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Environmental Overreach: The EU's Carbon Tax on International Aviation

Surya Gablin Gunasekara
Airlines for America.

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Surya Gablin Gunasekara*

Abstract

On November 27, 2012—without the fanfare of a Rose Garden ceremony—President Obama signed into law a bill that forbids United States airlines from participating in the European Union Emissions Trading Scheme ("EU ETS"). Environmental organizations bemoaned the President's decision after having urged him to veto the bill. Supporters of the law hailed the passage as a win for American sovereignty, preventing an illegitimate and disingenuous environmental tax on U.S. carriers and passengers. This article addresses the aviation industry's role in global climate change, and offers an in-depth analysis of the EU ETS and the European Commission's decision to include international aviation in the ETS. It also discusses the legal implications of the EU's Aviation Directive and the legal challenge before the European Court of Justice. Finally, this article discusses the aforementioned legislation and exposes the pitfalls of the EU's unilateral action.

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* Surya Gablin Gunasekara serves as Managing Director, Taxes in the Legislative and Regulatory Policy Department of Airlines for America. He received his J.D. *cum laude* from the University of Mississippi with a certificate in Aviation and Space Law. The views expressed herein are those of the author and do not reflect the positions of Airlines for America.

I. Introduction

> *[T]he EU's Emissions Trading Scheme, when applied to U.S. airlines, is the wrong way to achieve the right objective. It goes against international law and agreements, and it brings the hand of European regulators into our own airspace. The EU's go-it-alone approach is not the way to find a global solution to a global problem.*[1]
> *~ Congressman Nick Rahall (D-W.Va.)*

Through the efficiency and reliability of global air travel, distant nations have been brought closer together in a way that was not contemplated even a hundred years ago.[2] A trans-Atlantic trip that once took weeks has been reduced to mere hours.[3] As this means of transportation evolved through the twentieth and twenty-first centuries, air travel has continued to be more accessible and affordable.[4] Every year,

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1. 158 CONG. REC. H6,332 (daily ed. Nov. 13, 2012) (statement of Rep. Nick Rahall).

2. *See* Jad Mouawad & Christopher Drew, *Airline Industry at Its Safest Since the Dawn of the Jet Age*, N.Y. TIMES, Feb. 11, 2013, at A1 ("[F]lying has become so reliable that a traveler could fly every day for an average of 123,000 years before being in a fatal crash."); U.S. DEP'T OF TRANSP., AIR TRAVEL CONSUMER REPORT 4 (2012), *available at* http://airconsumer.dot.gov/reports/2012/September/2012SeptATCR.PDF (showing that seventy-six percent of commercial airline flights arrive on time); STEVEN A. MORRISON & CLIFFORD WINSTON, THE EVOLUTION OF THE AIRLINE INDUSTRY 3 (1995) (describing the first American commercial plane flight in 1914, which was an eighteen mile voyage); BUREAU OF TRANSP., U.S. DEP'T OF TRANSP., STATISTICS, FLIGHTS: ALL CARRIERS – ALL AIRPORTS (2012), *available at* http://www.transtats.bts.gov/Data_Elements.aspx?Data=2 (showing that almost 1.4 million international flights took place in 2012) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

3. *See Curtiss NC-4*, SMITHSONIAN NATIONAL AIR AND SPACE MUSEUM, http://airandspace.si.edu/collections/artifact.cfm?id=A19270032000 (last visited Sept. 7, 2013) (explaining that the first transatlantic flight, on the *Curtiss NC-4*, took twenty-four days) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT); *Flights to New York*, BRITISHAIRWAYS.COM, http://www.britishairways.com/en-gb/destinations/new-york/flights-to-new-york (last visited Sept. 7, 2013) (stating that a nonstop flight from London to New York takes seven hours thirty minutes) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

4. *See* GEORGE WILLIAMS, THE AIRLINE INDUSTRY AND THE IMPACT OF DEREGULATION 20 (2d ed. 1994) (discussing the proliferation of major traffic hubs during the last quarter of the twentieth century and the drastic increase in passenger numbers during that time); MORRISON & WINSTON, *supra* note 2, at 11 (showing that the average domestic air fare per passenger mile has fallen consistently since 1970).

about 2.2 billion passengers travel on the world's air carriers, "with predictions of 9 billion passengers by 2025."[5] There is no doubt that modern society has become dependent on aviation for day-to-day life.[6]

As global air transportation increases,[7] concerns over the amount of carbon dioxide, nitrous oxide, ozone, and methane (collectively greenhouse gases, or GHGs) emitted from the aviation industry also escalate.[8] Like any motor vehicle that runs on fossil fuels, aircrafts release gaseous and particulate emissions into the atmosphere.[9] Aircrafts are unique, however, in that their emissions are injected directly into the atmosphere at high altitudes.[10] There is scientific consensus that cumulative anthropogenic GHG emissions are driving climate change,[11] the precise effects of which are still being debated.[12] The fact remains that international aviation emissions represent only about two percent of total global carbon dioxide emissions, which is a tiny fraction of the overall anthropogenic emissions.[13]

Over the last two decades, international bodies and national governments have attempted to curb emissions through various command-

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5. INT'L CIVIL AVIATION ORGANIZATION, ICAO ENVTL. REPORT 116 (2010) [hereinafter ICAO ENVIRONMENTAL REPORT].

6. *See* AIR TRANSPORT ACTION GROUP, AVIATION: BENEFITS BEYOND BORDERS 2□4 (2012), *available at* http://aviationbenefitsbeyondborders.org/sites/aviationbenefitsbeyondborders.org/files/pdfs/ABBB_Medium%20Res.pdf (explaining that 3.5% of global GDP is supported by aviation and that air transport carriers haul close to 35% of world trade by value).

7. *See* ICAO ENVIRONMENTAL REPORT, *supra* note 5, at 19 (stating that from 1989□2009, total scheduled airline traffic grew at a yearly rate of 4.4%).

8. *See id*. at 69 (discussing the concern over climate change during the past decade and the increasing pressure on the aviation industry to reduce its impact on climate change).

9. *See id.* at 38 (stating that aircraft produce emissions much like those produced during fossil fuel combustion).

10. *See* Daniel B. Reagan, Note, *Putting International Aviation into the European Union Emissions Trading Scheme: Can Europe Do It Flying Solo?*, 35 B.C. ENVTL. AFF. L. REV. 349, 349 (2008) (citing Intergovernmental Panel on Climate Change, *Aviation and the Global Atmosphere: Summary for Policy Makers*, at 3 (1999)) ("Aircraft release gaseous and particulate emissions at high altitudes directly into the atmosphere.").

11. *See* ICAO ENVIRONMENTAL REPORT, *supra* note 5, at 38 ("Global climate change is caused by the accumulation of greenhouse gases (GHG) in the lower atmosphere.").

12. *See* Janelle Veno, Comment, *Flying the Unfriendly Skies: The European Union's New Proposal to Include Aviation in Their Emissions Trading Scheme*, 72 J. AIR L. & COM. 659, 659 (2007) (stating that scientists around the world debate global warming as well as the effect it may have on the earth).

13. *See* ICAO ENVIRONMENTAL REPORT, *supra* note 5, at 38 (stating that aviation accounts for two percent of global carbon dioxide emissions and showing that carbon dioxide emissions from aviation make up a miniscule portion of the world's anthropogenic carbon dioxide emissions).

and-control and market-based emissions schemes.[14] Perhaps the most famous agreement dedicated to climate change and the reduction of greenhouse gases is the Kyoto Protocol (Protocol).[15] In 1997, the United Nations Framework Convention on Climate Control (UNFCCC) created the Kyoto Protocol, a treaty in which Member States agreed to the task of reducing their carbon dioxide emissions.[16] The Protocol established an initial five-year commitment period, from 2008 to 2012, for Member States to achieve their reduction goals.[17] The Protocol also created mandatory reduction targets during the commitment period that are at least five percent below the countries' 1990 emissions levels.[18] In 2012, the Member States agreed to extend the Kyoto Protocol for a few years and to commit to more ambitious actions to reduce greenhouse gases.[19]

One of the principal means of reducing greenhouse gases suggested by the Kyoto Protocol was an emissions trading system.[20] Emissions trading systems involve exchanging credits, which permit the holder to emit a predetermined amount of carbon dioxide.[21] Actors that emit more than their credit limit can purchase additional credits while those who emit less than their credit limit can sell their unused credits.[22] Under this theory, actors

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14. *See* Reagan, *supra* note 10, at 350 (discussing how regulatory bodies over the past two decades have "moved beyond command-and-control regulation" and have begun using market-based systems like emissions trading).

15. Kyoto Protocol to the United Nationals Framework Convention on Climate Change, Dec. 11, 1997, 37 I.L.M. 22 [hereinafter Kyoto Protocol], *available at* http://unfccc.int/resource/docs/convkp/kpeng.pdf.

16. *See id.* at art. 2 (defining the goals of the Kyoto Protocol).

17. *See id.* at art. 3, para. 1 (stating that Member States must "ensure that their aggregate anthropogenic carbon dioxide equivalent emissions . . . do not exceed their assigned amounts, . . . with a view to reducing their overall emissions of such gases by at least 5 percent below 1990 levels in the commitment period 2008 to 2012"). Additionally, in 2012, delegates from Kyoto Protocol Member States decided to extend the Protocol for "a few years." John M. Broder, *Climate Talks Yield Commitment to Ambitious, but Unclear, Actions*, N.Y. TIMES, Dec. 9, 2012, at A13 (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

18. *See* Veno, *supra* note 12, at 660 (discussing mandatory emission reduction targets under the Kyoto Protocol).

19. *See* Broder, *supra* note 17 (stating that the delegates from over 190 nations agreed to extend the Protocol and to use more ambitious, albeit unspecified, methods to combat emissions).

20. *See* Kyoto Protocol, *supra* note 15, at art. 17 ("The Parties . . . may participate in emissions trading for the purposes of fulfilling their commitments under Article 3.").

21. *See* Veno, *supra* note 12, at 660 (explaining that an emissions trading system issues credits to polluters, each credit allowing a set amount of emissions, and lets the polluters buy and sell each other's credits in order to cover their respective amounts of pollution).

22. *See id.* (noting that an emissions trading system permits low emissions-producing entities to sell off their unused credits for profit, while high emissions-producing entities must buy credits to account for their pollution).

that can reduce emissions at a low cost will do so, while actors that are not financially equipped to reduce emissions will be able to purchase credits.[23] Essentially, the emissions trading system is a market-based scheme designed to reduce greenhouse gases in the most cost-effective method.[24]

The European Union (EU)[25] has implemented an Emissions Trading Scheme (ETS) to meet its target Kyoto Protocol reductions, which represents the most ambitious emissions trading plan to date.[26] Phase I of the ETS began in 2005 and only covered carbon dioxide emissions from "energy, metal production, mineral, and paper industries in EU member-states."[27] Phase I represents the first wave of a planned EU implementation strategy, which will slowly tighten emissions targets and expand to include new industries.[28] Under Directive 2008/101/EC (Aviation Directive) civil aviation was included in the EU ETS.[29] The Aviation Directive extended emissions trading to the aviation industry by covering flights within the EU beginning in 2011 and all flights arriving and departing from the EU beginning on January 1, 2012.[30]

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23. *See id.* (explaining that, in theory, entities that cannot cut emissions cost effectively will buy credits from those entities that can do so cost effectively).

24. *See Why Emissions Trading is More Effective than Command and Control*, INT'L EMISSIONS TRADING ASS'N, http://www.ieta.org/index.php?option=com_content&view=article&id=418:why-emissions-trading-is-more-effective-than-command-and-control&catid=54:3-minute-briefing&Itemid=135 (last visited Sept. 10, 2013) (describing emissions trading and arguing that a cap and trade system "is the most effective way of minimizing the cost" of emissions reduction) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

25. The European Union is an economic and political union consisting of twenty-seven Member States, which are primarily located throughout Europe. It was created to serve as "a political and economic community with supranational and intergovernmental features," evidenced by the fact that Member States "delegated to the Union the exercise of certain national competencies." Ruwantissa Abeyratne, *The Authority of the European Union to Unilaterally Impose and Emissions Trading Scheme*, 21 AIR & SPACE LAW., no. 4, 2008, at 5–6.

26. *See* Reagan, *supra* note 10, at 350 ("The European Union (EU) has implemented its Emissions Trading Scheme (ETS)—the most ambitious CO_2 emissions trading scheme to date.").

27. *See id*. (describing phase I of the ETS, including its starting date in 2005 and the industries that the regulation covered during that phase).

28. *See id.* at 363 (describing how phase I was just the first part of the scheme, with later phases expanding to cover more GHGs and industries while simultaneously tightening emissions caps).

29. *See* Council Directive 2008/101, 2009 O.J. (L 8) 3 (EC) [hereinafter Aviation Directive], *available at* http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:008:0003:0021:EN:PDF (stating that the Directive's purpose was to include aviation in the EU's emissions trading scheme).

30. *See id.* at 17 (requiring that "[f]rom 1 January 2012 all flights which arrive at or depart from an aerodrome situated in the territory of a Member State" shall be subject to the

The aviation industry only produces a small portion of the total greenhouse gases, yet that percentage could grow.[31] Civil aviation, like all transportation sectors, is working towards emissions reduction through efficiency; however, the EU's extension of their ETS to the international community presents broader international legal ramifications with extra-jurisdictional consequences.[32] Section I of this article will address the aviation industry and the role that it plays in global climate change. Section II will offer an in-depth analysis of the EU's ETS, and the European Commission's ("EC") decision to include international aviation in the ETS. Section III discusses the legal implications of the EU's Aviation Directive, the legal challenge before the European Court of Justice ("ECJ"), the U.S. legislation blocking American air carriers from participating in the ETS, and problems with emissions related taxes to aviation. Finally, this article presents the alternative to a multilateral international aviation emissions target allowing for civil aviation to organically reach new efficiencies and alternatives.

II. Civil Aviation Emissions and Global Climate Change

A. Climate Change Overview

The atmosphere is a fragile shield that protects the Earth while providing a temperature equilibrium that can sustain life.[33] Typically, as sunlight penetrates the atmosphere, "carbon dioxide traps heat and warms the Earth."[34] The temperature on Earth is maintained by a delicate balance between energy input from the sun and energy lost back into space.[35]

Since pre-industrial times the increase in GHGs has altered the energy balance in the climate system and is claimed to be one of the leading

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EU ETS); Reagan, *supra* note 10, at 350 (noting that the Directive extends to cover flights within the EU in 2011 and all flights to or from the EU in 2012).

31. *See* ICAO ENVIRONMENTAL REPORT, *supra* note 5, at 18, 31 (stating that aviation carbon dioxide emissions only account for two percent of the world's human-made carbon dioxide emissions and that aviation fuel consumption is anticipated to grow at a rate of 3.0% to 3.5% per year).

32. *See* AIR TRANSPORT ACTION GROUP, *supra* note 6, at 4 (explaining that the aviation industry has agreed to improve fleet fuel efficiency by 1.5% per year until 2020); *see also* Reagan, *supra* note 10, at 375 (stating that opponents of the EU Directive may challenge the Directive by arguing that EU member-states do not have jurisdiction to set emissions regulations extraterritorially).

33. *See* Veno, *supra* note 12, at 661 (explaining that the atmosphere plays an essential role in regulating the Earth's temperature and keeping it from becoming "a cold, barren place").

34. *Id.*

35. *See id.* (explaining that Earth's temperature is regulated by a give-and-take between heat coming from the sun and heat lost back into space).

drivers of climate change.[36] GHGs "affect the absorption, scattering, and emissions of radiation within the atmosphere and at the Earth's surface."[37] The subsequent positive or negative radiation changes in the energy balance is expressed as radiative forcing,[38] "which is used to compare warming or cooling influences on the global climate."[39]

Human activities have increased the atmospheric concentrations of three major GHGs: carbon dioxide, nitrous oxide, and methane.[40] Since 1992, concentrations of carbon dioxide, nitrous oxide, and methane, have increased by 30%, 15%, and 145% respectively.[41] Research from the IPCC shows that "[m]any greenhouse gases remain in the atmosphere for a long time," and in the case of carbon dioxide and nitrous oxide, several decades.[42] Consequently, if carbon dioxide emissions remained at 1990s levels, "they would lead to a nearly constant rate of increase in atmospheric concentrations for at least two centuries."[43]

While it is difficult to determine the exact result of climate change in the future—from the dire to the benign—there is no single mitigation measure available.[44] Instead there is a global hodgepodge of legislation and treaties aimed at reducing carbon dioxide output.[45] The result of this patchwork approach is that some policies impact specific industries on a

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36. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT 36–37 (2007) [hereinafter SYNTHESIS REPORT] (explaining that global GHG emissions have grown since pre-industrial times and that changes in atmospheric concentrations of GHGs drives climate change).

37. *Id.* at 37.

38. *See id*. at 36 n.4 ("Radiative forcing is a measure of the influence a factor has in altering the balance of incoming and outgoing energy in the Earth-atmosphere system and is an index of the importance of the factor as a potential climate change mechanism.").

39. *Id.* at 37.

40. *See* INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, AVIATION AND THE GLOBAL ATMOSPHERE: SUMMARY FOR POLICY MAKERS 4 (1999) [hereinafter IPCC Report, AVIATION AND THE GLOBAL ATMOSPHERE] (explaining that atmospheric concentrations of these three gases have grown significantly and much of the growth is attributable to human activities); *see also* SYNTHESIS REPORT, *supra* note 36, at 37 ("Global atmospheric concentrations of CO_2, CH_4, and N_2O have increased markedly as a result of human activities since 1750.").

41. *See* IPCC Report, AVIATION AND THE GLOBAL ATMOSPHERE, *supra* note 40, at 4 (summarizing conclusions from the 1995 IPCC Second Assessment Report on the effect of anthropogenic emissions on climate change).

42. *See id.* (discussing the long length of time that greenhouse gases stay in the atmosphere).

43. *Id.*

44. *See* SYNTHESIS REPORT, *supra* note 36, at 73 ("A wide range of [climate change] mitigation options is currently available or projected to be available by 2030 in all sectors.").

45. *See id.* at 62 (showing the myriad types of policy instruments and actions that countries have taken to affect emissions).

scale much greater than their actual contribution to climate change—which is especially true for international aviation.[46]

B. Aviation and Climate Change

Aviation plays a key role in the global economy and serves as the most efficient passenger and cargo transport available.[47] International aviation has increased rapidly over the last few decades alongside the growth of the world economy.[48] These international flights, however, do contribute to the build-up of anthropogenic gases in the atmosphere.[49]

Aircrafts produce the same types of emissions as other vehicles with fossil fuel combustion engines.[50] Jet engines, like many other vehicles, produce carbon dioxide, water vapor, and nitrous oxide, as well as other trace elements.[51] Aircraft engine emissions are comprised of approximately seventy percent carbon dioxide, thirty percent water vapor, and less than one percent other various pollutants.[52] In addition to the emissions that take place during flight, "[a]bout 10 percent of aircraft emissions of all types, except hydrocarbons and CO [carbon monoxide], are produced during airport ground level operations and during landing and takeoff."[53] The majority of aviation emissions, however, take place at much higher altitudes.[54]

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46. *See* ICAO ENVIRONMENTAL REPORT, *supra* note 5, at 38 (recognizing that the total amount of carbon dioxide emissions from aviation accounts for only two percent of global carbon dioxide emissions).

47. *See* AIR TRANSPORT ACTION GROUP, *supra* note 6, at 2 ("Aviation provides the only rapid worldwide transportation network, which makes it essential for global business and tourism. It plays a vital role in facilitating economic growth."); *see also* Veno, *supra* note 12, at 672 (explaining that international air transport is important for the world economy because it can carry passengers and cargo over long distances in short time periods).

48. *See* IPCC Report, AVIATION AND THE GLOBAL ATMOSPHERE, *supra* note 40, at 3 (discussing the correlation between the growth in the world economy and the growth in the aviation industry).

49. *See* Veno, *supra* note 12, at 672 (discussing the effects that international flights have on greenhouse gas emissions); *see also* ICAO ENVIRONMENTAL REPORT, *supra* note 5, at 31 ("International flights are responsible for approximately 62% of [total aviation] emissions.").

50. *See* ICAO ENVIRONMENTAL REPORT, *supra* note 5, at 38 (discussing the type of emissions released by aircraft engines and the effect they have on climate change).

51. OFFICE OF ENV'T & ENERGY, FED. AVIATION ADMIN., AVIATION & EMISSIONS: A PRIMER 1 (2005) [hereinafter AVIATION & EMISSIONS] (providing an overview of the emissions released by aircraft engines).

52. *See id.* (discussing the composition of aircraft emissions).

53. *Id*. at 2.

54. *See* ICAO ENVIRONMENTAL REPORT, *supra* note 5, at 38 ("[M]ost of these emissions are released directly into the upper troposphere and lower stratospheres.").

Aircrafts emit carbon dioxide and water vapor directly into the upper troposphere and lower stratosphere where they have a different impact on atmospheric composition.[55] Currently, aviation emissions contribute to approximately two to three percent of the greenhouse gas emissions worldwide.[56] This figure, however, is expected to rise both in terms of absolute emissions and the total percentage.[57] "[I]n the last ten years, the airline industry has grown in absolute size, showing an increased diversity in the categorization of airlines operating in the different markets. Thanks to liberalization in many countries, completely new types of airlines have been entering the air transport market."[58] As a result of this growth, emissions from aircrafts have continued to increase every year.[59] The aviation industry, however, remains committed to addressing aviation's contribution to climate change by aggressively working toward a sustainable future.[60]

III. The European Union Emissions Trading Scheme

A. The Kyoto Protocol and EU ETS

The Kyoto Protocol established a legally binding agreement with the commitment of reducing greenhouse gas emissions by setting target levels of reduction.[61] The Protocol entered into force on February 15, 2005,

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55. *See id.* at 38–39 (explaining that aircraft typically operate at cruising altitudes of 8,000–13,000 meters (26,000–40,000 feet), making the non-CO_2 impacts on climate variable because of the variable lifespans for these emissions).

56. *See* AVIATION & EMISSIONS, *supra* note 51, at 10 ("[E]missions of the world's aircraft fleet [are] at about three percent of the total greenhouse emissions from fossil fuel, the majority of which come from commercial aviation."). *But see* ICAO ENVIRONMENTAL REPORT, *supra* note 5, at 18 (explaining that, while fuel efficiency is expected to improve, "an emissions 'gap' could exist relative to 2006 or earlier . . . ").

57. *See* ICAO ENVIRONMENTAL REPORT, *supra* note 5, at 19 ("A decrease in fares has encouraged people of all incomes to travel more, causing a growth in air travel demand significantly larger than what economic growth alone would have created.").

58. *Id.*

59. *See* AVIATION & EMISSIONS, *supra* note 51, at 10 ("According to the projection, aircraft greenhouse gas emissions in the U.S. will increase 60 percent by 2025."). *But see* ICAO ENVIRONMENTAL REPORT, *supra* note 5, at 45 ("[Discussions] of current total annual global CO_2 emissions . . . are of limited value. What is important is the total of emissions over time. In the absence of policy intervention, aviation emissions of CO_2 are projected to increase over 2005 levels by 1.9 to 4.5 fold by 2050.").

60. *See* ICAO ENVIRONMENTAL REPORT, *supra* note 5, at 35 ("[The International Civil Aviation Organization] and its Member States, with relevant organizations[,] will also keep working together in undertaking further work on medium and long-term goals, including exploring the feasibility of goals of more ambition . . . .").

61. *See* Kyoto Protocol, *supra* note 15, at Annex B (outlining the quantified emission limitation or reduction commitment made by each signatory Party).

and requires all Annex I countries to implement procedures to help achieve their target emissions level, including enhancing energy efficiency, protecting and improving sinks,[62] researching and developing new forms of energy, and encouraging appropriate emissions reforms.[63] "As signatories of the Protocol, the EU and its Member States obligated themselves to make measurable greenhouse gas emissions reductions."[64]

The European Union had long endorsed environmental legislation that favored command-and-control regulations.[65] In the 1990s, however, the EU transitioned away from command-and-control in favor of the more American system of market-based regulations.[66] After Kyoto was adopted, European Union Member States found that a market-based regulation scheme would be the most cost-effective method of meeting the emissions reductions mandated by the Protocol.[67]

In order to meet the emissions reductions required by the Kyoto Protocol, the European Union Emissions Trading Scheme was created and began operating in January of 2005, allowing Member States to distribute carbon dioxide credits to companies that emitted large quantities of GHGs.[68] By capping the number of credits, the EU essentially created a market for carbon allowances.[69] If an operator does not use all the credits allocated to it, then it has the ability to sell the credits to another operator

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62. *See id.* at art. 1 ("'Sink' means any process, activity or mechanism which removes a greenhouse gas, an aerosol or a precursor of a greenhouse gas from the atmosphere.").

63. *See id* at art. 2(1)(a)(i)–(viii) ("Each Party included in Annex I in achieving its quantified emission limitation and reduction commitments under Article 3 shall [i]mplement and/or further elaborate policies and measures in accordance with its national circumstances.").

64. Reagan, *supra* note 10, at 362.

65. *See id.* at 362 n.120 ("Command-and-control systems are generally programs of centralized regulatory commands issued in excruciating detail via permits to pollution dischargers throughout a jurisdiction in order to implement environmental goals.").

66. *See id.* at 362 (explaining that the increased support for an EU transition "to market-based regulatory mechanisms, [was] in large part due to the American experience with such regulation").

67. *See id.* (describing European support for finding a "low-cost means to attain the emissions reductions mandated by the Protocol").

68. *See* EUROPEAN COMM'N, EUROPEAN ACTION AGAINST CLIMATE CHANGE: THE EU EMISSIONS TRADING SCHEME, at 5 (2009) [hereinafter EUROPEAN COMMISSION], *available at* http://www.ab.gov.tr/files/ardb/evt/1_avrupa_birligi/1_6_raporlar/1_3_diger/environment/eu_emmissions_trading_scheme.pdf ("Launched at the start of 2005, the EU ETS is the world's first international company-level 'cap-and-trade' system of allowances for emitting carbon dioxide (CO_2) and other greenhouse gases.") (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

69. *See* Abeyratne, *supra* note 25, at 5 (discussing the structure of the EU ETS program and how carbon allowances can be traded).

that exceeded its allowance.[70] "The theory behind the scheme is that as the demand for credits increases, the price will increase; thus, it will eventually be cheaper for companies to invest in innovative ways to cut emissions than to purchase more credits."[71] Ideally, emissions cuts would be made at the lowest possible cost to the economy under this scheme.[72] The EC employed a phased introduction of the ETS to allow for periodic review and amendment.[73]

The first phase began in 2005, and was limited to carbon dioxide emissions from industrial installations in energy, metal production, mineral, and paper industries, which account for nearly half of the EU's carbon dioxide emissions.[74] As the phases progress, more industries will be included to cover more of the GHGs, while progressively tightening the emissions caps.[75] The second phase of the ETS was set to coincide with the first Kyoto Protocol commitment period, which ran from 2008 to 2012.[76]

During these stages of the ETS, EU Member States developed National Allocation Plans, which established how many emissions credits to issue and how to apportion them to individual companies.[77] The EC then reviewed the allocation plans to ensure that they were consistent with the emission reduction commitments set forth in the Kyoto Protocol.[78] The ultimate goal of the ETS is to ensure that the EU is sufficiently reducing its carbon dioxide emissions to comply with the Kyoto Protocol.[79]

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70. *See id.* ("To comply, facilities can either reduce their emissions or purchase allowances from facilities with an excess of allowances. Progressively tightening caps are foreseen for each new period, forcing overall reductions in emissions.").

71. Veno, *supra* note 12, at 670.

72. *See id.* (explaining that when the burden to cut emissions is put on the least expensive mechanism available, "emissions reductions will be made at the lowest cost to the economy").

73. *See* EUROPEAN COMMISSION, *supra* note 68, at 8 (describing each phase of the EU ETS implementation).

74. *See id.* (stating that the first phase of implementation was a pilot phase focusing on establishing a price for carbon allowances and collecting emissions data).

75. *See id*. (noting that phases II and III will focus on reducing the allowed emissions based on data collected in phase I).

76. *See id.* (explaining that phase II of the ETS implementation process is meant to coincide with the "first commitment period" of the Kyoto Protocol).

77. *See id.* at 9 ("Member States are currently required to draw up national allocation plans for each trading period setting out how many allowances each installation will receive each year.").

78. *See id.* at 15–16 (explaining that, after member-states construct National Allocation Plans for the distribution of credits, the EC reviews and assesses each allocation plan based on specific criteria).

79. *See id.* (describing the process by which the EC required member-states to align their allocation plans with the commitments made under the Kyoto Protocol).

B. The Aviation Directive

The Environmental Commission of the EU adopted the Directive to include aviation within the ETS on December 20, 2006.[80] This was introduced into the ETS in two phases.[81] First, starting in 2011, flights between domestic airports would be required to account for their emissions.[82] Then, in 2012, the ETS was set to be extended to cover all flights arriving at or departing from an EU airport.[83] The EU, however, postponed the application of the ETS to flights departing the EU through 2013 pending international action on aviation emissions.[84]

Under the Aviation Directive, EU Member States would allocate carbon dioxide credits to airlines much like the system set up for industrial installments under the ETS.[85] These allocations would be capped based on the 2004–06 emissions levels of commercial airlines.[86] "Airlines only have

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80. *See* Aviation Directive, *supra* note 29, at 3 ("[A]mending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community.").

81. *See* Press Release, European Union, Climate Change: Commission Proposes Bringing Air Transport into EU Emissions Trading Scheme (Dec. 20, 2006), *available at* http://europa.eu/rapid/press-release_IP-06-1862_en.htm ("From 2011 all domestic and international flights between EU airports will be covered, and from 2012 the scope will be extended to all international flights arriving at or departing from EU airports.") (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

82. *See id.* (describing the implementation of the EU ETS and noting the projected reduction of 183 million tons of CO_2 emissions).

83. *See id.* (noting that all airlines will be treated equally under the EU ETS); *see also* Carl Burleson, *The EU Emissions Trading System Proposal*, 21 AIR & SPACE LAW., No. 3, 2007, at 22–23 ("For example, under the proposed legislation, on a flight from Los Angeles to Paris, United Airlines would have to obtain permits to cover not only the emissions of the flight in French airspace but in U.S. and international airspace over the Atlantic in order to operate to Paris."). *But see* Aviation Directive, *supra* note 29, at 6 (noting that where a third country puts in place measures to reduce the climate change impact of aviation, the ETS would not apply to flights arriving from that country).

84. *See* Elisabeth Rosenthal, *Your Biggest Carbon Sin May Be Air Travel*, N.Y. TIMES, Jan. 26, 2013, at SR4 ("[A]fter airlines and governments in the United States, India and China went ballistic — filing lawsuits, threatening trade actions and prompting legislation — the European Commission said it would delay full implementation for just one year to let the naysayers accede to an alternative global plan to reduce airlines' carbon footprint.") (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

85. *See* Press Release, European Union, Questions & Answers on Aviation & Climate Change, *available at* http://europa.eu/rapid/press-release_MEMO-06-506_en.htm ("Like industrial installations, airlines will receive tradable allowances to emit a certain level of CO_2 per year from their flights.") (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

86. *See id.* ("For the trading periods up until 2022, aviation emissions will be capped at the average level for the years 2004–2006. However, should international aviation be brought into a global climate agreement after 2012, this cap could be reviewed.").

to maintain present [emissions] levels, which differs from other installments that are required to reduce their emissions to 1990 levels."[87] According to the Directive, each aircraft operator, including those from non-EU countries, would be administered under the program by only one Member State.[88] "For EU [aircraft] operators, the administering state [is] the Member State that issued their operating certificate; for the third-country operators, it [will] be the Member State to which most of their emissions can be attributed."[89] The Aviation Directive essentially integrates the airlines into the ETS market so that airlines can buy and sell allowances from any other industry.[90]

Just like any other ETS participants, aircraft operators would be required to monitor their emissions of carbon dioxide and report them to their administering Member State by March 31 each year.[91] Any airline that does not stay within its allotted emissions will have to pay a fine at the end of the year, and could possibly lose its contract to fly to or from EU airports.[92] According to the Convention Between the United States and Other Governments Respecting International Civil Aviation (Chicago

87. Veno, *supra* note 12, at 675.

88. *See* Daniel Calleja Crespo & Mike Crompton, *The European Approach to Aviation and Emissions Trading*, 21 AIR & SPACE LAW., no. 3, 2007, at 1, 20 (explaining that this form of administration avoids duplication and an excessive administrative burden on aircraft operators).

89. *Id.*; *see also* Abeyratne, *supra* note 25, at 5 ("The Scheme would exclude flights by State aircraft, flights under visual flight rules, circular flights (or circuits), flights for testing navigation equipment or for training purposes, rescue flights, and flights by aircraft with a maximum take-off weight of less than 5,700 kilograms (approximately 12,500 pounds).").

90. *See* Reagan, *supra* note 10, at 364 ("The Proposed Directive would integrate the airlines into the prior-existing ETS market so that the airlines could buy and sell allowances across industries.").

91. *See* Abeyratne, *supra* note 25, at 5 (describing how reports will be independently verified by the competent authority of their administering Member State to ensure their accuracy); *see also* Veno, *supra* note 12, at 677 ("To monitor emissions airlines must report their annual emissions by multiplying the amount of fuel they consumed that year by a standard emission factor. If the airline is not capable of documenting the amount of fuel used for each flight, then a standardized fuel consumption estimation will be applied.").

92. *See* Veno, *supra* note 12, at 672–77 (discussing the inclusion of aviation in the EU ETS and the penalties that airlines will suffer for failing to stay within their allotted emissions).

Convention),[93] all airlines must comply with the laws and regulations of the state in which they arrive and depart, including the Aviation Directive.[94]

C. Justification for Including Aviation in the ETS

While the Kyoto Protocol calls for the domestic reduction of aviation emissions for developed nations, it provides for the International Civil Aviation Organization (ICAO)[95] to guide the overall international aviation emissions reduction.[96] In the EU, the inclusion of just domestic aviation would only be a partial solution.[97] The EC contended that for any meaningful reduction to take place international aviation must be included since it is responsible for the vast majority of the aviation industry's carbon dioxide emissions.[98] "EU GHG emissions from international aviation grew by 87 percent between 1990 and 2004."[99] Although only three percent of EU greenhouse gas emissions are produced by aviation, "the EC projects that by 2012, emissions from international flights would increase by 150% from 1990 levels."[100] Furthermore, this projected growth could offset EU Kyoto Protocol reductions by up to twenty-five percent.[101] With the amount of anticipated growth in the international aviation sector, the European

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93. Convention Between the United States of America and Other Governments Respecting International Civil Aviation, Dec. 7, 1944, 61 Stat. 1180, 15 U.N.T.S. 295 [hereinafter Chicago Convention].

94. *See id.* ("The laws and regulations of a contracting State as to the admission to or departure from its territory of passengers, crew or cargo of aircraft . . . shall be complied with . . . upon entrance into or departure from, or while within the territory of that State.").

95. *See* Veno, *supra* note 12, at 673 ("The ICAO is an organization created under the Chicago Convention agreement to oversee international flight regulations and procedures. The ICAO is composed of 188 countries, encompassing the entire field of international civil aviation, and it has legislative 'authority to promulgate standards and recommended practices (SARPs).'").

96. *See* Kyoto Protocol, *supra* note 15, at art. 2 § 2 ("The Parties included in Annex I shall pursue limitation or reduction of emissions of greenhouse gases not controlled by the Montreal Protocol from aviation and marine bunker fuels, working through the International Civil Aviation Organization and the International Maritime Organization, respectively.").

97. *See* Reagan, *supra* note 10, at 364 ("While the inclusion of domestic aviation into the ETS for member-states is a partial solution to the emissions problem, the EC posits that any meaningful emissions reduction measures must also include international aviation because it accounts for the vast majority of EU flights.").

98. *See id.* (explaining that international aviation accounts for the vast majority of EU flights).

99. Crespo & Crompton, *supra* note 88, at 19.

100. Reagan, *supra* note 10, at 364–65.

101. *See id.* at 365 (explaining that emissions from international flights in the near future could offset existing emission reduction plans).

Commission claims that failing to work toward emissions reduction in this industry would ultimately undermine the overall efforts of the ETS.[102]

The European Commission acknowledged that under the Kyoto Protocol, authorization over international aviation emissions was delegated to the ICAO.[103] Since the Protocol was agreed upon in 1997, EU Member States and the ICAO had been working on creating a market-based emissions trading system.[104] After studying various means to put such a system into practice, the ICAO Committee on Aviation Environmental Protection agreed in 2004 "that an aviation-specific emissions trading system based on a new legal instrument under the ICAO auspices '. . . seemed sufficiently unattractive that it should not be pursued further.'"[105] Later that same year, the ICAO Assembly announced that work on any further implementation "should focus on two approaches: voluntary emissions trading and the incorporation of international aviation into a State's existing emissions trading schemes."[106] The EC adopted the latter approach in its proposal and continues to cooperate with the ICAO in emission reductions.[107]

In sum, the EC contends that bringing aviation into the ETS will place pressure on the industry as a whole to mitigate the impacts from GHGs.[108] Supporters of the regulation project allege that it will provide incentives for international airlines to develop "green" or more efficient technology.[109] In addition, the proposal could strengthen the carbon market as airlines will be able to trade emissions credits across industry lines.[110] Conversely, the EU's proposal has sparked debate over the legal implications of including international aviation in the ETS.[111]

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102. *See* Rosenthal, *supra* note 84 (discussing American, Chinese, and Indian efforts to evade participation in the EU ETS).

103. *See* Reagan, *supra* note 10, at 365 (expressing the EC's understanding of which organization currently mandates international aviation emissions).

104. *See id.* (describing the EC's efforts to alter the existing international aviation emissions reduction effort).

105. Crespo & Crompton, *supra* note 88, at 19.

106. *Id.*

107. *See* Rosenthal, *supra* note 84 ("[T]he European Union commissioner [for climate action], said that if the International Civil Aviation Organization fails to come up with a solid, market-based program in September, the European Union will begin collecting the emissions fees for all flights in and out of its airports.").

108. *See* Reagan, *supra* note 10, at 365 (describing how regulation will inevitably change the industry's emission mitigation efforts).

109. *See id.* (discussing the possible outcomes of the regulation project).

110. *See id.* (describing a potential benefit that could arise from the EU's ETS proposal).

111. *See id.* (highlighting the adverse reactions from nations and aviation associations outside of the EU's proposal).

IV. Implications of the Aviation Directive

The decision to include non-EU operators into the ETS drew broad criticism from international air carriers and the governments of the United States, China, and India.[112] Specifically, the Chinese Aviation Administration ordered Chinese airlines to boycott the ETS and former Secretary of State Hillary Clinton strongly objected to the ETS on legal and policy grounds.[113] In addition, the Aviation Transport Association of America (ATA) and other major U.S. airlines brought a lawsuit before the European Court of Justice, Europe's highest court, "asserting that the extraterritorial regulation of non-EU operators in the ETS is unlawful and breaches customary international law and international agreements."[114]

A. International Aviation Law

The EC contends that the Aviation Directive is within its authority under the current international aviation regulatory framework.[115] EU ETS proponents equate the proposal to admission and departure requirements permitted under the Chicago Convention.[116] Article 1 of the Chicago Convention confirms that every State has exclusive sovereignty over the airspace above its territory.[117] Article 6 provides that "[n]o scheduled international air service may be operated over or into the territory of a contracting State, except with the special permission or other authorization of that State, and in accordance with the terms of such permission or authorization."[118] Furthermore, under Article 11, a contracting State may apply admissions and departure requirements to international aircraft entering or leaving the state, so long as they are applied without distinction to nationality and in accordance with the provisions of the Chicago

112. *See* Rosenthal, *supra* note 84 (discussing the lawsuits filed and threats of trade action made by air carriers and governments in response to the EU's ETS proposal).

113. *See* Roger Martella et al., *Lessons Learned: The EU and its Aviation Directive*, 43 TRENDS, Mar./Apr. 2012 at 1 (describing the adverse responses to the EU's ETS proposal).

114. *Id*. at 1.

115. *See* Reagan, *supra* note 10, at 369 (explaining the EU's argument that the regulation is legal under the existing aviation regulatory framework).

116. *See id.* at 369–70 (analogizing the EU's ETS proposal to the admission and departure requirements permissible under the Chicago Convention and air service agreements (ASAs)).

117. *See* Chicago Convention, *supra* note 94, at art. 1 ("The contracting States recognize that every State has complete and exclusive sovereignty over the airspace above its territory.").

118. *Id.* at art. 6.

Convention.[119] Based upon these provisions, the EU contends that the Chicago Convention supports the extension of ETS to international aviation.[120]

On the other hand, opponents of the Aviation Directive can provide an equally compelling case that the regulation is impermissible under the Chicago Convention.[121] As previously mentioned, Article 1 of the Chicago Convention gives a State exclusive jurisdiction over its territorial airspace.[122] In this case, however, the EU proposed to extend the ETS to all flights arriving at or departing from an EU airport, while exempting those countries that establish measures to reduce the climate change impact of aviation.[123]

Under international law, a state can only apply jurisdiction beyond its territorial limits when the conduct being regulated has a substantial effect within its territory.[124] Although a state can gain jurisdiction over conduct outside its territory, "[A] state may not exercise jurisdiction to prescribe with respect to a person or activity having connections with another state when the exercise of such jurisdiction is unreasonable."[125] Essentially, if the extension of jurisdiction is found to be unreasonable, then the state cannot exert authority beyond its borders.[126]

In addition to the extra-jurisdictional issues associated with the Aviation Directive, the EU ETS also imposed potential penalties and costs associated with compliance on international airlines.[127] These costs could

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119. *See id.* at art. 11 ("[T]he laws and regulations of a contracting State relating to the admission to or departure from its territory of aircraft engaged in international air navigation . . . shall be applied to the aircraft of all contracting States without distinction as to nationality.").

120. *See* Reagan, *supra* note 10, at 370 (describing the EU's conclusion that the ETS incorporation of aviation is legal because it is similar to the Chicago Convention).

121. *See id.* at 371 (explaining that opponents of the Aviation Directive argue that the plan "amounts to an impermissible operating requirement, tax, or charge, or . . . that the EC lacks jurisdiction to prescribe emissions regulation to operation in international aviation").

122. *See* Chicago Convention, *supra* note 94, at art. 1 ("The contracting States recognize that every State has complete and exclusive sovereignty over the airspace above its territory.").

123. *See* Abeyratne, *supra* note 25, at 6 (describing how the EU is attempting to extend its carbon dioxide emissions trading scheme to include conduct outside of its territory, namely international flights).

124. *See* RESTATEMENT (THIRD) OF FOREIGN RELATIONS LAW § 402(1)(c) (1987) ("[A] state has jurisdiction to proscribe law with respect to conduct outside its territory that has or is intended to have substantial effect within its territory . . . .").

125. *Id*. § 403(1).

126. *See id.* § 403(2)(a)–(h) (describing the factors for determining whether the use of jurisdiction is unreasonable).

127. *See* Rosenthal, *supra* note 84 (explaining that the EU ETS would cost US airlines $3.1 billion between 2012 and 2020).

functionally be construed as a tax or fee that is not related to the cost of providing aeronautic facilities or services.[128] Article 15 of the Chicago Convention specifically prohibits the imposition of fees on airlines for the right of transit over, exit from, or entry into the contracting State.[129] It seems that the EU's legislation would require international airlines to pay for emissions allowances simply for the right to land or take off.[130] "Although there is not a direct charge placed on airlines, the stringent requirements under the EU ETS would require that airlines pay a 'charge' to emit carbon when flying into those airports, and any airlines that do not comply could possibly lose their contract at those airports."[131] The airline receives nothing in return for this charge, with the exception of being able to operate within the EU.[132] Therefore, the Aviation Directive could be construed as a violation of Article 15 of the Chicago Convention.[133]

As a result, the aforementioned EU contention that Article 11 provides authority for the inclusion of aviation in the ETS would be rendered moot.[134] Article 11 is limited in that the laws and regulations of contracting States pertaining to admission and departure must be consistent with the provisions of the Chicago Convention.[135] If the Aviation Directive is found to be in violation of Article 15, the EU will not be able to rely on Article 11 to justify its inclusion of international aviation in the ETS.[136] The

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128. *See* Burleson, *supra* note 83, at 23 (discussing the variety of problems that have been associated with the EU ETS).

129. *See* Chicago Convention, *supra* note 94, at art. 15(b) ("No fees, dues or other charges shall be imposed by any contracting State in respect solely of the right of transit over or entry into or exit from its territory of any aircraft of a contracting State or persons or property thereon.").

130. *See* Burleson, *supra* note 83, at 23–24 (explaining how the EU ETS violates article 15 of the Chicago Convention by requiring airlines to pay for emissions allowances in order to land or take off within the EU).

131. Veno, *supra* note 12, at 685.

132. *See* Burleson, *supra* note 83, at 23 (describing the reasons that the airline industry is opposed to the EU ETS).

133. *See* Charles E. Smith, *Air Transportation Taxation: The Case for Reform*, 75 J. AIR L. & COM. 915, 939 (2010) ("It is a well known—but publicly ignored—fact that several foreign governments may violate this sentence [of Article 15 of the Chicago Convention] by charging air passengers a fee merely for the privilege of entering or exiting the country. Chile, for example, charges an 'Entry Fee' of $131.").

134. *See* Burleson, *supra* note 83, at 23 (explaining that the EU does not have the authority to promulgate the ETS under Article 11 of the Chicago Convention).

135. *See id.* at 23–24 (arguing that the EU's reading of Article 11 of the Chicago Convention would result in virtually no restriction of a signatories right to impose charges for international aviation on airlines, contrary to Article 11).

136. *See id.* at 24 (discussing the applicability of Articles 11 and 15 of the Chicago Convention to the EU ETS).

viability of any challenge to the Aviation Directive under Article 15 would ultimately hinge on what constitutes a charge or a tax.[137]

B. European Court of Justice

On December 21, 2011, the European Court of Justice rejected the claims of an airline trade association and three U.S. airlines that the inclusion of international air carriers in the EU ETS violated customary international law and international treaties.[138] In deciding the case, the ECJ examined two questions.[139] First, the court determined whether the plaintiff airlines and trade association—as individuals and not state actors—could use international agreements and customary international law to challenge the Aviation Directive.[140] Second, the court looked at whether those laws, if applicable, would invalidate the Directive.[141]

From the outset, the ECJ stated that the Chicago Convention did not bind the EU.[142] The court reasoned that although all twenty-seven EU Member States were a party to the treaty, the EU, as a separate entity had not signed the agreement.[143] Rather, the EU was merely an observer under the Chicago Convention.[144] Therefore, the court determined that plaintiffs could not use the Chicago Convention to challenge the validity of the Aviation Directive.[145]

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137. *See* Reagan, *supra* note 10, at 374 (describing how EU representatives argue that emissions trading is distinct from a charge or tax and how opponents to the EU's proposal argue is a charge or tax because it is a unilaterally imposed cost).

138. *See generally* Case C-366/10, Air Transp. Ass'n of Am., Inc. v. Sec'y of State for Energy & Climate Change, 2011 E.C.R. 00000 (Dec. 21, 2011).

139. *See id.* ¶ 45 (setting out the issues left to be addressed in this case); *see also* JANE A. LEGGETT ET. AL., CONG. RESEARCH SERV., R42392, AVIATION AND THE EUROPEAN UNION'S EMISSION TRADING SCHEME 23 (2012), *available at* http://www.fas.org/sgp/crs/row/R42392.pdf (summarizing the European Court of Justice's opinion).

140. *See Air Transp. Ass'n of Am., Inc.* ¶ 45 (noting that the court must examine customary international law, the Chicago Convention, the Open Skies Agreement, and the Kyoto Protocol in order to determine whether the EU directive is challengeable).

141. *See id.* (explaining that the court will undergo a similar analytic structure as the first issue, whether the EU directive is challengeable).

142. *See id.* ¶ 71 (explaining that EU Member States have not given over all control of aviation in their countries to the EU).

143. *See id.* ¶¶ 69–72 (describing the reason that the Chicago Convention does not apply to the EU).

144. *See id.* ¶¶ 69–70 (explaining that the EU has not assumed "exclusive competence in the entire field of international civil aviation" because some Member States have retained powers within the realm of the Chicago Convention).

145. *See id.* ¶ 72 ("It follows that in the context of the present reference for a preliminary ruling the Court cannot examine the validity of [the Aviation Directive] in the light of the Chicago Convention as such.").

Conversely, the court found that the EU was indeed bound by the Kyoto Protocol.[146] The airlines and trade association argued that the Kyoto protocol specifically named ICAO as the vehicle for aviation emissions reductions, and accordingly, that the EU must refrain from independent action.[147] The court, however, found that in order for an individual to challenge the validity of the Aviation Directive under an international agreement, the specific provision relied upon must be "unconditional and sufficiently precise so as to confer on persons subject to European Union law the right to rely thereon in legal proceedings in order to contest the legality of an act of European Union law."[148] With respect to the ICAO provision in the Kyoto Protocol, the court stated:

> [T]hat provision, as regards its content, cannot in any event be considered to be unconditional and sufficiently precise so as to confer on individuals the right to rely on it in legal proceedings in order to contest the validity of Directive 2008/101. Consequently, the Kyoto Protocol cannot be relied upon in the context of the present reference for a preliminary ruling for the purpose of assessing the validity of Directive 2008/101.[149]

Consequently, the plaintiffs could not rely upon either the Chicago Convention or the Kyoto Protocol in their challenge of the Aviation Directive.[150]

Despite not allowing challenges to the Aviation Directive under the Chicago Convention or Kyoto Protocol, the court did allow the airlines and trade association to rely on the Open Skies Agreement and some principals of international customary law.[151] Similar to Article 15 of the Chicago Convention, Article 11 of the Open Skies Agreement prohibits customs

146. *See id.* ¶¶ 73–74 (evaluating whether the Kyoto Protocol precludes the court from determining the Aviation Directive's validity and whether the Kyoto Protocol's provisions give those subject to EU law the right to rely on Kyoto in order to challenge other EU laws).

147. *See id.* ¶¶ 43, 77 (stating that pleading the Aviation Directive was invalid).

148. *Id.* ¶ 74.

149. *Id.* ¶¶ 77–78.

150. *See id.* ¶¶ 72, 78 (rejecting both laws as a basis to examine the Aviation Directive).

151. *See id*. ¶¶ 87, 94, 100, 111 (allowing evaluation of the Aviation Directive in light of the Open Skies Agreement and international law); *see also* LEGGETT ET AL., *supra* note 139, at 25 (noting the plaintiff could "challenge the [Aviation] Directive pursuant to the customary international law principles of (1) complete state sovereignty over its airspace; (2) freedom of flight over the high seas; and (3) the high seas are free from state sovereignty").

taxes or fees from being placed on fuel that is on board the aircraft.[152] As such, the plaintiffs asserted that the EU ETS constituted an impermissible duty, tax, fee or charge on fuel consumption under the Open Skies Agreement.[153]

In rejecting the claim that the EU ETS was a tax, the court acknowledged that the cost imposed on aircraft operators was, in part, based upon fuel consumption.[154] The ECJ, however, ruled that "there is no direct and inseverable link between the quantity of the fuel held or consumed by an aircraft and the pecuniary burden on the aircraft's operator in the context of the allowance trading scheme's operation."[155] Indeed, the court went on to distinguish the EU ETS from a tax by noting that under the scheme, an airline could potentially make a profit by burning less fuel and selling the leftover allowances.[156] Ultimately, it was this distinction between a market-based measure and a tax that lead the ECJ to find the EU ETS permissible under Article 11 of the Open Skies Agreement.[157]

The implication of this decision is that the ECJ sees a tax as only a fixed value.[158] Taxes, however, often fluctuate based on the value of what is being taxed.[159] For instance, taxes on fuel or real estate that are based on a

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152. *See Air Transp. Ass'n. of Am., Inc*. ¶ 136 (discussing arguments by the airlines and trade associations that fuel loads are exempted from duties, taxes, fees and charges under Article 11(1) and 2(c) of the Open Skies Agreement).

153. *See id.* (discussing Air Transportation Association of America's contention that, "only charges based on the cost of the service provided can be imposed by the European Union" and that the scheme in the EU ETS directive does not fall within this exception); *see also* LEGGETT ET AL., *supra* note 139, at 25–26 (discussing the airlines' and trade associations' argument that the Aviation Directive "imposes an impermissible tax or duty levied on airline fuel").

154. *See Air Transp. Ass'n. of Am., Inc.* ¶ 141 (noting that aircraft fuel consumption was part of the formula which calculated emissions); *see also* Katherine B. Andrus, *Beyond Aircraft Emissions: The European Court of Justice's Decision May have Far-Reaching Implications*, 24 AIR & SPACE LAW. No. 4, 13, 16 (2012) (noting that the ECJ distinguishes costs from a fuel charge because it is a market-based measure).

155. *Air Transp. Ass'n of Am., Inc.* ¶ 142.

156. *See id.* ("Nor can it be ruled out that an aircraft operator, despite having held or consumed fuel, will bear no pecuniary burden resulting from its participation in the allowance trading scheme, or will even make a profit by assigning its surplus allowances for consideration."); *see also* LEGGETT ET AL., *supra* note 139, at 26 (noting the ECJ argument that the airlines could make a profit by burning less fuel and selling excess emission allowances).

157. *See Air Transp. Ass'n of Am., Inc.* ¶ 143–44 (noting a difference between the EU Aviation Directive and a Swedish scheme that taxed fuel consumption and constituted an unlawful excise duty on aviation).

158. *See* Andrus, *supra* note 154, at 16 (arguing that the ECJ implies a tax "must always use a fixed value").

159. *See id.* (arguing that there are many examples which contradict the view that a tax is a fixed value).

percentage of the price will vary based upon the market price.[160] "In the case of the [EU] ETS, it can just as easily be viewed as a tax on fuel that simply uses a different currency (i.e. allowances) that fluctuates in value."[161] While there is no direct charge per ton on the fuel consumed—and subsequent carbon emitted—the chosen currency does not change the fact that the EU ETS operates as a tax.[162]

C. EU Emissions Trading Scheme Prohibition Act of 2011

In response to the EU ETS, a historically divided 112th Congress swiftly approved—with large bi-partisan support—the European Union Emissions Trading Scheme Prohibition Act of 2011 (EU ETS Prohibition Act).[163] Arguably one of the greatest legislative accomplishments of 2012, the Act essentially functions as the title indicates: it prohibits U.S. aircraft operators from participating in the EU ETS.[164] The EU ETS Prohibition Act allows the Secretary of Transportation to prohibit U.S. carriers from complying with the EU ETS based upon a public interest determination.[165] In making the public interest determination the Secretary must take into account: "(1) the impacts on U.S. consumers, U.S. carriers, and U.S. operators; (2) the impacts on the economic, energy, and environmental security of the United States; and (3) the impacts on U.S. foreign relations, including existing international commitments."[166]

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160. *See id.* ("[A] fuel tax assessed as a percentage of the value of fuel consumed would fluctuate along with the price of fuel. Similarly, real estate taxes are typically calculated as a percentage of a property's value, which in turn is based roughly on its market price, which may rise or fall.").

161. *Id.*

162. *See id.* (arguing that because the cost imposed on aircraft operators is based on fuel consumption and charged at a rate set by the government, it constitutes a tax even if it could also be considered a market-based measure).

163. *See* European Union Emissions Trading Scheme Prohibition Act of 2011, 49 U.S.C. § 40101 ("An Act To prohibit operators of civil aircraft of the United States from participating in the European Union's emissions trading scheme, and for other purposes."); *see also* Rosenthal, *supra* note 84 ("[O]ne bill glided through Congress with broad bipartisan support and won a quick signature from President Obama . . . .").

164. *See id.* ("The Secretary of Transportation shall prohibit an operator of a civil aircraft of the United States from participating in the emissions trading scheme unilaterally established by the European Union . . . ."); *see also* LEGGETT ET AL., *supra* note 139, at 31 (noting that one possible consequence of the legislation is the exclusion of operators serving the EU from the EU aviation market).

165. *See* 49 U.S.C. § 40101 (2012) (describing the role and responsibility of the Secretary of Transportation under the European Union Emissions Trading Scheme Prohibition Act of 2011).

166. *Id*.

In addition, the EU ETS Prohibition Act instructs the Secretary of Transportation and the Administrator of the Federal Aviation Administration to "use their authority to conduct international negotiations, including using their authority to conduct international negotiations to pursue a worldwide approach to address aircraft emissions."[167] It also directs the Administrator to ensure that U.S. carriers are held harmless under the EU ETS.[168]

The EU ETS Prohibition Act was, in part, ultimately effective; shortly after its passage, the EU, bending to international outcry, announced that it would delay implementation for a year.[169] But the EU continued to pressure the ICAO to develop a market-based measure, threatening to resume collecting emissions fees on all flights beginning in September of 2013.[170] That effort has met with mixed success. Although the ICAO has since agreed to develop a plan over the next three years for an aviation emissions market to come online in 2020, ICAO did not allow the EU to subject airlines to its emissions scheme in the meantime.[171]

D. Taxing Is No Solution

On international flights, government taxes and fees can add up to $350 to the base fare of a ticket.[172] If allowed to rise unfettered, tax increases could erode passenger demand, undermining the numerous public and economic policy goals that aviation supports.[173] "The problem with the

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167. *Id*.

168. *See id.* ("The Secretary of Transportation . . . take other actions under existing authorities that are in the public interest necessary to hold operators of civil aircraft of the United States harmless from the emissions trading scheme . . . .").

169. *See* Rosenthal, *supra* note 84 (noting that the EU would delay implementation to allow opposing countries to agree on an alternative global plan for emission reduction).

170. *See id.* (requiring the ICAO to develop a global emissions plan or risk the EU collection of emission fees).

171. *See* Ewa Krukowska, *Global Emissions Plan for Airlines Gets First UN Approval*, BLOOMBERG (Oct. 4, 2013, 9:13 PM), http://www.bloomberg.com/news/2013-10-04/carbon-cuts-loom-for-airlines-as-icao-eyes-global-market.html (discussing the UN's approval of a market-based approach to reduce emissions by the airline industry) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

172. *See* Smith, *supra* note 133, at 915 (arguing that the airline industry is not solely to blame for the rise in costs of airfare and that government imposed fees are partly to blame).

173. *See id.* at 935 ("Aviation employs large numbers of people at various skill levels. This contributes greatly to local employment rates, tax bases, and disposable incomes. In addition, aviation stimulates economies by guaranteeing that firms have convenient access to much-needed air service.").

European trading scheme is that it began with a market-based measure—a tax."[174]

A market-based measure is designed to influence behavior by providing financial incentives and disincentives for certain results.[175] Taxes operate in a similar fashion, promoting the change of behavior to limit overall tax liability.[176] For a market-based measure, the only real difference is that the market, rather than the government, determines the exact financial burden or benefit.[177] The government, however, is still imposing a cost to influence behavior whether it is through the creation of the market or through a tax.[178]

This fact goes to the root of the problem with the EU ETS, the need for incentives.[179] International aviation already has the proper incentive to increase efficiency and reduce emissions, which can be summed up in two words: fuel costs.[180] Jet fuel represents airlines' largest cost, edging close to thirty percent of all operating expenses.[181] "Annually, a 1 cent increase in a gallon costs U.S. airlines $175 million; a one dollar increase in a barrel costs them $415 million."[182] This provides all the incentives airlines need to reduce fuel consumption and, as a result, emissions.[183] Indeed, U.S. airlines

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174. Rosenthal, *supra* note 84 (quoting Nancy Young, the vice president for environmental affairs of Airlines for America).

175. *See* Andrus, *supra* note 1544, at 16 (explaining that a market-based measure differs from a tax in the mechanism that is used and not the predictability of cost compliance).

176. *See id.* ("[T]he target of a tax may be expected to operate within certain limits to avoid paying higher taxes, or to invest in new equipment to receive a tax break.").

177. *See id.* ("The primary difference is that, for a market-based measure, the 'market,' rather than the government, sets the amount of the financial penalty or reward.").

178. *See id.* ("[It] is still the government imposing that cost, whether it is styled a tax, charge, or market-based measure.").

179. *See* LEGGETT ET AL., *supra* note 139, at 18–19 (demonstrating that the incentives for airlines to comply with the Aviation Directive are minimal when airlines pass the costs onto their customers).

180. *See id.* at 20 (arguing that higher fuel costs alone are sufficient to encourage efficiency and increased biofuel use, curbing emissions).

181. *See A4A Quarterly Cost Index: U.S. Passenger Airlines*, AIRLINES FOR AMERICA, http://www.airlines.org/Pages/A4A-Quarterly-Cost-Index-U.S.-Passenger-Airlines.aspx (last visited Sept. 11, 2013) (reporting that fuel per gallon is 28.3% of operating expenses) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

182. John Heimlich, *The Price of Jet Fuel and Its Impact on U.S. Airlines*, AIRLINES FOR AMERICA, http://www.airlines.org/Pages/The-Price-of-Jet-Fuel-and-Its-Impact-on-U.S.-Airlines.aspx (last visited Sept. 11, 2013) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

183. *See* LEGGETT ET AL., *supra* note 137, at 20 ("Rising fuel expenses also require a rising share of airlines' revenues, from around 12%–15% in 2002 to around 26%–35% in 2010.").

have reduced their fuel intensity (energy consumed per passenger mile) by forty-one percent, more than any other mode of transportation.[184] In addition, airlines are investing in a host of advances that will continue to save fuel and reduce emissions.[185] These include improved aircraft management, modernized aircraft fleets, and biomass-based fuels.[186] Since the current market structure already provides incentives for airlines to reduce emissions there is no need for unilateral market-based measures or carbon taxes on international aviation.[187]

V. Conclusion

The Aviation Directive was developed to help the EU reach its target emission reductions under the Kyoto Protocol.[188] The Kyoto Protocol, however, specifically designated the ICAO as the entity that should regulate emissions from international aviation.[189] Furthermore, the Chicago Convention charges the ICAO with creating uniformity in international aviation regulation.[190] Therefore, regardless of the ECJ opinion, the ICAO is the only appropriate body to decide whether it is even appropriate to develop, implement, and direct an international aviation emissions initiative.[191]

The Aviation Directive embodies the fundamental flaw where unilateral action is forced upon other state actors in a misguided effort to address a perceived problem that is already being addressed on the

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184. *See id.* at 6 (discussing the improvement in airline fuel efficiency between 1990 and 2008).

185. *See id.* at 6–7 (noting that more efficient aircraft designs, alternative fuels, and improved air traffic control will further reduce fuel usage).

186. *See id.* at 7 (noting that air traffic modernization efforts will reduce emissions by a predicted fourteen million tons, modernized aircraft fleets will lead to a twenty-five percent reduction in CO_2 emissions, and the use of biomass fuels "can have a net CO_2 emissions approaching zero").

187. *See id.* at 19 n.57 (arguing that the cost of fuel is a more significant driver of aviation fuel demand than carbon allowances).

188. *See supra* notes 95–96 and accompanying text (outlining the Kyoto Protocol's and ICAO's roles).

189. *See* Kyoto Protocol, *supra* note 15, at art. 2, § 2 (assigning ICAO as one of several bodies responsible for reducing emissions).

190. *See* Chicago Convention, *supra* note 94, at art. 37 (charging the ICAO with adopting and amending international standards to ensure the highest degree of collaboration between contracting states).

191. *See* Reagan, *supra* note 10, at 380 ("International aviation emissions reductions should be aggressively pursued through the ICAO because it is responsive to the political, technical, and legal implications raised by the regulation.").

international stage.[192] The EU should not apply the ETS to international air carriers and should stop subverting the global efforts to reduce emissions.[193] The airline industry is committed to aggressive emissions reductions including "an annual average fuel and CO_2 efficiency improvement of 1.5 percent through 2020 and carbon-neutral growth from 2020, with an aspirational goal of a 50 percent reduction in CO_2 by 2050 relative to 2005 levels."[194] If, and only if, airlines cannot live up to these commitments should ICAO proceed with a tax or market-based measure seeking to limit emissions.[195]

192. *See* Sean Lengell, *Europeans Eye Tough Emissions Rules for Airlines*, WASH. TIMES, Dec. 21, 2006, at A3 (quoting Federal Aviation Association spokeswoman Laura Brown) ("Such a unilateral approach [by the EU] will prove unworkable and will undercut rather than support international efforts to implement system improvements to better manage aviation emissions impacts.").

193. *See* Veno, *supra* note 12, at 687 ("If they impose this scheme despite the dissatisfaction of so many key players, they could in turn create an adverse effect of increasing the amount of carbon emissions from international aviation traffic.").

194. *ATA Challenges the Application of the EU ETS to U.S. Airlines*, AIRLINES FOR AMERICA, http://www.airlines.org/Pages/ATA-challenges-the-application-of-the-EU-ETS-to-U.S.-Airlines.aspx (last visited Sept. 11, 2013) (on file with the WASHINGTON AND LEE JOURNAL OF ENERGY, CLIMATE, AND THE ENVIRONMENT).

195. *See* LEGGETT ET AL., *supra* note 139, at 23 (outlining the ATA arguments against the Aviation Directive, in particular "that any environmental standards or market-based mechanisms to reduce GHG from aviation should be implemented through ICAO").