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# *Nuestro Futuro:* **CLIMATE CHANGE AND U.S. LATINOS**



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# U.S. Latinos: Growing Numbers and Growing Influence

There are more than 56 million Latinos living in the United States today, up from more than 50 million in 2010.<sup>1</sup> This rapidly changing segment of our population is expected to grow from nearly 18 percent of all U.S. inhabitants in 2015 to 29 percent by 2060.<sup>2</sup> The increase in the Latino population has been accompanied by rapid growth in Latino leadership and representation in business, technology, academics, and the arts.

This vast and diverse group includes people with roots across the Americas, Spain, and beyond. Some are recent immigrants, while some have lived in the United States for generations. Regardless of the language spoken at home, a common cultural thread runs through Latino communities across the United States.

This common cultural thread carries a strong tradition of environmentalism. From indigenous roots where nature holds a sacred space to family traditions that instill a duty to care for and protect the earth, Latino culture has always honored the environment. It should, therefore, be no surprise that the data reflect that this incredibly diverse group stands with strong commitment and unity when it comes to the environment.

Latinos care deeply—in fact, more than non-Hispanics—about environmental and public health protections.<sup>3</sup> Notably, their level of concern about climate change and

the amount of support for government action to combat it significantly outweigh the concern of most Americans. In 2014, 9 in 10 Latinos polled said they wanted the government to take action to protect future generations from the dangers of climate change, and 8 in 10 expressed support for President Obama's efforts to reduce the carbon

In this report we use the term *Latino* to refer to men and women in the United States who identify as either Hispanic or Latino, unless we are citing a scientific study that specifically uses the term *Hispanic*. The U.S. Census Bureau is required to use the Office of Management and Budget's definition of "Hispanic or Latino" as "a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race."

## DIVERSE BUT NOT DIVIDED: LATINOS WANT CLIMATE ACTION



### LATINOS' SUPPORT FOR CLIMATE ACTION CROSSES PARTY LINES:



71% OF DEMOCRATS



44% OF REPUBLICANS



63% OF INDEPENDENTS

pollution that is driving climate change. Overall, Latinos' support for climate action was second only to their backing of immigration reform policies.<sup>4</sup>

There are good reasons for this support and important ways Latino communities, in particular, can benefit from taking action. This report uses the latest and most comprehensive demographic data, public opinion research, and analysis of climate-related health threats to illustrate the dangers of climate change to U.S. Latinos and show how Latino engagement can help secure a safer climate and a cleaner energy future. Our analysis found:

- **Latinos are particularly vulnerable to climate-related threats because of where they live.** More than 60 percent of U.S. Latinos live in California, Texas, Florida, and New York, which are among the states most vulnerable to severe heat, air pollution, and flooding.<sup>5</sup> Nationally, Hispanics are 21 percent more likely than non-Hispanic whites to live in the hottest parts of cities, which have a high concentration of heat-retaining surfaces and little to no tree cover.<sup>6</sup> About 30 percent of the nation's nearly 14.7 million Hispanic households do not have air-conditioning.<sup>7</sup> More than 24 million Hispanics live in the 15 U.S. cities most heavily polluted by ozone smog, including Los Angeles, Houston, and New York.<sup>8</sup> In Florida, Hispanics make up about 40 percent of the population in the eight Florida cities (including Miami) that will almost certainly flood during future high tides, no matter how quickly the world cuts the carbon pollution driving sea level rise.<sup>9</sup>

- **Latinos experience heightened climate-related impacts because of their occupations.** People who work outdoors are highly vulnerable to heat. In 2015, Hispanics made up more than 48 percent of the nation's crop and livestock production workers and more than 28 percent of construction workers.<sup>10</sup> As a result, U.S. Latinos are about three times more likely to die on the job from heat-related causes than non-Hispanic whites.<sup>11</sup>
- **Millions of Latinos face financial challenges that make climate-related threats worse.** Hispanics are less likely to have health insurance than non-Hispanics.<sup>12</sup> Furthermore, about 78 percent of the estimated 11.2 million undocumented immigrants in the United States in 2012 were Latino.<sup>13</sup> These immigrants are ineligible for some federal disaster assistance that would help them recover from extreme weather.<sup>14</sup>

In the face of these challenges, addressing climate change now presents a tremendous potential benefit for Latinos. Their support for climate action and their willingness to engage local, state, and federal leaders can help accelerate the transition away from dirty and dangerous fossil fuels and toward clean energy solutions for the 21st century. These solutions—like wind and solar energy and increased energy efficiency—will create well-paid jobs, cut electric bills, and help safeguard future generations from catastrophic climate change.

Our findings affirm that by cleaning up the air and expanding clean energy, policymakers can foster healthier lives and expand prosperity for Latinos and all Americans.

## DIVERSE BUT NOT DIVIDED: ECONOMY=ENVIRONMENT

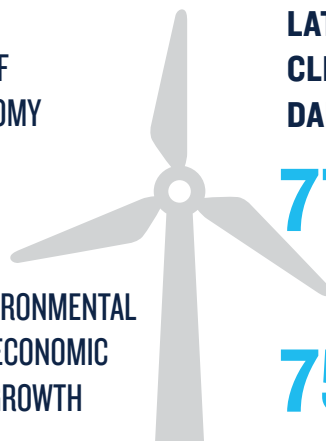
**78%**

OF LATINOS WANT MEMBERS OF CONGRESS TO PUBLICLY SUPPORT CARBON POLLUTION LIMITS

LATINOS DON'T BUY INTO THE FALSE DICHOTOMY OF ENVIRONMENT VS. ECONOMY

**59%**

OF LATINOS BELIEVE ENVIRONMENTAL PROGRESS IS GOOD FOR ECONOMIC OPPORTUNITY AND JOB GROWTH



LATINOS WOULD RATHER PAY FOR CLEAN ENERGY NOW THAN DANGEROUS CLIMATE IMPACTS LATER:

**77%**

WERE WILLING TO PAY \$5 MORE PER MONTH ON THEIR ELECTRIC BILLS FOR RENEWABLE ENERGY

**75%**

WERE SOMEWHAT OR VERY WILLING TO PAY \$10 MORE

Sources: Latino Decisions, "Latinos Want Strong Presidential Action to Combat Climate Change," January 12, 2014, [www.latinodecisions.com/blog/2014/01/23/latinos-want-strong-presidential-action-to-combat-climate-change](http://www.latinodecisions.com/blog/2014/01/23/latinos-want-strong-presidential-action-to-combat-climate-change); Segura, G.M., and Pantoja, A., "Polling Memo and Summary for National Release: 2015 Environmental Attitudes Survey," Latino Decisions for EarthJustice and GreenLatinos, July 2015, [earthjustice.org/sites/default/files/files/National Release Polling Memo Formatted.pdf](http://earthjustice.org/sites/default/files/files/National%20Release%20Polling%20Memo%20Formatted.pdf).



# Diverse but Not Divided: Latinos Want Climate Action

The U.S. Latino population is far from homogeneous. The millions of people in the United States who identify as Hispanic or Latino are multiracial, span the socioeconomic spectrum, are represented in every major industry, and come from many different countries and cultural backgrounds.<sup>15</sup>

Despite this diversity, U.S. Latinos are united by a desire for action on climate change. Poll findings show extremely high support for climate action across a wide swath of the U.S. Hispanic population.<sup>16</sup> A survey released by NRDC, Voces Verdes, and Latino Decisions in 2014 found that more than 90 percent of Latinos nationally want government action on climate, with 86 percent calling for carbon pollution limits on power plants and 78 percent saying they would feel somewhat or much more favorable toward members of Congress who publicly support limits. The desire for climate action among Latinos crosses party lines, with 71 percent of Democrats, 44 percent of Republicans, and 63 percent of independents strongly supporting limits on carbon pollution.

A majority of Latinos in the United States do not believe there is a trade-off between protecting the environment and fostering economic growth. In fact, a substantial majority of Latinos believe clean energy and environmental reform will create economic opportunities, with 59 percent saying environmental progress is good for economic opportunity and job growth.<sup>17</sup> When asked about specific policies and actions that help to alleviate carbon pollution and further energy efficiency, 94 percent of those surveyed favored building more efficient homes, and 91 percent supported preparing communities for future weather events like hurricanes.<sup>18</sup> Even when clean energy comes at a cost, Latinos are still highly supportive: 77 percent of respondents were somewhat or very willing to pay \$5 more per month on their electric bills for renewable energy instead of conventional energy, and 75 percent were somewhat or very willing to pay \$10 more.<sup>19</sup>

Research has also shown that Latinos are more likely than non-Hispanic whites to be concerned about the impacts of climate change outside of the United States.<sup>20</sup> In polling and focus groups, respondents repeatedly expressed concern for the safety of family members in Mexico, Central and South America, and the Caribbean, due to the relative severity of extreme weather impacts and the lack of resiliency and government safety nets in many of these countries.<sup>21</sup>



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*Opinion research has repeatedly shown that most U.S. Latinos are concerned about the impacts of climate change, want government action to limit carbon pollution, and are inclined to feel favorably toward members of Congress who also support action.*

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This concern is evidenced by the increased demonstrations of support for climate action by Latino leaders, health professionals, advocates, organizations, and businesses.<sup>22</sup> One important declaration of support came in in early 2016 when the National Hispanic Leadership Agenda (NHLA), a coalition of more than 40 of the largest Latino advocacy organizations in the United States, added climate change and the environment as a priority issue (in addition to immigration and education) for the first time ever.<sup>23</sup> Recognizing the growing climate crisis and the level of concern among Latinos, NHLA developed and presented policy recommendations to address this issue and its impacts on Latinos in the United States.

# Here and Now: Understanding the Climate Crisis

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Climate disruption is a fact of life today. The average global temperature has increased twice as quickly during the past 45 years as in the past 135 years.<sup>24</sup> According to the National Oceanic and Atmospheric Administration (NOAA) and the NASA Goddard Institute for Space Studies, 2015 was the warmest year on record worldwide.<sup>25</sup> In 2013, the United Nation's Intergovernmental Panel on Climate Change (IPCC) concluded that it is more than 95 percent likely that heat-trapping carbon dioxide and other pollution from fossil fuels have been the main cause of unequivocal global warming since the mid 20th century.<sup>26</sup>

## MORE EXTREME HEAT

The United States has seen the average annual temperature rise by 1.3 to 1.9 degrees Fahrenheit since 1895, with the largest increases in the Northeast, Southwest, and upper Midwest.<sup>27</sup>

Many parts of the country now experience more frequent and severe heat waves than they did just a few decades ago.<sup>28</sup> For instance, extreme heat waves (defined as four-day periods above a location-specific temperature threshold) have generally come more often in western states since the 1900s. In just a few decades, parts of southeast Oregon and southern Idaho could see 12 to 19 more days per year above 95 degrees Fahrenheit than in the late 20th century.<sup>29</sup> Parts of Southern California, Arizona, and New Mexico could see 30 to 40 more days per year above 95 degrees. This presents particular challenges for desert areas, where, as NOAA put it, "life is near the upper physical limitation for temperature."<sup>30</sup>

Without significant cuts in carbon pollution, warming (in combination with population growth) could lead to a four- to sixfold increase in the number of "person-days" Americans are exposed to temperatures above 95 degrees in the next 40 to 50 years. A person-day is the equivalent

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of one day in the life of one person (e.g., 10 days in one person's life are 10 person-days and 10 days in the lives of two people are 20 person-days). Some of the largest increases in exposure are expected in three areas with large Latino populations: Southern California, east Texas, and Florida.<sup>31</sup> Humidity, which can make heat waves more dangerous, is also expected to increase in some regions of the country, such as New York.<sup>32</sup>

## DIRTIER AIR

Despite improvements in air quality in the United States since the 1970s, every day millions of Americans are still exposed to fine particles (including dust and soot); volatile organic compounds; mercury; ground-level ozone (a major component of smog); and hundreds of other pollutants from power plants, cars and trucks, heavy machinery, and industrial operations.<sup>33</sup>

Many of these pollutants pose short-term threats to human health, from sore, irritated throats to breathing difficulties. They can also pose serious long-term threats, like chronic bronchitis; cancer; damage to the immune, neurological, reproductive, and respiratory systems; and even death.<sup>34</sup> Air pollution can be especially dangerous for people with chronic illnesses, pregnant women, young children, and the elderly.<sup>35</sup>

In early 2016, the U.S. Global Change Research Program concluded with high confidence that rising temperatures will degrade already-poor air quality.<sup>36</sup> Climate change-related increases in ozone pollution, for example, could offset existing efforts by local, state, and federal officials to reduce the building blocks of smog. Higher temperatures and the potential for more frequent and severe droughts and wildfires will also likely lead to more days with unhealthy levels of particle pollution.



## MORE SEVERE FLOODS

Climate change is fueling increasingly extreme and, at times, seemingly contradictory weather patterns. For example, despite the ongoing exceptional drought in parched California, 2015 was the wettest year on record for Texas and Oklahoma and the third-wettest year on record for the continental United States.<sup>37</sup> In spring and summer 2016, far above average or record rainfall events led to serious—and in some cases catastrophic—flooding in Louisiana, Texas, Kentucky, West Virginia, and Maryland.<sup>38</sup> Heavy downpours—which can increase the frequency and severity of some types of floods—have become more frequent and intense in almost every region of the country.<sup>39</sup> Scientists project that, with continued high levels of carbon pollution, extreme one-day rain and snow events (which now occur once every 20 years, on average) could occur up to five times more often by the 2080s than they did in the 1980s.<sup>40</sup>

Sea level rise is also boosting the risk of coastal flooding. Rising seas have made “nuisance” floods (minor, yet inconvenient, flooding of backyards, roads, sewer systems, etc.) more common.<sup>41</sup> Also, the combination of heavier rain and higher seas has greatly increased the threat of major flooding during and after storms.<sup>42</sup> Without much deeper cuts in carbon pollution, responding to unavoidable climate change and its damages and protecting lives and property

from sea level rise and hurricane-driven storm surge could cost the United States up to \$990 billion through 2100.<sup>43</sup> For context, Hurricane Sandy cost more than \$67 billion in 2012.<sup>44</sup> The economic costs of sea level rise will pose a significant budgeting challenge for all levels of government and impose particular hardship on low-income and disenfranchised communities near coastlines, such as some of the majority-Latino neighborhoods in southern Florida.

## THE CLIMATE CRISIS IS A HEALTH CRISIS

Climate change is already affecting the health of all Americans. The more carbon pollution we emit, the worse things will get. More extreme weather events and changes in seasonal patterns will increase heat-related illnesses and deaths. Worsening air quality will result in more breathing problems. A hotter climate will increase the number of water- and food-borne illnesses. Stronger storms will result in more injuries and deaths.<sup>45</sup>

The potential health consequences of climate change are so significant that the World Health Organization (WHO) and the experts making up the Lancet and University College London Institute for Global Health Commission call climate change “the greatest threat to global health in the 21st century,” and the American Academy of Pediatrics says the failure to act on climate change is “an act of injustice to all children.”<sup>46</sup>



# In the Line of Fire: U.S. Latinos Face Elevated Health Threats from Climate Change

Millions of Latinos are especially vulnerable to the health impacts of climate change. This is partly due to geographic distribution, a key climate-related risk factor.<sup>47</sup> Our country's more than 56 million Latinos are largely concentrated in California (where they are now the largest ethnic group), Texas, southern Florida, and New York City.<sup>48</sup> These regions are extremely vulnerable to climate-related increases in severe heat, air pollution, and flooding.<sup>49</sup>

Social and economic factors also make millions of U.S. Latinos more susceptible to climate-related health threats and less able to cope with disasters. As the NHLA's 2016 Policy Agenda states, "these changes are hitting [Latino] communities hard and magnifying the existing vulnerabilities that Latinos already face, such as poverty, chronic and reproductive health conditions, and inadequate infrastructure, to name a few."<sup>50</sup>

## FEELING THE HEAT AT HOME AND AT WORK

Every year, extreme heat sends tens of thousands of Americans to emergency rooms and kills many hundreds.<sup>51</sup> Anyone can suffer the effects of extreme heat—ranging from rashes and cramps to fatal organ damage—but young children, older adults, pregnant women, and people with serious chronic illnesses have a higher risk of heat-related hospitalization or death.

Workers engaged in strenuous outdoor occupations are also highly vulnerable to excess heat. In North Carolina, for instance, more than 57 percent of emergency room visits for heat-related illnesses from 2007 to 2012 occurred in rural areas, with higher incidences associated with more hours of agricultural labor.<sup>52</sup> In Oregon, 28 out of 100 mostly Latino farmworkers surveyed in summer 2013 reported two or more symptoms of heat-related illness in the week before the interview.<sup>53</sup> Nationally, farm and construction workers accounted for nearly 58 percent of occupational heat deaths from 2000 to 2010, and Hispanics had three times the risk of heat-related death on the job than did non-Hispanics.<sup>54</sup>

For decades, Latinos have been heavily represented in outdoor occupations, such as agriculture, construction, and landscaping. The Bureau of Labor Statistics estimates that Hispanics made up more than 48 percent of the nation's crop and livestock production workers and more than 28 percent of construction workers in 2015.<sup>55</sup> This overrepresentation in agriculture and construction partially explains Hispanics' high rates of occupational heat-related illnesses and deaths, but there are other



factors, including language barriers (which can prevent those who don't speak English from understanding warnings and instructions related to heat and other dangers), unsafe housing conditions, and inadequate training.<sup>56</sup> In 2010, for example, a study of 170 farm camps in North Carolina found that migrant workers (95 percent of whom were from Mexico) routinely experienced dangerous heat conditions in their housing.<sup>57</sup> A set of interviews in California from 2008 to 2010 found low water consumption among 474 farmworkers, even though 91 percent reported receiving training on heat-related illnesses.<sup>58</sup>

The reported number of heat-related illnesses in the U.S. Latino workforce could significantly understate the true numbers.<sup>59</sup> Undocumented immigrants accounted for about 26 percent of the U.S. farming workforce (about 312,000 people) and about 14 percent of the construction workforce (about 1.2 million) in 2012.<sup>60</sup> These workers may be reluctant to report illnesses to employers or seek care right away.<sup>61</sup>

The risk of heat-related illnesses and deaths is likewise high for millions of urban, low-income Latinos. Cities tend to be hotter than surrounding rural areas, due in part to the increased proportion of surfaces covered with heat-retaining materials like asphalt.<sup>62</sup> This is commonly referred to as the urban heat island effect. The U.S. Environmental Protection Agency (EPA) has found that the temperatures in many U.S. cities are up to 10 degrees Fahrenheit (5.6 degrees Celsius) than in surrounding areas with natural land cover.<sup>63</sup> Parks, tree-lined streets, and other vegetation can help protect people from extreme heat, but a recent national analysis found that Hispanics are 21 percent more likely than non-Hispanic whites to live in areas with heat-retaining surfaces like asphalt and without shade-providing trees.<sup>64</sup> In Phoenix, for instance, a quarter of heat-related deaths from 2000 to 2008 occurred among low-income people of color who lived in sparsely vegetated neighborhoods. Sixty percent of the heat deaths among homeless people were in the hottest inner-city areas.<sup>65</sup>

To make matters worse, in 2013, more than 1 million Hispanic householders lived in housing with moderate to severe structural problems like poor insulation or leaky windows and doors.<sup>66</sup> In the same year, more than 4.3 million Hispanic households had no air-conditioning.<sup>67</sup>

## THE HEAVY BURDEN OF DIRTY AIR

Even relatively low levels of air pollution can have negative health impacts, particularly for children, older adults, and people working or playing outdoors. Ground-level ozone (a major component of smog) and fine-particle pollution (including soot) irritate the lungs and can affect heart function. Prolonged exposure puts people at risk for premature death and serious health effects like lung cancer, asthma attacks, cardiovascular damage, and developmental and reproductive harm.<sup>68</sup> One recent national study found that long-term exposure to particles from burning coal and diesel fuel increased the risk of premature death from coronary artery disease.<sup>69</sup> Another study of more than 73,000 people in California found that long-term exposure to fine-particle pollution and ozone smog was associated with premature death due to coronary artery disease.<sup>70</sup>

According to the American Lung Association's 2016 *State of the Air* report, more than 52 percent of Americans live in counties with unhealthy levels of either ozone smog or particle pollution.<sup>71</sup> Many of the most polluted urban areas in the country have large populations of Latinos. Nearly 25 million of the nation's more than 56 million Latinos live in the 15 worst urban areas for ground-level ozone pollution (Table 1), and nearly 14 million Latinos live in the 15 worst

**Table 1: Hispanic population in the 15 U.S. urban areas most polluted by ground-level ozone, a key component of smog.<sup>72</sup> (MSA: Metropolitan Statistical Area; CSA: Combined Statistical Area)**

2016 Rank	State	Urban Area	Estimated Number of Hispanic Individuals in 2014	Estimated Percent Hispanic in 2014
1	CA	Los Angeles–Long Beach CSA	8,529,515	46
2	CA	Bakersfield MSA	450,826	52
3	CA	Visalia–Porterville–Hanford CSA	368,236	61
4	CA	Fresno–Madera CSA	588,537	53
5	AZ	Phoenix–Mesa–Scottsdale MSA	1,355,233	30
6	CA	Sacramento–Roseville CSA	530,130	21
7	CA	Modesto–Merced CSA	387,613	49
8	CA	Denver–Aurora CSA	752,265	22
9	NV, AZ	Las Vegas–Henderson CSA	665,488	29
10	CO	Fort Collins MSA	36,038	11
11	TX, OK	Dallas–Fort Worth CSA	2,020,448	27
12	CA	El Centro MSA	147,348	82
13	CA	San Diego–Carlsbad MSA	1,083,028	33
14	NY, NJ, CT, PA	New York–Newark CSA	5,344,577	23
15	TX	Houston–The Woodlands CSA	2,406,708	36
<b>TOTAL</b>			<b>24,665,990</b>	<b>32</b>

**Table 2: Hispanic population in the 15 U.S. urban areas most polluted by year-round particle pollution, including soot.<sup>73</sup>  
(MSA: Metropolitan Statistical Area; CSA: Combined Statistical Area)**

2016 Rank	State	Urban Area	Estimated Number of Hispanic Individuals in 2014	Estimated Percent Hispanic in 2014
1	CA	Bakersfield MSA	450,826	52
2	CA	Visalia–Porterville–Hanford CSA	368,236	61
3	CA	Fresno–Madera CSA	588,537	53
4	CA	Los Angeles–Long Beach CSA	8,529,515	46
5	CA	El Centro MSA	147,348	82
6 (tie)	CA	Modesto–Merced CSA	387,613	49
6 (tie)	CA	San Jose–San Francisco–Oakland CSA	2,213,991	26
8	PA, OH, WV	Pittsburgh–New Castle–Weirton CSA	40,873	2
9	PA	Harrisburg–York–Lebanon CSA	82,628	7
10	KY, IN	Louisville/Jefferson County– Elizabethtown–Madison CSA	65,523	4
11	OH	Cleveland–Akron–Canton CSA	142,697	4
12	PA, NJ, DE, MD	Philadelphia–Reading–Camden CSA	723,089	10
13	IN	Indianapolis–Carmel–Muncie CSA	139,024	6
14 (tie)	OH, KY, IN	Cincinnati–Wilmington–Maysville CSA	63,223	3
14 (tie)	PA	Altoona MSA	1,458	1
<b>TOTAL</b>			<b>13,944,581</b>	<b>27</b>

urban areas for annual particle pollution (Table 2). Six urban areas in California—Bakersfield, Visalia–Porterville–Hanford, Fresno–Madera, Los Angeles–Long Beach, El Centro, and Modesto–Merced—are on both lists.

On average, Hispanic children have the same prevalence of asthma as non-Hispanic white children. However, Hispanic children are 70 percent more likely to be admitted to the hospital for asthma.<sup>74</sup> More alarmingly, Hispanic children are twice as likely to die from asthma than non-Hispanic white children.

Asthma is an expensive, difficult-to-manage disease. From 2002 to 2007, the average American asthma patient racked up close to \$3,300 a year in costs for prescription

medication and visits to doctors’ offices and hospitals.<sup>75</sup> Hispanics have the lowest rate of health insurance of any racial or ethnic group in the country, making access to health care costly and burdensome. Barriers to enrollment include concerns about immigration status and limited access to computers.<sup>76</sup> Without insurance, Latinos are less likely to get preventive care or treatment from specialists.<sup>77</sup>

Receiving quality medical care can also be challenging for the more than 12.6 million foreign-born Latinos in the United States who are less than fluent in English.<sup>78</sup> Lack of English proficiency can make it harder to complete medical forms and understand written and verbal instructions from doctors and nurses.<sup>79</sup>

***More than 24 million Hispanics live in the 15 most heavily ozone smog-polluted urban areas in the country. Hispanic children are twice as likely to die from asthma than non-Hispanic white children.***





## SWEPT AWAY BY FLOODING

Even without the amplifying effects of climate change, heavy rain and flooding present myriad direct and indirect dangers to human health, including injury, drowning, exposure to toxic materials, and lung and skin infections.<sup>80</sup> For example, after the 2006 flooding disaster in El Paso County, Texas, that damaged or destroyed 1,500 homes, scientists found that physical problems such as coughing, headaches, and eye irritation were 149 percent more likely among Hispanics than among non-Hispanics.<sup>81</sup>

The loss of friends, family, and property through particularly severe storms and flooding commonly causes stress reactions and mental health effects, including anxiety, suicidal thoughts, and post-traumatic stress disorder.<sup>82</sup> An analysis of nearly 298,000 births in Miami-Dade and Broward Counties in Florida, for instance, suggests that exposure in 1992 to Hurricane Andrew, a category 5 storm, increased the risk of stress-induced abnormal labor by more than 50 percent and the risk of cesarean section by about 20 percent.<sup>83</sup> At the time, Hispanics made up about 9 percent of Broward County's population and about half the inhabitants of Miami-Dade County.<sup>84</sup>

Sea level rise threatens millions of Americans, especially as coastal populations continue to grow.<sup>85</sup> While residents of coastal counties will naturally be most directly affected by rising seas, the impacts of coastal flooding can extend much farther. This was illustrated when Hurricane Sandy hit New York City in 2012 and inland residents faced power outages and price gouging at gas stations.<sup>86</sup> Sea level rise also threatens water treatment facilities, roads and bridges, power plants, and other public infrastructure and services with potentially dramatic economic consequences for state governments and taxpayers.<sup>87</sup>

Southern Florida—home to more than 2.7 million Hispanics in 2014—faces some of the highest risks from sea level rise and hurricane-driven flooding in the country.<sup>88</sup> It is difficult to protect the area's dense population with flood-defense structures because the flat, low-lying coastal areas are made of porous bedrock that allows water to rise up under levees. Scientists with Climate Central and the Potsdam Institute for Climate Impact Research estimate that even if the world stopped pumping climate-warming pollution into the air today, at least eight Florida cities with sizable Latino communities are already “committed”—that is, unable to avoid—future high-tide flooding (Table 3).<sup>89</sup>





**Table 3: Coastal cities in Florida of 100,000 residents or more where 25 percent of the 2010 population-weighted area could fall below the committed future high-tide line. For cities marked with an asterisk (\*), 50 percent of the area could fall below the committed high-tide line.<sup>90</sup>**

City	Total Population (2010)	Percent Hispanic/Latino (2010)
Fort Lauderdale*	165,521	13.7
Hialeah*	224,669	94.7
Hollywood	140,768	32.6
Miami	399,457	70.0
Miami Gardens	107,167	22.0
Miramar*	122,041	36.9
Pembroke Pines*	154,750	41.4
St. Petersburg	244,769	6.6

According to a 2014 study of the Miami–Fort Lauderdale–Pompano Beach Metropolitan Statistical Area—one of the most heavily Hispanic urban areas in the country—Hispanics living in flood zones are more likely to live in high-risk areas (100-year floodplain) than in moderate-risk areas (500-year floodplain).<sup>91</sup>

As with air pollution and extreme heat, the threats associated with storms and floods are more severe for those living in poverty. A survey of 1,500 single-family

homes in the Galveston, Texas, area found that Hurricane Ike’s storm surge in 2008 caused more damage in lower-income Hispanic and black neighborhoods than in mostly white neighborhoods with higher-value homes.<sup>92</sup> This difference seemed to be independent of proximity to the coast or how high homes were elevated, possibly reflecting low-income residents’ lack of resources for the kind of maintenance and repairs that would reduce storm damage.

Furthermore, because property values are an important factor in siting infrastructure improvements and adaptation measures like flood walls, low-income neighborhoods are less likely to be physically protected from stormwater and residents may be forced to evacuate more often.<sup>93</sup> According to the 2013 American Housing Survey, the median value of Hispanic-owned homes was lower than that of homes owned by non-Hispanics in hurricane-prone cities like Miami (\$170,000 versus \$190,000) and Houston (\$100,000 versus \$150,000).<sup>94</sup>

In the event of a weather emergency, Latinos with low English proficiency or who are recent arrivals to flood-prone areas may not have the experience and knowledge to make informed decisions about evacuation and storm preparedness in general.<sup>95</sup> One small study conducted in 2012 and 2013, for example, found that foreign-born Hispanics in Miami and Houston tended to be less prepared for flooding. They were also unaware of—or ineligible for—postdisaster assistance.<sup>96</sup> Interviews with 65 foreign-born Latinos conducted after Hurricane Katrina in 2005 suggested that a lack of language-appropriate information and “fear, distrust, and low expectations of support from official sources” hampered evacuation efforts.<sup>97</sup>

# The Benefits of Climate Action

The challenges climate change poses to U.S. Latinos are serious, but national and world leaders are increasingly recognizing the urgent need to act. In 2015, Pope Francis issued his papal encyclical “Laudato Si’: On Care for Our Common Home,” which focused on the moral obligation to address climate change.<sup>98</sup> Universities, churches, cities, large companies, and many other institutions are removing dirty fuels from their investment portfolios.<sup>99</sup> As 2015 ended, 195 nations from around the world came together in Paris to adopt an historic agreement to cut carbon and the other climate-changing pollution.<sup>100</sup> As of early September 2016, 180 nations, including the United States and China, had signed the agreement.<sup>101</sup> (Signing is the first step after an international agreement is adopted to enter that agreement into force.<sup>102</sup>) And in the past two years, power companies have taken advantage of supportive policies and improvements in technology to install record-breaking amounts of renewable electricity generation, including wind and solar.<sup>103</sup>

The United States also took its most significant national action to date to address climate change in 2015 when the EPA finalized the Clean Power Plan, our first-ever national limits on carbon pollution from power plants.<sup>104</sup>

Burning less fossil fuel is necessary to address both climate change and the air pollution that disproportionately affects Latinos and other communities of color. Strong advocacy by environmental justice leaders and communities has helped ensure that equity issues are meaningfully addressed in policies intended to tackle climate change.

In California, environmental justice leaders worked with State Senator Kevin De León and Representative John Pérez to address equity concerns related to California’s landmark climate law AB32 (California Global Warming Solutions Act of 2006), ultimately creating the Communities Healthy Air Revitalization Trust. Through the trust, a portion of the revenues generated from the state’s carbon trading program is used to help Californians who are least able to confront the expected effects of climate change.

The Clean Power Plan was closely scrutinized by environmental justice leaders concerned with its equity provisions and was praised as an ambitious “step in the right direction.”<sup>106</sup> Continued engagement by environmental justice advocates will be critical in ensuring that states consider equity and justice and the needs of impacted low-income people and communities of color in their plans.

The Plan sets carbon pollution limits for each state. In February 2016, implementation of the Clean Power Plan was temporarily paused by the Supreme Court as a result of litigation by 27 states and industry groups arguing that the rule exceeds the EPA’s authority under the Clean Air Act.<sup>105</sup> Forward-looking policymakers are continuing to develop plans to meet their states’ carbon pollution targets based on the Plan. Meaningful engagement by Latino organizations, leaders, and citizens will help ensure the development of strong state implementation plans that protect health, fully account for the community’s concerns, ensure equity, and minimize harms to exposed and vulnerable populations.

Transitioning away from dirty fossil fuels and toward clean, renewable energy sources can address current health challenges, create economic opportunities, make communities more resilient, and help reduce the worst harms of climate change.

## CLEANER ENERGY, CLEANER AIR

Actions to address climate change can also clean up the air in our neighborhoods. About 85 percent of climate-changing pollution generated in the United States comes



from producing and using dirty energy, which also fuels smog formation and releases fine particles and toxic pollution like mercury.<sup>107</sup> Transitioning to clean energy will have near-immediate health benefits, particularly for communities of color located just a few miles from coal-burning power plants or congested highways.

According to researchers at Harvard and Boston University, adding 500 megawatts of wind or solar energy or reducing demand for electricity by 150 to 500 megawatts in just six locations in the eastern United States could produce health and climate benefits worth \$5.7 million to \$210 million a year.<sup>108</sup> With the implementation of the Clean Power Plan, the national health and climate benefits could add up to \$34 billion to \$54 billion per year in 2030. A significant proportion of those savings come from reducing ozone smog and fine-particle pollution, which could return up to \$4 of health benefits for every \$1 of investment.<sup>109</sup>

## MORE FINANCIAL SECURITY

Clean energy and energy efficiency can also help protect Latinos financially. Energy efficiency measures help reduce electricity bills by allowing consumers to cut their energy use while still keeping their homes comfortable and well lit. An energy efficiency retrofit of a typical low-income home can reduce energy use by a national average of 35 percent and save an estimated \$437 in heating and cooling costs every year.<sup>110</sup> Households can also save hundreds of dollars a year by switching to more efficient furnaces, water heaters, and appliances.<sup>111</sup>

There is a huge, untapped opportunity to reduce electricity bills for Latinos, including the nearly 5 million Hispanic householders in multifamily rental housing.<sup>112</sup> Multifamily rental housing is far less likely than other types of housing to have energy efficiency measures installed, but a recent study by Energy Efficiency for All found that cost-effective programs could cut electricity use in the affordable multifamily housing sector by up to 26 percent.<sup>113</sup> A report from the American Council for an Energy-Efficient Economy and Energy Efficiency for All found that low-income households spend 7.2 percent of their income on energy bills, compared with 2.3 percent in high-income households. Latino households, on average, spend 4.1 percent of their income on energy bills. Raising energy efficiency to the median national level could reduce excess energy bill expenditures (i.e., the amount above expenditures by median households) by 68 percent in Latino households.<sup>114</sup>

Increasing investment in energy efficiency programs, in conjunction with bill assistance and weatherization programs, could help reduce energy burdens and energy consumption in Latino and other underserved communities, cut costs associated with late bill payments and shutoffs, boost the local economy, and create jobs.<sup>115</sup>



## JOBS FOR A NEW GENERATION OF LATINOS

Creating jobs in energy efficiency can benefit Latinos who already work in large numbers in the construction trades and possess many of the needed skills for retrofit and weatherization programs. A recent report by Environmental Entrepreneurs (E2) found that energy efficiency already supplies the highest number of clean energy jobs in the United States, employing nearly 1.9 million people as of 2015 and helping to grow the economy nationally and especially in states like North Carolina, Colorado, and California. The energy efficiency industry includes jobs in manufacturing or installing ENERGY STAR® appliances and energy-efficient lighting, efficient HVAC equipment, materials, and insulation.<sup>116</sup>

Wind and solar energy also create jobs while reducing pollution. By the end of 2015, the wind energy industry supported the equivalent of 88,000 full-time jobs, most concentrated in Texas, Oklahoma, Iowa, and Colorado.<sup>117</sup> These four wind-friendly states were home to about 28 percent of the country's Latinos in 2014.<sup>118</sup> The solar industry has grown 123 percent since 2010, employing nearly 209,000 full-time or nearly full-time workers (including nearly 23,000 Latinos) by late 2015 at wages above the national median.<sup>119</sup> A 2016 report from Environment America and the Frontier Group found that Los Angeles, San Diego, and Phoenix—all of which have substantial Latino populations—are the top three cities in the country for installed rooftop and utility-scale solar capacity.<sup>120</sup> In 2015, the Obama administration announced programs designed to scale up solar power for households and businesses that lack the capital to invest, roof space, or adequate information about how to transition to solar energy.<sup>121</sup>

While Latinos in the construction trades already possess the skills necessary for some aspects of the clean energy economy, higher-level, technology-based careers will require additional training, especially in the fields of science, technology, engineering, and mathematics (STEM). Less than 2 percent of today's STEM workforce is Latino. Clearly there is an urgent need to increase STEM education and job-training opportunities at all levels if Latinos are to fully realize the opportunities of the clean energy economy.<sup>122</sup>



# Toward a Cleaner, Healthier *Futuro*

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Slowing climate change and protecting ourselves from its impacts will take dedication and leadership. Latinos—and all Americans—can and must insist that local, state, and federal officials act swiftly to cut the industrial pollution that is causing climate change and fouling our air. Latino leaders and communities must also push decision-makers in government and industry to think even more ambitiously, and creatively, to reach equitable outcomes.

Fully enjoying the benefits of the clean energy economy will require policies that fight climate change, support clean energy, and improve access to jobs. To ensure that we protect the millions of U.S. Latinos and other communities vulnerable to climate change, we should:

- **Fully implement the Clean Power Plan in the cleanest, most cost-effective manner.** In February 2016, implementation of the Clean Power Plan was temporarily paused by the Supreme Court. Forward-looking states like California, however, know the Clean Power Plan is good for public health and environmental stability and are continuing to develop plans to meet their states' carbon pollution targets.<sup>123</sup> Latino leaders must call on governors and state legislators to move forward with plans that are strong and protective of Latino health and minimize harms to exposed and vulnerable communities. In states with active planning processes, Latinos can participate in public hearings and submit comments on plans. In less active states, Latinos will need to use other avenues—like social media and meetings with state officials—to remind decision-makers that action on climate change is urgently needed and that the Clean Power Plan has broad and deep public support.
- **Ensure that the United States meets its international commitments to fight climate pollution.** Latinos are acutely aware of the serious climate change impacts facing Latin American nations. It is critical that the United States meets its international obligations to cut climate-changing pollution and fulfill its financial commitments that will help developing countries deal with the impacts of climate change. International leaders need to hear from Latinos—especially those who have ties to other countries—that climate action is a priority both in the United States and abroad.
- **Support policies to ensure that transportation agencies track air pollution and consider strategies to reduce it.** The U.S. Department of Transportation has proposed draft standards that would, for the first time, require that transportation agencies consider how to measure and reduce climate-changing pollution from cars and trucks.<sup>124</sup> These can help stem the pollution that hits Latinos hard and worsens climate impacts. Latino advocates can help shape neighborhood, city, and regional transportation plans by participating in community meetings and city planning hearings and by communicating with city, state, and federal agencies. These changes will improve air quality and quality of life by prioritizing public transportation and providing options for safe walking and cycling.
- **Demand strong energy efficiency programs from electric and natural gas utilities and government entities.** Cities have long been leaders in energy efficiency but can do much more in partnership with utilities to lower energy use in homes and office buildings, including weatherization, upgrades, and retrofits to low-income housing units and public housing buildings. These improvements build healthier communities and help Latino families save money.
- **Deploy clean renewable energy.** Wind and solar energy prices are falling rapidly. Thanks to smart federal and state policies, these resources are becoming cheaper than dirty fossil fuels in more and more places. Building renewable resources now promotes economic development, hastens the reduction of carbon pollution, and puts federal tax credits for clean energy to work for local economies—all of which greatly benefit Latino communities. States, renewable energy developers, utilities, and transmission planners must work together to seize these clean energy opportunities and ensure that Latinos benefit.

Much more action is needed to address climate change and its serious impacts on “our common home,” as Pope Francis reminded us in his encyclical. Through coalitions like Voces Verdes, Latinos are raising their voices to call for climate action, greater access to clean renewable energy and energy efficiency, and increased economic opportunities in our clean energy future. Latinos across the United States must work together to continue to elevate the voices of impacted communities, highlight Latinos' leadership and strength, demand action, and carve a path for those who can and should benefit from cleaner air and the growth of the clean energy economy. Together, we can tackle this global challenge and help communities thrive.



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