

# SPURRING ON ENVIRONMENTAL JUSTICE THROUGH CAP AND TRADE

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## ABSTRACT

*As proposed cap and trade programs for greenhouse gases gain political traction because of their averred market-based efficiencies, many environmental justice advocates have expressed concern about localized effects from cap and trade "hot spots." The Article analyzes the conflicts between market-based pollution trading systems, i.e., cap and trade programs, and environmental justice principles; reviews the history of cap and trade under the Environmental Protection Agency's Acid Rain Program under the Clean Air Act; and summarizes the values and principles of market-based programs and environmental justice. The Article then proposes a novel method of harmonizing environmental justice with cap and trade: cap and trade programs can be fashioned to spur on environmental justice. Through harnessing the monetary benefits that come from running a cap and trade program effectively, policymakers and regulators can fund focused green projects that will specifically benefit environmental justice communities. These funds can go towards clean energy and technology development projects in environmental justice communities that will encourage distributive justice, public participation, and most of all, empowerment. Rather than creating hot spots of localized pollution, cap and trade programs can stimulate clean development, economic growth, and revitalization in underrepresented and underserved environmental justice communities.*

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## INTRODUCTION

Many American lawmakers have made cap and trade the popular vehicle of choice in addressing the global problem of climate change. The recent adoption of the California cap and trade system has furthered the discussion of whether a domestic cap and trade system to regulate greenhouse gas (GHG) emissions would be most effective in mitigating climate change.<sup>1</sup> Moreover, the Regional Greenhouse Gas Initiative (RGGI) program has also been up and running in the Northeastern states.<sup>2</sup> Despite its regulatory nature, major business associations and environmental groups have endorsed market-based cap and trade, and the proposed system has enjoyed the most traction politically out of all the other possible GHG regulations, such as a carbon tax.

The cap and trade schema does not only influence the present, but has also been employed in the past. One prominent and often-cited example is the U.S. Environmental Protection Agency's (EPA) cap and trade Acid Rain Program.<sup>3</sup> The 1990 Clean Air Act (CAA) amendments added Title IV, which established a domestic sulfur dioxide emission trading market.<sup>4</sup> Many economists and environmental academics who supported harnessing the market's power to create a self-regulating trading system to manage sulfur

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<sup>1</sup> See California Adopts Extensive 'Cap-and-Trade' Plan, CBS News (2011), available at <http://www.cbsnews.com/stories/2011/10/20/ap/business/main20123483.shtml>.

<sup>2</sup> Regional Greenhouse Gas Initiative, Inc. Information, available at <http://www.rggi.org/rggi>.

<sup>3</sup> U.S. Environmental Protection Agency, Cap and Trade: Acid Rain Program Results, available at <http://www.epa.gov/capandtrade/documents/ctresults.pdf>.

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

dioxide emissions have given considerable praise and regard to this program.<sup>5</sup> California also established its own pollutant market in 1994 with the Regional Clean Air Incentives Market (RECLAIM), which created a market-based trading program for nitrogen oxide and sulfur oxide emissions.<sup>6</sup> Unlike EPA's Acid Rain Program, RECLAIM has received criticisms for its lack of resulting technological innovation, its overabundance of allowances, and its creation of regions with high concentrations of pollutants.<sup>7</sup>

The idea of cap and trade is simple enough: (1) set a "cap," which comprises the annual allowable emissions of the targeted pollutant; (2) allocate by auction, or for free, a certain number of allowances to pollute, which should equal the cap; and (3) allow the selling and purchasing (i.e. trade) of these allowances between firms. Many cap and trade programs also include offset provisions which allow firms to purchase additional allowances from the regulator by investing in outside pollution reducing programs.<sup>8</sup>

Theoretically, this system would create an efficient and low-maintenance administrative schema to reduce GHGs. Firms would self-

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<sup>5</sup> Lily N. Chinn, Can the Market Be Fair and Efficient? An Environmental Justice Critique of Emissions Trading, 26 *Ecol. L. Quarterly* 80, 87-88 (1999).

<sup>6</sup> South Coast Air Quality Management District, *REgional Clean Air Incentives Market (RECLAIM)*, available at <http://www.aqmd.gov/reclaim/reclaim.html> ("The RECLAIM program covering nitrogen oxide and sulfur oxide emissions started January 1, 1994.") last visited April 8, 2012.

<sup>7</sup> Alice Kaswan, Environmental Justice and Domestic Climate Change Policy, 38 *Env'tl. L. Rep. News & Analysis* 10287, 10296-297 (2008).

<sup>8</sup> Roberta Mann, How to Love the One You're With: Changing Tax Policy to Fit Cap-and-Trade, 2 *San Diego J. of Climate & Energy L.* 145, 156 (2010).

regulate, and the regulator would not have to command and control how firms reduce their emissions. Instead, the government would only have to set the cap, allocate the allowances and monitor the trading. In addition, a firm could choose its own method of reducing GHGs and decide to cover any excess emissions by purchasing allowances from other firms. On the other hand, if a firm's reduction methods are so efficient, it can sell its unused allowances to another firm. Therefore, the government achieves its aggregate reduction goal at the lowest cost because the most efficient polluters bear the lion's share of responsibility to meet the emissions cap.<sup>9</sup> As the government lowers the cap periodically, it would send price signals to spur on the continuous reduction of emissions at the lowest cost.

Furthermore, policymakers, academics and economists have touted GHG reduction and cap and trade as the perfect marriage because GHGs have the same effect on climate change no matter where the emissions occur; one unit of emissions will equally affect the globe whether emission occurs in New York or California.<sup>10</sup> Greenhouse gases also do not have localized effects like sulfur dioxide or lead does, so one California firm can use a large amount of allowances without disproportionately jeopardizing the health and welfare of its neighboring residents.<sup>11</sup>

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<sup>9</sup> See generally Alice Kaswan, CPR Perspective: Environmental Justice and Climate Change (2009) (hereinafter "Kaswan, CPR Perspective"), available at <http://www.progressivereform.org/perspEJandCC.cfm>.

<sup>10</sup> See Kaswan, CPR Perspective, available at <http://www.progressivereform.org/perspEJandCC.cfm>.

<sup>11</sup> See *id.*

However ideal it may seem, critics have severely criticized cap and trade.<sup>12</sup> Environmental justice groups have shown the most concern and skepticism, arguing that cap and trade disproportionately affects lower income and minority communities.

Though GHGs do not have a localized effect, their co-pollutants can cause severe health and environmental problems locally. Typical co-pollutants include volatile organic compounds (VOC), sulfur dioxide, benzene, carbon monoxide, nitrogen oxide and other harmful chemicals. Firms located in low-income minority neighborhoods tend to have the oldest and most out-of-date facilities; therefore, these firms likely have the highest emission levels and require the most allowances.<sup>13</sup> In addition, environmental justice groups are concerned with the lack of public participation. A cap and trade program's achieves efficiency by placing the burden of reduction on the firms. Cap and trade gives firms the flexibility to decide when to reduce emission levels or use allowances. Therefore, cap and trade would not allow for as much public input.<sup>14</sup>

This Article aims to craft a more robust and nuanced cap and trade system that promotes principles of public participation, equity and empowerment, while still maintaining an optimal and efficient market-based

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<sup>12</sup> Though there are very real concerns about setting a cap that is too high or allocating too many allowances, the Article will assume that the government will set a sufficiently stringent cap and allocate a strategically effective number of allowances for a domestic cap and trade system.

<sup>13</sup> See Kaswan, *Environmental Justice and Domestic Climate Change Policy*, at 10299 (2008) (hereinafter "Kaswan, *Environmental Justice*").

<sup>14</sup> See *id.* at 10302.

system. To date, many have considered environmental justice and cap and trade as oil and water. The Article, however, proposes a harmonization of environmental justice and cap and trade. In fact, a cap and trade program can further environmental justice. A fair, equitable and effective cap and trade system must involve: (1) an identification process;<sup>15</sup> (2) investment into environmental justice communities;<sup>16</sup> and (3) financial mechanisms to fund such investment.<sup>17</sup>

The first principle seeks a fundamental goal: identify the environmental justice communities. Government regulators must locate and identify environmental justice communities to provide remedial benefits and equitable treatment to the appropriate people and groups. Simply put, one cannot further environmental justice if he does not know which communities to target.

The second principle calls for investing the revenue made from cap and trade back into the very communities who are most affected by environmental pollution and health problems. Similarly to the California Market Advisory Committee, the Article proposes to “devot[e] a *significant*

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<sup>15</sup> See AB32 Environmental Justice Advisory Committee comments on the Proposed Screening Method for Low-Income Communities Highly Impacted by Air Pollution for AB 32 Assessments, p. 1-4, August 25, 2010 (spelling out a “screening method” that attempts to identify communities that have been “highly impacted by air pollution.”).

<sup>16</sup> See MARKET ADVISORY COMMITTEE TO THE CALIFORNIA AIR RESOURCES BOARD, RECOMMENDATIONS FOR DESIGNING A GREENHOUSE GAS CAP AND TRADE SYSTEM FOR CALIFORNIA 9 (2007), available at <http://www.energy.ca.gov/2007publications/ARB-1000-2007-007/ARB-1000-2007-007.PDF>.

<sup>17</sup> See Alice Kaswan, Reconciling Justice and Efficiency: Integrating Environmental Justice Into Domestic Cap-And-Trade Programs for Controlling Greenhouse Gases, 252-253 (hereinafter “Kaswan, Reconciling Justice and Efficiency”).

portion of the allowance value to *investments* in . . . communities that bear *disproportionate* environmental and public health burdens.”<sup>18</sup> The revenue gathered through cap and trade would be put into the hands of each environmental justice community to invest in clean energy and technology projects that could potentially benefit the community’s environmental health and economic condition.

The third principle calls for financial mechanisms that could allow the cap and trade program to gather revenue in furtherance of the second principle. These financial mechanisms would come in the form of allowance auctions, luxury taxes and possibly monetary penalties for excess emissions.

## **I. A BRIEF OVERVIEW OF CLIMATE CHANGE**

Climate change is simply “any distinct change in measures of climate lasting for a long period of time.”<sup>19</sup> Climate change is such a pressing issue because it can severely cause changes in, *inter alia*, temperature, snow, wind, rain, sea levels and polar ice sheets. Moreover, many of these changes can cause ripple effects in human health, land use, agriculture, water resources, ecosystems and many unforeseeable occurrences.<sup>20</sup> As

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<sup>18</sup> MARKET ADVISORY COMMITTEE TO THE CALIFORNIA AIR RESOURCES BOARD, RECOMMENDATIONS FOR DESIGNING A GREENHOUSE GAS CAP AND TRADE SYSTEM FOR CALIFORNIA 9 (2007), *available at* <http://www.energy.ca.gov/2007publications/ARB-1000-2007-007/ARB-1000-2007-007.PDF> (emphasis added).

<sup>19</sup> U.S. Environmental Protection Agency, Frequently Asked Questions About Global Warming and Climate Change: Back to Basics 3 (2009), *available at* [http://www.epa.gov/climatechange/downloads/Climate\\_Basics.pdf](http://www.epa.gov/climatechange/downloads/Climate_Basics.pdf).

<sup>20</sup> See generally U.S. Global Change Research Program, Global Climate Change Impacts in the United States, p. 41-152 (2009), *available at* <http://downloads.globalchange.gov/usimpacts/pdfs/climate-impacts-report.pdf>.



GHG concentrations continue to rise at record-breaking levels, the need to reduce emissions is more critical than ever.<sup>21</sup>

The Intergovernmental Panel on Climate Change (IPCC) has established that the warming of the globe's climate system is conclusive.<sup>22</sup> Greenhouse gases, such as carbon dioxide, nitrous oxide, methane and hydrofluorocarbons, naturally trap heat.<sup>23</sup> As the sun's solar radiation heats the earth, a portion of the heat is trapped in the atmosphere by clouds and GHGs.<sup>24</sup>

EPA has noted that "[i]f greenhouse gases continue to increase, climate models predict that the average temperature at the Earth's surface could increase from 3.2 to 7.2° F above 1990 levels by the end of this century."<sup>25</sup> The effect of the rises in temperature can be extreme and drastic. Humans have already observed rising sea levels, changing ecosystems and habitats and increased storms and flooding.<sup>26</sup> If climate change continues, one can expect to see decreases in biodiversity; longer and more intense heat waves; more frequent droughts and floods (which would most likely also affect water quality and availability); more intense

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<sup>21</sup> See Associated Press, UN: Concentrations of greenhouse gases hit record, Nov. 21, 2011, available at <http://news.yahoo.com/un-concentrations-greenhouse-gases-hit-record-100402390.html>.

<sup>22</sup> Intergovernmental Panel on Climate Change, *Climate Change 2007: The Physical Science Basis*, p. 5 (Susan Solomon et al. eds., 2007).

<sup>23</sup> Maxine Burkett, *Just Solutions to Climate: A Climate Justice Proposal for a Domestic Clean Development Mechanism*, 56 *Buffalo Law Review* 169, 175 (2008).

<sup>24</sup> U.S. Environmental Protection Agency, *Climate Change: Basic Information*, available at <http://epa.gov/climatechange/basicinfo.html>.

<sup>25</sup> *Id.*

<sup>26</sup> See U.S. Environmental Protection Agency, *Coastal Zones and Sea Level Rise*, available at <http://www.epa.gov/climatechange/effects/coastal/index.html>.

hurricanes; higher rainfall; and the disappearance of land as sea levels continue to rise.<sup>27</sup> Climate change could “increase the probability of some ordinary weather events reaching extreme levels or [the probability] of some extreme events becoming more extreme.”<sup>28</sup>

Although the greenhouse effect is partially caused by natural effects, scientists have determined that human activities have become “a dominant force, and are responsible for most of the warming observed over the past 50 years.”<sup>29</sup> Throughout history, the largest human sources of GHG emissions were the developed countries, especially the U.S. As these countries developed, modernized, and industrialized, they burned massive amounts of fossil fuels, emitting approximately 65 percent of the world’s present global emissions.<sup>30</sup> America, as the highest per capita emitter of carbon dioxide, has not fared well in its emissions history. As both a historic and current large emitter of GHGs, America has a special responsibility to lead in the reduction of GHG emissions. Though the country has relied on the burning of fossil fuels to reach its current pinnacle, America also has a rare opportunity to carry the torch for forthcoming climate change solutions. In addition, the U.S. can ensure that these future solutions incorporate considerations for environmental justice.

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<sup>27</sup> U.S. Environmental Protection Agency, Climate Change: Basic Information, available at <http://epa.gov/climatechange/basicinfo.html>.

<sup>28</sup> U.S. Environmental Protection Agency, Climate Change - Health and Environmental Effects: Extreme Events, available at <http://www.epa.gov/climatechange/effects/extreme.html>.

<sup>29</sup> IPCC Assessment Report 105 (2007), available at <http://www.ipcc.ch/pdf/assessment-report/ar4/wg1/ar4-wg1-chapter1.pdf>.

<sup>30</sup> David M. Driesen, Free Lunch or Cheap Fix?: The Emissions Trading Idea and the Climate Change Convention, 26 Boston College Environmental Affairs Law Review 1, 8-9 (1998).

## II. EPA'S SULFUR DIOXIDE CAP AND TRADE PROGRAM: AN ILLUSTRATIVE MODEL

Market-based mechanisms to control emissions of GHGs have become increasingly palatable in the discussion of how to stem climate change. Indeed, many EPA initiatives and rules for air and water pollution, such as the Clean Air Interstate Rule (which the D.C. Circuit eventually struck down for reasons unrelated to the idea of trading) and the Water Quality Trading Policy of 2003, have included some type of trading mechanism.<sup>31</sup> GHG cap and trade programs seeks to harness the power of the market and to reduce GHG emissions in the most flexible and efficient means possible.<sup>32</sup> Since the cap and trade model gained substantial traction after the implementation of the Acid Rain Program, the Article will use the Acid Rain Program as an illustrative model of how cap and trade functions. The 1990 CAA amendments established a national cap and trade program for, *inter alia*, sulfur dioxide through the Acid Rain Program. The program sought to reduce emissions by 10 million tons below 1980 levels,<sup>33</sup> and would prove to

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<sup>31</sup> 70 Federal Register 25162, 25162 (May 2005), available at <http://www.federalregister.gov/articles/2005/05/12/05-5723/rule-to-reduce-interstate-transport-of-fine-particulate-matter-and-ozone-clean-air-interstate-rule#p-3> (“Today’s action also includes model rules for multi-State cap and trade programs for annual SO<sub>2</sub> and NO<sub>x</sub> emissions for PM 2.5 and seasonal NO<sub>x</sub> emissions for ozone.”); U.S. Environmental Protection Agency, Final Water Quality Trading Policy (2003), available at <http://water.epa.gov/type/watersheds/trading/finalpolicy2003.cfm>.

<sup>32</sup> See Kaswan, CPR Perspective, available at <http://www.progressivereform.org/perspEJandCC.cfm>.

<sup>33</sup> U.S. Environmental Protection Agency, Clean Air Markets: Acid Rain Program’s Phases and Reductions, available at <http://www.epa.gov/airmarkets/progsregs/arp/basic.html#phases>. The Act also called for a 2 million ton reduction in nitrogen oxides emissions by the year 2000.

be the model used by future state and national cap and trade in their programs and proposals.<sup>34</sup>

The CAA's Acid Rain Program allocated sulfur dioxide emission allowances to participating firms according to an allocation formula.<sup>35</sup> These allowances acted as currency. Each allowance permitted one ton of sulfur dioxide emission, and would be transferrable among all parties, including third-party individuals who wished to "retire" the allowance, instead of use it. Firms could trade, sell and buy allowances among each other to meet their emission levels. A firm could also choose to "bank" any of its surplus allowances for future years.

This type of trading program offered the flexibility and efficiency that made compliance costs attractively cheaper for industry stakeholders.<sup>36</sup> In this artificial pollutant market, firms could trade allowances among themselves without having the government impose controlling and disruptive regulations.<sup>37</sup> At the same time, there would be reductions in emissions because only a certain number of total allowances would be allocated each year.<sup>38</sup> In addition, to protect public health, the Acid Rain Program prohibited any firm from emitting at levels that violated federal or state

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<sup>34</sup> U.S. Environmental Protection Agency, Acid Rain Program - Compliance Options: Freedom to Choose, available at <http://www.epa.gov/airmarkets/progsregs/arp/basic.html#model>.

<sup>35</sup> T.H. TIETENBERG, EMISSIONS TRADING: PRINCIPLES AND PRACTICE 10-11 (2nd ed., 2006).

<sup>36</sup> *Id.*

<sup>37</sup> See U.S. Environmental Protection Agency, Acid Rain Program - Compliance Options: Freedom to Choose, available at <http://www.epa.gov/airmarkets/progsregs/arp/basic.html#model>. "(The allowance trading system creates low-cost rules of exchange that minimize government intrusion and make allowance trading a viable compliance strategy for reducing SO<sub>2</sub>.")

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

limits under Title I of the CAA – regardless of how many allowances that firm had.<sup>39</sup>

### *A. The Auction Program*

The Acid Rain Program instituted an innovative allowance auction program. Beginning in 1993, every March, EPA held an auction for sulfur dioxide allowances. “The auctions help[ed] to send the market an allowance price signal, as well as furnish utilities with an additional avenue for purchasing needed allowances.”<sup>40</sup> There was also a direct sale method, which offered allowances for \$1,500 each (adjusted for inflation).<sup>41</sup> Through this cap and trade program, EPA sought to artificially establish a self-monitoring market.<sup>42</sup>

The market-based program furthered the active purchase and transfer of allowances and granted facilities the freedom to become compliant in the most efficient, business sensible, and low-cost manner – all while meeting emission reduction goals.<sup>43</sup> Businesses had the flexibility to choose – with minimum government intervention – how they would comply under the

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<sup>39</sup> U.S. Environmental Protection Agency, Acid Rain Program - Trading, available at <http://www.epa.gov/airmarkets/progsregs/arp/basic.html#trading>; *see generally* U.S. Environmental Protection Agency, Cap and Trade: Essentials, available at <http://www.epa.gov/captrade/documents/ctessentials.pdf>; DENNY ELLERMAN, ET AL., MARKETS FOR CLEAN AIR: THE U.S. ACID RAIN PROGRAM (2000); LAURINE G. CHESTNUT, DAVID M MILLS, A FRESH LOOK AT THE BENEFITS AND COSTS OF THE US ACID RAIN PROGRAM, 77 J ENV. MGMT 252 (2005).

<sup>40</sup> U.S. Environmental Protection Agency, Acid Rain Program Basics - Auctions, available at <http://www.epa.gov/airmarkets/progsregs/arp/basic.html#auctions>.

<sup>41</sup> U.S. Environmental Protection Agency, Acid Rain Program - Auctions, available at <http://www.epa.gov/airmarkets/progsregs/arp/basic.html#auctions>.

<sup>42</sup> *See* U.S. Environmental Protection Agency, Acid Rain Program - Trading, available at <http://www.epa.gov/airmarkets/progsregs/arp/basic.html#trading>; U.S. Environmental Protection Agency, Acid Rain Program - Model, available at <http://www.epa.gov/airmarkets/progsregs/arp/basic.html#model>.

<sup>43</sup> *Id.*

relevant environmental laws.<sup>44</sup> This sulfur dioxide cap and trade program – based on free market values and incentives – directly contrasted with the traditional *command-and-control* regulatory methods that impose “specific, inflexible emissions limitations with which all affected sources must comply.”<sup>45</sup>

### *B. Tracking the Allowances and Transactions*

EPA established the Allowance Management System (AMS) to monitor and track the allowances that flow throughout the cap and trade program.<sup>46</sup> This electronic recordkeeping system allowed EPA to determine each firm’s compliance using a quick and easy digital database. All firms in the cap and trade system had to create an account with AMS.<sup>47</sup> Every firm received an individual account number, and each allowance bore a serial number for effective and expedited recordkeeping and monitoring. EPA made available all information on emission allowances and transactions to the general public, as well.<sup>48</sup>

### *C. The Benefits of Applying Market Mechanisms to GHG Policy*

Many are attracted to the program because of the administrative ease, economic efficiency, and flexibility for the participating firms.<sup>49</sup> Cap and

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

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

<sup>46</sup> U.S. Environmental Protection Agency, Acid Rain Program SO<sub>2</sub> Allowances Fact Sheet, available at <http://www.epa.gov/airmarkets/trading/factsheet.html#whatis>.

<sup>47</sup> *Id.*

<sup>48</sup> *Id.*

<sup>49</sup> See generally Bruce A. Ackerman and Richard B. Stewart, “Reforming Environmental Law,” 37 *Stan. Law Rev.* 1333 (1985).

trade programs theoretically require a much smaller government role than traditional regulatory approaches, which leads to greater administrative ease. A cap and trade program would not require the government to command specific standards for firm operations.<sup>50</sup> Traditional regulations require government regulators to determine which types of technology and equipment would be appropriate for each industry.<sup>51</sup> The government would need to employ the right experts and scientists to make these determinations. These determinations oftentimes require extensive reports, long approval processes, and general lag – all while using up government resources.<sup>52</sup> Furthermore, the technological expertise and information the government is seeking may already be part of the collective industry knowledge.<sup>53</sup> “[T]raditional regulations require[] government officials to develop technological expertise that is arguably already held by regulated industries.”<sup>54</sup>

Under a cap and trade program, the regulated firms could use their own industry knowledge and expertise to decide what the most sensible methods of reduction are. Ideally, a well-designed cap and trade program will not only bring economic efficiency, but also increase administrative expeditiousness – the government would play a more passive facilitator role; it would set the cap, auction off allowances, monitor the use of those

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<sup>50</sup> Kaswan, *Reconciling Justice and Efficiency* at 238.

<sup>51</sup> *Id.*

<sup>52</sup> *Id.*

<sup>53</sup> *Id.*

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

allowances, facilitate the purchase of offsets, verify the facilities' emission levels and enforce actions against firms who exceed their allowed emission levels. Professor Alice Kaswan has noted that under cap and trade, "[t]he government role consists of monitoring and ensuring that facilities have enough allowances to account for their emissions at the end of a specified 'compliance period.'"<sup>55</sup> Under a cap and trade regime, the government would focus more on *results* rather than on inquiring extensively into the *method* of reduction, unless there was evidence of fraud, market manipulation or other illegal activity.<sup>56</sup> Under an ideal cap and trade program, the government would no longer have to oversee facility-specific permitting, control the installation of control technologies, or determine which control technologies would be best-suited for regulated firms.<sup>57</sup> Of course, since the government would mostly be looking at results, it is critical for regulators to monitor and enforce emission levels strictly and consistently, in order to maintain the efficacy of the program.<sup>58</sup> The government must still play the important role of collecting, verifying,

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<sup>55</sup> Kaswan, CPR Perspective; see also

U.S. Environmental Protection Agency, Basics of Cap and Trade, <http://www.epa.gov/captrade/basic-info.html> ("A well-designed cap and trade program delivers . . . [f]ewer administrative costs to government.").

<sup>56</sup> U.S. Environmental Protection Agency, Cap and Trade: Essentials, available at <http://www.epa.gov/captrade/documents/ctessentials.pdf> ("Compliance strategies in well-designed cap and trade programs require no prior approval, allowing sources to respond quickly to market conditions and government regulators to remain focused on results.").

<sup>57</sup> See Kaswan, Environmental Justice at 10297.

<sup>58</sup> *Id.* ("Therefore, the government's ability to monitor and enforce emission levels becomes of paramount important. . . . [A]ccurate emissions monitoring is essential to meeting environmental goals.").



maintaining and making available all the data on the firms' emissions and compliance status.<sup>59</sup>

Under a market-based regulatory system, the government could focus on other tasks and priorities while expending less government resources. Additionally, the government would ideally not have to spend as much money enforcing command-and-control regulations, and firms would retain lower compliance costs. "Greater administrative efficiency preserves limited government resources for other priorities or reduces the taxpayers' burden."

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Cap and trade would also ideally result in the most cost-effective and economically efficient means of reducing total GHG emissions. Traditional regulatory mechanisms require firms to install control technology that may not be the most cost-effective or economically sensible methods of reduction.<sup>61</sup> Certain regulated firms may know how to reduce emissions at an equal or higher rate using a cheaper method than the one which the government requires. Command-and-control regulations typically do not incentivize firms to implement and perform their own cheaper reduction operations – even if doing so would reduce GHG emission levels – because

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<sup>59</sup> See e.g. Sam Napolitano et. al, The U.S. Acid Rain Program: Key Insights from the Design, Operation, and Assessment of a Cap-and-Trade Program, 54, available at [http://www.epa.gov/airmarkets/resource/docs/US%20Acid%20Rain%20Program\\_Elec%20Journal%20Aug%202007.pdf](http://www.epa.gov/airmarkets/resource/docs/US%20Acid%20Rain%20Program_Elec%20Journal%20Aug%202007.pdf) ("For the ARP to operate with environmental integrity and public credibility, the EPA must collect, verify, maintain, and disseminate vast amounts of data.").

<sup>60</sup> See Kaswan, Reconciling Justice and Efficiency at 238.

<sup>61</sup> See *id.*

firms would still have to implement government-mandated technology even if they knew of cheaper and more effective methods.<sup>62</sup>

On the other hand, under a cap and trade program, firms with low reduction costs would theoretically have an incentive to reduce GHG emissions because such firms could sell the leftover allowances. Firms with high reduction costs would have the option to buy these allowances and spur on the trade and demand for allowances in the market-based system. Since firms with the most cost effective reduction methods would perform the majority of reductions, “reducing aggregate emissions [would come] at the lowest industry cost.”<sup>63</sup>

### **III. ENVIRONMENTAL JUSTICE: PUBLIC PARTICIPATION, DISTRIBUTIVE JUSTICE, AND EMPOWERMENT**

Environmental justice seeks three essential goals: (1) distributive justice; (2) the promotion of public participation; and (3) community empowerment.<sup>64</sup> The inception of the environmental justice movement occurred in 1987 when the United Church of Christ (UCC) Commission for Racial Justice published its seminal study, *Toxic Wastes and Race in the United States*.<sup>65</sup> The report concluded that communities with a large population of minorities tended to be the sites where hazardous waste

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<sup>62</sup> *Cf. id.* at 238 (stating that under a cap and trade program, “facilities that have lower control costs have an incentive to reduce emissions and sell the excess allowances”); *see also id.* at 238 (“Traditional regulatory approaches are deemed economically inefficient since they require all facilities with high reduction costs to buy allowances rather than make expensive reductions.”).

<sup>63</sup> *See Kaswan, Reconciling Justice and Efficiency* at 238.

<sup>64</sup> *See id.* at 235-37.

<sup>65</sup> United Church of Christ Justice and Witness Ministries, *Toxic Wastes and Race at Twenty 1* (2007), available at <http://www.ucc.org/assets/pdfs/toxic20.pdf>.

facilities were located.<sup>66</sup> A disproportionate number of uncontrolled toxic waste sites were concentrated in Black and Hispanic communities.<sup>67</sup> Further studies and reports confirmed the UCC's findings: poor communities of color disproportionately became the sites for waste disposal facilities, hazardous waste facilities and other unattractive and potentially dangerous land uses.<sup>68</sup> Already at a disadvantage, "[l]ow-income and of-color Americans are more likely to be underserved by government and private relief agencies before, during, and after environmental disasters."<sup>69</sup>

The grass-roots movement gained mainstream political traction. Executive Order 12898, issued by President Clinton on February 11, 1994, ordered each federal agency to integrate environmental justice into its actions and mission.<sup>70</sup> Each federal agency would need to address the "disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations in the United States."<sup>71</sup> EPA also set out to address environmental justice concerns in its enforcement and compliance assurance activities.<sup>72</sup>

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<sup>66</sup> *Id.* at 1-6.

<sup>67</sup> United Church of Christ, *Toxic Wastes and Race in the United States: A National Report on the Racial and Socio-Economic Characteristics of Communities with Hazardous Waste Sites*, p. xv (1987), available at <http://www.ucc.org/about-us/archives/pdfs/toxwrace87.pdf>.

<sup>68</sup> Kaswan, *Reconciling Justice and Efficiency* at 234.

<sup>69</sup> Maxine Burkett, *Just Solutions to Climate: A Climate Justice Proposal for a Domestic Clean Development Mechanism*, 56 *Buffalo Law Review* 169, 186,(2008).

<sup>70</sup> Executive Order, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations* (1994), available at [http://www.epa.gov/region2/ej/exec\\_order\\_12898.pdf](http://www.epa.gov/region2/ej/exec_order_12898.pdf).

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

<sup>72</sup> U.S. Environmental Protection Agency, *Environmental Justice Homepage*, <http://www.epa.gov/environmentaljustice/> ("Environmental Justice is the fair treatment and meaningful involvement

Despite much lip service to environmental justice and its tenets, there has not been nearly the same amount of practical action. Industrial and hazardous waste facilities are still disproportionately located in environmental justice communities. As of 2008, Congress has not specifically addressed environmental justice concerns in any its bills on GHG reduction programs.<sup>73</sup>

California, a forerunner in environmental justice, recently passed its state cap and trade program under the Global Warming Solutions Act, also known as Assembly Bill 32 (AB 32).<sup>74</sup> AB 32 attempts to implement a statewide cap and trade program while still addressing environmental justice concerns.<sup>75</sup> AB 32's policymaking process must, by law, involve the consultation of, *inter alia*, environmental justice communities, industry stakeholders and business groups.<sup>76</sup> AB 32 also requires the creation of the Environmental Justice Advisory Committee (EJAC), which should be

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of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.”).

<sup>73</sup> See Alice Kaswan, Environmental Justice and Domestic Climate Change Policy, 38 *Env'tl. L. Rep. News & Analysis* 10287, 10290 (2008) (“A few of these bills consider the statutes' potential economic consequences through provisions that would compensate low-income utility customers and workers or regions especially affected by regulation. None of the bills explicitly addresses the potential adverse environmental consequences of the GHG reduction programs themselves, or assures environmental justice more broadly.” (footnotes omitted)).

<sup>74</sup> See *id.*

<sup>75</sup> See *id.* at 10291 (“Procedurally, the law instructs CARB to develop its policies in consultation with many relevant stakeholders, including ‘the environmental justice community, industry sectors, business groups, academic institutions, [and] environmental organizations.’ The law also mandated the creation of an Environmental Justice Advisory Committee . . . .” (alteration in original) (footnote omitted)).

<sup>76</sup> CAL. HEALTH & SAFETY CODE § 38501 (f) (“It is the intent of the Legislature that the State Air Resources Board coordinate with state agencies, as well as consult with the environmental justice community, industry sectors, business groups, academic institutions, environmental organizations, and other stakeholders in implementing this division.”).

comprised of representatives from communities with high exposure to air pollution, including low-income and minority communities.<sup>77</sup>

EJAC has already voiced concern about environmental justice issues stemming from the state's cap and trade program.<sup>78</sup> Among its multiple concerns, EJAC commented that AB 32's Scoping Plan should provide more guidance to local and regional government entities in regard to land use decisions.<sup>79</sup> EJAC recommended that the California Air Resources Board (CARB) issue "specific or quantifiable measures," to aid local government authorities in making "appropriate land-use decisions."<sup>80</sup> The committee also called for more focus on the local government's role in reducing carbon emissions, recommending that CARB set stringent carbon reduction targets for local jurisdictions based on the jurisdiction's size.<sup>81</sup> Rather than simply having CARB encourage local governments to set carbon reduction targets, EJAC believes the local governments should be forced to meet certain

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<sup>77</sup> *Id.* § 38591 (a) ("The state board, by July 1, 2007, shall convene an environmental justice advisory committee, of at least three members, to advise it in developing the scoping plan pursuant to Section 38561 and any other pertinent matter in implementing this division. The advisory committee shall be comprised of representatives from communities in the state with the most significant exposure to air pollution, including, but not limited to, communities with minority populations or low-income populations, or both.").

<sup>78</sup> See Recommendations and Comments of the Environmental Justice Advisory Committee on the Implementation of the Global Warming Solutions Act of 2006 (AB 32) on the Draft Scoping Plan 14-15, October 1, 2008, available at [http://www.arb.ca.gov/cc/ejac/ejac\\_comments\\_final.pdf](http://www.arb.ca.gov/cc/ejac/ejac_comments_final.pdf) ("Since the [EJAC's] inception, we have repeatedly flagged the importance of understanding and maximizing the public health and non-economic benefits associated with the State's effort to reduce greenhouse gases. It is equally important that the State's efforts do not negatively impact public health and the environment. Understanding and maximizing the public health impacts of the plan are of acute importance to low-income communities, communities of color, and those who are already highly burdened by air pollution because the benefit or burden of these programs has a significant impact on the health of those communities.") (footnote omitted).

<sup>79</sup> *Id.* at 23 ("Local and regional land use authorities have not been provided with adequate standards, guidance, or incentives to ensure that local and regional development decisions will contribute to AB 32 greenhouse gas reduction targets.").

<sup>80</sup> *Id.* ("These measures include adopting specific standards, creating guidance documents, instituting control requirements, and offering incentive programs to local and regional governmental agencies.").

<sup>81</sup> *Id.*

targets because, according to EJAC, "our [EJAC's] experience continues to demonstrate that cities either do not set any targets, set targets that are too low, or unrealistic targets with no intent of meeting them."<sup>82</sup> Among other recommendations, EJAC also recommended incentive programs to encourage increased spending on public transportation infrastructure or usage; farmland protection to encourage sustainable and organic farming practices; increased regional water protection and conservation; specified amounts of reductions for various categories of industrial emissions; and "enhanced community benefits" through the establishment of energy efficiency, green building and renewable energy programs in low-income communities.<sup>83</sup> AB 32 serves as an example of how environmental justice advocates worry about pollution trading's effects on local communities.

#### *A. Distributive Justice*

Distributive justice – one of the main goals of environmental justice – means that no community or group of people should be forced to bear a disproportionate share of the negative environmental effects from industrial or government actions.<sup>84</sup> Moreover, their healthcare is often substandard or not easily accessible.<sup>85</sup> Distributive justice is a primary concern in the

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<sup>82</sup> *Id.*

<sup>83</sup> *Id.* at 25, 30-34.

<sup>84</sup> See Alice Kaswan, Environmental Justice and Domestic Climate Change Policy, 38 *Env'tl. L. Rep. News & Analysis* 10287, 10294 (2008) ("In the world of environmental justice . . . distributive justice is key: the issue is who suffers the impacts of pollution.").

<sup>85</sup> Maxine Burkett, Just Solutions to Climate: A Climate Justice Proposal for a Domestic Clean Development Mechanism, 56 *Buffalo Law Review* 169, 189-90 (2008); see also Power, Justice, and the Environment: A Critical

environmental justice movement. “[E]nvironmental justice advocates place a high premium on relieving low-income and minority communities of environmental burdens regardless of resulting higher costs to certain market participants or society as a whole.”<sup>86</sup>

### *B. Public Participation*

Environmental justice advocates also seek meaningful public participation.<sup>87</sup> Giving residents of environmental justice communities, i.e., those who live in environmental justice communities, a voice to express their views would allow them to more ably effect change in their neighborhoods.<sup>88</sup> The environmental justice movement supports regulations and laws that provide avenues for public participation and comment to foster accountability with the government and industrial firms.<sup>89</sup> Access to public information and records allows residents to remain informed about policies and operations that could affect the community’s health and environment.<sup>90</sup>

### *C. Empowerment*

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Appraisal of the Environmental Justice Movement, Edited by David Naguib Pellow and Robert J. Brulle, MIT Press (2005), at 1-4.

<sup>86</sup> Lily N. Chinn, Can the Market Be Fair and Efficient? An Environmental Justice Critique of Emissions Trading, 26 Ecol. L. Quarterly 80, 84 (1999).

<sup>87</sup> Kaswan, Reconciling Justice and Efficiency at 237.

<sup>88</sup> *Id.*

<sup>89</sup> *See id.*

<sup>90</sup> *See* Kaswan, Reconciling Justice and Efficiency at 237; Alice Kaswan, Environmental Justice and Domestic Climate Change Policy, 38 Env'tl. L. Rep. News & Analysis 10287, 10303 (2008).

Lastly, environmental justice advocates seek the empowerment of local communities and neighborhoods.<sup>91</sup> Environmental justice need not be confined in a category of its own, but can be built upon broader civil rights concerns.<sup>92</sup> The environmental justice, through a focus on grass-roots activism, addresses the widespread and societal inequities that cause injustice in the first place.<sup>93</sup> The movement, therefore, ultimately envisions a thriving, influential and self-reliant community – and not just environmental improvement for its own sake.<sup>94</sup> The environmental justice movement can form empowered communities that “feed themselves, provide energy, build new systems of governance and decision making . . . and produce and control new knowledge about public health and the environment.”<sup>95</sup>

#### **IV. ENVIRONMENTAL JUSTICE’S CONFLICTS WITH CAP AND TRADE**

There is much conflict between environmental justice and cap and trade. Both sides seek to promote human health and protect the environment. However, the concerns of environmental justice often intersect with the methods of cap and trade. “Naturally, market-based

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<sup>91</sup> See Comment, Environmental Justice and Community Empowerment: Learning From the Civil Rights Movement, 48 Am. U. L. Rev. 229, 247 (1998).

<sup>92</sup> See Alice Kaswan, Environmental Justice and Domestic Climate Change Policy, 38 Env'tl. L. Rep. News & Analysis 10287, 10289 (2008) (“Emerging primarily in communities of color, the environmental justice movement built upon the civil rights tradition and its strong focus on grass-roots activism.”).

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

<sup>94</sup> Kaswan, Environmental Justice at 10289.

<sup>95</sup> See Power, Justice, and the Environment: A Critical Appraisal of the Environmental Justice Movement, edited by David Naguib Pellow and Robert J. Brulle, MIT Press (2005), at 295.



approaches such as emission trading permits came under scrutiny by the environmental justice movement as the most recent policy innovation in air pollution control. Environmental justice advocates were particularly concerned with the efficacy of the market as a method to distribute environmental burdens and benefits.”<sup>96</sup>

### *A. Collateral Damage by Co-pollutants*

GHG emissions do not have a localized effect, only a global one. Thus, theoretically, it makes no difference – in terms of climate change effect – where emissions or reductions occur in a GHG cap and trade system.<sup>97</sup> However, toxic co-pollutants that have a localized effect often accompany GHG emissions.<sup>98</sup> Therefore, if a facility emits a high level of GHGs, then there will also be a large localized effect from co-pollutants. Facilities that use the most allowances likely emit the most co-pollutants, and facilities that use the most allowances are typically located in environmental justice communities.<sup>99</sup> Many of the “dirtiest” and oldest facilities are located in communities where minorities and the poor live, and these firms would often rather buy allowances than take on the costs of retrofitting existing plants to reduce emissions.<sup>100</sup> “In the area of program design, enthusiasm for

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<sup>96</sup> Lily N. Chinn, Can the Market Be Fair and Efficient? An Environmental Justice Critique of Emissions Trading, 26 *Ecol. L. Quarterly* 80, 81-82 (1999)

<sup>97</sup> Kaswan, CPR Perspective, available at <http://www.progressivereform.org/perspEJandCC.cfm>.

<sup>98</sup> *Id.*

<sup>99</sup> Eileen Gauna et al., CPR Perspective Environmental Justice at Stake (hereinafter “Gauna, CPR Perspective”), available at <http://www.progressivereform.org/perspEnvironJustice.cfm>.

<sup>100</sup> *Id.*

pollution trading has often overlooked the potential of trading programs to cause or exacerbate toxic 'hot spots.'"<sup>101</sup>

Hot spots are locations where harmful co-pollutants are highly concentrated.<sup>102</sup> The facilities in environmental justice communities are likely to be the ones that are high-cost reducers (because of older equipment and technology) with the most need for allowances and offsets.<sup>103</sup> Unless they have an incentive to reduce emissions themselves, under a GHG cap and trade program, these firms would likely continue to use a large majority of the total allowances and offsets.<sup>104</sup> In some locations, cap and trade may actually case emission rates to be higher than they would have been otherwise.<sup>105</sup> In other words, emission rates in those areas could *rise* under a cap and trade program.<sup>106</sup> Indeed, the California Market Advisory Committee, in advising CARB on how to design an effective GHG cap and trade program, has noted that carbon trading could lead to an increase in "emissions of a local pollutant [co-pollutant] at one facility."<sup>107</sup> Thus, the local dangers and potential for distributional injustice have consistently

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<sup>101</sup> *Id.*

<sup>102</sup> See Gabriel Nelson, *Has Emissions Cap and Trade Created Toxic Hotspots? A New Study Says No*, N.Y. Times (Mar. 31, 2011), <http://www.nytimes.com/gwire/2011/03/31/31greenwire-has-emissions-cap-and-trade-created-toxic-hotsp-4746.html> (describing hot spots as "cutting pollution overall but concentrating the rest of it in vulnerable areas").

<sup>103</sup> See Alice Kaswan, *Environmental Justice* at 10299 ("[P]oor communities of color . . . contain the nation's older, more polluting, facilities.")

<sup>104</sup> See Gauna, *CPR Perspective*, available at <http://www.progressivereform.org/persp/EnviroJustice.cfm>.

<sup>105</sup> Kaswan, *Reconciling Justice and Efficiency* at 241 ("It is also conceivable that trading in GHG allowances could lead to *increases* in associated co-pollutants at certain locations.")

<sup>106</sup> *See id.*

<sup>107</sup> MARKET ADVISORY COMMITTEE TO THE CALIFORNIA AIR RESOURCES BOARD, *RECOMMENDATIONS FOR DESIGNING A GREENHOUSE GAS CAP AND TRADE SYSTEM FOR CALIFORNIA* 13 (2007), available at <http://www.energy.ca.gov/2007publications/ARB-1000-2007-007/ARB-1000-2007-007.PDF>.

drawn wariness and sharp skepticism from environmental justice advocates.<sup>108</sup>

### *B. Tensions between a Holistic Outlook and a Localized Concern*

Cap and trade programs views GHG emissions as a very *broad* and *holistic* problem that must be solved using market-based mechanisms. The Center for American Progress states the goal is “[t]o steadily reduce carbon dioxide and other greenhouse gas emissions economy-wide in a cost-effective manner.”<sup>109</sup> The focus is on reducing the aggregate amount of emissions, without placing as much emphasis on where or how it is accomplished.<sup>110</sup> It does not matter how much each firm emits – as long as the sum remains under the cap. Accordingly, the greatest good should come at the lowest cost: “[b]y reducing the cost of improving and maintaining air quality, everyone is better off.”<sup>111</sup>

The conflict arises when environmental justice advocates point to the lack of localized concern in the market-based system.<sup>112</sup> To attain the highest economic efficiency, the focus would not be on *distributional consequences*.<sup>113</sup> On one hand, the very goal of cap and trade includes not worrying about the localized effects because that would take away from the

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<sup>108</sup> See Gauna, CPR Perspective, available at <http://www.progressivereform.org/perspEnvironJustice.cfm>.

<sup>109</sup> *Cap and Trade 101: What Is Cap and Trade, and How Can We Implement It Successfully?*, Center for American Progress (Jan. 16, 2008) (hereinafter “Cap and Trade 101”), available at <http://www.americanprogress.org/issues/2008/01/capandtrade101.html>.

<sup>110</sup> See *id.*

<sup>111</sup> See Daniel J. Dudek and John Palmisano, “Emissions Trading: Why Is This Thoroughbred Hobbled?,” 13 *Colum. J. of Env. Law* 217, 223 (1988).

<sup>112</sup> Kaswan, *Reconciling Justice and Efficiency* at 240.

<sup>113</sup> *Id.*

efficiency of aggregate reduction.<sup>114</sup> On the other hand, environmental justice is especially concerned about reducing environmental pollution and negative health effects in communities that most likely would have the highest chance of “hot spots” under a cap and trade regime.<sup>115</sup>

### *C. Tensions between Expeditiousness and Public Participation*

Cap and trade programs seek to foster quick and easy trading so that extended procedures and “red tape” do not hamper the transfer and purchase of allowances between different firms. Therefore, an ideal trading process occurs mostly *within the market* itself and between the firms, with no input or comment from the outside – governmental or otherwise.<sup>116</sup>

Administrative burdens are light when the government’s most important tasks are setting the cap and ensuring each firm has enough allowances to meet its emissions.<sup>117</sup> Trading is mainly a private sector concern.

Procedurally, this administrative method makes the market run most expeditiously by reducing transaction costs and lag time. Firms can trade privately among themselves with little to no public engagement or disturbance, thereby creating liquidity and demand in the market.<sup>118</sup>

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<sup>114</sup> See Cap and Trade 101, available at <http://www.americanprogress.org/issues/2008/01/capandtrade101.html>.

<sup>115</sup> See Gauna, CPR Perspective, available at <http://www.progressivereform.org/perspEnvironJustice.cfm>.

<sup>116</sup> See Kaswan, CPR Perspective, available at <http://www.progressivereform.org/perspEJandCC.cfm> (“Market mechanisms are also touted as administratively efficient. Instead of government agencies developing regulatory standards for each industry or engaging in facility-specific permitting proceedings, the industries make their own emission-reduction choices. The government role consists of monitoring and ensuring that facilities have enough allowances to account for their emissions at the end of a specified ‘compliance period.’”).

<sup>117</sup> See *id.*

<sup>118</sup> See *id.*

In environmental justice, public participation and community involvement serve as means to foster accountability and local awareness.<sup>119</sup> Cap and trade does not afford many opportunities for local citizens to participate in the decisions that would affect their health and environment.<sup>120</sup> When a local facility decides to purchase allowances so it can maintain its emissions level, that facility is essentially making an environmental and health decision that will affect the local residents. All these decisions affect human health and the environment and they would occur without meaningful input from the people who are most affected locally.<sup>121</sup> Environmental justice advocates believe that “[c]ommunities dominated by persons of color and poor persons have a right to participate fully and meaningfully in decisions affecting them, and society has an obligation to reduce the environmental burdens these communities disproportionately experience.”<sup>122</sup>

Traditional regulatory mechanisms offer at least some forms of public participation. Under a command-and-control schema, the government specific regulations and requirements for an industry under a public rule-making process.<sup>123</sup> “The notice-and-comment process helps agencies formulate responses to interest-group data and arguments before

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<sup>119</sup> *Id.* (“Public scrutiny is necessary to improve accountability and could allow the public to detect potential fraud.”).

<sup>120</sup> *Id.* (“[I]t is much more difficult to incorporate opportunities for genuine public participation into a trading program.”).

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

<sup>122</sup> Gauna, CPR Perspective, available at <http://www.progressivereform.org/perspEnvironJustice.cfm>.

<sup>123</sup> *See* Kaswan, CPR Perspective, available at <http://www.progressivereform.org/perspEJandCC.cfm>.

committing to a course of action.”<sup>124</sup> New individual facilities are also subject to a permitting process, where the public can submit comments and participate in oral hearings.<sup>125</sup> Policymakers would have the benefit of public input as well as information on the environmental justice communities. While some may see these opportunities for hearings and public comments as *pro forma*, they offer at least a possibility of swaying a decision-maker’s choice.<sup>126</sup>

#### *D. Lack of Avenues Toward Empowerment*

Environmental justice seeks to place power into the hands of disadvantaged and vulnerable local residents to allow them an opportunity to navigate their own destiny through self-reliance and increased responsibility.<sup>127</sup> However, neither cap and trade programs nor command-and-control regulations focus on empowering the local community. These programs focus on reducing emission levels and enforcing regulations. However, environmental justice seeks more than just emission reductions, but empowerment of the disadvantaged community. Empowerment can come in the form of developing infrastructure or educating the youth about

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<sup>124</sup> See Andrew P. Morriss, Bruce Yandle, Andrew Dorchak, *REGULATION BY LITIGATION* 41-42, Yale University Press, 2009 (“Rulemaking’s primary advantage for regulators is that it offers them an opportunity to test a proposal against the arguments interest groups can make in the legislature or courts.”).

<sup>125</sup> See *id.*

<sup>126</sup> Kaswan, *Reconciling Justice and Efficiency* at 244-45 (“[Traditional] proceedings provide communities with key information about the emissions decisions of neighboring industries and allow them to voice concerns that could help shape permitting conditions. While communities have never had veto power over facility emissions, the opportunity to participate in the proceedings is nonetheless of significant value. A cap-and-trade program’s administrative efficiency and private autonomy come at the cost of public involvement.”).

<sup>127</sup> See *e.g.* U.S. Environmental Protection Agency, *Environmental Justice Showcase Grants*, available at <http://www.epa.gov/environmentaljustice/grants/ej-showcase.html>.

environmental health. “Community empowerment strategies must play a prominent role in any environmental justice strategy because they are the most effective means of addressing the root-cause of environmental injustice: economic and political powerlessness.”<sup>128</sup> Many of the enacted and proposed GHG regulations have focused on preventing and mitigating harm but have not devoted the same attention and care to improving the condition of the local people’s lives. An environmental regulation may parry potential negative health effects, but that would not necessarily do anything to remedy the long-term health problems and economic condition of the community. As one author wrote: “Community empowerment strategies are necessary because they are the only means to adequately address and remedy the underlying cause of environmental injustice – powerlessness.”<sup>129</sup>

## **V. ADVANCING ENVIRONMENTAL JUSTICE THROUGH CAP AND TRADE**

The Article proposes the harmonization of environmental justice and cap and trade. Cap and trade programs can encourage the environmental justice goals of public participation, distributive justice, and empowerment. Such a cap and trade system must involve: (1) an identification process; (2) investment into environmental justice communities; and (3) financial mechanisms to fund such investment.<sup>130</sup>

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<sup>128</sup> R. Gregory Roberts, Comment, Environmental Justice and Community Empowerment: Learning From the Civil Rights Movement, 48 Am. U. L. Rev. 229, 247 (1998).

<sup>129</sup> *Id.* at 255.

<sup>130</sup> See Kaswan, Reconciling Justice and Efficiency at 235-37.

The revenue generated through cap and trade has the potential to easily surpass the billion dollar mark. For example, according to the California Legislative Analyst's Office, the state's landmark GHG cap and trade program could generate \$1 billion to \$3 billion through the auctioning of allowances in 2012 and 2013.<sup>131</sup> The amount of revenue could "jump to \$14 billion within three years."<sup>132</sup> Likewise, auctions on a national scale would also bring in a significant amount of money. If the national government establishes a domestic GHG cap and trade program, federal policymakers should follow California's lead and make environmental justice efforts a top priority when determining how to use cap and trade revenue.<sup>133</sup> National GHG cap and trade would offer an opportunity to advance environmental justice.

#### *A. Identifying Environmental Justice Communities*

The first fundamental step in implementing environmental justice in a national GHG cap and trade program is to identify the communities who are most at risk, underserved, and disadvantaged. By identifying these environmental justice communities, policymakers and government

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<sup>131</sup> Yale Environment 360, California Might Reap Billions of Dollars From Cap-and-Trade Auctions (2012), available at [http://e360.yale.edu/digest/california\\_might\\_reap\\_billions\\_of\\_dollars\\_from\\_cap-and-trade\\_auctions/3411/](http://e360.yale.edu/digest/california_might_reap_billions_of_dollars_from_cap-and-trade_auctions/3411/).

<sup>132</sup> *Id.*; see also Paul Rogers, Windfall of cash could hit state treasury from global warming program, Mercury News (Apr. 8, 2012, 3:39 PM), available at [http://www.mercurynews.com/science/ci\\_20348096/windfall-cash-could-hit-state-treasury-from-global](http://www.mercurynews.com/science/ci_20348096/windfall-cash-could-hit-state-treasury-from-global)

<sup>133</sup> See, e.g., Alice Kaswan, Environmental Justice and Domestic Climate Change Policy, 38 *Env'tl. L. Rep. News & Analysis* 10287, 10290 (2008). ("At the state level, California is a national leader in incorporating environmental justice. AB 32, adopted in 2006, recognizes the importance of developing climate change policies that take a wide variety of factors into consideration, including environmental justice." (footnotes omitted)).



regulators would have an accessible database. They can use this database listing to confer government services and benefits more effectively and precisely.

Other government entities, such as CARB and EJAC, have already proposed a program called the “screening method.”<sup>134</sup> Members of EJAC have advocated for such a method to identify environmental justice communities. EJAC already “strongly recommends that [CARB] utilize the [environmental justice] Screening Approach developed by the [Environmental Justice] Research Team.”<sup>135</sup>

### 1. The Process of Identification

This Article proposes that environmental justice communities can be identified in two ways. First, a certain neighborhood can attempt to self-identify as an environmental justice community by applying with the regulatory agency in charge of the cap and trade program. Of course, the merits of the community’s claim would be evaluated under specified criteria so that no community can simply self-identify as an environmental justice community and receive certain government services and treatment that come with such a designation.

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<sup>134</sup> AB32 Environmental Justice Advisory Committee comments on the Proposed Screening Method for Low-Income Communities Highly Impacted by Air Pollution for AB 32 Assessments 2 (Aug. 25, 2010), available at <http://www.arb.ca.gov/cc/ejac/meetings/081610/ejac-letter-ej-screening-method.pdf>. (“We [EJAC] commend the [CARB] staff for their efforts to develop a useful tool for identifying communities highly impacted by air pollution.”).

<sup>135</sup> *Id.* (“We believe that in the end, this [screening method] will prove to be a more efficient and timely process and will ultimately allow [CARB] to effectively fulfill the requirements and legislative intent of AB 32.”).

Such an evaluation of applicants could use EJAC's August 25, 2010, screening method recommendations to CARB as a model for the criteria to use when identifying environmental justice communities.<sup>136</sup> EJAC has recommended that "[a]t the very least we expect [CARB] to include race ethnicity, home ownership, age of housing stock, language isolations, age, and access to health services" when screening for potential environmental justice communities.<sup>137</sup> In EJAC's research, it has found that income, race and ethnicity, home ownership, language isolation, and land use have been "shown to be statistically significant indicators of increased cancer risk or respiratory hazards in the [San Francisco] Bay Area."<sup>138</sup> These findings offer evidence that negative environmental effects continues to inversely correlate with the level of income and minority percentage of the neighborhood population.<sup>139</sup> EJAC also recommends taking into account cumulative effects, tailoring certain criteria for certain types of regions (e.g. measuring pesticide use in farm areas), and including analysis on land use and proximity of emitting facilities.<sup>140</sup>

The regulators must also, on their own, actively seek out and identify potential environmental justice communities. In fact, regulators should probably have the ultimate responsibility of evaluating and identifying potential environmental justice communities. Regulators cannot simply rely

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

<sup>137</sup> *Id.*

<sup>138</sup> *Id.* at 2-3.

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

<sup>140</sup> *Id.* at 2-4.

on the environmental justice communities to self-identify. The government must proactively identify and pinpoint environmental justice communities based on a set of specified criteria.

Government decision-makers and regulators can choose to partner with nonprofit groups or contract with survey companies to identify which communities are truly underprivileged and at risk of environmental and public health harms. Indexing every environmental justice community in America would be no easy task, but once that database is created, government regulators would theoretically then have a comprehensive list of communities. And through this identification process, specific information about each community will naturally be gathered, creating an encyclopedic database of local profiles. This process could also create opportunities for the government to understand and meet the greatest needs of disadvantaged community members in the most effective and direct way.

Problems could arise if a community, which desires to be recognized as an environmental justice community, is not officially recognized as one by the government. This could be an even bigger problem if there are significant benefits and services that come along with a community's designation as an "environmental justice community." Though the Article cannot specifically address every situation, the author suggests two possible solutions. First, the government should ensure that the criteria are broad and flexible enough to take into account the wide range of environmental

problems that communities might face.<sup>141</sup> Second, the government could implement an appeals process where the applicant-community can make its case in front of some type of appeals board. This appeals process can allow for a more detailed review of the data, a face-to-face meeting, and a reconsideration of any special circumstances that the community may have.

The self-identification process allows environmental justice communities to voice their concerns and needs. By allowing environmental justice communities to publicly participate in the identification process, the government is legitimizing and validating the communities' concerns and problems. This helps to promote one of environmental justice's main goals of furthering public participation.

## 2. Greater Oversight for Firms in Environmental Justice Communities

After identifying the environmental justice communities, government regulators should maintain rigorous monitoring and oversight of the businesses in these communities to ensure that they are complying with regulations and truly have enough allowances to match their units of emissions. This task would most likely fall to government regulators. The government may even want to allow more public participation by installing a hotline where private citizens can call and report a suspicious or illegal activity occurring in the community. The actual regulations need not be

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<sup>141</sup> *Id.* at 2 (“As such, EJAC recommends that a broader suite of indicators should be available to tailor to the reality of each of the State’s regions.”).

heavier on firms in environmental justice communities, but the government's monitoring should be more rigorous.

### *B. Investment in Local Environmental Justice Communities*

Empowerment means building the capacity of people to “take control over decisions affecting their lives.”<sup>142</sup> It can address the “structural problems in society” that are clearly seen in the environmental justice communities.<sup>143</sup> In furthering the environmental justice goal of community empowerment, a cap and trade program can provide funding for localized investments in clean energy and technology projects that could potentially revitalize the communities in which the projects are placed. By investing the capital that market-based programs receive through financial mechanisms, such as the auctioning of allowances, cap and trade programs can provide a means to stimulate economic growth and environmental health in environmental justice communities.<sup>144</sup>

Throughout recent years, much emphasis has been placed on the potential economic benefits that green development and “green-collar” jobs could bring. Political leaders, government policymakers, academics, nonprofit groups, economists, urban planners, labor unions and businesses

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<sup>142</sup> See Luke Cole, Empowerment as the Key to Environmental Protection: The Need for Environmental Poverty Law, 19 Ecology L.Q. 619, 657 (1992).

<sup>143</sup> See *id.* at 633.

<sup>144</sup> See *id.* at 633-34 (“Environmental problems, because they affect many people at once, illuminate the social and systemic, rather than individual, nature of the problems faced by poor people. The importance of environmental issues, however, goes beyond their ability to illuminate structural problems in our economy and society: as the Reverend Ben Chavis of the United Church of Christ's Commission for Racial Justice notes, the environment is not just a good organizing issue - it is - but an issue of life and death.” (internal quotation marks and footnote omitted)).

have taken an interest in facilitating economic growth while also building sustainable communities, developing clean technology and energy, and improving the overall quality of life for all the local residents of environmental justice communities.<sup>145</sup> This level of green development would help to shift America's fossil-fuel based economy towards an economy that "can function effectively through renewable energy sources and . . . achiev[e] high levels of energy efficiency."<sup>146</sup>

This green development has the potential to also provide much-needed environmental and economic improvement to environmental justice communities at the same time. When policymakers funnel a plethora of the clean technology and clean energy investments into environmental justice communities, these investments consequently create green-collar jobs because workers will be needed to provide the pertinent goods and services

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<sup>145</sup> See e.g. Ella Baker Center for Human Rights, *Making Green Work: Best Practices in Green-Collar Job Training* (2009), available at <http://www.ellabakercenter.org/downloads/gcjc/making-green-work.pdf>; Raquel Pinderhughes, *GREEN COLLAR JOBS: An Analysis of the Capacity of Green Businesses to Provide High Quality Jobs for Men and Women with Barriers to Employment*, 2007, available at <http://bss.sfsu.edu/raquelrp/documents/v13FullReport.pdf>; Jonathan Rose Companies LLC, Wallace Roberts and Todd, *Smart Growth: Guidelines for Sustainable Design and Development* (2009), available at [http://www.epa.gov/dced/pdf/sg\\_guidelines.pdf](http://www.epa.gov/dced/pdf/sg_guidelines.pdf); U.S. Environmental Protection Agency, *Building a Sustainable Future: A Report on the Environmental Protection Agency's Brownfields Sustainability Pilots* (2009), available at [http://www.epa.gov/brownfields/sustain\\_plts/reports/sustain\\_report\\_web\\_final.pdf](http://www.epa.gov/brownfields/sustain_plts/reports/sustain_report_web_final.pdf); Green Prosperity: How Clean Energy Policies Can Fight Poverty and Raise Living Standards in the United States, Political Economy Research Institute, University of Massachusetts, Amherst. June 2009, available at [http://docs.nrdc.org/globalWarming/files/glo\\_09062504a.pdf](http://docs.nrdc.org/globalWarming/files/glo_09062504a.pdf); California Jobs and Economic Development Panel, *The Governor's Conference on Local Renewable Energy Resources: California's Path to Local Renewables*, 2009, available at [gov.ca.gov/docs/ec/Jobs\\_and\\_Economic\\_Development.pdf](http://gov.ca.gov/docs/ec/Jobs_and_Economic_Development.pdf); see generally *THE GREEN COLLAR ECONOMY: HOW ONE SOLUTION CAN FIX OUR TWO BIGGEST PROBLEMS*, Van Jones, HarperOne, New York, NY, 2008; see Clinton-Gore Administration, *Building Livable Communities: Sustaining Prosperity, Improving Quality of Life, Building a Sense of Community*, 2000, available at <http://permanent.access.gpo.gov/lps5086/LPS5086.pdf>.

<sup>146</sup> Green Prosperity: How Clean Energy Policies Can Fight Poverty and Raise Living Standards in the United States, Political Economy Research Institute, University of Massachusetts, Amherst. June 2009, p. 2, available at [http://docs.nrdc.org/globalWarming/files/glo\\_09062504a.pdf](http://docs.nrdc.org/globalWarming/files/glo_09062504a.pdf).

in those industries.<sup>147</sup> As Van Jones wrote: “[W]e should use the transition to a better energy strategy as an opportunity to create a better economy.”<sup>148</sup> We create a revitalized community by “creat[ing] new markets, new technology, new industries, and a new workforce.”<sup>149</sup> According to Van Jones, these clean energy and technology investments would require thousands of contracts and workers.<sup>150</sup>

### 1. Investing in Clean Energy and Technology

Clean energy and technology (hereinafter, “clean energy”) investments in local communities can lead to a greater net capacity for jobs and economic advancement. A report by the Renewable and Appropriate Energy Laboratory states: “Across a broad range of scenarios, the renewable energy sector generates more jobs than the fossil fuel-based energy sector per unit of energy delivered (i.e., per average megawatt).”<sup>151</sup> U.S. Commerce Department research has also shown that 16.7 jobs are created for every \$1 million spent on clean energy investments, whereas 5.3 jobs are created

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<sup>147</sup> *Id.* at 9 (“Spending money in any area of the U.S. economy will create jobs, since people are needed to produce any good or service that the economy supplies. This is true regardless of whether the spending is done by private businesses, households, or a government entity.”).

<sup>148</sup> Van Jones, *THE GREEN COLLAR ECONOMY: HOW ONE SOLUTION CAN FIX OUR TWO BIGGEST PROBLEMS*, 14, HarperOne, New York, NY, 2008.

<sup>149</sup> *Id.*

<sup>150</sup> *Id.* at 10.

<sup>151</sup> Daniel M. Kammen, Kamal Kapadia, and Matthias Fripp, Putting Renewables to Work, UC Berkeley, Renewable and Appropriate Energy Laboratory, April 13, 2004, p. 2, available at: <http://rael.berkeley.edu/old-site/renewables.jobs.2006.pdf>.

through spending \$1 million on oil, natural gas, or coal investments.<sup>152</sup>

“Clean energy investments” could include spending on building retrofits, public transportation, smart grid electrical transmission systems, solar power, wind power and biomass fuels.

Job creation – green or otherwise – occurs from the *direct, indirect* and *induced* effects of spending. To borrow from an example given in a report by the Department of Economics and Political Economy Research Institute at University of Massachusetts, Amherst (“the University of Massachusetts report”), we how jobs are created when homes are retrofitted. First, jobs are directly created for workers who will retrofit the homes. The indirect effect comes from the creation of jobs associated with industries that supply intermediate goods – such as lumber, steel, and conveyances – for the retrofitting process. Lastly, when these paid workers spend their money on other goods and services, they induce the creation of other jobs, which further increases overall employment capacity.<sup>153</sup>

These clean energy jobs, because of their specific characteristics and demands, tend also to be well-suited for creating employment opportunities for local residents in environmental justice communities. Clean energy jobs require traditional blue collar workers. As Dr. Raquel Pinderhughes wrote: “Green-collar jobs are blue-collar jobs in green businesses – that is, manual

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<sup>152</sup> Green Prosperity: How Clean Energy Policies Can Fight Poverty and Raise Living Standards in the United States, Political Economy Research Institute, University of Massachusetts, Amherst. June 2009, p. 10, available at [http://docs.nrdc.org/globalWarming/files/glo\\_09062504a.pdf](http://docs.nrdc.org/globalWarming/files/glo_09062504a.pdf).

<sup>153</sup> *Id.* at 9.



labor jobs . . . .”<sup>154</sup> According to the University of Massachusetts report, clean energy spending produces more jobs at all pay levels than the fossil fuel industry does, further expanding the capacity for employment at all skill levels.<sup>155</sup> Because green-collar jobs require more workers at all skill levels, clean energy businesses can create more work opportunities for those with less than a college bachelor's degree. According to a 2008 Current Population Survey, \$1 million of clean energy investments creates 8.0 jobs for workers with a high school degree or less (paying on average \$12/hour), whereas a fossil fuel expenditure of the same amount creates 2.2 jobs of the same type.<sup>156</sup> And \$1 million of clean energy investments creates 4.8 jobs for workers with a high school diploma or less (paying on average \$15/hour), which is over six times greater than the fossil fuel industry’s 0.7.<sup>157</sup>

Furthermore, many of these clean energy investments more often depend heavily on domestic goods, services and labor than their fossil fuel counterparts. For example, according to the University of Massachusetts report, about 97 percent of total spending in public transportation and building retrofits would most likely remain within the U.S. economy.<sup>158</sup>

Instead of outsourcing labor or importing goods and services, these

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<sup>154</sup> Making Green Work: Best Practices in Green-Collar Job Training, by Green-Collar Jobs Campaign, An Ella Baker Center Initiative 7, available at <http://www.ellabakercenter.org/downloads/gcjc/making-green-work.pdf>.

<sup>155</sup> Green Prosperity: How Clean Energy Policies Can Fight Poverty and Raise Living Standards in the United States, Political Economy Research Institute, University of Massachusetts, Amherst. June 2009, p. 10, 12, available at [http://docs.nrdc.org/globalWarming/files/glo\\_09062504a.pdf](http://docs.nrdc.org/globalWarming/files/glo_09062504a.pdf).

<sup>156</sup> *Id.* at 12.

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

<sup>158</sup> *Id.* at 10.

investments' applications are concentrated within the domestic borders.<sup>159</sup> In fact, these jobs could further benefit the communities in which they are located because many of them *cannot* be outsourced. A home can only be retrofitted where it is located, and the retrofitting of a public transportation system cannot plausibly be done overseas.<sup>160</sup> As seen from the data in the previous paragraph, the clean energy sector offers a greater quantity of jobs without sacrificing their quality and pay. These jobs also are available and can be readily filled by people who do not have a college degree.<sup>161</sup> Importantly, these jobs help to empower and revitalize the local community both economically and environmentally because they are, "high quality, living wage manual labor jobs that engage [community members] in meaningful, environmentally restorative, community serving work and livelihoods."<sup>162</sup>

## 2. Empowerment of Environmental Justice Communities through Clean Energy

Environmental justice communities can harness the wealth of potential benefits that comes from clean energy investments.<sup>163</sup> The federal government, as it has in the past, can marshal financial resources so each

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<sup>159</sup> *Id.* at 9.

<sup>160</sup> *Id.* at 12.

<sup>161</sup> *Id.* at 10-12.

<sup>162</sup> See Raquel Pinderhughes, GREEN COLLAR JOBS: AN ANALYSIS OF THE CAPACITY OF GREEN BUSINESSES TO PROVIDE HIGH QUALITY JOBS FOR MEN AND WOMEN WITH BARRIERS TO EMPLOYMENT 21, available at <http://bss.sfsu.edu/raquelrp/documents/v13FullReport.pdf>.

<sup>163</sup> See *id.* at 19-22..

environmental justice community can make clean energy investments.<sup>164</sup>

These financial resources should not come from additional taxpayer dollars, but could come from the revenue gained through cap and trade's various revenue-producing mechanisms. The federal government would ideally play a limited subsidiary role. As the Clinton Administration report on sustainable communities stated: "[Y]ou start with the fundamental principle that *communities know best . . . .*"<sup>165</sup>

### 3. A Community Council as an Agent for Each Environmental Justice Community

This Article proposes that the federal government designate an individual Community Council for *each* environmental justice community. Each Community Council could be comprised of a group of citizens who live in the community and operate at the local level. Each Community Council could receive a certain amount of resources from the federal government; and the Community Council would potentially use these resources toward clean energy investments that benefit the community.

Although the federal government would designate a Community Council for each environmental justice community, a Community Council would not be a federal agency. Rather, it would ideally function like a small

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<sup>164</sup> See Clinton-Gore Administration, Building Livable Communities: Sustaining Prosperity, Improving Quality of Life, Building a Sense of Community, 2000, p. 62, available at <http://permanent.access.gpo.gov/lps5086/LPS5086.pdf>.

<sup>165</sup> *Id.* at 5.

city council, meeting periodically to discuss and vote on how to invest resources into clean energy projects for its respective community.<sup>166</sup>

A Community Council's main goals would be to improve the community's environmental health and to revitalize the economic condition of its local community. A Community Council would achieve these goals by: (1) seeking out and investing in beneficial clean energy projects for the community; (2) contracting with clean energy firms to work on those specific projects; and (3) expanding the economic capacity of the community through rigorous job training programs. A Community Council would be acting as the *agent* for its respective environmental justice community and could make decisions on what types of clean energy investments would be most beneficial to its community.

#### 4. Selecting a Community Council

The composition of a particular Community Council is extremely important because the Community Council's members are the ones who would vote on the clean energy investments in which to partake. It is extremely important for a Community Council's members to have a strong

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<sup>166</sup> Though there are no exact parallels to a Community Council, there have been many examples in the past of small city councils that made decisions on how to allocate revenue and spending for environmental projects. The Community Councils would attempt to function a similar way. *See e.g.* Lorain Council OKs conversion of steel mill plant to recycling center, Chronicle-Telegram, Nov. 22, 2011, available at <http://chronicle.northcoastnow.com/2011/11/22/lorain-council-oks-conversion-of-steel-mill-plant-to-recycling-center/> ("Council members on Monday conditionally approved an 18-month, \$718,000 cleanup of coal ash from the approximately 286-acre plant and are expected to formally approve it next month. The cleanup would be paid for with a federal taxpayer grant."); *see also* Council approves solar power system for sewer plant, Hammonton News (Nov. 29, 2011), available at <http://www.thedailyjournal.com/article/20111130/HAMMONTON01/311300008>; *see also* Bainbridge City Hall is going solar, Kitsap (Dec. 15, 2011), available at <http://www.kitsapsun.com/news/2011/dec/15/bainbridge-city-hall-is-going-solar/>.

commitment to environmental justice, a devotion to their community and an unwavering reverence for honesty and integrity since federal dollars are involved. Community Council members could come from various sectors of the community, including local government, nonprofit groups, local community groups, local environmental justice groups, school boards and local businesses.

Because of the Community Council's decision-making power, a very rigorous selection process for potential members would be important to ensure that each potential member meets certain fundamental prerequisites. The federal government should require that all members of a Community Council be residents of the pertinent environmental justice community. The federal government should also require each member to have lived in his or her community for at least a certain period of time, such as five to ten years. Lastly, the federal government should require potential members to have a nothing on their criminal records past a certain point in time. These criteria help to filter out potential members who may lack the necessary integrity.

After weeding out candidates through these prerequisites, the federal government would move onto the second stage of the selection process. For this stage, the government could use certain aspects of AB 32, Part 7,

Section 38591.<sup>167</sup> First, a potential member should be nominated by a local environmental justice organization or civic community group; the nomination should also include a reference letter or recommendation. The federal government would then evaluate the potential members based on a number of factors, including the following three factors: (1) how active is the nominee in an environmental justice group; (2) how active is the nominee in a local community group; and (3) the how strong is the nominee’s letter of recommendation.<sup>168</sup> No one factor should be dispositive, nor would a particular factor be necessary; rather the federal government would use its best judgment and balance the strength of the nominees. This selection process would occur for each environmental justice community.<sup>169</sup>

Like CARB, the federal government should also consider selecting alternate members in case of absences, deaths or other extreme situations.<sup>170</sup> Again, similar to CARB, the federal government should consider selecting a chairperson to lead the committee and run the meetings. The federal government could select the strongest nominee as a

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<sup>167</sup> AB 32, Part 7, Section 38591 states:

“The advisory committee shall be comprised of representatives from communities in the state with the most significant exposure to air pollution, including, but not limited to, communities with minority populations or low-income populations, or both.

(b) The state board shall appoint the advisory committee members from nominations received from environmental justice organizations and community groups.”

available at [http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab\\_0001-0050/ab\\_32\\_bill\\_20060927\\_chaptered.pdf#page=11](http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf#page=11).

<sup>168</sup> *See id.*

<sup>169</sup> The Article does not seek to lay out all the specifics of a Community Council. Details such as the number of members, how to avoid conflicts of interest, and accountability procedures will not be addressed.

<sup>170</sup> EJAC has eleven alternatives for its committee. California Air Resources Board, Environmental Justice Advisory Committee, available at <http://www.arb.ca.gov/cc/ejac/ejac.htm> (last visited Dec. 15, 2011).

chairperson for a Community Council, and the second strongest nominee as the vice chairperson.<sup>171</sup>

Using a portion of the revenue from the allowance auctions of the cap and trade program, the federal government could also provide training to the members of each Community Council. The training program should be extensive enough to educate the members in general clean energy development, financial and environmental literacy, ethical duties and green-collar job training, so that each member has a basic understanding of how to make prudent decisions on which investments would most benefit the community.<sup>172</sup>

## 5. Illustrating How a Community Council Should Function

To give a clear picture of how each Community Council should ideally work, the Article will give an illustration. First, a community could be deemed an environmental justice community through the identification process spelled out in Section VI(A). Under the Article's proposal, if the government deems a certain community to be an environmental justice one, then the government would select a Community Council for that community.

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<sup>171</sup> *See id.*, last visited on December 15, 2011.

<sup>172</sup> Such general environmental training programs have been proposed and written about before. *See e.g.* Making Green Work: Best Practices in Green-Collar Job Training, by Green-Collar Jobs Campaign, An Ella Baker Center Initiative 17-18, available at <http://www.ellabakercenter.org/downloads/gcjc/making-green-work.pdf> (writing about a training program that includes a comprehensive curriculum. This curriculum comprises soft skills training (such as basic literacy and math), hard skills (such as basic construction trades and specialized green-collar job training), financial literacy skills training, environmental literacy.).

Thus, each environmental justice community would have its own separate Community Council, which is comprised of members who would vote on clean energy investments.

For example, a particular Community Council may want to retrofit some of the community's office buildings to be more energy efficient. The Community Council may decide on this project after reading about all the benefits of clean energy construction that improve environmental health and provides jobs for less-educated laborers in the construction industry.<sup>173</sup> The Community Council then ponders a decision between several potential clean energy firms that can retrofit the office buildings in that certain community.

The Community Council chooses the clean energy firm for its building retrofit project based on a variety of possible factors. These factors can vary from community to community based on each one's specific needs.<sup>174</sup> Obviously, the firm's contract price would be important, but other considerations may exist. The Community Council may choose a local or nearby clean energy firm because more localized investments tend to create more economic benefits and increase job capacity.<sup>175</sup> Perhaps the

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<sup>173</sup> See Green Prosperity: How Clean Energy Policies Can Fight Poverty and Raise Living Standards in the United States, Political Economy Research Institute, University of Massachusetts, Amherst. June 2009, p. 11-12, available at [http://docs.nrdc.org/globalWarming/files/glo\\_09062504a.pdf](http://docs.nrdc.org/globalWarming/files/glo_09062504a.pdf) ("Roughly 30 percent of all the job creation generated by the clean-energy investment agenda will be in the construction industry . . .").

<sup>174</sup> See Clinton-Gore Administration, Building Livable Communities: Sustaining Prosperity, Improving Quality of Life, Building a Sense of Community, 2000, p. 8, available at <http://permanent.access.gpo.gov/lps5086/LPS5086.pdf> (reiterating that "communities know best," then goes on to state, "Every community is different. Decisions about how they grow are best made by the communities themselves."

<sup>175</sup> See *e.g. id.* at 15-16 (stating, as an example, that local Phillips city residents, as part of an environmental justice movement, invested in creating the Green Institute, which runs "innovative businesses that sell used building and



Community Council was very impressed by a certain firm's past work, and the firm and the community have developed a good business and working relationship.<sup>176</sup>

The Community Council could also choose a firm because the firm agreed to offer on-field internship opportunities to the youth, with the possibility of long-term employment. For example, the Oakland Green Jobs Corps, which is a training program for students who are pursuing green-collar careers, has built relationships with green-collar employers who have committed to provide on-the-job training and even job interviews for students who graduate from the training program.<sup>177</sup> According to the Oakland Green Jobs Corps's report: "Several Bay Area employers have committed to providing 90 days of on the job training . . . . Others have agreed to interview the Green Jobs Corps graduates for available openings."<sup>178</sup>

There may be a variety of beneficial reasons to choose a specific clean energy firm, and it is up to the Community Council to decide which reasons are best for its specific environmental justice community. Continuing with

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construction materials, disassemble buildings, and salvage materials for reuse, creating jobs and keeping construction debris out of landfills").

<sup>176</sup> See e.g. Making Green Work: Best Practices in Green-Collar Job Training, by Green-Collar Jobs Campaign, An Ella Baker Center Initiative 48-49, available at <http://www.ellabakercenter.org/downloads/gcjc/making-green-work.pdf> (listing beneficial working relationships with various solar companies, such as "GRID Alternatives, ReGrid, Solar City, and REC Solar.").

<sup>177</sup> Making Green Work: Best Practices in Green-Collar Job Training, by Green-Collar Jobs Campaign, An Ella Baker Center Initiative 48-49, available at <http://www.ellabakercenter.org/downloads/gcjc/making-green-work.pdf>.

<sup>178</sup> *Id.* ("Involved employers include SolarCity, Sunlight & Power, Borrego Solar, Swinerton, Canyon construction, Federal Building Company, REC Solar, Weather Tight, Spectrum Inc., Sungevity, Dan Antonioli Construction and Wellington Energy Corp.").

the example, the Community Council then decides – based on majority vote – with which firm to contract. For example, the Community Council may contract with Firm A because it is locally based, offers the cheapest contract price and is also committed to providing on-field internship opportunities for youth in the community with the possibility for job interviews upon completion of the internship.<sup>179</sup>

After completing the contract with the Community Council, Firm A would begin retrofitting the buildings. Because it is a locally based firm, most of its workers would come from the local community. While the firm is working on the project, it also provides a valuable on-field internship opportunity for its interns. This investment benefits the community environmentally because the energy efficiency of the buildings increases. In addition, the clean energy investment expands the economic capacity of the community through direct, indirect and induced spending.<sup>180</sup>

After the retrofit project is complete efficiently and adequately, the Community Council may be more inclined to contract with the firm in the future. The community builds a strong business relationship with Firm A, which leads to mutual benefits for both parties. As the University of Massachusetts report stated: “As we have seen, clean-energy investments will generate a disproportionately large expansion of new jobs in the

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<sup>179</sup> *See id.*

<sup>180</sup> *See* Green Prosperity: How Clean Energy Policies Can Fight Poverty and Raise Living Standards in the United States, Political Economy Research Institute, University of Massachusetts, Amherst. June 2009, p. 9, available at [http://docs.nrdc.org/globalWarming/files/glo\\_09062504a.pdf](http://docs.nrdc.org/globalWarming/files/glo_09062504a.pdf).

construction industry. . . . In addition . . . the demand for workers connected directly or indirectly to clean-energy investments will be spread throughout [the] economy, in every job category, not simply in construction.”<sup>181</sup>

Building good relationships with Firm A makes this specific environmental justice community seem friendly towards green commerce and attractive to other types of clean energy firms who are considering doing business with the local community.

## 6. Job Training Programs in Clean Energy Careers

A Community Council can also use its federal resources to invest in funding for job training programs in clean energy careers. These training programs work optimally in environmental justice communities – where there is a general lack of formal education – when the programs are more holistic: not only educating the students in clean energy and the environment, but also in general life skills, job-readiness, basic math, and literacy.<sup>182</sup>

A Community Council could decide to invest their resources to fund local community colleges or trade schools to create certification and accreditation programs that educate and train youth who want to pursue a career in the clean energy sector. Such environmental training programs at local colleges have educated young adults who want to pursue green-collar

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<sup>181</sup> *Id.* at 18.

<sup>182</sup> Making Green Work: Best Practices in Green-Collar Job Training, by Green-Collar Jobs Campaign, An Ella Baker Center Initiative 16-17 available at <http://www.ellabakercenter.org/downloads/gcjc/making-green-work.pdf>.

careers.<sup>183</sup> For example, the Los Angeles Trade-Technical College (LATTC), in downtown Los Angeles, offers a Weatherization and Energy Efficiency education program (WE2P) “that prepares individuals for weatherization and energy auditing occupations.” These programs are known in LATTC as “green-oriented training and education pathways.”<sup>184</sup> A Community Council could use a portion of its federal dollars to hire instructors – who are current or former employees from the clean energy industry – to teach the more specialized environmental components of the training program.<sup>185</sup> The community college or trade school could also provide some of its own hired instructors for any parts of the program that do not require specialized environmental knowledge.<sup>186</sup>

The training programs should be rigorous and extensive enough to adequately educate and empower students.<sup>187</sup> A Community Council’s goal in setting up these training programs should be to produce trainees who are adequately educated and ready to work in future clean energy careers.<sup>188</sup> The training programs can provide environmental benefits because they train environmental justice community members to work in an environmentally friendly field. The programs could also expand the

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<sup>183</sup> See, e.g., *id.* at 27-35.

<sup>184</sup> *Id.* at 40.

<sup>185</sup> See e.g. *id.* at 37 (JobTrain’s instructor for the Solar Training program is taught by a former owner of a photovoltaic installation business.).

<sup>186</sup> See e.g. *id.* at 43 (“LATTC hires its own instructors for its community college-level courses.”).

<sup>187</sup> See e.g. *id.* at 46-47 (“The Oakland Green Jobs Corps program spans 38 weeks and includes a 16-week pre-apprenticeship training, 10 weeks of solar, energy efficiency and green construction training, and, if possible, 12 weeks of paid on-the-job training or apprenticeship.”).

<sup>188</sup> See e.g. *id.* at 47 (“The Oakland Green Employer Council is a circle of green collar employers that have committed to provide trainees with opportunities, including paid on-the-job training and long-term employment.”).

community's economic capacity because the trainees would be educated and equipped to work in an emerging clean energy industry that will require new laborers.<sup>189</sup>

A successful example of a green-collar job training program is JobTrain. This program, which is based in East Menlo Park, California, trains mainly low-income students who lack a degree in higher education, and thus face many employment barriers.<sup>190</sup> JobTrain trains its students in specific "hard skills regarding how to install Grid-tied photovoltaic electrical systems," but it also includes extended tutoring in life skills, job-readiness, environmental education, and math.<sup>191</sup> The program seeks to provide not just vocational training, but "whole person" education through extensive counseling, and other supportive services.<sup>192</sup> The training is significantly hands-on and is "highly disciplined," allowing no more than three absences throughout a 20-week training program.<sup>193</sup> JobTrain instructors prepare their students for job interviews, the work environment and general life challenges.<sup>194</sup> The JobTrain Solar Training program graduates 90 percent of its students and has developed contacts with many solar employers, such as

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<sup>189</sup> *Id.* at 16; cf. Daniel M. Kammen, Kamal Kapadia, and Matthias Fripp, Putting Renewables to Work, UC Berkeley, Renewable and Appropriate Energy Laboratory, April 13, 2004, p. 15. available at <http://rael.berkeley.edu/old-site/renewables.jobs.2006.pdf> (explaining how there will be some people who will lose their jobs when fossil fuel use is steadily replaced by clean energy use. Those communities and people who were negatively impacted "will need retraining to develop the new skills needed in the *clean energy industry*. Locally relevant programs will be needed for retooling and retraining, and for attracting *new industries*."") (emphasis added).

<sup>190</sup> Making Green Work: Best Practices in Green-Collar Job Training, by Green-Collar Jobs Campaign, An Ella Baker Center Initiative 36-39, available at <http://www.ellabakercenter.org/downloads/gcjc/making-green-work.pdf>.

<sup>191</sup> *Id.*

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

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

<sup>194</sup> *Id.*

GRID Alternatives, ReGrid, and Solar City; these firms have hired many JobTrain graduates in the past.<sup>195</sup> The program's relationships with clean energy firms grow through the work of a dedicated Corporate Relations staff that connects employers with properly trained students who are ready to work in the clean energy sector.<sup>196</sup> JobTrain is continuing to expand and train new students, while also planning the start of a green building construction training program in the future.<sup>197</sup>

Community Councils can establish training programs like JobTrain within their own communities and elsewhere. Such training programs can provide all types of direct and ancillary benefits for the environmental justice community. Extensive job training provides community members with more opportunities for jobs and better wages.<sup>198</sup> "Overall then, significant levels of on-the-job training are clearly an important resource that will enable workers with low formal educational credentials to be promoted into jobs that will pay good wages."<sup>199</sup> Education can be one of the major keys to empowerment. Residents become empowered not only because they have gainful employment, but because they have developed life skills and have received formal education in a growing industry.<sup>200</sup> As the University of Massachusetts report wrote: "[T]o maximize the potential of the clean-

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<sup>195</sup> *Id.*

<sup>196</sup> *Id.*

<sup>197</sup> *Id.*

<sup>198</sup> See Green Prosperity: How Clean Energy Policies Can Fight Poverty and Raise Living Standards in the United States, Political Economy Research Institute, University of Massachusetts, Amherst. June 2009, p. 14, available at [http://docs.nrdc.org/globalWarming/files/glo\\_09062504a.pdf](http://docs.nrdc.org/globalWarming/files/glo_09062504a.pdf).

<sup>199</sup> *Id.*

<sup>200</sup> See *id.* at 7-26.

energy investment agenda to create pathways out of poverty, it will be crucial to expand opportunities for appropriate job training as a key complement to the overall growth in employment itself.”<sup>201</sup> Through these investments into environmental justice communities, local residents can be empowered to “feed themselves.”<sup>202</sup> These environmental justice residents can be better prepared to build and shape communities that are productive, thriving, and self-reliant.<sup>203</sup>

Educating the local residents, reaching out to clean energy firms and providing financial resources to environmental justice communities are all important aspects to improving the environment and to spurring on environmental justice within the local community.<sup>204</sup> Taken together, the development of business relationships with clean energy firms; investment into clean energy projects in the community; and extensive in-depth green job training programs can turn an environmental justice community into a green-business friendly neighborhood, which is attractive to clean energy firms. These business opportunities do not pollute the environment or negatively affect public health, but they benefit the community at large by

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<sup>201</sup> *Id.* at 14-15.

<sup>202</sup> *See* Power, Justice, and the Environment: A Critical Appraisal of the Environmental Justice Movement, Edited by David Naguib Pellow and Robert J. Brulle, MIT Press (2005), at 295.

<sup>203</sup> *See id.*

<sup>204</sup> Environmental Justice and the Green Economy: A Vision Statement and Case Studies for Just and Sustainable Solutions, p. 25 (2010) available at <http://ejstimulus.files.wordpress.com/2010/03/ejreport-english1.pdf> (“Local residents were trained in the principles of green building and the science of sustainability. This enabled them to voice their perspectives even more effectively. It empowered them to ask the right questions, in favor of green development in their community.”).

improving the environment and expanding the available opportunities for the local residents.<sup>205</sup>

### *C. Financial Mechanisms in Cap and Trade*

The financial resources used for clean energy investments in environmental justice communities would primarily come from certain financial mechanisms within the cap and trade program. The government can implement the following mechanisms in the cap and trade program to create more revenue for clean energy investments in environmental justice communities.

#### 1. Auctioning Allowances

A portion of the allocation of allowances should come through an auctioning system. Rather than solely allocating the allowances for free, the government should annually hold an auction for a portion of the allowances. As the California Market Advisory Committee has noted, it is possible to use “the allowance value to finance reductions of GHGs and criteria pollutants in communities that bear disproportionate environmental and public-health burdens.”<sup>206</sup> The Article’s proposal should also follow the California Market Advisory Committee’s recommendation to initially allocate a portion of

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<sup>205</sup> *See id.*

<sup>206</sup> MARKET ADVISORY COMMITTEE TO THE CALIFORNIA AIR RESOURCES BOARD, RECOMMENDATIONS FOR DESIGNING A GREENHOUSE GAS CAP AND TRADE SYSTEM FOR CALIFORNIA 57 (2007), available at <http://www.energy.ca.gov/2007publications/ARB-1000-2007-007/ARB-1000-2007-007.PDF>.



allowances for free, “while the remaining allowances are auctioned. The percentage of allowances auctioned should then increase over time.”<sup>207</sup>

Firms would purchase their allowances based on how many units of emissions they plan to emit. The government could also set a starting bid price to ensure that each allowance is sold for a minimum amount. Critically, an adequate *demand* must exist for these allowances, so the government must ensure that the overall cap is low enough and that there is not an oversaturation of allowances on the market. The auctioning of allowances would likely not effectively generate revenue if the firms do not consistently need allowances to meet their levels of emissions. In addition to auctioning allowances to firms, the government could also open up the auction to the general public. Private citizens or groups in the general public could purchase allowances and effectively retire them by never using them, thus creating a greater demand and driving up the price of all allowances even more.

One may point out that neither the state nor the federal government has ever performed such a large auction of allowances in a cap and trade program and that such a large auction of allowances to so many regulated entities could prove unwieldy. However, the government is not unfamiliar with other types of auctions on such a large scale. The federal government has conducted and managed treasury auctions, which are at least as

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<sup>207</sup> *Id.* at iv.

complex and on as large a scale.<sup>208</sup> Therefore, the federal government should have enough resources, knowledge and experience to run such an auction.

## 2. Luxury Tax

The government could consider implementing a luxury tax into its cap and trade program. The goal of the luxury tax is to incentivize firms to still attempt to reduce emissions instead solely relying on allowances. The luxury tax would work as follows. First, the regulator should designate a percentage of overall emissions as the threshold, i.e., the luxury cap. Then, if a firm were to emit an amount that exceeded that percentage, it would have to pay a heavier tax – the luxury tax – for every ton of emissions over this threshold. For example, assume that the government has set this year’s luxury cap as 0.5 percent of the total emissions within the cap and trade system. If Firm A’s amount of emissions comprises 0.6 percent of the total emissions by all firms, Firm A would have to pay a hefty tax on those excess emissions. Such a luxury tax system would place some type of emissions limit on firms in environmental justice communities since those firms typically are the oldest and require the most allowances.<sup>209</sup>

The luxury cap should be set at a fairly high percentage so that firms would not be discouraged from trading with one another. The cap should

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<sup>208</sup> Treasury Direct, How Treasury Auctions Work, available at <http://www.treasurydirect.gov/instit/auctfund/work/work.htm>.

<sup>209</sup> See Kaswan, Environmental Justice at 10299.

not be so low that it disrupts the efficiency and effectiveness of the cap and trade program, but at the same time, the cap should not be so high that firms would never be affected by it. The government regulators must strike a balance to ensure that the market is not significantly disrupted and that there is distributive justice in pollution trading. The government should hire economists, research groups and surveyors to come up with a percentage that strikes that balance. The parties can track the overall emission levels and each firm's average emissions to get a better sense of what an appropriate percentage would be.

The luxury tax serves to reconcile two competing principles that arise within the cap and trade program. One is distributive justice: poor communities should not have to suffer a disproportionate amount of pollution and bear the majority of the nation's emissions. The other is the marketplace: firms are guided more by price signals and cheaper reductions than by concern for the localized effects of concentrated pollutants. The government needs to incentivize firms to participate in the cap and trade program and reduce emissions efficiently and cheaply while ensuring that the emission levels in environmental justice communities do not reach unjust levels. A luxury tax serves as a check on firms by financially incentivizing them to not rely on allowances to the point that they no longer make good faith attempts to reduce their own emissions.

### 3. Monetary Penalties

Finally, the Article proposes that the government reserve a portion of its collected monetary penalties for environmental justice needs. As the government enforces the cap and trade program, it will collect monetary penalties from certain firms who do not have enough allowances to cover their emissions. The government can marshal a portion of the monetary penalties to Community Councils in environmental justice communities. There have already been proposals by the California Market Advisory Committee to “use a portion of the allowance value . . . to finance pollution reductions in communities that bear disproportionate environmental and public-health burdens.”<sup>210</sup> If a portion of the allowance value could be used to finance pollution reduction, the same may hold true monetary penalties. The financial resources from monetary penalties can be used by Community Councils to invest in clean energy projects in environmental justice communities.

### **CONCLUSION**

The cap and trade debate is not only about how to best reduce emissions. Cap and trade has the potential to generate an enormous amount of revenue through various financial mechanisms, such as the allowance auction. However, such great wealth requires even greater

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<sup>210</sup> MARKET ADVISORY COMMITTEE TO THE CALIFORNIA AIR RESOURCES BOARD, RECOMMENDATIONS FOR DESIGNING A GREENHOUSE GAS CAP AND TRADE SYSTEM FOR CALIFORNIA 80 (2007), available at <http://www.energy.ca.gov/2007publications/ARB-1000-2007-007/ARB-1000-2007-007.PDF>.

thoughtfulness when determining how to spend the cap and trade revenue. The Article proposes that a portion of the revenue should go toward investments in environmental justice communities. These investments would produce dividends in the form of economic development, community empowerment, and clean energy projects. Policymakers have continually neglected the underserved and voiceless residents of environmental justice communities. A national cap and trade program would grant a golden opportunity to address and remedy these past failings.