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Renewable Energy: Helping America Thrive *A Need for Stable Renewable Energy Initiatives*

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Executive Summary

When compared to fossil fuels, renewable energy such as solar and wind provides the U.S. with energy security and independence, creates a cleaner and healthier environment, and nourishes our local economy while improving our standard of living. Federal incentives for renewable energy have promoted businesses and individuals to invest on renewable energy technologies such as solar and wind in the last five years. The U.S. has seen a 79 percent growth from 2008–2012 in the average monthly electrical generation from non-hydro renewable energy. Unfortunately, many incentives will be expiring soon. To continue moving in this direction, it's important that Congress provides "long-term, consistent policies that incentivize investment, manufacturing and deployment of clean technologies" that will motivate more people to invest in renewable energy (Peeples). Getting the knowledge and information out to the right people proves important. To engage more people and encourage their participation courses such as *energy 101* are being offered in universities. These incentives are an important tool to provide energy for rural communities that are off the grid in the U.S. such as *colonias*, a group of communities near the border with Mexico. If properly guided, these communities will be able to afford clean energy, and also have economic benefits in the long run.

Introduction

Increasing renewable energy production is important for the U.S., and Latinos play an critical role in moving forward with renewable energy. Fossil fuels such as coal, natural gas, and oil, although they currently provide about 78 percent of our energy needs, when consumed give off harmful by-products such as carbon dioxide, nitrous oxide, sulfur oxides, and hydrocarbons (Gelman, 2011 Renewable Energy Data Book). When these by-products get in the atmosphere they produce greenhouse gases, a major contributor to global warming, acid rain, and smog (Sustainable Table).

In a survey published in 2012 by the Sierra Club and the National Council of La Raza (NCLR), results show that, on average, Hispanics support renewable energy (Sierra Club and National Council of La Raza). The following are a few of the findings:

- If more energy jobs were to be created in the near future, 9 in 10 Latino voters would want to be working for the clean energy industry rather than for a fossil fuel company or an oil refinery.
- Hispanics believe that "coal plants and oil refineries are a thing of the past. We need to look toward the future and use more energy from clean sources."
- Of those polled, 86 percent prefer that the "government invest in clean, renewable energy like solar and wind."

Hispanics are the fastest growing minor-

ity group, comprised of 16.4 percent of the U.S. population, or 50.7 million in 2010 (Pew Hispanic Center). Since Hispanics are a significant part of the American population, the support and growth of the Latino population positions the U.S. to move toward more renewable energy.

One of the benefits of renewable energy is that it does not have to be connected to the electrical grid and when connected, utility companies are willing to pay the client for energy added to the grid through net metering (Painter). In the states that border Mexico—Texas, New Mexico, Arizona, and California—rural communities called *colonias* still lack basic amenities such as running water and electricity. In these communities, renewable energy is key to gaining critical amenities. Renewable energy can provide a more stable development growth in these areas. With 400,000 residents living in dire conditions in Texas *colonias* alone (Texas Secretary of State John Steen), renewable energy technologies such as wind and solar can provide electricity to these Hispanic communities that are off the general grid. With the aid of clean energy tax credits from the government there has been an increase in the production and installation of solar and wind energy in the last two years. Unfortunately, many of these incentives have expired or will be expiring this year.

Therefore, with the continued support from the government providing a long-

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term energy policy by extending the incentives for renewable energy more people are willing to invest their money and as a result the U.S. will see more jobs, cleaner air, and more communities resembling third world countries becoming part of the American dream.

Background

Renewable energy is a clean source of energy, defined by the U.S. Energy Information Administration as “an energy source that is regenerative or virtually inexhaustible.” Making use of this source of energy benefits the U.S. and sets an example for the rest of the world. The U.S. is the largest user of energy in the world (Gasification and Renewable Energy). There are many sources of renewable energy including solar, wind, biomass, geothermal, and hydropower. Hydropower has been around for a longer period than the other sources. Wind resources are largely found from the Dakotas to Texas; solar energy is abundant in the Southwest and the Southeast has massive amounts of biomass (Peeples).

Facts show how much the U.S. consumes of renewable energy. A report from the U.S. Department of Energy states that out of all the energy produced in the U.S., 8 percent was produced from non-hydro renewables and 3 percent from hydropower as seen in Figure 1. When looking at the energy consumed by the U.S., the quantity that comes from renewable energy accounts for an even smaller portion — 6 percent for the non-hydro renewable and 3 percent for hydropower. The majority of the energy consumed comes from petroleum at 37 percent which is largely imported, in second place natural gas with 25 percent, and in third place coal with 21 percent (Gelman, 2012 Renewable Energy Data Book).

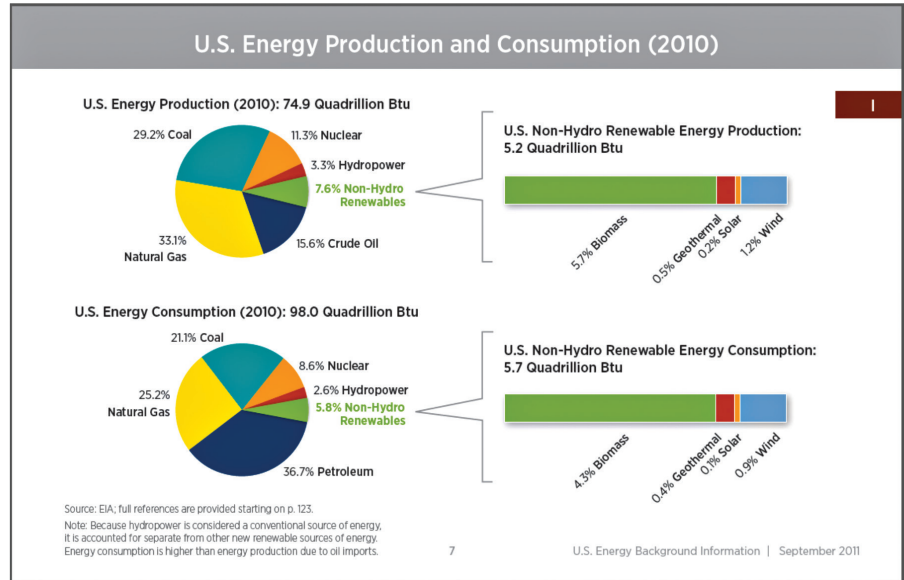


Figure 1

The challenges America faces with petroleum is environmental degradation, market instability and dependence on other countries. Any international conflict in the Persian Gulf and other unstable regions ends up affecting the U.S. An example of this was in 2011 with the Libyan upheavals that resulted in a \$25 per barrel price hike (Korin & Loft, 2012).

How do fossil fuels impact Hispanics?

Hispanics are the largest minority group in the U.S. with almost 50 million people, comprising 16 percent of the nation’s total population, and considered the fastest growing demographic group in the country. Many accounts have been given about the impact that the Hispanic vote had in the 2012 presidential election. Republicans recognized the power of the Hispanic vote when stating “we could have won this election if the party had a better brand with Hispanics.”

Fossil fuels, such as coal and petroleum have historically had an adverse environmental impact on Latino communities. Among the major concerns for Hispanics shared in a recent survey are the economy, jobs, and the public-health effects of environmental pollution. From a survey conducted by the Sierra Club about the environment of Latino¹ voters, 61 percent of Latinos said that air pollution and water contamination are among the top two environmental issues of importance for their families (Sierra Club and National Council of La Raza).

In 2012, 43 percent of Latino voters reported living or working near a toxic site which includes a refinery, a coal-fired power plant, an incinerator, an agricultural field, a major highway or a factory. This represents a 9 percent increase from 2008.

¹ Latinos and Hispanic’s used interchangeably to represent people with roots to a Spanish speaking country.

In a survey from the National Latino Coalition on Climate Change (NLCCC) , at least 85 percent of Latino voters in three “swing states”—Florida, Colorado, and Nevada—say they would be willing to pay higher energy prices in order to increase the amount of our energy needs met by renewable energy sources.

Living near these toxic sites increases their risk of health issues. From the survey, 47 percent reported they or someone in their immediate family suffers from asthma and 41 percent of Latino respondents dealt with cancer, either personally or in their immediate family (Sierra Club and National Council of La Raza). Many industrial sites release toxic chemicals and particles that when inhaled, ingested or touched, cause long-term health effects such as cancer.

Another report reveals how coal-fired power plants affect the Latino community who fish in local waterways (Bernstein). In 2009, more than 130,000 pounds of toxin containing mercury was spewed from coal-fired power plants into the environment. The fish in urban areas, on average, have the highest mercury concentrations that derive mainly from these plants. This puts the 31 percent of the Hispanic community who regularly fish at risk. What’s more, 76 percent of those who fish eat and share with their families, affecting the most vulnerable like children and pregnant women.

Why is renewable energy important to the Hispanic Community?

In a survey from the National Latino Coalition on Climate Change (NLCCC) , at least 85 percent of Latino voters in three “swing states”—Florida, Colorado, and Nevada—say they would be willing to pay higher energy prices in order to increase the amount of energy needs met by renewable energy sources. Three-quarters of Latino voters say that Congress should take action now on an energy proposal that includes an increase in renewable energy and new standards and incentives to use smarter energy technologies (NLCCC).

In another survey, when asked which source of energy they prefer, 83 percent of Hispanics surveyed have agreed that they prefer renewable energy stating that “coal plants and oil refineries are a thing of the past. We need to look toward the future and use more energy from clean sources.” When asked if all wages and benefits remained the same, nearly 9-in-10 of the Latino voters prefers working in a clean energy industry than a fossil fuel company or oil refinery. In addition, 58 percent of Hispanics are willing to pay more on their monthly electrical bills in order to receive their electricity from clean energy sources (Sierra Club and National Council of La Raza).

Clearly the majority of Hispanics prefer renewable energy over the non-renewable fossil fuels. Among the Latino electorate polled, 86 percent would like to see the government investing on clean energy and only 11 percent prefer investing on fossil fuels like coal, oil, and gas (Sierra Club and National Council of La Raza). Continued government investment and extension of their incentives on renewable energy makes renewable energy more affordable for a wider population willing to invest in renewable energy.

Las Colonias

Renewable energy would not only benefit people’s health by promoting a clean environment, unlike most fossil fuels, but would also allow underdeveloped communities to rise up to the average American standard of living in rural areas such as *las colonias*. The word *colonias* refers to neighborhoods in Spanish, but in the U.S. one of its residents described it as “ruddy, crudely constructed shacks that are little more than a patchwork of old boards and cardboard” (Galan). *Colonias* are districts that border Mexico and represent some of

the poorest regions in the United States. The majority of the residents living there are Americans of Mexican descent, and Spanish is the common language. Many of the residents living there are still without running water and electricity. There are few roads and cheap housing, “with little concern for structural integrity or standards of living” (The Economist). This can be seen after heavy rain where the houses are stuck in mosquito-infested open sewer due to the houses being built on flood plains. As the population of the Americans living there increases, the residents build other houses in phases as they can afford materials and will generally lack electricity, plumbing, and other basic amenities (The Economist).

Colonias are found all along the southern border with Mexico on four states: California, Arizona, New Mexico, and Texas. The largest numbers of *colonias* are in Texas with about 2,300 *colonias* and about 400,000 residents. In the 2000 U.S. Census, the poorest place in the United States was Cameron Park, one of Texas’ *colonias*. Cameron Park is a small community along the southern Texas border near Brownsville, a larger border city, with over a 1,000 people and an income per head of \$4,100. More recently, in 2010 the income head per person was about \$5,700 (The Economist).

In a white paper produced by Texas on the funding done for *las colonias*, not once was funding for energy mentioned (Legislative Budget Board Staff). One of the main problems in these areas is infrastructure and the inefficiency of the homes. With enough electricity in the area, the infrastructure can be improved and efficiency can be tackled. Part of improving the infrastructure is also investing in the energy. The environment in most of these areas is arid and dry, and they can benefit from solar and wind energy. Through

As an example of the importance of renewable energy incentives, the wind energy sector has been creating a significant number of jobs in the U.S. since 2008. The American Wind Energy Association (AWEA) reports that 75,000 full-time workers were employed in the U.S. at the end of 2010 and 2011.

grants and education of the options available such as federal incentives, these communities can benefit with modern solutions to have clean energy.

Existing Incentives and Public Policy to Promote Renewable Energy

Currently, policy and incentives from the federal government place the U.S. as the number one country in the world in investing in clean energy for 2011, after being down to number three in 2010. The U.S. invested \$48.1 billion in 2011, a 42 percent increase. However, this amounts to 0.33 percent of the US GDP compared to other countries that invested 1 percent of its GDP toward renewable energy, as is the case with Germany. Germany is now the world's largest solar market due to its "strong, stable policies that give businesses and individuals a clear incentive to invest" (EESI).

So far, the U.S. government has funded policies that motivate businesses and homeowners to invest in renewable energy. The main policy is the American Recovery and Reinvestment Act. Through this act implemented in 2009, the US government has invested \$10.9 billion on energy incentives (Recovery.gov). However, with many of the incentives expiring such as the Production Tax Credit (PTC) in 2013 or Investment Tax Credit in 2016, conservative investors are reluctant to take investment risks without incentives, which may halt the move toward renewable energy in the coming years.

US companies such as Ben & Jerry's, Clif Bar, Johnson & Johnson, Levi Strauss & Co, Sprint, Starbucks, and Yahoo! understand the value of renewable energy for their customers and the environment, and they are taking advantage of federal incentives to increase the amount of renewable en-

ergy they are buying. They have increased the amount of renewable energy use from 8 percent in 2009 to 10 percent in 2011 as a percentage of total electricity consumption. Morten Albaek global senior vice president at Vestas and Michael Liebreich, chief executive officer of Bloomberg New Energy Finance, attribute the increase in renewable energy among companies to energy policies. As an example, Starbucks obtained 47 percent of its energy from renewable energy last year and it plans to continue the trend as part of its business strategy. For this reason, Starbucks, along with eighteen other U.S. companies wrote a letter to Congress to extend the PTC, set to expire at the end of 2012, which has motivated companies to install solar and wind energy. "The PTC has enabled the industry to slash wind energy costs – 90% since 1980" a main reason why big companies are investing on renewable energy (Carus).

Recommendations

Congress should provide stable federal policies for renewable energy

As an example of the importance of renewable energy incentives, the wind energy sector has been creating a significant number of jobs in the U.S. since 2008. The American Wind Energy Association (AWEA) reports that 75,000 full-time workers were employed in the U.S. at the end of 2010 and 2011. With federal incentives scheduled to expire at the end of 2012, it led to an over-capacity, manufacturers reporting weakened financial results, and companies in the wind industry announcing cuts to their workforce (Wind Technologies Market Report 2011). Fortunately, the PTC was extended one more year until 2013, but it's not enough for investors to stay in the market due to the uncertainty. By following President Obama's call to Congress to make the renewable energy

PTC permanent and refundable, the market can continue growing as it has in the last four years in the U.S., not only providing new jobs domestically, but also providing clean energy (Peebles).

A main benefactor could be rural areas in the U.S. such as *colonias*. "Houses in *colonias* are generally constructed in phases by their owners and may lack electricity, plumbing and other basic amenities. Colonia residents build homes as they can afford materials" (Texas Secretary of State John Steen). The area of *las colonias* can benefit from community solar power or wind power projects made from small turbines, which are partially owned and developed by a local community. These small turbines generate electricity in a clean manner for use on-site, making it ideal for rural homes like the ones found in *las colonias*. Benefits of locally owned solar or wind projects include local control of power management, profits from electricity sales, and more local jobs.

Promote renewable energy education

Germany is undergoing a major energy transformation as a whole country, entitled "Energiewende," and the German government is backing it up. They have set a target and they are educating the public. By 2050, they want to increase their renewable energy sources in electricity supply to at least 80 percent. They are framing a strong set of stable policies that provide businesses and individuals a "clear incentive to invest." With less solar radiation than the U.S., nevertheless it has become the leader in the solar market. The government is educating the country and making it a priority in order to increase the number of jobs, avoid fossil fuel imports, reduce CO2 emissions, and reduce their national debt by about 180 billion euro by 2020 (EESI). In a similar manner, the government, universities,

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and schools can promote education in renewable energy. A good example is the "Energy 101" framework developed by the Department of Energy, the Association of Public and Land-grant Universities (APLU), the University of Maryland, and the Environmental and Energy Study Institute (EESI). It can be incorporated at the university level as an introductory course to energy. This framework contains essential energy concepts for all ages from K-to-Gray to help people make "informed choices about energy production, energy use, and sustainable development" (EESI).

Conclusion

Hispanics are the largest minority group in the U.S with almost 50 million people, comprising 16 percent of the nation's total population. As the largest minority group, they are capable of making a difference in U.S. public policy issues such as renewable energy. The U.S. must gain energy independence from the countries it gets its oil from, to reduce the carbon footprint due to the use of fossil fuels that has played a major role in climate change, and to increase the amount of jobs in America through green jobs. President Obama has recognized this and made it clear in his State of the Union address. He has called to double the "country's wind, solar and geothermal energy generation by 2020" (Peoples). For example, from wind energy alone, with federal tax incentives there were more domestic companies created to fabricate wind turbines, thus more jobs were created, and there was an increase in electricity generated added to the U.S. electrical grid. The U.S. will be investing its money back into the economy of its own country rather than in other countries. Therefore, in order to continue this trend seen in 2011 that can be found in reports from DOE, the government needs to continue supporting renewable energy by ex-

tending federal tax incentives and creating a long-term energy plan that includes renewable energy. President Obama has called for the U.S. to become a world leader in harvesting renewable resources, but in order to have the support of Congress the voice of the country must be heard.

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