ADD ONE TO THE ARSENAL: CORPORATE SECURITIES LAWS IN THE FIGHT TO SLOW GLOBAL WARMING

by
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Two large energy companies recently agreed to disclose their climate change risks in annual Securities and Exchange Commission ("SEC") filings. These disclosures shed light on a new strategy environmentalists can use to incentivize businesses to reduce greenhouse gas emissions—corporate disclosure rules. Although the SEC requires businesses to report environmental liabilities, the SEC does not consider global warming impacts a reportable liability. This Comment addresses how global warming liabilities are disclosable under two SEC environmental disclosure requirements, Item 101 and Item 303, and how such disclosure would aid in reducing greenhouse gas emissions. This Comment then goes on to discuss how the SEC disclosure rules could be used in a lawsuit to compel businesses to disclose their climate change impacts and how such a lawsuit would compare to litigation tactics typically used by environmentalists. The Author concludes that the environmental disclosure rules may be a good alternative to litigation tactics typically employed by those seeking to limit greenhouse gas emissions.

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I. INTRODUCTION

Xcel Energy and Dynegy, two large energy companies, recently agreed to disclose their climate change risks in annual Securities and Exchange Commission ("SEC") filings.[1] This is significant because it demonstrates that greenhouse gas ("GHG") emitters acknowledge and are willing to address their contribution to global warming. More importantly for this Comment, the agreement sheds light on a GHG reduction strategy generally overlooked by environmentalists—using corporate law as a tool to protect the environment.

Although skeptics remain, a growing number of corporations are willing to change their business practices to account for global warming.[2] Since the largest contributors to GHG emissions are corporations, this willingness is an initial step towards reducing GHG emissions.[3] The Intergovernmental Panel on Climate Change ("IPCC") predicts that to avert the most significant impacts of climate change, GHG emissions must be reduced eighty percent by 2050.[4] Corporations in the energy supply, transportation, and industry sectors emit approximately fifty-eight

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[1] *Xcel to Disclose Climate Risks*, ENVTL. LEADER, Aug. 28, 2008, http://www.environmentalleader.com/2008/08/28/xcel-to-disclose-climate-risks; John Horan, *Dynegy Inc. Agrees with New York Attorney General Andrew Cuomo to Disclose Material Risks Related to Climate Change*, GLOBAL CLIMATE LAW BLOG, Oct. 27, 2008, http://www.globalclimatelaw.com/2008/10/articles/securities-disclosure/dynegy-inc-agrees-with-new-york-attorney-general-andrew-cuomo-to-disclose-material-risks-related-to-climate-change/index.html.

[2] DOUGLAS G. COGAN, CORPORATE GOVERNANCE AND CLIMATE CHANGE: MAKING THE CONNECTION v (2006), http://www.pewclimate.org/docUploads/Ceres%20–%20Corporate%20Climate%20Change%20Ranking%202006.pdf (discussing corporate responses to climate change). A 2006 report by Ceres found that more corporations are investing in low-carbon and carbon-free energy alternatives, building more hybrid vehicles, and even in some cases advocating for a national climate change policy. *Id.* at 1–2.

[3] INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, CLIMATE CHANGE 2007: SYNTHESIS REPORT 36 (2007), http://www.ipcc.ch/pdf/assessment-report/ar4/syr/ar4_syr.pdf [hereinafter IPCC].

[4] *Id.* at 67.

percent of the total GHGs.[5] Any effective GHG reduction strategy must include requiring corporate emitters to reduce emissions.[6]

The IPCC suggests that corporate emitters should install low-carbon emitting technology in order to effectively reduce GHG emissions.[7] Such investment in low-carbon technology is needed within the decade to seriously reduce global warming impacts.[8] While some companies have reduced their emissions, many others continue to emit.[9] Because of this business-as-usual approach, action is required to force companies to emit less. National climate change legislation mandating GHG emission reductions is certainly a necessary step, but more is needed.[10] Indeed, it is unclear what legislation would entail or even when Congress will pass a bill. Furthermore, because widespread use of low-carbon emitting technology will likely take decades to implement, citizens, states, and the government must act now to start the process.[11]

Some states have taken the initiative by enacting renewable portfolio standards and setting statewide GHG reduction goals.[12] Citizens have also played a key role by filing lawsuits to compel government regulations and directly hold GHG emitters responsible.[13] Such actions promoting carbon reduction technology are helpful, but with industries emitting 4.1 billion metric tons of GHGs annually,[14] more tactics are required to ensure corporations reduce GHG emissions enough to decrease the impacts of global warming.[15]

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[5] *Id.* at 36.

[6] *Id.* at 61 (discussing infrastructure changes to reduce GHG emissions).

[7] *Id.*

[8] *Id.* at 68.

[9] *See* COGAN, *supra* note 2, at v.

[10] *Id.*

[11] IPCC, *supra* note 3, at 58.

[12] PEW CENTER ON GLOBAL CLIMATE, CLIMATE CHANGE 101: UNDERSTANDING AND RESPONDING TO GLOBAL CLIMATE CHANGE 9–10 (Jan. 2009), http://www.pewclimate.org/docUploads/Climate101-Complete-Jan09.pdf.

[13] *See, e.g.*, Massachusetts v. EPA, 549 U.S. 497, 510 (2007); Natural Res. Def. Council v. Abraham, 355 F.3d 179, 184 (2d Cir. 2004); California v. Gen. Motors Corp., No. C06-05755 MJJ, 2007 WL 2726871, at *1 (N.D. Cal. Sept. 17, 2007); Comer v. Nationwide Mut. Ins. Co., No. 1:05 CV 436 LTD RHW, 2006 WL 1066645, at *1 (S.D. Miss. Feb. 23, 2006); Connecticut v. Am. Elec. Power Co., Inc., 406 F. Supp. 2d 265, 267 (S.D.N.Y. 2005); Coke Oven Envtl. Task Force v. EPA, No. 06-1131, 2006 U.S. App. LEXIS 23499 (D.C. Cir. Mar. 30, 2009) (dismissing case).

[14] ENERGY INFORMATION ADMINISTRATION, GREENHOUSE GASES, CLIMATE CHANGE & ENERGY (2008), http://www.eia.doe.gov/bookshelf/brochures/greenhouse/greenhouse.pdf.

[15] For instance, a regional cap and trade program in the eastern United States requires companies to decrease emissions ten percent by 2019 and does not mention further reductions. *See* REGIONAL GREENHOUSE GAS INITIATIVE, MEMORANDUM OF UNDERSTANDING 3 (Dec. 20, 2005), http://rggi.org/docs/mou_12_20_05.pdf. To reach the IPCC's estimate that reductions must go down eighty percent by 2040, more action is needed. IPCC, *supra* note 3, at 36.

Corporate securities laws provide another tool to reduce GHG emissions.[16] The SEC requires publicly traded companies to disclose any events having a material impact on a company's future financial performance.[17] For climate change, companies must disclose the financial risks related to present and future climate change regulation, climate change related litigation, and operational changes due to climate change.[18] Disclosing such risks helps reduce GHG emissions because disclosure provides an economic incentive to invest in low-carbon technology.[19] For instance, studies conducted in response to other environmental reporting requirements found that companies forced to report bad environmental information are more likely to change their business practices and pollute less than report bad environmental news.[20] Because of this, companies faced with costs associated with climate change litigation and regulations may mitigate climate change costs by changing their operating structures rather than report GHG emissions.[21]

Using the SEC disclosure requirements as a means to spur investment in low-carbon technology is certainly not the only way to reduce GHGs to meet the IPCC goals by 2050. The SEC laws nonetheless provide a compelling mechanism to require companies to invest in carbon reducing technology. The current SEC laws provide a regulatory framework dealing with environmental disclosure. Because this framework exists, corporations must consider reducing their emissions now. There is no need to wait to respond to national emissions limitations.[22] Compliance with the SEC laws incentivizes companies to install pollution control technology and change operations sooner than environmental laws may otherwise mandate.[23]

The SEC laws also provide a cause of action for litigants wishing to force corporations to reduce their GHG emissions. Climate change lawsuits using negligence theories have run into causation, political question, and standing hurdles.[24] A cause of action based on violating the SEC disclosure requirements may provide a solution to these limitations.

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[16] *See* Perry E. Wallace, *Climate Change, Fiduciary Duty, and Corporate Disclosure: Are Things Heating Up in the Boardroom?*, 26 VA. ENVTL. L.J. 293, 309 (2008) (discussing corporate securities and global warming).

[17] *See* 17 C.F.R. § 229.303 (2008).

[18] 17 C.F.R. §§ 229.101, .103, .303 (2008).

[19] Perry E. Wallace, *Disclosure of Environmental Liabilities Under the Securities Laws: The Potential of Securities-Market Based Incentives for Pollution Control*, 50 WASH. & LEE L. REV. 1093, 1098 (1993) (describing evolution of SEC environmental disclosure).

[20] *See* Shameek Konar & Mark A. Cohen, *Information as Regulation: The Effect of Community Right to Know Laws on Toxic Emissions*, 32 J. ENVTL. ECON. & MGMT. 109, 123 (1997).

[21] Wallace, *supra* note 19, at 1098.

[22] Wallace, *supra* note 16, at 321 (citing U.S. GOV'T ACCOUNTABILITY OFFICE, ENVIRONMENTAL DISCLOSURE: SEC SHOULD EXPLORE WAYS TO IMPROVE TRACKING AND TRANSPARENCY OF INFORMATION 20–21 (2004), *available at* http://www.gao.gov/new.items/d04808.pdf.

[23] *In re* Caremark Int'l, Inc. Derivative Litig., 698 A.2d 959, 969 (Del. Ch. 2008).

[24] *See* discussion *infra* Part VI.

Courts have considered the policy arguments against holding one defendant liable for global warming given the numerous contributors to global warming.[25] The SEC laws do not require a plaintiff to prove that a defendant company caused global warming. Rather, the SEC laws on causation only require a plaintiff to show that a defendant failed to state the global warming impacts and that this omission caused the plaintiff's injury. To show injury, the plaintiff need only state that he would not have invested in the corporation had he known it was impacted by climate change.[26]

Part II of this paper briefly describes the expected impacts of climate change and proposed mitigation strategies. Part III explains how global warming impacts fit within the current SEC environmental disclosure requirements. Part IV discusses how the SEC reporting requirements reduce GHG emissions by promoting corporate investment in low-carbon technology. Part V addresses compliance with the disclosure requirements. Part VI demonstrates how a SEC enforcement suit may provide a better litigation strategy than the negligence-based theories environmentalists have pursued so far. Finally, Part VII concludes that those wishing to incentivize reduction of GHG emissions should use the SEC environmental disclosure requirements as a strategy.

II. CLIMATE CHANGE IMPACTS AND MITIGATION STRATEGIES

Mounting evidence shows that climate change is drastically altering the Earth's weather patterns.[27] Worldwide, temperatures are on the rise, glaciers are melting, and hurricanes are becoming fiercer.[28] Human activities, particularly burning fossil fuels that saturate the atmosphere with carbon dioxide, methane, and other GHGs, are the leading cause of this problem.[29]

Scientists predict that if the world continues emitting GHGs, potentially catastrophic consequences will occur. Among the more serious impacts are: increased rainfall in some areas and droughts in others, which will shift agricultural zones and cause political and economic dislocation; a significant rise in sea level caused by water expansion, melting ice caps and glaciers, resulting in permanent inundation of low-lying coastal areas; an increase in ocean temperature that could severely devastate marine life and disrupt the oceanic food chain; and degradation of significant habitats and the extinction of plant and animal species.[30]

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[25] Connecticut v. Am. Elec. Power Co., 406 F. Supp. 2d 265, 273 (S.D.N.Y. 2005).
[26] *See* Blue Chip Stamps v. Manor Drug Stores, 421 U.S. 723 (1975).
[27] IPCC, *supra* note 3, at 30.
[28] *Id.*; *see* COGAN, *supra* note 2, at v.
[29] IPCC, *supra* note 3, at 36.
[30] U.S. DEP'T OF STATE, U.S. CLIMATE ACTION REPORT 89 (2002), http://www.gcrio.org/CAR2002/car2002ch6.pdf.

Even if the world stops emitting GHGs today, a significant degree of climate change will still occur.[31] However, countries can control the amount of damage done. The IPCC states that reducing current emissions eighty percent by 2050 will avert the largest global warming impacts.[32] There are a variety of mitigation measures countries can institute to meet the reduction goal.[33] Such mitigation measures include financial incentives like tax breaks and subsidies for renewable energy development, emission regulation standards, transferable permits, and public awareness campaigns.[34] In the United States, policy makers seem to favor an emissions cap coupled with a trading regime.[35] Such a cap and trade approach sets a hard and declining limit on GHG emissions from the principle emitters.[36] Emitters covered by the program receive authorization to emit up to a certain amount. Those who emit less than their allotted amount can sell their unused allowance to emitters over their cap. Conversely, emitters who cannot meet their allotted amount may buy extra emission credits to allow them to emit more. Sources design their own compliance strategy to meet the overall reduction requirement. Typical compliance measures include sale and purchase of allowances, installing pollution controls, and implementing efficiency measures.[37] Because these measures require a corporation to change its operations and spend money, such mitigation measures likely implicate the federal securities laws.

III. DISCLOSING GLOBAL WARMING IMPACTS UNDER FEDERAL SECURITIES LAWS

The SEC requires most publicly traded companies to disclose financial and nonfinancial information in yearly reports.[38] These regulations are divided into three disclosure categories including SEC procedures, accounting rules, and the form and content needed for financial statements.[39] Since the 1970s, the SEC has required corporations to disclose environmental liabilities among the nonfinancial matters.[40] This Part explains the SEC's current regulatory framework for

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[31] IPCC, *supr*a note 3, at 46.
[32] *Id.* at 67.
[33] *Id.* at 61.
[34] *Id.*
[35] *See infra* notes 69–72 and accompanying text (detailing state emission cap statutes).
[36] For a description of cap and trade programs see EPA, *Quick Facts about Cap and Trade*, http://www.epa.gov/capandtrade/basic-info.html.
[37] *Id.*
[38] *See generally* 17 C.F.R. §§ 229.101, .103, .303 (2008).
[39] Adoption of Integrated Disclosure System, 47 Fed. Reg. 11,380, 11,381 (Mar. 16, 1982) (to be codified at 17 C.F.R. pt. 200).
[40] Wallace, *supra* note 19, at 1102–05 (describing evolution of SEC environmental disclosure).

environmental disclosure with a particular emphasis on two regulations, Items 101 and 303, as they apply to disclosing global warming liabilities.

A. *Current Environmental Regulatory Framework*

Following the 1929 stock market crash, Congress passed the Securities Act of 1933 and the Securities Exchange Act of 1934.[41] Hoping to remedy corporate misrepresentation, exploitation, and speculation, the Acts and ensuing regulations protect consumers by opening access to corporate information and enabling consumers to make informed investment decisions.[42] The 1934 Act requires publicly traded companies to file periodic reports disclosing information that would be material to making investment decisions.[43]

In addition to reporting financial information, the SEC requires disclosure of environmental liabilities.[44] The SEC viewed the enactment of the National Environmental Policy Act ("NEPA")[45] as a mandate "to use all practicable means . . . to improve and coordinate Federal . . . programs" to "achieve environmental goals."[46] Implementing NEPA's instructions, the SEC promulgated the S-K Regulations, which require companies to disclose environmental impacts on their business, environmental legal proceedings, and future impacts of environmental laws.[47] Global-warming-related impacts fall within disclosable items in the environmental disclosure requirements.

B. *Disclosing Global Warming Impacts Under the S-K Regulations*

The S-K Regulations contain three explicit environmental disclosure standards through which a company must disclose its environmental liabilities. Item 101 includes a general description of the company's business,[48] Item 103 covers material legal proceedings,[49] and Item 303 requires management to disclose future trends or uncertainties that will affect the business's financial outlook.[50] Item 101 and Item 103 require a

[41] 15 U.S.C. §§ 77–78 (2006); SEC v. Capital Gains Research Bureau, Inc., 375 U.S. 180, 186 (1963).

[42] Ernst & Ernst v. Hochfelder, 425 U.S. 185, 195 (1976).

[43] Basic, Inc. v. Levinson, 485 U.S. 224, 230 (1988).

[44] *See* 17 C.F.R. §§ 229.101, .103, .303 (2008) (referred to as Item 101, 103, and 303, respectively). These regulations are contained in the Standard Instructions for Filing Forms Under Securities Act of 1933, Securities Exchange Act of 1934 and Energy Policy and Conservation Act of 1975—Regulation S-K, which are commonly called the "S-K Regulations".

[45] 42 U.S.C. § 4321 (2006).

[46] Environmental and Social Disclosure, 40 Fed. Reg. 51,656, 51660 (Nov. 6, 1975). NEPA § 101 provides a broad mandate that the government work to protect the environment for future generations. 42 U.S.C. § 4321.

[47] *See* 17 C.F.R. §§ 229.101, .103, .303 (2008).

[48] *Id.* § 229.101.

[49] *Id.* § 229.103.

[50] *Id.* § 229.303.

company to respond to particular events such as environmental legislation or litigation that has already occurred.[51] In contrast, Item 303 requires a company to analyze the probable impact of future events.[52]

Each S-K Regulation is a potential vehicle for disclosing global warming impacts. The following subsections address disclosure under Item 101 and Item 303. While Item 103 is an environmental disclosure requirement, this section will not address it in detail because it is less relevant now. Item 103 requires companies to disclose material legal proceedings where the litigation is pending and liability is reasonably certain.[53] The "reasonably certain liability" element makes disclosure under Item 103 less of a possibility at this time. Most litigation so far has sought to require the government to regulate GHGs or to hold GHG emitters liable.[54] Such lawsuits have failed for a variety of reasons, including lack of jurisdiction under the political question and standing doctrines.[55] These outcomes make liability not as likely and Item 103 is not triggered.[56] However, Item 101 and Item 303 are pertinent. The following subsections discuss the elements triggering disclosure under each Item and how global warming impacts meet the elements.

1. Item 101: Description of Business

Item 101 requires disclosure where federal, state, or local environmental laws impact a company.[57] Examples of disclosable impacts include increases in capital expenditures, a decrease in earnings, and a loss of competitive position.[58] Global warming impacts disclosable under Item 101 include installing pollution controls, maintenance costs, and shutdown costs to retrofit the plant.[59] Two elements trigger Item 101 disclosure. First, the business changed its operations, and second, this change was in response to an environmental law.[60]

Any change in operations to comply with a cap and trade system for GHGs is precisely the type of "change in operations" covered by Item 101. A cap and trade program puts a maximum limit on how much a

[51] *See* John W. Bagby et al., *How Green Was My Balance Sheet?: Corporate Liability and Environmental Disclosure*, 14 VA. ENVTL. L.J. 225, 289–291 (1995) (giving a general explanation of the S-K Regulations).

[52] *Id.* at 299.

[53] 17 C.F.R. § 229.103 (*see* "Instructions to Item 103" 5A–C).

[54] *See*, *e.g.*, Massachusetts v. EPA, 549 U.S. 497 (2007); Comer v. Nationwide Mut. Ins. Co., No. 1:05 CV 436 LTD RHW, 2006 WL 1066645, at *1 (S.D. Miss. Feb. 23, 2006).

[55] Connecticut v. Am. Elec. Power Co., Inc., 406 F. Supp. 2d 265, 274 (S.D.N.Y. 2005).

[56] As courts begin to hold companies liable for GHG emissions, Item 103 will likely become a significant disclosure requirement. *See* Wallace, *supra* note 16, at 305 (discussing Item 103's future applicability).

[57] 17 C.F.R. § 229.101(c)(1)(xii).

[58] *Id.*

[59] Bagby et al., *supra* note 51, at 289.

[60] 17 C.F.R. § 229.101(c)(1)(xii).

company can emit.[61] Such limits may force a company to install pollution reduction equipment, cut back hours of operation, or buy emissions credits in order to comply.[62] The likely result of these changes is an increase in capital expenditures and a decrease in earnings, both of which require Item 101 disclosure. For example, the 1990 Clean Air Act Amendments forced utilities to reduce certain emissions and comply with the "best available control technology."[63] Former SEC Commissioner Richard Roberts noted that operational changes to comply with the best available control technology mandate qualified as changes triggering Item 101.[64] Operational changes to comply with a cap and trade program require similar changes because a company will likely employ different technology to comply with emissions limits.

Item 101 next requires the operational changes to be made in response to an existing environmental law or regulation.[65] The lack of federal GHG limitations does not exempt a company from reporting under Item 101, because Item 101 includes state and local environmental laws.[66] As such, the existence of state and regional climate change statutes is sufficient to impose a disclosure duty. Further, Item 101's emphasis on "estimated" compliance costs requires a company to disclose future operational changes in response to forthcoming environmental regulations.[67]

A variety of GHG regulations are already on the books in many states.[68] Nine northeastern states formed the Regional Greenhouse Gas Initiative ("RGGI"), which establishes a cap and trade program to reduce carbon dioxide emissions from power plants.[69] In the west, Washington, Oregon, and California passed laws capping GHG emissions.[70] All of these statewide emission limitations will likely require companies to report how the law impacts them. For example, New Hampshire's statute sets a yearly carbon dioxide emission allowance of 8,620,460 tons per year from 2009 to 2014.[71] In 2015, the yearly allowance declines by 215,512

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[61] EPA, *supra* note 36.
[62] *Id.*
[63] *See* Clean Air Act Title IV, 42 U.S.C. §§ 7475, 7478, 7501, 7651 (2006).
[64] Richard Y. Roberts, Comm'r, Sec. & Exch. Comm'n, Remarks at the Dallas Bar Association: Recent Developments Concerning Environmental Disclosure (May 28, 1992), http://www.sec.gov/news/speech/1992/052892roberts.pdf.
[65] 17 C.F.R. § 229.101.
[66] *Id.*
[67] Roberts, *supra* note 64.
[68] *See* PEW CENTER ON GLOBAL CLIMATE, *supra* note 12, at 70 (detailing state and regional climate change efforts).
[69] *See* REGIONAL GREENHOUSE GAS INITIATIVE, *supra* note 15, at 1; N. H. REV. STAT. ANN. § 125-O:21 (LexisNexis 2008); 38 ME. REV. STAT. ANN. tit. 38 §§ 580-A, -B, -C (2008); N.Y. ENVTL. CONSERV. LAW § 19-0107 (McKinney 2008); CONN. GEN. STAT. ANN. § 22a-200a (West 2008).
[70] OR. REV. STAT. ANN. § 468A.200 (West 2008); WASH. REV. CODE ANN. § 70.235.005(3) (West Supp. 2009); CAL. HEALTH & SAFETY CODE § 38560 (West 2008).
[71] N.H. REV. STAT. ANN. § 125-O:21.

tons per year.[72] To meet these targets, emitters receive an allowance and can buy or sell additional allowances as needed.[73] Meeting the allowance may require installing pollution control technology or buying emissions credits. Such changes constitute a change in operations as a response to an existing environmental law and must be disclosed.[74]

Evidence also suggests that specific environmental regulations need not be promulgated to impose an Item 101 disclosure duty.[75] Item 101 states that companies "shall disclose any material estimated capital expenditures."[76] A 1979 SEC release addressed estimated future costs and disclosure.[77] Prior to the 1979 release, the Clean Water Act[78] and Clean Air Act[79] were newly enacted. Companies anticipating future capital outlays under the Acts did not disclose these costs because regulations were not yet in effect mandating changes.[80] Finding this violated the S-K Regulations, the SEC stated that *anticipated* operational changes under forthcoming regulations must be disclosed under Item 101.[81] In the global warming context, Item 101 places a disclosure duty on GHG emitters to disclose anticipated emissions regulations and the likely cost of compliance.[82]

While global warming impacts facially fall within Item 101's disclosure regime, the largest argument against disclosure is that the SEC has not directly required companies to disclose climate change impacts. To this point, there has been a lot of discussion on whether the S-K Regulations apply to climate change and very little actual reporting.[83] This is most likely due to the SEC's past treatment of environmental disclosure.[84] Since 1970, when the SEC first promulgated the environmental disclosure rules, the same pattern has played out: the disclosure rule is implemented, it is so vague that companies do not know

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[72] *Id.*
[73] *Id.*
[74] 17 C.F.R. § 229.101(c)(1)(xii) (2008).
[75] *See id.* ("The registrant shall disclose any material *estimated* capital expenditures for environmental control facilities for the remainder of its current fiscal year and its *succeeding fiscal year and for such further periods as the registrant may deem materials* [sic]." (emphasis added)).
[76] *Id.*
[77] *See* Environmental Disclosure, 44 Fed. Reg. 56,924, 56,924 (Oct. 3, 1979).
[78] 33 U.S.C. §§ 1251–1387 (2006).
[79] Clean Air Act Title IV, 42 U.S.C. §§ 7651–7671 (2006).
[80] Environmental Disclosure, 44 Fed. Reg. at 56,925.
[81] *Id.* at 56,925–26.
[82] *See In re* U.S. Steel Corp., 47 S.E.C. 155, 168–69 (1979) (finding company failing to disclose estimated compliance costs with newly-enacted Clean Water Act and Clean Air Act violated disclosure policy); Roberts, *supra* note 64, at 3, 8, 12 (stating companies who reasonably expect they will need to comply with the then-recently-enacted 1990 Clean Air Act amendments must estimate the cost of compliance with best available control technology even though the EPA had not yet promulgated rules on what this meant).
[83] Wallace, *supra* note 16, at 302.
[84] *Id.*

what exactly to report, companies do not report, environmental groups petition the SEC for a clarifying release, the SEC issues a release, and the companies begin reporting.[85] This pattern results in companies not voluntarily reporting environmental liabilities until expressly told to do so.[86]

Until the SEC issues a release definitively stating that climate change impacts fall within Item 101, it is likely that some companies will not disclose such impacts. However, even without a definitive SEC statement, recent events support the argument that Item 101 includes climate change related disclosure. In 2004, the SEC stated that climate change impacts were not disclosable at the time, but intimated they would be in the future.[87] While it is unclear what future events would lead to disclosure, in 2004 no emissions laws existed so the second element for disclosure was missing. The existence of emissions laws today requiring a company to change its operations is likely sufficient to trigger an Item 101 disclosure duty.[88]

Additionally, the recent deal between New York, Dynegy, and Xcel demonstrates that government officials already view Item 101 as imposing a climate change disclosure duty. In 2008, New York entered into agreements with Dynegy and Xcel under which the two energy companies will disclose, among other things, the financial risks the company has from GHG emissions regulations, specifically including compliance with the RGGI,[89] and the risks from expected trends in GHG emissions laws.[90] The events leading to the deal began in 2007 when New York sent letters to Dynegy, Xcel, and three other energy companies questioning the companies' disclosure practices.[91] In Dynegy's case, New

[85] *See id.* at 302–03; Terra Pfund, *Corporate Environmental Accountability: Expanding SEC Disclosures to Promote Market-Based Environmentalism*, 11 MO. ENVTL. L. & POL'Y REV. 118, 126–28 (2004).

[86] Wallace, *supra* note 16, at 321.

[87] *See* U.S. GOV'T ACCOUNTABILITY OFFICE, ENVIRONMENTAL DISCLOSURE: SEC SHOULD EXPLORE WAYS TO IMPROVE TRACKING AND TRANSPARENCY OF INFORMATION 20–21 (2004), http://www.gao.gov/new.items/d04808.pdf [hereinafter GAO].

[88] *See* Peter L. Gray, *The SEC is Getting Hot and Bothered Over Climate Change*, THE METRO. CORPORATE COUNSEL, Jan. 2008, http://www.metrocorpcounsel.com/pdf/2008/January/11.pdf (discussing state emissions laws requiring disclosure); Wallace, *supra* note 16, at 310.

[89] *See* REGIONAL GREENHOUSE GAS INITIATIVE, *supra* note 15.

[90] *In re* Dynegy Inc., AOD 08-132 at *3 (N.Y. Att'y Gen. Envtl. Prot. Bureau Oct. 23, 2008), *available at* http://www.oag.state.ny.us/media_center/2008/oct/dynegy_aod.pdf; *In re* Xcel Energy Inc., AOD 08-012 at *3 (N.Y. Att'y Gen. Envtl. Prot. Bureau Aug. 26, 2008), *available at* http://www.oag.state.ny.us/media_center/2008/aug/xcel_aod.pdf.

[91] Letter from Katherine Kennedy & Matthew Gaul, Office of the N.Y. Att'y Gen., to Richard C. Kelly, President and CEO of Xcel Energy Inc. (Sept. 14, 2007), http://www.oag.state.ny.us/media_center/2007/sep/xcelenergy.pdf; Letter from Katherine Kennedy & Matthew Gaul, Office of the N.Y. Att'y Gen., to Paul Hanrahan, President and CEO of AES Corp. (Sept. 14, 2007), http://www.oag.state.ny.us/media_center/2007/sep/aes corporation.pdf; Letter from Katherine Kennedy & Matthew Gaul, Office of the N.Y. Att'y Gen., to Thomas F. Farrell II, President and

York questioned whether the company had adequately disclosed the financial and regulatory risks of building eight new coal-fired power plants.[92] The letter specifically stated:

> As you are aware, a public company must disclose information material to a shareholder's investment decision. We are concerned that Dynegy has failed to disclose material information about the increased climate risks Dynegy's business faces. For example, any one of the several new or likely regulatory initiatives for CO_2 emissions from power plants—including state carbon controls, potential EPA regulations under the Clean Air Act, or the enactment of federal global warming legislation—would add a significant cost to carbon-intensive coal generation, such as the new conventional coal plants planned by Dynegy. According to [a report], Dynegy could face annual emission allowance expenses of over $1 billion.[93]

Failing to find any climate change related disclosure in Dynegy's 2007 reports, New York issued a subpoena asking Dynegy to further elaborate on its climate change impacts.[94] The fact that New York repeated this process with four other energy companies is evidence that some regulators find climate change impacts fit within Item 101.[95]

2. *Item 303: Disclosure of Current Trends or Uncertainties*

Item 303 likely provides the broadest mandate requiring disclosure of global warming liabilities within the S-K regulations. Item 303 requires companies to disclose known trends, events, or uncertainties that are reasonably likely to impact the business.[96] Item 303 is purposefully forward-looking and, unlike disclosure under Item 101, Item 303 disclosure focuses less on hard facts and more on what the company thinks may occur.[97] In the global warming context, a company must disclose when emissions regulations are likely to impact the business, how management believes such regulations will affect the business (e.g., plant

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CEO of Dominion Resources Inc. (Sept. 14, 2007), http://www.oag.state.ny.us/media_center/2007/sep/dominion resources.pdf; Letter from Katherine Kennedy & Matthew Gaul, Office of the N.Y. Att'y Gen., to Gregory H. Boyce, President and CEO of Peabody Energy (Sept. 14, 2007), http://www.oag.state.ny.us/media_center/2007/sep/peabody energy.pdf; Letter from Katherine Kennedy & Matthew Gaul, Office of the N.Y. Att'y Gen., to Bruce Williamson, Chairman and CEO of Dynegy Inc. (Sept. 14, 2007), http://www.oag.state.ny.us/media_center/2007/sep/dynegy.pdf.

[92] Letter from Kennedy & Gaul to Dynegy, *supra* note 91, at 2.

[93] *Id.*

[94] *Id.*

[95] *See* Letter from Kennedy & Gaul to Xcel Energy Inc., *supra* note 91; Letter from Kennedy & Gaul to AES Corp., *supra* note 91; Letter from Kennedy & Gaul to Dominion Resources Inc., *supra* note 91; Letter from Kennedy & Gaul to Peabody Energy, *supra* note 91.

[96] 17 C.F.R. § 229.303(a)(1)–(2) (2008).

[97] Management's Discussion and Analysis of Financial Condition and Results of Operations; Certain Investment Company Disclosures, 54 Fed. Reg. 22,427, 22,429 (May 24, 1989).

closure, facility upgrade, monitoring, enforcement liability, emissions credits), and any action the company proposes to take to remedy this potential liability.[98] The implication is that a company faced with future emissions regulations must assess its response to the laws, tell its investors of the potential liability, and explain what the company is doing to limit that liability.

Item 303 requires disclosure where a trend or uncertainty affects a business.[99] Courts typically analyze one event as being either a "trend or uncertainty" without distinguishing between the two terms.[100] Staffing changes, plant operations, and future environmental regulations have been found to qualify as trends and uncertainties.[101] Global warming related trends or uncertainties include national GHG legislation or the physical impacts of global warming.[102] For instance, New York required Dynegy to assess and disclose the impacts of future GHG legislation and the physical impacts of climate change in its SEC disclosure agreement.[103] New York specifically referred to future legislation as a "trend" and its language regarding physical impacts is similar to the language used in Item 303.[104] These facts make it likely future emission legislation is a disclosable item under Item 303.

Despite this evidence, an argument could be made that emissions legislation is not a disclosable trend or uncertainty.[105] For example, in *Kapps v. Torch Offshore*, the court held that an increase in gas prices did not have to be disclosed because such information is generally known to investors.[106] The court reasoned that the purpose of disclosure is to inform investors of information they do not already know.[107] In the context of global warming, companies could argue that they do not need to tell investors about the potential impacts of climate change legislation because everyone knows that climate change affects businesses. However,

[98] 17 C.F.R. § 229.303(a)(1) ("If a material deficiency is identified, indicate the course of action that the registrant has taken or proposes to take to remedy the deficiency.").

[99] *Id.* § 229.303(a)(1)–(4).

[100] *See In re* Canandaigua Sec. Litig., 944 F. Supp. 1202, 1210–12 (S.D.N.Y. 1996).

[101] *See* Kapps v. Torch Offshore, Inc., 379 F.3d 207, 217 (5th Cir. 2004); *In re* Canandaigua Sec. Litig., 944 F. Supp. at 1211; Kriendler v. Chem. Waste Mgmt., Inc., 877 F. Supp. 1140, 1145 (N.D. Ill. 1995).

[102] *In re* Dynegy Inc., AOD 08-132 at *2–5 (N.Y. Att'y Gen. Envtl. Prot. Bureau Oct. 23, 2008), *available at* http://www.oag.state.ny.us/media_center/2008/ aug/xcel _aod.pdf. (requiring company to discuss future GHG legislation, its impact on the company, expected physical impacts of climate change, and a discussion of how the company intends to reduce its climate change risks).

[103] *Id.*

[104] *Id.* at 3; 17 C.F.R. § 229.303(a)(1). The agreement requires Dynegy to disclose "strategies to reduce its climate change risk" related to physical impacts. *In re* Dynegy Inc., AOD 08-132 at *4.

[105] *See Kapps*, 379 F.3d at 220 (finding natural gas prices not a trend because generally known).

[106] *Id.*

[107] *Id.*

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this argument will likely fail. Unlike the natural gas prices in *Kapps*, the regulatory and physical impacts of climate change are not generally known. The issue in *Kapps* was fluctuating gas prices generally, not their specific effect on the business,[108] whereas with climate change, the impacts are plant-specific. While an investor likely knows that global warming affects a business generally, the investor is not likely to know the costs associated with compliance. Global warming impacts are likely a trend or uncertainty and must be disclosed because they are not generally known.

If a trend or uncertainty exists, it must be reasonably likely to occur to trigger Item 303 disclosure.[109] To determine if an event is reasonably likely to occur, the company must assume the trend or uncertainty will actually come to fruition.[110] If the trend or uncertainty results in a financial impact under this assumption, then disclosure is required.[111] The effect of this analysis is that it makes it much harder for a company to get out of its Item 303 disclosure duty.[112] For instance, a company faced with a trend or uncertainty has a disclosure duty unless the company demonstrates that the potential event will have no impact.[113]

Companies subject to a potential national emissions regulation must disclose this under Item 303 because the regulation meets the reasonably-likely-to-occur test outlined above. Under the test, a company must operate under the assumption that a national emissions regulation will be enacted.[114] The burden is on the company to demonstrate that the regulation will have no impact on the company.[115] To a GHG emitter, this will likely be hard to do. An emissions regulation places a cap on the amount of GHGs a company can emit.[116] To comply with the cap, an emitter may install pollution reduction equipment or purchase additional allowances.[117] Both of these options impact the company because they require a huge expense. Thus, under the reasonably-likely-to-occur test, the company has a disclosure duty because it must spend money to comply with the regulation.

[108] *Id.* at 211.

[109] Commission Guidance Regarding Management's Discussion and Analysis of Financial Condition and Results of Operation, Exchange Act Release No. 33,8350, 81 SEC Docket 2905, 2906 (Mar. 1, 2004). *See also In re* Caterpillar Inc., 50 S.E.C. 903, 907, 910–12 (1992) (finding company violated disclosure requirement because it could not demonstrate that a subsidiary change would not affect the business and holding that Item 303 required such disclosure).

[110] Management's Discussion and Analysis of Financial Condition and Results of Operations; Certain Investment Company Disclosures, 54 Fed. Reg. 22,427, 22,429 (May 18, 1989).

[111] *Id.*

[112] *Id.*

[113] *Id.*

[114] *Id.*

[115] *Id.*

[116] EPA, *supra* note 36.

[117] *Id.*

An argument could be made that future emissions regulations do not financially impact the company and thus do not meet the reasonably-likely-to-occur test. This argument is only plausible when the company can comply with the regulation without changing operations. In that instance, the company could demonstrate that it is not impacted by the future regulation and need not disclose because it meets its burden (i.e. can demonstrate it is not impacted by a trend or uncertainty). However, while a company can make this argument, success is not likely. Since the stated purpose of emissions regulations is to decrease the amount of GHGs, most regulations cap emissions below current emission rates and require companies to reduce their emissions, thus forcing operational changes.[118] Furthermore, even where a company could comply with an emissions regulation in 2009 without decreasing emissions, the "cap" in many regulations declines over time, so eventually the company will have to reduce its emissions.[119] Either way, because the company will eventually be impacted by future regulation, it is subject to an Item 303 disclosure.[120]

A company may also argue that it need not disclose the impacts of a future law because the parameters of the regulation have not yet been worked out. This argument will also likely fail. The SEC states that uncertainty about the exact regulatory framework or requirements is not a basis for nondisclosure under Item 303.[121] Rather, the company must look at the impact of similar legislation to determine possible impacts.[122] For example, when the 1990 Clean Air Act Amendments were enacted, SEC Commissioner Roberts stated that companies subject to yet-to-be-promulgated regulations needed to approximate potential impacts based on similar rules and disclose them.[123] Based on this, Item 303 likely requires companies to disclose the impacts of future climate change legislation.

IV. ENVIRONMENTAL DISCLOSURE REQUIREMENTS PROVIDE ECONOMIC INCENTIVES TO REDUCE GHG EMISSIONS AND INCENTIVIZE COMPLIANCE WITH EMISSIONS LIMITS

The SEC's disclosure rules are primarily meant to ensure investors have the requisite information to make informed investment decisions.[124] Beyond this, the disclosure requirements may play a role in reducing

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[118] *See, e.g.*, N.H. REV. STAT. ANN. § 125-O:19 (LexisNexis 2008) (stating the purpose of the cap and trade program is to decrease the amount of manmade GHGs in the atmosphere).

[119] *Id.* § 125-O:21 (beginning in 2015, emissions set to decline 215,512 tons per year, "resulting in a 10 percent total reduction from" initial allowance).

[120] Management's Discussion and Analysis of Financial Condition and Results of Operations; Certain Investment Company Disclosures, 54 Fed. Reg. 22,427, 22,429 (May 18, 1989).

[121] Roberts, *supra* note 64, at 10.

[122] *Id.* at 12.

[123] *Id.* at 3, 12.

[124] SEC v. Capital Gains Research Bureau, Inc., 375 U.S. 180, 186 (1963).

GHG emissions.[125] The SEC rules provide market-based incentives to implement pollution control technology by making polluting potentially costly.[126] Furthermore, the disclosure rules may incentivize quicker reductions of GHG emissions than straight compliance with environmental regulations.[127]

Security disclosure requirements provide an incentive to reduce GHG emissions by incentivizing investment in pollution reduction technology.[128] The SEC regulatory scheme requires businesses to disclose environmental liabilities.[129] This increases the available information to investors. In some cases, the available information may diminish the value of a company's stock and have negative implications for that company's profitability.[130] For instance, where a business discloses that it is not in compliance with environmental laws, investors may be leery of investing due to the bad news. Because investors are not investing, the stock price falls.[131] This potentially creates an incentive for the company to proactively install pollution reduction technology or change its environmental practices to avoid reporting environmental liabilities that may result in falling stock prices.[132]

While the incentive exists, a company may not automatically change its environmental practices in every case where negative information may damage its stock price.[133] This is most likely the case where a company determines that it costs less to not comply with environmental laws than it does to comply. Assessing costs, the company may engage in a "least cost" approach.[134] In a least-cost approach, a company determines the benefits of compliance with environmental laws (higher stock prices or no penalties for failing to report environmental liabilities under the SEC laws) and weighs them against noncompliance with environmental laws (fines and potential litigation for violating environmental laws).[135] If the company determines that the benefits of compliance are more advantageous than violating environmental laws, it may make its practices more environmentally-friendly.[136] While not every company finds it

[125] Wallace, *supra* note 19, at 1098 (discussing how market-based incentives create a willingness within the business community to consider environmental impacts).

[126] *Id.* at 1132.

[127] *Id.* (stating that securities laws require early disclosure of potential liability whereas command and control statutes impose liability after a violation occurs).

[128] *Id.* at 1125.

[129] 17 C.F.R. §§ 229.101(e)(2), .303 (2008); Wallace, *supra* note 19, at 1100.

[130] Wallace, *supra* note 19, at 1127.

[131] Konar & Cohen, *supra* note 20, at 120 (concluding that firms suffered negative stock performance in the wake of reporting bad environmental news).

[132] Wallace, *supra* note 19, at 1128. For a report detailing companies that have seen profit from environmental innovation, *see* Susannah Blake Goodman et al., *The Case for Incorporating Environmental Factors into Investment Management Policies*, THE ENVTL. FIDUCIARY SERIES, 2002, at iii, http://rosefdn.org/downloads/EFreport.pdf.

[133] Wallace, *supra* note 19, at 1127.

[134] *Id.*

[135] *Id.*

[136] *Id.*

advantageous to proactively comply with environmental laws, a potential economic incentive to do so nonetheless remains.[137]

The response to California's Proposition 65 ("Prop. 65")[138] provides an example of how reporting requirements changed companies' business practices. Prop. 65 requires businesses in California to alert the public whenever their products or activities expose people to cancer-causing agents.[139] Studies conducted in the decade following these disclosure rules showed that companies reformulated their products and reduced emitting carcinogens to avoid reporting.[140] For example, Gillette discontinued use of trichloroethylene in its Liquid Paper products, Chinese manufacturers phased lead out of their dishes, and Dow Chemical, Sara Lee, and Sears all reformulated their products to remove carcinogens.[141] Prop. 65 also led to overall reductions in emissions of carcinogens.[142] A study conducted between 1987 and 1989 showed a two-third decline in emissions of chemicals and that some companies completely stopped emitting six cancer-causing agents.[143] Although this data indicates a cause and effect relationship between reporting under Prop. 65 and changed business practices, it has some limits. The Toxics Release Inventory ("TRI") found a general decrease in the release of toxic chemicals during the same time period, which makes the data a little less conclusive.[144] However, the anecdotal information about Sears and Gillette is nonetheless indicative of Prop. 65's effect on companies' business practices in response to reporting requirements.

Reporting requirements pursuant to the TRI also induced companies to implement environmental protection measures.[145] The TRI requires companies with more than ten employees to annually report their releases and deposits of listed toxic chemicals.[146] This program resulted in a marked decline of toxic releases. Between 1988, when reporting began, and 2002, the total release and disposal of TRI chemicals decreased forty-nine percent.[147] While some of this decline is attributed to better efficiency, studies suggest that companies with high toxic releases lost money due to market fluctuations and investor

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[137] *Id.* at 1128.

[138] Safe Drinking Water and Toxic Enforcement Act of 1986, Proposition 65 (Cal. 1986), http://www.oehha.org/prop65/law/pdf_zip/P65LAW72003.pdf.

[139] CAL. HEALTH & SAFETY CODE §§ 25249.5–.13 (West 2008).

[140] *See* Michael Barsa, Note, *California's Proposition 65 and the Limits of Information Economics*, 49 STAN. L. REV. 1223, 1240–41 (1997) (detailing studies).

[141] *Id.*

[142] *Id.* at 1241.

[143] *Id.*

[144] *Id.* at 1241–42.

[145] *Id.* § 11023 (2006).

[146] 42 U.S.C. § 11023 (b)(1)(A).

[147] EPA, 2002 TOXICS RELEASE INVENTORY (TRI) PUBLIC DATA RELEASE REPORT 5 (2004), http://www.epa.gov/tri/tridata/tri02/pdr/tri_brochure.pdf.

response.[148] For instance, a 1995 study found a statistically significant share price reduction for firms reporting large TRI emissions.[149] A later analysis of forty firms showed that the companies reporting the highest TRI numbers subsequently reduced their emissions more than other firms in the industry, made other significant attempts to improve environmental performance, and received fewer noncompliance fines from the government in subsequent years.[150] These studies suggest that where companies must report environmental information and such information is negative, the company is likely to change its behavior rather than report bad environmental news.[151] This supports the assertion that the SEC's environmental disclosure requirements may incentivize companies to reduce their GHG emissions.

The SEC environmental disclosure requirements may also be an effective tool in promoting early disclosure of environmental problems.[152] Items 101 and 303 require disclosure of environmental liabilities well before the liability actually manifests itself. Item 101, in particular, requires a company that is reasonably likely to be subject to emission reductions laws in 2010 to disclose this to investors in 2009.[153] Traditional environmental laws, on the other hand, do not require disclosure until after a violation occurs.[154] This suggests that the securities laws may provide a means to limit the violation of environmental laws because the problem could be addressed before it manifests.[155] Item 101 also requires the company to explain how it plans to limit its potential liability.[156] At this point, a company might find it beneficial to install pollution reduction equipment to limit future environmental problems to keep its stock value up.[157]

Conversely, a company may decide that the cost of complying exceeds any probable future compliance costs and will not change its practices. Or, the company may delay compliance with future environmental laws until compliance is required. Such outcomes are possibilities. For some companies, however, the SEC laws may nonetheless provide economic incentives to reduce GHG emissions.

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[148] *See* James T. Hamilton, *Pollution as News: Media and Stock Market Reactions to the Toxic Release Inventory Data*, 28 J. ENVTL. ECON. & MGMT. 98, 109 (1995).

[149] *Id.* at 109 (documenting an average loss of $4.1 million per firm reporting a high TRI number).

[150] Konar & Cohen, *supra* note 20, at 120 (concluding that firms suffered negative stock performance in the wake of TRI and reduced their toxic emissions).

[151] *See generally* Hamilton, *supra* note 148.

[152] Wallace, *supra* note 19, at 1132.

[153] 17 C.F.R. § 229.101(c)(1)(xii) (2008).

[154] Wallace, *supra* note 19, at 1132 (discussing early disclosure of environmental issues).

[155] *Id.*; *see also* Konar & Cohen, *supra* note 20, at 123 (suggesting that required reporting lessens a company's future liability for violating environmental statutes).

[156] 17 C.F.R. § 229.101.

[157] See Wallace, *supra* note 19, at 1131–32 for a detailed discussion on this topic.

V. SHAREHOLDER ENFORCEMENT SUITS PLAY AN INTEGRAL ROLE IN REQUIRING COMPANIES TO DISCLOSE GLOBAL WARMING IMPACTS

Disclosure requirements are only an effective tool in reducing GHG emissions when they are complied with. Unfortunately, SEC enforcement of its environmental reporting requirements is weak and there is no guarantee companies will disclose climate change impacts to investors.[158] An EPA study conducted in 1998 found that seventy-four percent of publicly traded companies surveyed openly violated the SEC's environmental regulations.[159] A 2004 Government Accountability Office ("GAO") report on SEC enforcement found that compliance was varied in detail and level and that the probability of SEC enforcement is minimal.[160] In particular, the SEC's primary enforcement mechanism is to rely on reporting companies and independent auditors to completely and accurately disclose environmental liabilities.[161] Further, even when the SEC wants to review all filings for compliance, it does not have the resources to do so.[162] Based on this, there needs to be an alternate compliance mechanism to enforce the disclosure requirements.

One such method is Rule 10b-5.[163] Rule 10b-5 allows any person who buys or sells securities to file suit against a company for failure to comply with the S-K Regulations.[164] In the global warming context, a plaintiff who buys or sells securities from a company that failed to disclose its climate change impacts can use Rule 10b-5 to file suit.[165] This Part explains the necessary elements to plead and prove a Rule 10b-5 cause of action and then addresses how a plaintiff can use the rule to challenge a company's failure to disclose climate change impacts.

A. *Enforcement Actions through Rule 10b-5*

The Securities Exchange Act of 1934 provides plaintiffs with a cause of action for securities violations.[166] Under Rule 10b-5, plaintiffs can file suit alleging a publicly traded company failed to disclose the impacts of global warming on its business. Standing to sue is open to any person who bought or sold securities from the company during the relevant

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[158] *See* GAO, *supra* note 87, at 24 (analyzing SEC enforcement of environmental liabilities and finding it lax).

[159] Donald Sutherland, *EPA Reveals US Publicly Traded Corporations Hide Environmental Debt in SEC Filings to Shareholders*, SAFE2USE, Feb. 12, 2002, http://www.safe2use.com/ca-ipm/02-02-12.htm.

[160] GAO, *supra* note 87 at 21, 24.

[161] *Id.* at 24.

[162] *Id.*

[163] 15 U.S.C. § 78j (2006); 17 C.F.R. § 240.10b-5 (2008).

[164] Blue Chip Stamps v. Manor Drug Stores, 421 U.S. 723, 731 (1975).

[165] Tracy Soehle, Comment, *SEC Disclosure Requirements For Environmental Liabilities*, 8 TUL. ENVTL. L.J. 527, 546 (1995).

[166] *See* 15 U.S.C. § 78j; 17 C.F.R. § 240.10b-5.

disclosure period.[167] Rule 10b-5 actions have the potential to be a powerful tool in reducing GHG emissions because a suit alleging inadequate disclosure of environmental risks under the S-K Regulations fits within a prima facie Rule 10b-5 case. Furthermore, Rule 10b-5 actions do not have the same challenges inherent in traditional tort litigation that have thus far plagued climate change litigants.

SEC Rule 10b-5 makes it unlawful for a company to make any misrepresentations or omissions in the course of buying and selling securities.[168] In the context of disclosing global warming liabilities, this rule allows a lawsuit where a disclosure duty exists under the S-K Regulations and the company failed to disclose.[169] To prevail in a Rule 10b-5 cause of action, a plaintiff must show three main elements: (1) the company knowingly omitted material information; (2) the company had a duty to disclose such information; and (3) the plaintiff relied on the omission and this reliance proximately caused his injuries.[170]

1. Knowingly Omitting Material Information

A company that knowingly fails to disclose material information to investors violates the first element.[171] While the traditional definition of "knowingly" requires actual intent, courts also hold that recklessness meets the definition.[172] A company acts recklessly when it engages in conduct that presents a danger of misleading investors and that the company was or must have been aware of.[173] The Supreme Court defines "material information" as information an investor considers important when deciding to invest.[174]

A company that knowingly fails to disclose global warming liabilities meets the recklessness standard. In *SEC v. Infinity Group Co.*, the court held that a company acted recklessly because it did not research potential investments before committing shareholder money.[175] The court reasoned that the company should have done its duty to become aware by at least conducting a "reasonable investigation."[176] Applying this in the environmental context, when a company should know it is subject to

[167] *Blue Chip Stamps*, 421 U.S. at 755.

[168] 17 C.F.R. § 240.10b-5.

[169] *See* Levine v. NL Indus., Inc., 717 F. Supp. 252, 254–55 (S.D.N.Y. 1989) (finding no disclosure duty).

[170] Basic Inc. v. Levinson, 485 U.S. 224, 230, 238, 243 (1988); *see also* Commercial Union Assurance Co. v. Milken, 17 F.3d 608, 611 (2d Cir. 1994).

[171] *Levine*, 717 F. Supp. at 254.

[172] *See* SEC v. Infinity Group Co., 212 F.3d 180, 192 (3d Cir. 2000) (defining recklessness as conduct that the company was or must have been aware might mislead buyers or sellers).

[173] *Id.*

[174] *Basic Inc.*, 485 U.S. at 231.

[175] *Infinity Group Co.*, 212 F.3d at 192–93.

[176] *Id.* at 193.

GHG emissions limits, a showing that the company failed to investigate its potential liability is likely enough for a reckless finding.[177]

Furthermore, Item 303's definition of reasonable makes it easier for a plaintiff to show that a company acted recklessly in failing to disclose its global warming liabilities. Item 303 places the burden on the company to disprove it is impacted by current or future GHG regulations.[178] To disprove impacts, the company must analyze future laws and affirmatively conclude the laws have no impact on the company.[179] This analysis alone should put a company on notice that it is subject to future emissions limits and thus reckless in failing to disclose.[180]

The plaintiff must also prove the failure to disclose is material. Materiality for Rule 10b-5 purposes means "there must be a substantial likelihood that the disclosure of the omitted fact would have been viewed by the reasonable investor as having significantly altered the 'total mix' of information made available."[181] Typically, materiality is established if the omitted information affects the company's finances because a reasonable investor is presumed to care about money.[182]

Under these requirements, global warming impacts in the form of GHG emissions limitations are material because they impact the company's financial outlook. Costs associated with emissions limitations might include installing pollution controls, implementing efficiency measures, and purchasing emission credits.[183] Such costs are similar to those which courts have found material. For example, courts state that cost increases of raw materials, costs associated with plant closures, and cleanup costs and fines due to environmental law violations are all material.[184]

Even where the company is not currently spending money to comply with emissions limitations, the materiality standard is met.[185] Courts hold that when future events are likely to require expenditures, such events

[177] For a discussion of the knowing standard, see Wallace, *supra* note 19, at 1116–17 (discussing how companies subject to environmental regulations are on notice of potential violations due to extensive monitoring and reporting requirements).

[178] Management's Discussion and Analysis of Financial Condition and Results of Operations; Certain Investment Company Disclosures, 54 Fed. Reg. 22,427, 22,429 (May 18, 1989).

[179] *Id.*

[180] *See* Wallace, *supra* note 19, at 1116–17.

[181] Basic Inc. v. Levinson, 485 U.S. 224, 231–32 (1988) (quoting TSC Industries, Inc. v. Northway, Inc., 426 U.S. 438, 449 (1976)).

[182] *See* 17 C.F.R. §§ 229.101, .103, .303 (requiring impact on company's finances for disclosure); Levine v. NL Indus., Inc., 717 F. Supp. 252, 255 (S.D.N.Y. 1989) (finding environmental problem was not material because the liability did not affect the company's finances after the Dep't of Energy indemnified it).

[183] EPA, *supra* note 36.

[184] *In re* Canandaigua Sec. Litig., 944 F. Supp. 1202, 1210–11 (S.D.N.Y. 1996) (finding raw materials cost increases and plant closures material); *Levine*, 717 F. Supp. at 255 (finding environmental regulation violations material).

[185] Philadelphia v. Fleming Cos., Inc., 264 F.3d 1245, 1265 (10th Cir. 2001).

are material for a Rule 10b-5 action.[186] Future events that courts find material include filed lawsuits, future earnings forecasts, and fiscal projections.[187]

Future GHG limitations are material because they are reasonably likely to occur and require a company to spend money in order to comply with them. A 2006 Pew Center on Global Climate Change study surveyed businesses and nearly all said that government limits on GHG emissions were inevitable.[188] Of those surveyed, eighty-four percent believed that new standards would be in place by 2015 and seventeen percent believed regulations would be in place by 2010.[189] While this evidence does not mean that national emissions limitations will occur, it nonetheless meets the materiality definition. Rule 10b-5 focuses on whether a company thinks it will incur costs, not whether it actually will.[190] GHG emission limitations will likely require businesses to spend money to implement them. Thus, future costs to comply with a GHG regulation are material because businesses believe such regulation is likely and will financially affect the company.

2. Duty to Disclose

The second element a plaintiff must prove in a Rule 10b-5 action is that the company failed to disclose its global warming liabilities where it had a duty to do so.[191] This element is met by showing that the company had a disclosure duty under the S-K Regulations.[192] For example, in *Levine v. NL Industries, Inc.,* the court stated that a failure to disclose environmental liabilities under Items 101 and 103 would meet the duty to disclose element.[193] Similarly, in the global warming context, showing that a GHG emitter has a disclosure duty under Item 103 or Item 303 meets the second element.[194]

3. Reliance and Causation

To succeed in a Rule 10-5 cause of action, the plaintiff must also prove reliance and causation. Specifically, a plaintiff must show that he relied on the company's misrepresentations and that this reliance caused

[186] *Id.*

[187] *Id.*; James v. Gerber Prods. Co., 587 F.2d 324, 327 (6th Cir. 1978); Colby v. Hologic, Inc., 817 F. Supp. 204, 211 (D. Mass. 1993).

[188] ANDREW J. HOFFMAN ET AL., PEW CENTER ON GLOBAL CLIMATE CHANGE, GETTING AHEAD OF THE CURVE: CORPORATE STRATEGIES THAT ADDRESS CLIMATE CHANGE iii (2006), http://www.pewclimate.org/docUploads/PEW_CorpStrategies.pdf.

[189] *Id.* at iii, 1.

[190] *Fleming Cos., Inc.*, 264 F.3d at 1265.

[191] Basic Inc. v. Levinson, 485 U.S. 224, 239 n.17 (1988); Levine v. NL Indus., Inc., 717 F. Supp. 252, 254 (S.D.N.Y. 1989).

[192] *Levine*, 717 F. Supp. at 254–55.

[193] *Id.* at 254. In *Levine*, the court ultimately held no disclosure duty existed because environmental liability was not material. *Id.* at 255.

[194] See Part III for a longer discussion on how companies with global warming impacts have a disclosure duty under the S-K regulations.

his injury.[195] Proving reliance and causation in a shareholder suit is typically easier than in other areas of the law.[196] In *Basic Inc. v. Levinson*, the Supreme Court stated that reliance is presumed where a duty to disclose existed and was breached.[197] The reason for this relaxed standard is due to the special nature of securities markets.[198] Because no investor would buy or sell stock without using the information provided to him, the Court presumes the investor relies on the information to be correct.[199] This presumption of reliance is rebutted, however, by showing there was no causal connection between the misrepresentation and the actions of the plaintiff, or that the investor knew the information regardless.[200]

In the context of a climate change suit, a company has a plausible argument to rebut the presumption of reliance. Any investor in a company subject to climate change impacts knows that the company is likely to incur climate-change-related liability, and thus does not rely on the company's statements, or lack thereof, on the issue.[201] This argument potentially rebuts the presumption of reliance. However, it only succeeds where the company shows that the plaintiff actually knew the climate change liabilities were omitted.[202] In *Basic Inc. v. Levinson*, the Court contemplated how publicly available information rebuts the presumption and stated that a plaintiff's specific knowledge of generally known information must be shown.[203] The implication is that to succeed in rebutting the presumption in the global warming context, the investor is presumed to not know generally available information (e.g., the climate change risks a company potentially faces) unless proven otherwise. Thus, a plaintiff in a Rule 10b-5 cause of action can likely prove reliance unless the company can show he actually did not.

A plaintiff must also show that the presumed reliance caused his injury.[204] The applicable injury in a Rule 10b-5 cause of action is showing that the plaintiff bought or sold securities when he would not have otherwise done so.[205] A plaintiff also enjoys a relaxed standard in proving causation because the Court reasons that it is hard to show what an

[195] *Basic Inc.*, 485 U.S. at 243.
[196] *Id.* (stating that material misrepresentation in securities markets is different from that in other areas of the law and that causation and reliance should be relaxed to account for this).
[197] *Id.* at 247.
[198] *Id.* at 243–44.
[199] *Id.* at 247.
[200] *Id.* at 248–49.
[201] *Id.* at 249 (discussing how to rebut reliance presumption).
[202] *Id.*
[203] *Id.*
[204] *Id.* at 243.
[205] *Id.* at 248. Of course, in the damages phase of the litigation, the plaintiff must prove some monetary loss to receive damages. But at the liability phase, monetary loss is basically presumed. *Id.*
[205] *Id.*

investor would have done.[206] The Court in *Basic Inc. v. Levinson* found that where the presumption of reliance is raised and a plaintiff shows that he bought or sold stock during the period, then causation is proven.[207] On this basis, a plaintiff who demonstrates a global warming disclosure duty under the S-K Regulations will likely meet the reliance and causation elements, because he is presumed to have relied on the information as being correct and the incorrect information caused his injury (e.g., he invested and would not have otherwise).

B. Rule 10b-5: A Hypothetical Climate Change Suit

This Part takes the elements necessary to plead and prove a Rule 10b-5 cause of action and applies them to a hypothetical suit in order to show how a person could use the rule in the climate change context. Assume there is a publicly traded energy company in a state that has emissions limits, but has not yet promulgated detailed regulations. When the regulations take effect, the company will be required to make capital investments to limit GHG emissions by installing pollution control technology, monitoring equipment, and/or buying emission credits. As a publicly traded entity, the company is subject to the Act's disclosure requirements and S-K Regulations.[208] In a quarterly report, the company fails to disclose operational changes and expenditures it needs to implement to comply with the forthcoming regulations. A shareholder ("plaintiff") buys stock based on this information. The plaintiff brings suit under Rule 10b-5 for failure to disclose these environmental liabilities. To succeed, the plaintiff must show that the failure to disclose environmental liabilities was knowing and material, that the company had a duty to disclose under the S-K Regulations, and that he relied on the omission which caused his injury.[209]

To plead the knowledge element, the plaintiff must show that the company knew or should have known that it had a disclosure duty.[210] The plaintiff could argue that the company knew it would be subject to emission limitations because it emits GHGs. The argument is that any industry subject to current reporting and monitoring requirements has knowledge that it will also be subject to GHG emission laws and must likely spend money to comply.[211] Even where a company does not have actual knowledge that it will have to comply with emission regulations, at the very least, the plaintiff could argue that the company was reckless in

[206] *Id.*
[207] *Id.* at 247.
[207] *Id.* at 247.
[208] *See generally* 17 C.F.R. § 229.101, .303 (2008).
[209] *Basic Inc.*, 485 U.S. at 243.
[210] SEC v. Infinity Group Co., 212 F.3d 180, 192 (3d Cir. 2000).
[211] *See* Wallace, *supra* note 19, at 1116–17 (discussing how companies subject to environmental regulation are on notice of environmental liabilities through the very nature of being a regulated entity).

failing to learn whether it needed to comply.[212] A company that emits GHGs should be aware that it is subject to any laws aimed at reducing GHG emissions.

To demonstrate materiality, a plaintiff must show that a reasonable investor would have wanted to know the information.[213] Courts typically find a reasonable investor would have wanted to know the information when such information requires the company to spend money.[214] Here, a plaintiff could argue that emission limits are material because they affect the company's financial outlook by requiring capital expenditures to upgrade technology. A counter-argument could be made that contingent global warming liabilities are not material because a reasonable investor would not consider the information important. However, one court addressing this argument held that a plaintiff has enough of a claim to get past a motion for summary judgment on the issue of materiality because reasonable minds differ on the question of what investors find important.[215] Thus, demonstrating current or future compliance costs likely meets the materiality threshold.

A plaintiff must next show that the company is subject to disclosure duties under either Item 101 or Item 303. Under Item 303, the company has a duty to disclose projected financial impacts related to future emissions limits.[216] This requires the company to show that it will not have to change operations, install pollution equipment, or spend any money in response to emissions limits. Because most GHG regulations require companies to reduce emissions and thus, change operations, a disclosure duty under Item 303 likely exists.[217]

The company may also have a disclosure duty under Item 101 to disclose estimated future capital expenditures related to compliance with existing environmental laws.[218] In the hypothetical, the company is in a state with enacted emission limitations. Thus, the company must disclose expected capital expenditures to comply with such limitations even where specific regulations have not yet been codified.[219]

Lastly, a plaintiff must show that he relied on the company to disclose material information and the company's failure to do so caused

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[212] *See Infinity Group Co.*, 212 F.3d at 192 (defining recklessness as conduct that is extremely negligent and creates a danger that the actor knew of or that is so apparent the actor must have been aware).

[213] *Basic Inc.*, 485 U.S. at 231–32.

[214] Levine v. NL Indus., Inc., 717 F. Supp. 252, 255 (S.D.N.Y. 1989).

[215] *See* Endo v. Albertine, 863 F. Supp. 708, 723 (N.D. Ill. 1994).

[216] *In re* Caterpillar Inc., 50 S.E.C. 903, 909 (1992) (requiring company to disprove future events would not impact business).

[217] *See* discussion *supra* Part III.

[218] 17 C.F.R. § 229.101(c)(xii) (2008).

[219] *See* Roberts, *supra* note 64, at 3 (stating companies that reasonably expect they will need to comply with the then-recently-enacted 1990 Clean Air Act amendments must estimate the cost of compliance with best available control technology even though the EPA had not yet promulgated rules on what this meant).

him to invest where he would not have otherwise done so.[220] Reliance and subsequent causation are presumed when the company has a disclosure duty under the S-K Regulations.[221] The plaintiff could specifically argue that he invested not knowing that the company would have to change its operations in response to environmental laws and that he would not have invested had he known. Financial loss is not necessarily needed to prove an injury.[222] Rather, the court focuses on injury in terms of a plaintiff being induced to invest based on misrepresentations.[223]

Based on the foregoing, the theoretical basis for a cause of action based on a failure to disclose global warming liabilities is sound. A few hurdles exist, however. First, although the plaintiff in a Rule 10b-5 cause of action enjoys the presumption of reliance, this is rebuttable.[224] Where a company can specifically show that the plaintiff knew of such liabilities or that the plaintiff invested but did not read any information the company supplied, then the presumption is rebutted.[225] However, the company still must show actual knowledge or nonreliance. A general statement that everyone knows a GHG emitter is subject to more regulations will not suffice to rebut the presumption.[226]

Another hurdle is proving a disclosure duty under the S-K Regulations. A Rule 10b-5 cause of action is premised on the theory that disclosure of global warming liabilities is mandated. Not only is a disclosure duty a necessary element, but proving reliance and causation is linked to it. A court may hold that no such disclosure duty exists because the SEC has not expressly required disclosure. New York state's deal with the two energy companies to disclose global warming liabilities mitigates this problem a bit because it acknowledges climate change impacts are subject to disclosure. However, a court may not take what New York does as definitive for mandated disclosure.

If a plaintiff can plead and prove a Rule 10b-5 cause of action, the defendant is liable for such omissions. The court will likely order the company to comply with the disclosure requirements and institute internal procedures to ensure future compliance.[227] While this remedy does not directly ensure that the company will reduce its GHG emissions, it provides the economic incentive to do so and this may lead to reductions in GHG emissions.[228]

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[220] Basic Inc. v. Levinson, 485 U.S. 224, 243 (1988).

[221] *Id.* at 243, 247.

[222] Commercial Union Assurance Co. v. Milken, 17 F.3d 608, 609 (2d Cir. 1994).

[223] *See id.* (addressing injury in the form of monetary loss in damages phase of suit only).

[224] *Basic Inc.*, 485 U.S. at 248.

[225] *Id.* at 248–49.

[226] *Id.* at 249.

[227] *In re* Caterpillar Inc., 50 S.E.C. 903, 913 (1992) (ordering company to comply with Item 303 and institute internal compliance mechanisms).

[228] See discussion *supra* Part IV on how economic incentives may reduce GHG emissions.

VI. SHAREHOLDER SUITS IN THE LARGER CONTEXT OF GLOBAL WARMING LITIGATION

Tort and administrative actions have recently arisen as a means to reduce global warming emissions.[229] These suits can be categorized as:[230] (1) actions against the government for failure to regulate GHG emissions,[231] (2) actions against the government to force procedural consideration of global warming impacts,[232] and (3) private actions directly against GHG emitters.[233] To date, the tort litigation in particular has run into courtroom barriers like standing, causation, and the political-question doctrine.[234] Because shareholder suits under Rule 10b-5 do not share these barriers, Rule 10b-5 could play a critical role in holding GHG emitters directly liable for their emissions.

At the outset, where the goal of climate change litigation is to reduce GHG emissions, targeting emitters directly is likely the quickest way to success.[235] Targeting emitters directly, versus suing the government to regulate GHGs, gets rid of a time-consuming intermediary step.[236] Certainly, suing the government to regulate GHGs is an important step. However, forcing the government to enact laws and rules is burdensome and contingent on politicians who are adverse to change.[237] For instance, in *Massachusetts v. EPA*, the Court held that the EPA needed to consider regulating CO_2 emissions from automobiles under the Clean Air Act.[238] Nearly two years later, and under a new presidency, the EPA just recently began the process to regulate GHG emissions.[239] Because of such political stalling, directly suing the emitter may be a faster way to compel reductions.[240]

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[229] *See supra* note 13.

[230] This categorization is attributed to Shi-Ling Hsu, *A Realistic Evaluation of Climate Change Litigation Through the Lens of a Hypothetical Lawsuit*, 79 U. COLO L. REV. 701, 711–16 (2008) (discussing current climate change litigation in detail).

[231] *See* Massachusetts v. EPA, 549 U.S. 497 (2007); Coke Oven Envtl. Task Force v. EPA, No. 06-1131, 2006 U.S. App. LEXIS 23499 (D.C. Cir. Mar. 26, 2009) (dismissing case); Hsu *supra* note 230, at 711–12.

[232] *See* Ctr. for Biological Diversity v. Nat'l Highway Transp. Safety Admin., 508 F.3d 508 (9th Cir. 2007); Natural Res. Def. Council v. Abraham, 355 F.3d 179 (2d Cir. 2004); Hsu *supra* note 230, at 712–14.

[233] *See* California v. Gen. Motors Corp., No. C06-05755 MJJ, 2007 WL 2726871 (N.D. Cal. Sept. 17, 2007); Comer v. Nationwide Mut. Ins. Co., No. 1:05 CV 436 LTD RHW, 2006 WL 1066645 (S.D. Miss. Feb. 23, 2006); Connecticut v. Am. Elec. Power Co., Inc., 406 F. Supp. 2d 265 (S.D.N.Y. 2005); Hsu, *supra* note 230, at 715.

[234] Hsu, *supra* note 230, at 744–56 (summing up tort litigation problems).

[235] *Id.* at 717.

[236] *Id.*

[237] *Id.*

[238] Massachusetts v. EPA, 549 U.S. 497, 528 (2007).

[239] *See* Hsu, *supra* note 230, at 716 (suggesting that prevailing politics are key to government regulations on global warming).

[240] *Id.* at 717.

Furthermore, suing the emitter directly is more likely to ensure quick GHG reductions because the company may want to proactively negate its environmental liability.[241] The premise is that those companies potentially required to spend a lot of money in response to adverse court rulings will take steps to reduce such liability.[242] In the torts context, for instance, the company could be liable for millions of dollars in judgment for failing to reduce emissions.[243] This may incentivize the company to change its policies on global warming. Similarly, in a Rule 10b-5 action, a company could face losing money through lost investors if it fails to mitigate global warming impacts. As such, the company will take steps now to reduce GHG emissions regardless of government action on the issue.[244] Based on this, suing companies directly responsible for GHG emissions may provide a quicker route to reducing GHG emissions than suing the government to regulate such emissions.

Shareholder actions may also solve the problems of causation, standing, and the political-question doctrine. Courts faced with negligence actions have largely dismissed the claims at the outset on political question grounds.[245] In *Connecticut v. American Electric Power Co., Inc.*, the court stated that resolving climate-related claims requires the court to resolve "economic, environmental, foreign policy, and national security" issues better left to "non-judicial discretion."[246] Conversely, Rule 10b-5 shareholder suits do not present this challenge because Congress has already addressed the issue by giving the SEC authority to promulgate securities rules.[247] The SEC has, in turn, promulgated rules relating to environmental disclosure and finds that climate change issues may fall within the framework.[248] Thus, a court can address a company's failure to disclose global warming impacts in the S-K Regulations because there is already a statutory framework in place and the court will not need to make policy judgments.

An argument could be made that, because the SEC has not expressly stated that climate change impacts are disclosable, a court should defer deciding the issue until the SEC makes such a statement. While this argument has merits, the recent agreement between Dynegy and New York mitigates it somewhat. As noted, New York treated climate change impacts as clearly disclosable under the S-K Regulations.[249] This is

[241] *Id.* at 718 (comparing global warming litigation to tobacco mass tort litigation as a way to internalize costs and compel change from within).
[242] *See* Barsa, *supra* note 140, at 1240.
[243] Hsu, *supra* note 230, at 718.
[244] Wallace, *supra* note 19, at 1101.
[245] Connecticut v. Am. Elec. Power Co., Inc., 406 F. Supp. 2d 265, 274 (S.D.N.Y. 2005).
[246] *Id.*
[247] 15 U.S.C. § 77g (2006).
[248] *See* 17 C.F.R. § 229.101, .103, .303 (2008).
[249] *See In re* Dynegy Inc., AOD 08-132 at *3–5 (N.Y. Att'y Gen. Envtl. Prot. Bureau Oct. 23, 2008), *available at* http://www.oag.state.ny.us/media_center/2008/oct/dynegy_aod.pdf.

evidence of the trend to include global warming in the S-K Regulations. As such, a court may find that it can readily decide the issue.

A tort litigant must also prove that he has standing to bring a lawsuit.[250] One element the plaintiff must prove to obtain standing is to show that he suffered a concrete and particularized injury-in-fact.[251] Environmental litigants find this element particularly difficult to prove because the injury must be different from that suffered by everyone else.[252] In the climate change context, plaintiffs' injuries are typically quite broad and shared by virtually everyone on the planet.[253] *Massachusetts v. EPA* may help some tort litigants get over the injury hurdle.[254] In *Massachusetts*, the Court found that some coastal states could allege an injury from rising sea levels that inundated coastal land and that this was concrete enough for standing.[255] However, because the plaintiffs in *Massachusetts* were states, this expanded standing doctrine may be limited to states only. As such, private litigants must still contend with showing an injury from global warming that is different from others.

Standing in the context of a Rule 10b-5 suit is much easier to show—any person injured by buying and selling stock from the company alleged to have made a disclosure violation has standing to sue.[256] A plaintiff can show injury by demonstrating that he was induced to buy or sell stock based on the company's misrepresentations.[257]

Finally, even where a tort litigant gets over the political-question doctrine and standing hurdles, he must prove causation. This requires a plaintiff to prove that his injury was caused by global warming and that the defendant's actions proximately caused global warming.[258] For example, in *Connecticut v. American Electric Power Co., Inc.*, the plaintiffs sued five power plants for their alleged contribution to global warming.[259] The five power plants are the largest carbon dioxide emitters in the United States, collectively emitting "650 million tons of carbon dioxide annually," making up twenty-five percent of the total "U.S. electric power

[250] Friends of the Earth, Inc., v. Laidlaw Envtl. Servs. (TOC), Inc., 528 U.S. 167, 180–81 (2000).

[251] *Id.*

[252] Fla. Audubon Soc'y v. Bentsen, 94 F.3d 658, 667 (D.C. Cir. 1996).

[253] *See, e.g.*, Comer v. Nationwide Mut. Ins. Co., No. 1:05 CV 436 LTD RHW, 2006 WL 1066645, at *1 (S.D. Miss. Feb. 23, 2006) (claiming injury to coastal property); *In re* Exxon Valdez, 104 F.3d 1196, 1198 (9th Cir. 1997) (finding Alaska Natives lacked standing because injury felt by all Alaskans).

[254] Massachusetts v. EPA, 549 U.S. 497 (2007); Hsu, *supra* note 230, at 744 n.211.

[255] *Massachusetts*, 549 U.S. at 519–23.

[256] *See* Blue Chip Stamps v. Manor Drug Stores, 421 U.S. 723, 737–38 (implying that a person who buys or sells stock may also be injured); Grossman v. Waste Mgmt., Inc., 589 F. Supp. 395, 399–403 (N.D. Ill. 1984).

[257] Basic Inc. v. Levinson, 485 U.S. 224, 243, 247 (1988).

[258] *See* Alec C. Zacaroli & Peter C. Condron, *Legal Developments Related to Greenhouse Gas Emissions*, 39 ENV'T REP. 1309, 1319 (2008) (discussing causation in global warming suits).

[259] Connecticut v. Am. Elec. Power Co., Inc., 406 F. Supp. 2d 265, 268 (S.D.N.Y. 2005) (discussing causation).

sector's carbon dioxide emissions."[260] Although the court ultimately dismissed the case on political-question grounds, it nonetheless demonstrates the difficulties in proving causation.[261] The power plants were only responsible for 2.5% of the world's total emissions.[262] With China and India increasingly emitting more, a plaintiff may find it difficult to prove an American power plant is causing global warming in any significant way.[263] A Mississippi District Court addressed the causation problem by stating that there are:

> [D]aunting evidentiary problems for anyone who undertakes to prove, by a preponderance of the evidence, the degree to which global warming is caused by the emission of greenhouse gasses; the degree to which the actions of any individual . . . company . . . or the collective action of these [companies] contribute, through the emission of greenhouse gasses, to global warming . . . .[264]

In *California v. General Motors Corp.*, the court also addressed causation.[265] In *General Motors Corp.*, the court dismissed a claim that six car manufacturers were responsible for contributing to global warming.[266] California based its allegations on the grounds that emissions from vehicles manufactured by the defendants accounted for over thirty percent of the statewide CO_2 emissions.[267] The court dismissed the case claiming it could not reasonably determine the extent to which automobile emissions caused global warming.[268] Such cases demonstrate that courts are still hesitant to hold one emitter responsible for a problem caused by many. Arguably, proving causation will become easier as courts accept that emitters are directly responsible for global warming. However, this requirement presents a hurdle in the foreseeable future in negligence claims.[269]

In contrast, suits alleging SEC violations as a cause of action do not present this problem. Instead of having to prove that the defendant caused global warming, a plaintiff need only show that the defendant failed to state its global warming impacts where he had a duty to do so.[270] The court presumes causation from this.[271] Thus, there is no need to wait for courts to catch up with scientific findings on the causes of global warming.

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[260] *Id.*
[261] *Id.* at 274.
[262] Zacaroli & Condron, *supra* note 258, at 1319.
[263] *See* Hsu, *supra* note 230, at 748 (discussing causation issues).
[264] Comer v. Nationwide Mut. Ins. Co., No. 1:05 CV 436 LTD RHW, 2006 WL 1066645, at *4 (S.D. Miss. Feb. 23, 2006).
[265] California v. Gen. Motors Corp., No. C06-05755 MJJ, 2007 WL 2726871, at *14 (N.D. Cal. Sept. 17, 2007).
[266] *Id.* at *16.
[267] *Id.* at *1.
[268] *Id.* at *12–15.
[269] Zacaroli & Condron, *supra* note 258, at 1319.
[270] *See* discussion *supra* Part V.
[271] Basic Inc. v. Levinson, 485 U.S. 224, 243, 247 (1988).

Although Rule 10b-5 has some inherent problems of its own, as noted in the previous Part, on the whole, it provides an alternate vehicle to sue GHG emitters. While using Rule 10b-5 does not directly require companies to reduce GHG emissions, it will achieve the same result in the end. A company faced with the loss of financing will likely act now to reduce GHG emissions in lieu of losing investors.[272] In addition to reaching the desired result, such suits may also solve the issues of standing, causation, and political-question doctrine plaguing traditional tort litigation.

VII. CONCLUSION

The world may be very near the point where climate change becomes irreversible.[273] Citizens and companies must act now to reduce GHG emissions in order to avoid the most serious impacts.[274] According to the IPCC, widespread investment in low-carbon technology in the energy, transportation, and industrial sectors is needed.[275] International agreements like the Kyoto Protocol,[276] state and regional emission reduction agreements, and the enactment of national climate change legislation play a pivotal role in reducing GHG emissions. However, the sooner GHG emissions are reduced, the less severe the impacts of climate change will be.[277] Federal securities laws can play a critical role in speeding up widespread use of low-carbon technology.

The energy, transportation, and industrial sectors are the largest GHG emitters in this country.[278] Many of the companies in these sectors are also publicly traded, making them subject to extensive disclosure requirements under the federal securities laws. These disclosure requirements can be effective tools in fighting global warming. They provide market incentives to invest in pollution reduction technology, and thus, give companies economic reasons to invest in low-carbon technology. The securities laws also require companies to analyze and mitigate potential climate change impacts now, even where specific regulations are not in place. These factors lend support to the argument that the SEC disclosure requirements could play a role in speeding up GHG reductions.

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[272] Wallace, *supra* note 19, at 1127.

[273] Juliet Eilperin, *Debate on Climate Shifts to Issue of Irreparable Change; Some Experts on Global Warming Foresee 'Tipping Point' When It Is Too Late to Act,* WASH. POST, Jan. 29, 2006, at A01.

[274] IPCC, *supra* note 3, at 58.

[275] *Id.*

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

[277] IPCC, *supra* note 3, at 66.

[278] *Id.* at 36.

The federal securities laws may also provide an easier cause of action for litigants wishing to sue companies directly responsible for GHG emissions. Although the remedy for winning a Rule 10b-5 suit will not automatically require companies to emit less, it may result in the same thing. Requiring disclosure of global warming impacts induces a company to mitigate such impacts by reducing its emissions. Furthermore, while a Rule 10b-5 cause of action may not be a sure victory, such cause of action may provide an easier route for climate change litigants wishing to spur direct operational changes at the GHG emitter level than negligence-based theories.

Global warming impacts are occurring even now. There are many strategies to reduce GHG emissions. Those wishing to ensure that companies invest in low-carbon technology within the next few years should consider the federal securities laws as one possible strategy among many.