (July 23, 2019), <https://www.eesi.org/papers/view/fact-sheet-jobs-in-renewable-energy-energy-efficiency-and-resilience-2019>.



sector jobs.<sup>82</sup> The solar and wind industries combined to employ more than four times the number of workers in the coal industry.<sup>83</sup> It is also predicted that offshore wind development will add between 45,000 and 83,000 jobs by the year 2030.<sup>84</sup>

Despite the positive trends and growth of renewables in the U.S., fossil fuels remain the federal government's favorite energy source. Caught in the middle of deep party rivalry, climate change and renewable energy laws often get less preferential treatment than traditional energy sources.

Under President Trump's administration, the government took major steps to suppress the growth of renewables in the country.<sup>85</sup> He introduced an "energy dominance" agenda, in order to speed up oil, gas, and coal production through deregulating and dismantling environmental rules intended to curb greenhouse gas emissions and protect natural habitats from development.<sup>86</sup> Most recently, in January 2020, the Trump administration made significant changes to the National Environmental Policy Act (NEPA), making it easier for federal agencies to approve projects without considering the effects of climate change.<sup>87</sup> This change is still in the process of implementation and can potentially be challenged or, depending on the new presidential administration's agenda, be thrown out.<sup>88</sup>

A study by the Center for American Progress Action Fund found that the Trump Administration's environmental policies suppressed more than 600,000 jobs in the renewable energy sector.<sup>89</sup> This estimate doesn't include the disruptions from COVID-19 and how the administration's response affected the industry.<sup>90</sup>

The federal government also continues to favor the oil and gas industry through tax incentives.<sup>91</sup> It is estimated that the tax

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82. L.M. Sixel, *COVID Pandemic Slows Planned Job Growth for Green Energy Jobs in Texas*, HOUS. CHRONICLE (Aug. 3, 2020), <https://www.houstonchronicle.com/business/energy/article/Pandemic-slows-planned-job-growth-in-green-energy-15450118.php>.

83. Bianca Majumder, et al., *The Impact of the Coronavirus on the Renewable Energy Industry*, CTR. FOR AM. PROGRESS (Apr. 15, 2020), <https://www.americanprogress.org/issues/green/news/2020/04/15/483219/impact-coronavirus-renewable-energy-industry/>.

84. *Id.*

85. *Id.*

86. Emma Newburger, *Trump Moves to Overhaul the National Environmental Policy Act*, CNBC (Jan. 9, 2020, 10:35 AM EST), <https://www.cnbc.com/2020/01/09/trump-to-announce-sweeping-changes-to-the-national-environmental-policy-act.html>.

87. *Id.*

88. *Id.*

89. Majumder, et al., *supra* note 83.

90. *Id.*

91. See *What Tax Incentives Encourage Energy Production From Fossil Fuels?*, TAX POLICY CTR: BRIEFING BOOK (May 2020), <https://www.taxpolicycenter.org/briefing-book/what-tax-incentives-encourage-energy-production-fossil-fuels>.

expenditure for oil and gas is up to \$20 billion a year.<sup>92</sup> The tax incentives for fossil fuels are plentiful, including both direct and indirect subsidies.<sup>93</sup> Examples include the percentage depletion, credit for clean coal investment, intangible drilling costs deduction, last-in, first-out accounting, and domestic manufacturing deduction.<sup>94</sup> Some of these subsidies have been around for over a hundred years and remain available, even though the relevant circumstances that justified their creation no longer exist.<sup>95</sup> At first, these subsidies were created to lower the cost of fossil fuels and incentivize domestic production.<sup>96</sup> But now, taxpayer dollars continue to fund outdated subsidies that remain in the tax code in a time when renewable energy is the most cost-competitive energy source.<sup>97</sup> In a time where current policy and public opinion lean towards goals of reducing greenhouse gas emission from the fossil fuel industry, it is difficult to justify subsidizing an industry with an estimated total cost of \$5.3 trillion in negative externalities that cause adverse environmental, climate, and health impacts.<sup>98</sup>

Regardless, while renewable energy subsidies like the ITC and PTC that have only been active for a few years are being phased out, fossil fuel subsidies that have been around for a hundred years are increasing.<sup>99</sup> This is a counterintuitive agenda, considering the acknowledgement of renewable energy being the future, and the heavy focus on the quality of our environment and climate.

### III. COVID-19 IMPACTS ON THE INDUSTRY

Renewables are the only energy source to show growth in 2020 and are still predicted to grow in 2021.<sup>100</sup> Other energy sources have seen major declines in growth and profitability.<sup>101</sup> The demand for coal fell by at least 8%, and oil decreased by 5% in the first quarter of

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92. CLAYTON COLEMAN & EMMA DIETZ, ENV. & ENERGY STUDY INST., FACT SHEET: FOSSIL FUEL SUBSIDIES: A CLOSER LOOK AT TAX BREAKS AND SOCIETAL COSTS 1 (2019), <https://www.eesi.org/papers/view/fact-sheet-fossil-fuel-subsidies-a-closer-look-at-tax-breaks-and-societal-costs>.

93. *Id.* at 1.

94. *Id.* at 2-3.

95. *Id.* at 1.

96. *Id.* at 1-2.

97. *Id.* See also James Ellsmoor, *Renewable Energy Is Now The Cheapest Option - Even Without Subsidies*, FORBES (Jun 15, 2019, 02:39 PM EDT) (explaining why and how renewable energy is the cheapest and most cost-effective energy source).

98. COLEMAN & DIETZ, *supra* note 92, at 1-2.

99. *Id.* at 2.

100. INT'L ENERGY AGENCY, RENEWABLE ENERGY MARKET UPDATE: OUTLOOK FOR 2020 AND 2021 (2020), <https://www.iea.org/reports/renewable-energy-market-update/2020-and-2021-forecast-overview#abstract> [hereinafter: INT'L ENERGY AGENCY, MARKET UPDATE].

101. INT'L ENERGY AGENCY, GLOBAL ENERGY REVIEW 2020: THE IMPACTS OF THE COVID-19 CRISIS ON GLOBAL ENERGY DEMAND AND CO2 EMISSIONS 3-4 (2020), <https://www.iea.org/reports/global-energy-review-2020>.

2020.<sup>102</sup> In total, the demand for electricity decreased by 20% during periods of lockdown across the country.<sup>103</sup>

The renewable sector was not as hard hit by the decrease in demand, because their output is largely unaffected by market demand.<sup>104</sup> This is because power purchase agreements (financial agreements selling “produced energy” to a buyer at a fixed cost for long periods of time) are integral to the industry and take place in most renewable projects.<sup>105</sup> However, project construction, employment, development, and investment in the sector have been significantly impacted by financial challenges, lockdowns, and stay-at-home orders.<sup>106</sup>

#### A. COVID-19 impacts on Project Construction

COVID-19 has impacted the world’s supply chain and transportation abilities.<sup>107</sup> Industries like renewable energy, which rely on specialized supply chains, have felt a severe impact.<sup>108</sup> The solar industry heavily relies on imports from China, with few alternative options for supplying projects with solar panels and other key components.<sup>109</sup> The wind industry relies heavily on European manufacturers for turbine components.<sup>110</sup> COVID-19 has dramatically slowed production of these items in China and Europe, in turn threatening delivery schedules here in America.<sup>111</sup> The delay in materials, along with lockdown and quarantine orders, have created a major delay in construction and project completion.<sup>112</sup>

The implication of delayed construction is the inability for renewable projects to qualify for the time sensitive tax credits mentioned above.<sup>113</sup> Both the ITC and PTC are heavily utilized and relied

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102. *Id.*

103. *Id.* at 3.

104. *Id.* at 3-5.

105. GlobalData Energy, *The Covid-19 pandemic is an opportune time to expand renewable energy growth, says GlobalData*, POWER TECH. (Aug. 14, 2020, 11:39 AM), <https://www.power-technology.com/comment/covid-19-renewable-energy-globaldata/>.

106. See generally INT’L ENERGY AGENCY, MARKET UPDATE, *supra* note 100.

107. James O’Brien et al., *Outlook for US Renewable Energy Projects Following COVID-19*, BAKER MCKENZIE (June 1, 2020), <https://www.bakermckenzie.com/en/insight/publications/2020/06/outlook-for-us-renewable-energy-projects>.

108. *Id.*

109. *Id.*

110. *Id.*

111. *Id.*

112. Dave Turk & George Kamyia, *The Impact of the Covid-19 Crisis on Clean Energy Progress*, INT’L ENERGY AGENCY (June 11, 2020), <https://www.iea.org/articles/the-impact-of-the-covid-19-crisis-on-clean-energy-progress>.

113. O’Brien et al., *supra* note 107.

on in the industry and failure to receive either of these credits could be detrimental for a renewable energy developer.<sup>114</sup>

*B. COVID-19 impacts on Development and Investment*

Another threat to the industry is the uncertainty surrounding project financing.<sup>115</sup> Most renewable energy developers use third party financing to support their large projects.<sup>116</sup> In order to secure third party financing, most developers engage in “tax equity” transactions.<sup>117</sup> A tax equity transaction is one where a developer transfers the right to claim a tax credit in exchange for an equity investment in their project.<sup>118</sup> The industry can do this because unlike most other federal tax credits, the PTC and ITC are transferable and, therefore, encourage third party financing.<sup>119</sup>

However, this type of transaction is only influential when the investors have sufficient tax burdens and income elsewhere in their company to offset.<sup>120</sup> Unfortunately, the economic downturn caused by COVID-19 might limit the availability of this type of transaction and diminish the attractiveness for investors.<sup>121</sup>

Tax equity investors are also disincentivized to invest because the value of the tax credits depends on the project meeting development milestones important to qualify for the best ITC or PTC rates.<sup>122</sup> Thus, the construction delays caused by lockdowns, supply chain disruption, and stay at home orders are creating concerns about the ability for to receive tax credits from a tax equity transaction, causing potential investors to withhold from investing at this time.<sup>123</sup>

The economic uncertainty created by COVID-19 is also affecting the availability of senior debt and traditional financing lenders.<sup>124</sup> This is explained by a general trend of investors being more risk averse than before.<sup>125</sup> In a conservative financing market, both tax equity investors and traditional debt lenders are not as open to working with new developers, and instead focus on industries they have existing

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114. *Id.*

115. *Id.*

116. *Id.*

117. *Id.*

118. *Id.*

119. *Id.*

120. Nick Richards & Yomal Wijekoon, *2019 Deloitte Renewable Energy Seminar*, Deloitte (October 2-4, 2019), <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/energy-resources/us-structuring-and-financing-considerations-for-tax-equity.pdf>.

121. O'Brien et al., *supra* note 107.

122. *Id.*

123. *Id.*

124. *Id.*

125. *Id.*

relationships with.<sup>126</sup> This has not only limited financing for projects already in the pipeline, but even projects from trusted developers. In turn, the outlook for projects and new developments expected to enter the market is extremely uncertain.<sup>127</sup>

### C. COVID-19 impacts on Industry Employment

Before COVID-19, renewable energy was one of the country's largest and fastest developing employment sectors, adding nearly 3.4 million jobs from 2015 to 2019.<sup>128</sup> "That made clean energy by far the biggest employer of workers in all energy occupations, employing nearly three times as many people as the fossil fuel industry."<sup>129</sup> However, from March to May of 2020, the Department of Labor data suggests that over 620,590 workers in renewable energy occupations, nearly 18.5% of the industry's workforce, filed for unemployment.<sup>130</sup>

Despite some delays in growth, renewable energy is still expected to thrive.<sup>131</sup> Most of the large, utility-scale renewable energy projects that were previously delayed are expected to come online in 2021.<sup>132</sup> However, small scale and household renewable projects (like rooftop solar panels), a vital part of the industry, may continue to decline without government support.<sup>133</sup> The Government has an unprecedented opportunity to accelerate the transition to clean energy by making investments in renewables a part of future stimulus packages and bettering the tax incentive structure for the industry.<sup>134</sup>

## IV. TAX CREDIT EXTENSION

As mentioned above, due to COVID-19 concerns, both the ITC and PTC were extended in June of 2020.<sup>135</sup> The PTC, which applies to wind energy projects, gained an additional year so that projects beginning construction before December 31, 2020, qualify under the tax credit.<sup>136</sup> The ITC, which applies to solar projects, gained an additional year in order to ensure that developers had adequate time to place the project

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126. *Id.*

127. *Id.*

128. *Clean Energy & COVID-19 Crisis | May 2020 Unemployment Analysis*, E2 (June 15, 2020), <https://e2.org/reports/clean-jobs-covid-economic-crisis-may-2020/>.

129. *Id.*

130. *Id.*

131. *Renewable Energy Sector Is Expected to Bounce Back Quickly Despite the Impact of COVID-19*, EY (May 19, 2020), [https://www.ey.com/en\\_gl/news/2020/05/renewable-energy-sector-is-expected-to-bounce-back-quickly-despite-the-impact-of-covid-19](https://www.ey.com/en_gl/news/2020/05/renewable-energy-sector-is-expected-to-bounce-back-quickly-despite-the-impact-of-covid-19).

132. Turk & Kamyia, *supra* note 112.

133. *Id.*

134. *See id.*

135. Tanya M. Larrabee & Beth A. Goldstein, *Extension to Tax Credits Provides Relief to the Renewable Energy Industry*, 11 NAT'L L. REV. 73 (2020).

136. *Id.*

in service, which in turn qualifies the project for the ITC credit.<sup>137</sup> The IRS added an additional safe harbor provision to the ITC in order to ensure that new projects have the opportunity to qualify for the ITC.<sup>138</sup> This safe harbor provision extended the normal “3 1/2 month” rule to a flat deadline of October 15, 2020, to allow developers leeway for the arrival of purchased equipment.<sup>139</sup> While these changes were valuable and important to the renewables industry, the continued delay in the global production of parts, development of domestic projects, and availability of labor remain a big issues for developers trying to qualify for tax credits.<sup>140</sup>

In response to the continued strain on the industry, Congress included The Energy Act of 2020 (Energy Act) as part of the most recent COVID-19 relief bill.<sup>141</sup>

As part of the Energy Act, Congress further extended the ITC and PTC.<sup>142</sup> The Act includes a two-year extension at 26% for the ITC (applicable to solar projects), a one-year extension at 60% for the PTC (applicable to onshore wind projects), and a new ITC for offshore wind projects at 30%.<sup>143</sup>

#### A. *The Current ITC for Solar Projects*

The June ITC extension only applied to solar projects that began construction on a qualified project in 2016, giving the developers an additional year to place the project in service to compensate for construction delays related to COVID-19.<sup>144</sup> ITC qualified projects include solar projects, qualified wind facilities, fiber optic solar, qualified microturbine properties, and more.<sup>145</sup> But, the scheduled step down in the ITC rate from 26% to 10% was still set to take place for projects that began construction in 2020.<sup>146</sup>

However, the ITC extension in the Energy Act applies to projects that began construction after December 31, 2019.<sup>147</sup> Now, the previous

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137. *Id.*

138. *Id.*

139. *Id.*

140. *See id.*

141. Lee Peterson et al., *New COVID-19 relief includes extenders for Renewable Energy*, COHN REZNICK (Dec. 22, 2020), <https://www.cohnreznick.com/insights/new-covid-19-relief-includes-extendere-for-renewable-energy>.

142. *Id.*

143. Jorge Medina & Mona E. Dajani, *Tax Extenders Included in the Stimulus Bill Poised to Provide a Boost to Renewables*, PILLSBURY (Dec. 29, 2020), <https://www.pillsburylaw.com/en/news-and-insights/tax-extendere-stimulus-bill-renewables.html>.

144. Larrabee & Goldstein, *supra* note 135.

145. *See id.*

146. *See id.*

147. Lee Peterson et al., *New COVID-19 Relief Includes Extenders For Renewable Energy*, COHNREZNICK (Dec. 22, 2020), <https://www.cohnreznick.com/insights/new-covid-19-relief-includes-extendere-for-renewable-energy>.

26% will continue to apply to projects that begin construction after December 31, 2019 and before January 1, 2023.<sup>148</sup> Projects that begin construction after January 1, 2023 and before January 1, 2024 will receive a 22% credit.<sup>149</sup> The previously scheduled permanent phasedown to 10% will now apply to projects that begin construction after 2025.<sup>150</sup> This is a two year extension from the previous deadline.<sup>151</sup>

### B. *The Current ITC for Wind Projects*

The Energy Act contains a benefit for taxpayers who would like to claim the ITC instead of the PTC for onshore wind projects.<sup>152</sup> Previously, an ITC of 18% was available for wind projects that began construction in 2020, but not for wind projects constructed any time after.<sup>153</sup> This credit has been extended by one year.<sup>154</sup> Now, an 18% ITC is available (if elected instead of the PTC) for wind projects that begin construction in 2021.<sup>155</sup>

In addition to the other extensions, a new 30% ITC is available for offshore wind projects.<sup>156</sup> This credit is available to offshore wind projects that begin construction between January 1, 2017 and December 31, 2025.<sup>157</sup> At present, the United States only has one operating offshore wind farm, but around fifteen new projects are being planned and developed that could create upwards of 83,000 jobs by 2030.<sup>158</sup> This new credit could be a very valuable tool that further develops the renewable industry, especially since offshore wind is considered the next frontier of wind energy.<sup>159</sup>

### C. *The Current PTC*

The previous extension of the PTC ensured that the 60% credit would apply to wind projects starting construction before December 31, 2020.<sup>160</sup> Under the Energy Act, the PTC was further extended for an

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148. *Id.*

149. *Id.*

150. *Id.*

151. *Id.*

152. Hagai Zaifman et al., *Stimulus Bill Brings Welcomed Changes to the Renewable Energy Industry*, White & Case (Jan. 6, 2021), <https://www.whitecase.com/publications/alert/stimulus-bill-brings-welcomed-changes-renewable-energy-industry>.

153. *Id.*

154. *Id.*

155. *Id.*

156. *Id.*

157. Walter Wright Jr., *Congressional Enactment of COVID-19 Omnibus Legislation: Solar/Wind Tax Credit Extensions*, MITCHELL WILLIAMS, JD SUPRA (Dec. 28, 2020), <https://www.jdsupra.com/legalnews/congressional-enactment-of-covid-19-38586/>.

158. *Offshore Wind Power Facts*, AM. CLEAN POWER ASS'N (March, 15, 2021), <https://www.awea.org/policy-and-issues/u-s-offshore-wind>.

159. *See id.*

160. Peterson et al., *supra* note 141.

additional year.<sup>161</sup> Now, projects beginning construction in either 2020 or 2021 will get the PTC rate of 60%.<sup>162</sup> The extension also allows taxpayers to elect to claim the ITC in lieu of the PTC if the construction of the wind facility begins before 2022.<sup>163</sup> Qualified offshore wind facilities, located inland or coastal, also have the opportunity to claim the ITC instead of the PTC.<sup>164</sup>

The Act also extended the PTC deadline for other renewable energy projects, such as open and closed loop biomass, geothermal energy, qualified hydropower, and more.<sup>165</sup> These projects now have a “beginning of construction” deadline of December 31, 2021 to qualify for the PTC.<sup>166</sup>

#### D. *New Safe Harbor*

On December 31, 2020, the IRS issued a notice providing relief for the impact of construction delays on energy projects being built either on federal land or offshore.<sup>167</sup> The notice addresses the “beginning of construction” requirement that renewable energy projects must meet in order to gain eligibility for either the PTC or ITC.<sup>168</sup>

Previously, a taxpayer could satisfy the “beginning of construction” requirement for the PTC and ITC by either starting physical work or by incurring 5% or more of the costs of the facility to be built.<sup>169</sup> Both tests require the project make continuous progress towards completion, further known as the continuity requirement.<sup>170</sup> Taxpayers also enjoyed a continuity safe harbor provision which deemed projects placed into service no more than four years after construction as satisfying the continuity requirement.<sup>171</sup> The continuity safe harbor was further expanded due to COVID-19, giving projects that began construction in 2016 or 2017 five years to place the project into service without violating the continuity requirement.<sup>172</sup>

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161. *Id.*

162. *Id.*

163. Laura Gritz et al., *COVID Relief Bill Includes ITC and PTC Extensions*, STOEL RIVES, LLP, JD SUPRA (December 23, 2020), <https://www.jdsupra.com/legalnews/covid-relief-bill-includes-itc-and-ptc-19573/>.

164. *Id.*

165. Zaifman et al., *supra* note 152.

166. *Id.*

167. *Id.* See also *Notice 2021-5: Extended continuity Safe Harbor, Renewable Energy Projects Offshore or on Federal Land*, KPMG: INSIGHTS (Jan. 1, 2021), <https://home.kpmg/us/en/home/insights/2020/12/tnf-notice-2021-5-extended-continuity-safe-harbor-renewable-energy-projects-offshore-federal-land.html>.

168. Zaifman et al., *supra* note 152.

169. *Id.*

170. *Id.*

171. *Id.*

172. *Id.*



The recent notice creates an extended continuity safe harbor of ten years for offshore energy projects or energy projects located on federal land.<sup>173</sup> This extension will be incredibly valuable to the industry because of the greater delays associated with offshore and federal land projects. These delays may be caused by unfavorable weather, unavailability of correct turbines, government permit delays, and more.<sup>174</sup> These delays lead to a higher risk of failing the continuity safe harbor, and therefore losing the valuable tax credits.<sup>175</sup>

#### V. IMPLICATIONS OF THE EXTENSION

Overall, these changes have been praised and welcomed by the renewables industry.<sup>176</sup> They provide much-needed relief from COVID-19 delays in construction, supply chains, and production.<sup>177</sup>

The sweeping and broad nature of the tax credit extensions is expected to increase investments in renewable energy by billions of dollars, both by encouraging the development of the industry and promoting greater planning and predictability that helps boost the confidence of private investors.<sup>178</sup> Since the renewable industry is quickly growing and of great importance to the country, the tax incentives in turn will boost the economy generally and enhance the overall COVID-19 related economic recovery.<sup>179</sup>

The extension will also help get people back to work after roughly 13% of the clean energy workforce lost jobs during the holiday season in 2020.<sup>180</sup> Gregory Wetstone, the President of the American Council on Renewable Energy, claims this act is a “vote of support” for the industry and for the “hundreds of thousands of Americans building our clean energy future.”<sup>181</sup>

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173. *Notice 2021-5: Extended continuity Safe Harbor, Renewable Energy Projects Offshore or on Federal Land*, *supra* note 167.

174. DELOITTE, OFFSHORE WIND CAPITAL PROJECTS 6,9 (2019), <https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/real-estate/deloitte-uk-offshore-wind-capital-projects-pov-vf-no-creds.pdf>.

175. *IRS Notice: Continuity Safe Harbor Extension for Offshore, Federal Land Renewable Energy Projects (IRC § 45)*, BLOOMBERG TAX LAW NEWS (Dec. 31, 2020), <https://news.bloombergtax.com/daily-tax-report/irs-notice-continuity-safe-harbor-extension-for-offshore-federal-land-renewable-energy-projects-irc-45>.

176. *A Breath of Fresh Air During the Pandemic: Treasury Plans to Extend PTC and ITC Deadlines for Renewables*, SULLIVAN & WORCESTER: INSIGHTS (May 14, 2020), <https://www.sullivanlaw.com/news-A-Breath-of-Fresh-Air-During-the-Pandemic-Treasury-Plans-to-Extend-PTC-and-ITC-Deadlines-for-Renewables.html>.

177. *Id.*

178. MEDINA & DAJANI, *supra* note 143.

179. *See* WINDPOWER ENG'G DEV., *PTC Extended By One Year, New Offshore Wind Tax Credit Inserted In Congress Bill*, (Dec. 22, 2020), <https://www.windpowerengineering.com/ptc-extended-by-one-year-new-offshore-wind-tax-credit-inserted-in-congress-bill/>.

180. *Id.*

181. *Id.*

Arguably, one of the most important outcomes of the extension is making the ITC applicable to offshore wind energy projects.<sup>182</sup> The industry overall is happy to see Congress recognize the potential of offshore wind, known to be the largest untapped electricity source in the country.<sup>183</sup> Not only does offshore wind hold great promise in its high-capacity potential, but it also promises extensive job creation.<sup>184</sup> A study by the Workforce Development Institute found that over 74 different occupations are needed during the creation and operation of offshore wind farms.<sup>185</sup> These jobs not only provide for the upcoming generation of energy professionals, but also require the transferable skill set of many workers in existing oil and gas companies.<sup>186</sup> These jobs include experienced professionals in planning, development, supply chain, and operation. Thus, offshore wind development will be essential to producing new careers, as well as ensuring a smooth transition to clean energy, without leaving millions of Americans in the fossil fuel industry without employment.

#### VI. WHAT MORE IS NEEDED?

The current extensions are seen as a “down payment” on the technologies that are needed to fully develop the renewable industry.<sup>187</sup> However, this is not enough to carry the industry to its full potential. The momentum towards the development of renewables needs to continue if the country wants to achieve a transition to entirely clean, renewable energy.<sup>188</sup>

With a change in federal administration, it is very likely that renewables will remain a focus of discussion and policy. However, other areas of renewable energy need to be in the forefront for policymakers if the country really wants to move towards cleaner energy.

First, there needs to be a focus on energy storage.<sup>189</sup> The sun does not shine at night and sometimes the wind just does not blow. This is often the major argument against renewable energy.<sup>190</sup> The solution for this issue is to develop a vast network of battery storage in order to

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182. *Offshore Wind Power Facts*, *supra* note 158.

183. *Id.*

184. *See Id.*

185. ROSS GOULD & ELIOT CRESSWELL, WORKFORCE DEV. INST., NEW YORK STATE AND THE JOBS OF OFFSHORE WIND ENERGY (2017).

186. *See id.*

187. Catherine Morehouse, *Federal Stimulus Includes Wind, Solar Tax Credit Extensions, Adds First US Offshore Wind Tax Credit*, UTILITY DRIVE (Dec. 22, 2020), <https://www.utilitydive.com/news/federal-stimulus-includes-wind-solar-tax-credit-extensions-adds-first-us/592572/>.

188. *Id.*

189. *Id.*

190. Wayne Hicks, *Declining Renewable Costs Drive Focus on Energy Storage*, NAT'L RENEWABLE ENERGY LAB'Y (Jan. 2, 2020), <https://www.nrel.gov/news/features/2020/declining-renewable-costs-drive-focus-on-energy-storage.html>.

store and save renewable energy.<sup>191</sup> This will enable renewable energy projects to deliver energy on demand, no matter the weather conditions.<sup>192</sup> A standalone ITC type credit for energy storage has been sought by the industry for many years.<sup>193</sup> However, the credit continues to be left out of legislation.<sup>194</sup> A storage project credit would not only ease the transition to renewable energy, but would incentivize further development of energy projects in general.<sup>195</sup> The increase in storage development would provide more employment opportunities, in addition to the anticipated energy storage market value of \$5.1 billion in 2024.<sup>196</sup> Finally, with an ITC for storage, the overall price to build and develop batteries will decrease. Combined with the declining cost of wind and solar energy, it will become easier for the country to achieve energy goals, and will further benefit consumers.<sup>197</sup> With 18% of all electricity in the country currently coming from renewable energy, the growth of the renewable industry requires vast development in the country's storage infrastructure.<sup>198</sup> If the next administration is serious in its goal to expand the renewables industry, addressing the lack of storage capacity and innovation must become a significant legislative priority.

There must also be a large focus on offshore wind development. Wind energy is one of the largest producers of renewable energy, but onshore wind farms have a limited future due to land constraints and public displeasure at living near wind farms.<sup>199</sup> Conversely, offshore wind has vast spatial options and will face less resistance from the public. Offshore wind is also subject to stronger and more consistent wind, which leads to larger and more efficient turbines.<sup>200</sup> At its maximum potential, it is expected that offshore wind could reach more than 120,000 gigawatts of energy by the year 2040.<sup>201</sup> That is eleven times the projected global demand for energy.<sup>202</sup> As the scale and breadth of offshore wind projects expand, the cost for production, development, and the energy they produce will also decrease.<sup>203</sup> Not

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191. *Id.*

192. Medina & Dajani, *supra* note 143.

193. Jeff St. John, *What Renewable Energy and Energy Storage Did, and Didn't, Get from Congress This Week*, GREEN TECH MEDIA (Dec. 24, 2020), <https://www.greentechmedia.com/articles/read/what-renewable-energy-and-energy-storage-did-and-didnt-get-from-congress-this-week>.

194. Medina & Dajani, *supra* note 143.

195. *Id.*

196. Wayne Hicks, *supra* note 190.

197. *See id.*

198. *Id.*

199. Kristine Liao, *The Rise and Future of Offshore Wind Farms*, GLOBAL CITIZEN (Nov. 24, 2020), <https://www.globalcitizen.org/en/content/offshore-wind-rise-and-future/>.

200. *Id.*

201. *Id.*

202. *Id.*

203. *Id.*

only is the development good for consumer prices, the offshore wind industry will call for large numbers of workers.<sup>204</sup> In addition to the recently enacted offshore wind ITC, the ten year extended time period to meet the continuity safe harbor will encourage the growth of offshore wind.<sup>205</sup> Offshore wind is considered the next frontier of renewable energy and is expected to develop greatly over the next decade, and therefore, the new administration should consider additional incentives to encourage moving towards net-zero targets.<sup>206</sup>

In order to see renewable energy flourish and become the major source of American energy, there needs to be a push away from the long-standing favoritism of oil and gas. While the oil and gas industry remains important and valuable to the American economy, the government needs to undergo fiscal reform that will encourage the development of renewables as a true competitor in the energy market. The US has a vast assortment of both direct and indirect subsidies for the fossil fuel industry.<sup>207</sup> These subsidies were put in place years ago and are aiding an “industry that is mature, well established, and with an abundant private financing stream.”<sup>208</sup> Reducing the roughly \$20 billion of fossil fuel subsidies spent per year, and allocating part of that budget to renewables, will encourage the development of a new industry, as well as create more equal competition in the energy market.<sup>209</sup> The next administration must consider which subsidies are essential to fossil fuels, and which can be better allocated to renewables, in order to better invest in the future.

## VII. CONCLUSION

In conclusion, the current extensions and additions of both the PTC and ITC are a great start for the net-zero emissions future of this country. Not only will these credits succeed in developing larger renewable energy capacity, they will also incentivize economic activity and job creation—both of which are essential in recovering from the economic downturn caused by COVID-19. However, the current tax credit structure remains insufficient. The government will need to make many additions and changes should they really want to achieve the use of 100% renewable energy in the near future. These changes must include the development of battery storage and offshore wind projects and will require further transitioning away from reliance on the fossil fuel industry.

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204. *Id.*

205. Zaifman et al., *supra* note 152.

206. *See id.*

207. COLEMAN & DIETZ, *supra* note 92, at 2.

208. *Id.* at 8.

209. *Id.* at 1.

In no way is the country currently able to solely rely on renewable energy. It will take years to develop infrastructure that can support our population's energy demand. It will also take years to conduct the needed research to find what ways renewable energy will be able to replace fossil fuels in all situations such as long-distance travel, airplanes, etc. But the scale needs to start tipping towards renewable energy so that, in the future, the country is equipped to meet net-zero goals and fully rely on wind, solar, and other forms of renewable energy. There is no need for an immediate dismantling of the prominent oil and gas industry, as this would lead to energy instability and a huge downturn in the country's economy and employment. Instead, the government should focus on aligning with the times, looking towards the future, and investing in renewable infrastructure. The current tax credits are a great start, especially with the Energy Act extensions, however it is insufficient to support a fully renewable future.