

**Ken Sim MS**  
Institute of Policy Analysis  
SOUTHERN UTAH UNIVERSITY

**Ryan M. Yonk Ph.D**  
Institute of Policy Analysis  
Department of Political Science  
SOUTHERN UTAH UNIVERSITY

**Randy T Simmons Ph.D**  
Institute of Political Economy  
Department of Economics and Finance  
UTAH STATE UNIVERSITY

# SHARING RENEWABLE ENERGY PAYMENTS: H.R. 596

**FINAL REPORT | DECEMBER 2013**



# SHARING RENEWABLE ENERGY PAYMENTS: H.R. 596

Final Report  
December 2013

## Principal Investigators:

### **Ken Sim MS**

Institute of Policy Analysis  
Southern Utah University

### **Ryan M. Yonk PhD**

Institute of Policy Analysis  
Department of Political Science  
Southern Utah University

### **Randy T Simmons PhD**

Institute of Political Economy  
Department of Economics and Finance  
Utah State University

### **Nicholas S. Hilton**

Strata Policy

## STUDENT RESEARCH ASSOCIATES:

### **Tanner Robison**

Utah State University

### **Grant Patty**

Utah State University

# TABLE OF CONTENTS

<b>Introduction and Background</b>	<b>4</b>
<b>Details of H.R. 596</b>	<b>5</b>
Title I	6
Title II	6
<b>Data Collection Methodologies</b>	<b>8</b>
<b>Implications for States and Counties</b>	<b>11</b>
Arizona	12
California	13
Colorado	14
Nevada	15
New Mexico	16
Utah	17
<b>Case Studies</b>	<b>17</b>
Riverside County California	17
Nevada	19
Imperial County, California	20
Mineral County, Nevada	22
<b>Conclusions</b>	<b>23</b>
<b>Works Cited</b>	<b>24</b>
<b>Appendix</b>	<b>28</b>

## INTRODUCTION AND BACKGROUND

The high temperatures, high winds, and barren landscapes of the southwestern United States may seem inhospitable to some, but to those that value renewable energy, the Southwest is paradise. Those high temperatures allow solar power generation to produce thousands of megawatts of electricity and the high winds spin the turbines of giant windmills.

But this renewable energy comes at a cost, and too often that cost is born mainly by local governments whose resources are used to facilitate the development. Roads need additional maintenance, water resources are depleted, view-sheds are modified, and wildlife is displaced. The Public Lands Renewable Energy Development Act of 2013 (H.R. 596) is a bill currently before Congress that will provide funds to offset those costs. It will direct royalty and leasing revenue from solar and wind energy revenues to states and counties, who currently receive none of those funds. The sponsors of H.R. 596 hope that by sharing the royalty and leasing monies, states and counties will be more likely to support additional renewable energy development.

H.R. 596 was introduced in the 1<sup>st</sup> session of the 113<sup>th</sup> Congress to promote renewable energy development on public lands. It would extend the Energy Policy Act of 2005 through 2020 and establish a wind and solar leasing pilot program on Bureau of Land Management (BLM) and U.S. Forest Service (USFS) lands.

The Energy Policy Act of 2005 made specific changes to the way revenues from geothermal energy development were collected and distributed. Because H.R. 596 would extend the Energy Policy Act, existing revenue collection for geothermal energy would remain in place until 2020.

The bill would also establish a wind and solar leasing program on BLM and USFS land (public lands). The resultant revenues and fees collected from those lands would be administered in a similar manner to the existing geothermal revenue collection system established under the EPA 2005. The changes from the bill would include revenue and fee sharing with counties and states, and establish

a fund for public or private entities to receive grants for protecting or restoring wildlife habitat and improving access for outdoor recreation activities.

This report examines the proposed revenue collection system for wind and solar energy and discusses implications for counties and states that would be affected if this law were to be expanded and authorized. This report also examines the current geothermal revenue collection system and analyzes potential implications of its extension on counties, states, and the public. We examine the implications adopting the bill would have on six states in the southwestern United States – California, Nevada, Utah, Colorado, New Mexico, and Arizona.

Although renewable energy resources exist in other states, much of the existing and foreseeable planned infrastructure is centered in these six states. Because the law would change the ways in which revenues and fees are allocated by keeping them more local, and because some of the monies must be spent in targeted areas, there is potential for large-scale change in some areas. We evaluate the implications of those changes at both a state and county level, with additional information from local and state conservation and recreation organizations.

## **DETAILS OF H.R. 596**

Representative Paul Gosar of Arizona introduced H.R. 596 to the House of Representatives on February 8<sup>th</sup>, 2013 with a number of bipartisan co-sponsors. It was then referred to committee where it currently waits for review from the House Agriculture Committee and the House Natural Resources Committee (H.R. 596, 2013). Crafted with the intent to “streamlin[e] permitting for renewable energy projects on public lands”, the bill also creates a funding path that returns money generated by renewable energy projects to the areas most affected by the developments. This money will be used for various environmental conservation efforts at the state and county level (Gosar, 2013). Additionally, the bill would create a “Renewable Energy Resource Conservation Fund” that allows communities with renewable energy projects on nearby public lands to apply for grants for local

“conservation, hunting, fishing and other recreational opportunities” (House, 2013, H596; Gosar, 2013).

H.R. 596 is divided into two titles with Title I focusing on extension of the EPA 2005 and its geothermal implications. Title II focuses on establishing a new revenue distribution plan for both wind and solar energy development. Details of these two titles are described below.

## Title I

The Energy Policy Act of 2005 amended the Geothermal Steam Act of 1970 to modify “how royalties are calculated, how land is leased, and how Federal income from geothermal development is distributed”(Neron-Bancel, 2008, p. 5). These modifications included set percentages of royalties to be paid to federal, state, and county governments.

The federal government received 25% of total revenue, leaving 50% to states, and 25% to counties (Neron-Bancel, 2008, p. 6). Title I of H.R. 596 would continue this revenue distribution process through 2020 starting fiscal year 2012 (House, 2013, H596).

## Title II

Title II instructs the Secretary of the Interior and the Secretary of Agriculture to implement a pilot program for the purpose of encouraging and tracking the progress of solar and wind development on public lands. If successful, this program would then be extended to incorporate all lands administered by the Secretaries so long as it is in accordance with already existing environmental regulations such as the Federal Land Management Policy Act and the Mineral Leasing Act.

In the initial stages of the proposed pilot program, the Secretary of the Interior and the Secretary of Agriculture would each identify one site for solar energy production, and one site for wind energy development. These lands would then be made available for lease to qualifying bidders possessing the technical skill and financial means necessary to fully develop their proposed energy projects. Throughout this process and the development that follows, data would be collected

to indicate the program's level of success. Among the data gathered, specific emphasis would be placed on the level of competitive interest, summaries of the bids and revenues received, and factors that may have impacted the lease sale.

The Secretaries would then be responsible for reviewing these data to determine if renewable energy development should be increased under an expanded program. This decision however, may only occur jointly and after consultation with heads of federal and state agencies, local governments, industry representatives, and outdoor sporting or other conservation representatives. If expanded, the new program would then allocate specific portions of royalty revenue to states, counties, and federal agencies on a permanent basis. Additionally, the Renewable Energy Conservation Fund (RECF) would be established to receive a portion of the revenue, which is then available to agencies and individuals seeking to protect and restore fish and wildlife habitat.

The payment schedule for wind and solar would be as follows: states would receive 25%, counties would receive 25%, 25% would be deposited in the RECF, 15% would be paid to the state offices of the BLM and Forest Service, and 10% would be paid to the federal government (Table 1). A specific caveat of the law is that the money collected and re-distributed through the RECF under Title II must be used for:

*[A] protecting and restoring important fish and wildlife habitat in such regions, including corridors, water resources, and other sensitive land; and*

*[B] assuring and improving access to Federal lands and waters in such regions for hunting, fishing, and other forms of outdoor recreation in a manner consistent with the conservation of fish and wildlife habitat (House, 2013, H596, Title II Section 204).*

In addition, 35% of the state distribution must be used for the same purposes listed above in items A and B. For example, if \$4,000 of revenues are

collected, \$1,000 of that would go to the State and \$350 would have to be spent on conservation and recreation.

Table 1

**Summary Of Existing Revenue Distribution And Proposed Distribution Under H.R. 596**

		<b>Existing Revenue Distribution</b>	<b>Revenue Distribution Under H.R. 596</b>
<b>Solar</b>	<b>County</b>	0%	25%
	State	0%	25%
	Agency	0%	15%
	Federal Treasury	100%	10%
	RECF Fund	0%	25%
<b>Wind</b>	<b>County</b>	0%	25%
	State	0%	25%
	Agency	0%	15%
	Federal Treasury	100%	10%
	RECF Fund	0%	25%
<b>Geothermal</b>	<b>County</b>	25%	25%
	State	50%	50%
	Agency	0%	0%
	Federal Treasury	25%	25%
	RECF Fund	0%	0%

**DATA COLLECTION METHODOLOGIES**

We collected data from a variety of sources and then verified it through multiple means. As expected, not all data were available from a single source and instead were scattered across several agencies and bureaus in various stages of



completion.<sup>1</sup> Despite these challenges, we have assembled what we believe to be the most complete and accurate picture of renewable energy rates available.

We collected data for three types of renewable energy on BLM and USFS lands: solar, wind, and geothermal. These resources were then examined within six southwestern states including Arizona, California, Colorado, Nevada, New Mexico, and Utah. As a general practice, we examined all renewable energy projects on public land that were either pending BLM approval, approved but not completed, or fully completed. This large sample size enabled a thorough analysis of H.R. 596 and the potential revenue implications that would stem from its passage over the long-term.

The online information provided by the BLM and the USFS was incomplete and out-of-date. Additionally, we discovered that royalty fee collection varies depending on the source. For example, solar energy royalties are calculated based on *both the acreage of the project and the number of megawatts generated*. Wind and geothermal energy royalty rates on the other hand, are calculated solely on the *potential number of megawatts generated*.

Because we wanted to focus on the long-term implications of H.R. 596, we calculated revenue based on the total potential capacity of these projects. Our data include both currently operating and approved projects and calculates both as if they are operating at maximum capacity. Thus our revenue estimates are higher than the current actual rent collected. We make the assumption that this higher estimation will be balanced-out by future project revenues that are currently not approved. Details of data collection for each of the resources are included below.

## Solar

Information on solar energy projects was primarily gathered from various BLM websites, memos, and documents (Bureau of Land Management, 2013(b); Abbey, 2010). The BLM calculates the solar royalty fee based on both the acreage of the solar facility and the megawatt capacity. Acreage fees are calculated by multiplying the number of acres by a per-acre rental fee. The rental fee is different from county to county, and is adjusted yearly for inflation. We matched the county of each solar project with the solar rate indicated in the 2010 memo, and then used

---

<sup>1</sup> Diverse data sources coupled with the incomplete nature of government reporting leads us to acknowledge that some errors may be contained in this report.

the “Solar 2010 – 2015 Per Acre Base Rent Schedule” table to update the acreage rates to 2012 levels (Bureau of Land Management, 2010-2015).

Like the acreage rate, the solar megawatt fee is different from project to project and is based on the technology used to generate the energy. According to the 2010 memo, the BLM has three rates: “\$5,256 per MW for photovoltaic (PV) solar projects; \$6,570 per MW for concentrated PV and concentrated solar power (parabolic trough, power tower and solar dish/engine) projects without storage capacity; and \$7,884 per MW for concentrated solar power projects with storage capacity of 3 hours or more.” The 2009 renewable energy table identified the difference between photovoltaic and non-photovoltaic, but did not indicate storage capacity. We researched each individual project in order to identify the storage capacity. There are no approved or existing solar installations on USFS lands in any of the states examined.

## Wind

The BLM’s website only lists projects approved since 2009, but wind energy projects have been on public lands since the 1980s. When we called the BLM seeking a more complete set of data we were directed to the BLM’s Legacy Rehost System (LR2000). LR2000 is a “searchable database for public reports on BLM land and mineral use authorizations, conveyances, mining claims, withdrawals and classifications” (Bureau of Land Management, 2011). Although we were able to find additional information on wind energy projects, the database was both incomplete and out-of-date. We subsequently learned that when the BLM processes a claim for wind energy it becomes the responsibility of the Renewable Energy Coordination Office (RECO), a separate government bureau. Contacts with RECO indicated that wind revenues are calculated at a rate of \$4,155 per megawatt and are not based on acreage of the facility. There are no approved or existing wind installations on USFS lands in any of the states examined.

## Geothermal

Geothermal rental rates are a percentage of a project’s total gross sales. Under the Energy Policy Act of 2005, the federal government returns 25% of the fee to the county, 50% to the state, and keeps 25 percent. We used the Office of Natural

Resources Revenue database to find the total disbursement to each county and multiplied that number by four to find the total revenue collected for each county (Office of Natural Resources Revenue, 2013). Unlike wind and solar, revenues are ultimately based on the total revenue of individual projects. Estimates based on disbursements from 2013 were used as proxies for future revenues. There are no approved or existing geothermal installations on USFS lands in any of the states examined.

## IMPLICATIONS FOR STATES AND COUNTIES

Should H.R. 596 become law, state and county governments would be able to secure monies to promote higher levels of economic development, environmental conservation, and recreational access. Traditionally, communities have been forced to choose between these options, however this would no longer be the case under H.R. 596. There is also a clear benefit for organizations or individuals that seek to promote wildlife habitat and recreational resources because they would be able to receive RECF grants for these purposes. Lastly, states lacking current solar and wind energy infrastructure on public lands could be incentivized to promote solar and wind energy projects.

Since 2005, states have received 50% and counties have received 25% of geothermal royalty revenues. Under H.R. 596 this money flow would continue. The current incentive for states and counties to court and promote geothermal development would remain. As noted in the state summaries that follow, states lacking current geothermal infrastructure on public lands could be incentivized to promote geothermal energy projects.

Because H.R. 596 requires that a percentage of revenues and fees collected from wind and solar energy remain local, counties will likely remain more tolerant of the costs imposed on them by renewable energy development. Although states and counties may pay more in terms of infrastructure and maintenance costs

associated with renewable energy, much of those costs may be recouped in the form of additional disbursements resulting from H.R. 596.

Theoretically, a county could spend money over and above what they would normally spend maintaining a gravel road utilized by wind farm construction crews and workers. That same county however, will receive 25% of the revenues and fees collected at that site. The state will also have discretion for an additional 25% of the fees collected at that site that are to be spent within the region. Additionally, another 25% of the revenues and fees will be available in the form of RECF grants from the federal conservation fund. As a result, a minimum of 25% and up to 75% of the revenues and fees collected at a site would be available for use in the region or county, pending state and federal discretion.

Below, approximate revenues and fees that would be distributed to states and counties are disclosed and discussed. A more comprehensive breakdown of how revenues will be distributed is included as Appendix A.

## Arizona

Table 2

### Estimated Annual Arizona State And County Revenues By Resource

County	Solar Revenue	Wind Revenue	Geothermal Revenue	Total County Revenue
La Paz	\$224,394	\$0	\$0	\$224,394
Maricopa	\$1,499,615	\$0	\$0	\$1,499,615
Mohave	\$0	\$519,375	\$0	\$519,375
Navajo	\$0	\$31,163	\$0	\$31,163
Total County Revenue	\$1,724,009	\$550,538	\$0	\$2,274,547
Total State Revenue	\$1,724,009	\$550,538	\$0	\$2,274,547

Upon full implementation of the provisions in H.R. 596, Arizona counties would

receive approximately \$2.27 million with \$2.27 million going to the state and an additional \$2.27 million to RECF.

## California

Table 3

### Estimated Annual California State And County Revenues By Resource

County	Solar Revenue	Wind Revenue	Geothermal Revenue	Total County Revenue
Imperial	\$24,018	\$327,206	\$11,756	\$362,981
Inyo	\$0	\$0	\$189,840	\$189,840
Kern	\$0	\$175,549	\$0	\$175,549
Lake	\$0	\$72,713	\$802,135	\$874,847
Lassen	\$0	\$0	\$17,111	\$17,111
Mendocino	\$0	\$0	\$750	\$750
Mono	\$0	\$0	\$51,852	\$51,852
Riverside	\$3,759,180	\$264,881	\$0	\$4,024,061
San Bernardino	\$1,184,946	\$0	\$0	\$1,184,946
San Diego	\$0	\$193,208	\$0	\$193,208
Siskiyou	\$0	\$0	\$17,386	\$17,386
Sonoma	\$0	\$0	\$1,119,661	\$1,119,661
Total County Revenue	\$4,968,145	\$1,033,556	\$2,210,490	\$8,212,191
Total State Revenue	\$4,968,145	\$1,033,556	\$4,420,981	\$10,422,682

Upon full implementation of the provisions in H.R. 596, California counties would receive approximately \$8.2 million, with \$10.4 million going to the state and an additional \$8.2 million would be made available for the RECF.

## Colorado

Table 4

### Annual Colorado State And County Revenues By Resource

<b>County</b>	<b>Solar Revenue</b>	<b>Wind Revenue</b>	<b>Geothermal Revenue</b>	<b>Total County Revenue</b>
Chaffee	\$0	\$0	\$759	\$759
Gunnison	\$0	\$0	\$13,874	\$13,874
Total County Revenue	\$0	\$0	\$14,633	\$14,633
Total State Revenue	\$0	\$0	\$29,266	\$29,266

H.R. 596's only impact in Colorado will be that payments from geothermal development will continue to flow. The two counties with geothermal development would receive \$14,633 and the state would continue to receive \$29,266. No current projects in Colorado would contribute to the RECF.

## Nevada

Table 5

### Annual Nevada State And County Revenues By Resource

County	Solar Revenue	Wind Revenue	Geothermal Revenue	Total County Revenue
Churchill	\$0	\$0	\$533,630	\$533,630
Clark	\$536,372	\$207,750	\$0	\$744,122
Elko	\$0	\$0	\$48,103	\$48,103
Esmerelda	\$0	\$0	\$115,747	\$115,747
Eureka	\$0	\$0	\$11,802	\$11,802
Humboldt	\$0	\$0	\$61,582	\$61,582
Lander	\$0	\$0	\$133,461	\$133,461
Lyon	\$0	\$0	\$5,961	\$5,961
Mineral	\$0	\$0	\$29,105	\$29,105
Nye	\$242,882	\$0	\$15,980	\$258,862
Pershing	\$0	\$0	\$73,530	\$73,530
Washoe	\$0	\$0	\$30,322	\$30,322
White Pine	\$0	\$155,813	\$12,475	\$168,287
Total County Revenue	\$779,254	\$363,563	\$1,071,698	\$2,214,515
Total State Revenue	\$779,254	\$363,563	\$2,143,396	\$3,286,213

Upon full implementation of the provisions in H.R. 596, Nevada counties would receive approximately \$2.2 million, with \$3.2 million going to the state and an additional \$2.2 million would be made available for the RECF.

## New Mexico

Table 6

### Annual New Mexico State And County Revenues By Resource

<b>County</b>	<b>Solar Revenue</b>	<b>Wind Revenue</b>	<b>Geothermal Revenue</b>	<b>Total County Revenue</b>
Dona Ana	\$0	\$0	\$25,645	\$25,645
Hidalgo	\$0	\$0	\$3,119	\$3,119
Total County Revenue	\$0	\$0	\$28,764	\$28,764
Total State Revenue	\$0	\$0	\$57,528	\$57,528

Upon full implementation of the provisions in H.R. 596, New Mexico's two counties with geothermal development would continue to receive \$28,764, with \$57,528 going to the state. No current projects in New Mexico would contribute to the RECF.



## Utah

Table 7

### Annual Utah State And County Revenues By Resource

County	Solar Revenue	Wind Revenue	Geothermal Revenue	Total County Revenue
Beaver	\$0	\$83,100	\$74,087	\$157,187
Iron	\$0	\$0	\$1,203	\$1,203
Juab	\$0	\$0	\$46,644	\$46,644
Millard	\$0	\$0	\$37,342	\$37,342
Total County Revenue	\$0	\$83,100	\$159,275	\$242,375
Total State Revenue	\$0	\$83,100	\$318,550	\$401,650


Upon full implementation of the provisions in H.R. 596, Utah counties would receive \$242,375, with \$401,650 going to the state and an additional \$83,100 would be made available for the RECF.

## CASE STUDIES

### Riverside County California

Riverside County is located in Southern California and covers over 7,000 square miles with a population of about 2.2 million. Riverside County is the fourth-largest county in California (U.S. Census Bureau, 2013). Because of its large size, the county has a highly diverse geography including mountains, deserts, forests, and grasslands (Riverside County, n.d., p. 6). The county is home to a wide variety of plant and animal species, some of which are endangered (“Discover the Natural Wonders of Riverside County, n.d., p. 5).

Not only does Riverside County have significant opportunities for conservation, it also has renewable energy resources in great abundance. Of all the states and counties we studied, none were anywhere close to Riverside both in the number of renewable energy projects located on public lands and the amount of potential revenue that could be collected. According to the preceding figures,



solar is the primary potential revenue generator, followed by significant amounts of wind. One of the main reasons for choosing to study Riverside County is that the potential impact of H.R. 596 is higher in Riverside County than in any other county in the six states we studied.

According to the data we gathered, there are 4 large solar projects located within the county with a combined megawatt capacity of 1,700 megawatts per year. The county also has 16 wind projects with a combined megawatt capacity of 255 megawatts per year. We estimate that if these projects operated at their potential megawatt capacity, that under current regulations the royalties collected by the BLM from these projects is over \$16 million, more than any other county in California, Arizona, Nevada, or Utah. Currently this money is left in the hands of the federal government, but if H.R. 596 is made law, then over \$4 million would be returned to Riverside County to assist with county expenses, including extensive conservation and recreation efforts. Twenty-five percent would go to the state with 35% of that total going specifically to conservation and recreation initiatives. In addition to the money returned to the county and state, another \$4 million would be placed into RECF, making it available to federal and state agencies, local governments, and non-governmental organizations (NGOs).

Riverside has demonstrated serious efforts toward conservation by forming the Western Riverside County Regional Conservation Authority, an organization that is responsible for implementing the Multiple Species Habitat Conservation Plan, a plan aimed at “protecting 146 native species of plants and animals and preserving a half million acres of their habitat” (Regional Conservation Authority, n.d.).

One state agency that could potentially make use of this money is the California Department of Fish and Wildlife (CDFW). We spoke with David Vigil, an environmental scientist at the CDFW, and asked him what conservation projects the CDFW could potentially undertake through access to additional funding. The CDFW engages in many conservation projects, and one that Vigil discussed was the placing of artificial watering holes, also known as big-game guzzlers, in the

desert to help bighorn sheep populations, as well as guzzlers for the desert tortoise and quail (Vigil, 2013.).

Riverside County's abundant renewable energy resources have the potential to provide not only clean energy, but also funding for important conservation efforts undertaken by state and local governments and by NGO's. While obviously not all areas of the nation have renewable energy resources, such as wind and solar, in as great supply as Riverside, H.R. 596 would provide an incentive for local and state governments to make renewable energy development more appealing.

## Nevada

Northwestern Nevada is home to a species of trout, the Lahontan cutthroat (Pyramid Lake Fisheries, n.d.). Many of the state's Lahontan cutthroats occur in the basin once filled by the ancient Lake Lahontan that once covered almost 8,500 square miles during the ice age (Hattori, 2005). Lake Lahontan started to shrink because of climate change after the last ice age. It left behind many smaller lakes scattered throughout the Nevada Desert (Live Science, 2010)

Walker Lake, located in the Walker Basin is one of those lakes (United States Geological Survey, 1999). It is an essential habitat for the Lahontan cutthroat (Walker Basin Restoration Program, 2013). The Walker River is the source of Walker Basin, a natural desert lake. Since the early 1900s farmers have been using water from the Walker River to irrigate their fields, which has reduced the size of the lake and increased its salinity. This has caused problems for the Walker basin ecosystem, an important resting point for Common Loons and other waterfowl (Walker Basin Restoration Program, 2013).

The Lahontan cutthroat was listed as endangered on the Endangered Species List in 1970. Conservation efforts resulted in it being taken off the endangered species list in 1975, although it still remains on the threatened list (U.S. Fish and Wildlife Foundation, n.d.).

There are also efforts underway to restore the Walker Basin and Walker River. The National Fish and Wildlife Foundation and other groups are currently working on the Walker Basin Restoration Program, which primarily focuses on purchasing

water rights from willing sellers to increase freshwater inflows to the lake and decrease salinity. Since the start of the project 34 cubic feet per second of water rights, 3,100 acre feet of storage water rights, and 5,800 acre feet of groundwater rights have been acquired and massive re-vegetation projects have been undertaken (National Fish and Wildlife Foundation, n.d.).

While Walker Basin is important to the Lahontan cutthroat, there are many other areas in the Lahontan Valley where this threatened fish resides including Pyramid lake, Independence lake, Lake Tahoe, Humboldt, Carson, Truckee, and Marys rivers along with several small streams (U.S. Fish and Wildlife Service, 2013). These waters are in Washoe, Humboldt, Churchill, Mineral, Lyon, and Pershing counties. Depending on federal and state disbursements under H.R. 596, these counties would potentially have a combined \$734,130.69 annually to promote Lahontan Cutthroat trout habitat. This money could be used to purchase water rights and carry out stream restoration projects that could greatly enhance the health and size of the Lahontan cutthroat population.

Restoration projects like those on the Walker River and in Walker Basin are expensive. Expenses increase as watershed-level projects, such as those for the Lahontan Cutthroat trout, are initiated. H.R. 596 has particular potential to greatly influence local wildlife and recreational access projects because it requires that some funding (RECF portions) be spent on “protecting and restoring important fish and wildlife” and “assuring and improving access to federal lands and waters in such regions for hunting, fishing, and other forms of outdoor recreation” (Govtrack.us, 2013).

With the passage of H.R. 596, money will be available at local, county and state levels that could help the Lahontan cutthroat survive and thrive.

## Imperial County, California

Energy production is often a valuable source of revenue for counties across the United States. Imperial County, California has been unlucky, however, in that its energy production comes in the form of the 10,000-acre Ocotillo Express Wind Farm located on BLM land (BLM, 2013(a)). Under existing law, Imperial County

does not collect any revenue from the Ocotillo Express Wind Farm. All that could change, however, if H.R. 597 were to pass.

Imperial County has many potential uses for revenue provided through the new legislation. One of those uses dates back over a century, when construction began on irrigation canals that would divert water from the Colorado River to a dry lakebed called the Salton Sink. In 1905, a combination of heavy rainfall and snowmelt caused the Colorado River to swell, dumping millions of gallons of water into Salton Sink unrestrained (Salton Sea Authority, n.d.(a)). Over the next two years, the entire volume of the Colorado River intermittently poured into Imperial County causing the formation of the Salton Sea, which still exists today.

Over the past 100 years the Salton Sea has become a flourishing ecosystem, supporting populations of sportfish and the endangered desert pupfish (California Department of Fish and Wildlife, n.d.). The Salton Sea has been called one of the “most productive fisher[ies] in the world” (Salton Sea Authority, 2013(b)). The inland sea also supports a rich population of waterfowl and has been called “California’s crown jewel of avian biodiversity,” supporting 270 species of birds on a regular basis with records of over 400 species (California Department of Fish and Wildlife, n.d.).

Recently, increasing levels of salinity have jeopardized the value of the Salton Sea as a habitat for diverse animal life. Because insufficient fresh water is flowing into the sea, the water has become too salty for many species to survive. As a result, many of the sport fish that once called the Salton Sea home have died off, save for the tilapia (California Department of Fish and Wildlife, n.d.). As a result, the Salton Sea is a less favored attraction for sports fishing.

If H.R. 596 were to pass, Imperial County would have approximately \$350,000 annually in additional funding. Not only would government agencies have access to increased conservation funding, but under H.R. 596, funding also becomes available to private organizations such as the California Waterfowl Association, the Nature Conservancy, or Trout Unlimited. This money could be easily used to improve duck habitat, expand fish habitat, purchase water rights, promote access to hunting locations, and provide nesting areas in the Salton Sea

area. The Salton Sea Authority is already working to capture sick pelicans and other waterfowl, take them to rehabilitation facilities, and release them once they have healed (Salton Sea Authority, 2013(c)). Revenue generated through solar and wind projects would help the county further develop such recreational and environmental projects.

## Mineral County, Nevada

Every year officials from Mineral County present an annual financial report to the Nevada State legislature. Until the Energy Policy Act of 2005 allowed counties to keep 25% of the revenues from geothermal energy, Mineral County reported a deficit to the legislature (George, 2013). The county government was faced with layoffs on a regular basis, and many of the employees of the county even held two or more jobs, like Cherrie George, the County Clerk and Treasurer. “We were faced with having to layoff many of the County employees before this change in geothermal energy disbursements,” said Cherrie George, “we are a very poor, rural county” (George, 2013).

Mineral County has a population of 4,400 people. The land in Mineral County is almost completely owned by the BLM and USFS, meaning that the county gets very little revenue from property taxes (George, 2013). “With this new revenue (from geothermal energy disbursements) we weren’t forced to lay anyone off, in fact, we’ve been able to be in good standing with the state legislature the last few years,” she says (George, 2013).

Mineral County uses the money from geothermal leasing to pay to keep their small county government running, but many counties are not so fortunate. Cherrie points out “There are counties here in Nevada that are poorer, more rural than ours, counties who have it much worse. We are really grateful for this money” (George, 2013).

This story is common in sparsely populated rural counties. Before the Energy Policy Act of 2005 many counties with geothermal energy in their boundaries got nothing, but the geothermal revenue stream now helps to sustain and improve communities. H.R. 596 will extend the Energy Policy Act and the associated

financial benefits to the counties that bear the brunt of the development costs associated with renewable energy such as geothermal.

## CONCLUSIONS

If Congress adopts H.R. 596 the majority of the fees collected at renewable energy sites will remain in the counties and states that bear the burden of development. With wind and solar revenues providing 25% each to counties and states, and with geothermal continuing to provide 25% to counties and 50% to states, the counties and states have more incentive to promote and tolerate renewable energy with its associated costs.

These additional funds have the potential to significantly impact county and state budgets. This is particularly true for many counties that are low in population and do not have traditionally large budgets.

House Resolution 596 also has the potential to allow agencies, private citizens, and organizations to fund conservation and access projects that they care about through the additional 25% of funds that will be available through the RECF. Organizations such as Trout Unlimited, Ducks Unlimited, the Mule Deer Foundation, Blue Ribbon Coalition, and The Nature Conservancy have the potential to secure funding for projects in the areas affected by solar and wind energy development. Other conservation funds will come from the state distributions, as 35% of that total must be spent on regional conservation and recreation projects.

Our analysis of the fiscal impacts of H.R. 596 suggests that counties, states and organizations will be more receptive and accepting of proposals for renewable energy development. H.R. 596, if authorized and extended, includes a variety of ways in which counties, states, organizations, and agencies are incentivized to promote renewable energy development. In addition, because some funds are specifically designated for wildlife conservation and recreation, it is also likely that environmental and recreational resources will be enhanced.

## WORKS CITED

Abbey, Robert V. 2010. "Solar Energy Interim Rental Policy." Instruction memorandum. Retrieved from: [http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2010/IM\\_2010-141.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2010/IM_2010-141.html)

Bureau of Land Management. 2010, June 10. Instruction Memorandum No. 2010-141: Right-of-Way Management, Solar Energy. U.S. Department of the Interior. Retrieved from: [http://www.blm.gov/wo/st/en/info/regulations/Instruction\\_Memos\\_and\\_Bulletins/national\\_instruction/2010/IM\\_2010-141.html](http://www.blm.gov/wo/st/en/info/regulations/Instruction_Memos_and_Bulletins/national_instruction/2010/IM_2010-141.html)

Bureau of Land Management. 2010-2015. Solar 2010 – 2015 Per Acre Base Rent Schedule. U.S. Department of the Interior. Retrieved from: [http://www.blm.gov/pgdata/etc/medialib/blm/wo/MINERALS\\_\\_REALTY\\_\\_AND\\_RESOURCE\\_PROTECTION\\_/cost\\_recovery.Par.14041.File.dat/SolarRentalSchedule-2010-2015revised122010.pdf](http://www.blm.gov/pgdata/etc/medialib/blm/wo/MINERALS__REALTY__AND_RESOURCE_PROTECTION_/cost_recovery.Par.14041.File.dat/SolarRentalSchedule-2010-2015revised122010.pdf)

Bureau of Land Management. 2011. About LR2000. U.S. Department of Interior. Retrieved from: <http://www.blm.gov/lr2000/about.htm>

Bureau of Land Management. 2013(a). Ocotillo Express Wind Farm. U.S. Department of the Interior. Retrieved from: [http://www.blm.gov/ca/st/en/fo/elcentro/nepa/ocotillo\\_express\\_wind.html](http://www.blm.gov/ca/st/en/fo/elcentro/nepa/ocotillo_express_wind.html)



Bureau of Land Management. 2013(b). Renewable Energy Projects Approved Since the Beginning of Calendar Year 2009. U.S. Department of the Interior. Retrieved from: [http://www.blm.gov/wo/st/en/prog/energy/renewable\\_energy/Renewable\\_Energy\\_Projects\\_Approved\\_to\\_Date.html](http://www.blm.gov/wo/st/en/prog/energy/renewable_energy/Renewable_Energy_Projects_Approved_to_Date.html)

California Department of Fish and Wildlife. n.d. Salton Sea Program. Retrieved from: [http://www.dfg.ca.gov/regions/6/Salton\\_Sea\\_Program/Background.html](http://www.dfg.ca.gov/regions/6/Salton_Sea_Program/Background.html) \ George, Cherrie. 2013, December 3. Personal phone call to Mineral County Treasurer.

Gosar, Paul. 2013, February 8. Rep. Gosar Introduces Legislation to Increase Energy Development on Public Land. Retrieved from: <http://gosar.house.gov/press-release/reps-gosar-and-heck-introduce-legislation-increase-energy-development-public-land>

Govtrack.us. n.d. "H.R. 596--113th Congress: Public Lands Renewable Energy Development Act of 2013." Retrieved from: <http://www.govtrack.us/congress/bills/113/hr596>

Hattori, Eugene. 2009, December 18. "Ice Age Nevada and Lake Lahontan." Prepared for Nevada Online Encyclopedia. Retrieved from: <http://www.onlinenevada.org/articles/ice-age-nevada-and-lake-lahontan>

Live Science. 2010, October 19. "Pyramid Lake, the Last Remnant of an Ancient Lake." Retrieved from: <http://www.livescience.com/29758-nasa-astronaut-pyramid-lake-photo.html>

National Fish and Wildlife Foundation. n.d. Walker Basin Restoration Program. Retrieved from: <http://www.nfwf.org/walkerbasin/Pages/home.aspx>

Neron-Bancel, Timothee. 2008, December 14. Geothermal Revenue Under the Energy Policy Act of 2005: Income Distribution at Federal, State and County Levels. Geothermal Energy Association. Retrieved from: [http://geo-energy.org/reports/Geothermal\\_Revenue\\_Under\\_the\\_Energy\\_Policy\\_Act\\_of\\_2005\\_Final.pdf](http://geo-energy.org/reports/Geothermal_Revenue_Under_the_Energy_Policy_Act_of_2005_Final.pdf)

Office of Natural Resources Revenue. 2013. Disbursements FY 2013: State Detail. Retrieved from: <http://statistics.onrr.gov/ReportTool.aspx>

Pyramid Lake Fisheries. n.d. Fishing Tips. Retrieved from: <http://pyramidlakefisheries.org/fishmap/lctrout.html>

Regional Conservation Authority. n.d. About RCA. Retrieved from: [http://www.wrc-rca.org/about\\_rca.asp](http://www.wrc-rca.org/about_rca.asp)

Riverside County. n.d. "Discover the Natural Wonders of Riverside County." n.d. Retrieved from: [http://www.wrc-rca.org/Permit\\_Docs/Discover\\_the\\_Wonders.pdf](http://www.wrc-rca.org/Permit_Docs/Discover_the_Wonders.pdf)

Salton Sea Authority. 2013(b). Salton Sea. Retrieved from: <http://saltonsea.ca.gov/fishing.html>

Salton Sea Authority, 2013(c). Salton Sea. Retrieved from: <http://saltonsea.ca.gov/ourplan.html>

Walker Basin Restoration. 2013. About Walker Basin Restoration Program.  
Retrieved from: <http://www.walkerbasin.org/about.htm>

Vigil, David. 2013, December 4. Personal phone call to USFWS Environmental Scientist.

U.S. Census Bureau. 2013. Annual Estimates of the Resident Population: April 1, 2010 to July 1, 2012. U.S. Department of Commerce. Retrieved from: <http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk>

U.S. Fish and Wildlife Service. 2012, September 28. Lahontan cutthroat trout. Retrieved from: [http://www.fws.gov/nevada/protected\\_species/fish/species/lct.html](http://www.fws.gov/nevada/protected_species/fish/species/lct.html)

U.S. Geological Survey. 1999. Extent of Pleistocene Lakes in the Great Basin. Retrieved from: <http://pubs.usgs.gov/mf/1999/mf-2323/mf2323.pdf>

U.S. House of Representatives. 2013. Public Land Renewable Energy Development Act of 2013. 113th Congress, 1st session HB596. Retrieved from: [http://beta.congress.gov/bill/113th/house-bill/596/text?q={%22search%22:\[%22hr%20596%22\]}](http://beta.congress.gov/bill/113th/house-bill/596/text?q={%22search%22:[%22hr%20596%22]})

## **APPENDIX**











New Mexico Geothermal

State	County	Project Type	Total Geothermal Rental Fee	County (25%)	State (50%)	Agency (25%)
New Mexico	Dona Ana	Geothermal	\$ 102,581.28	\$ 25,645.32	\$ 51,290.64	\$ 25,645.32
New Mexico	Hidalgo	Geothermal	\$ 12,474.60	\$ 3,118.65	\$ 6,237.30	\$ 3,118.65
<b>Total</b>			<b>\$ 115,055.88</b>	<b>\$ 28,763.97</b>	<b>\$ 57,527.94</b>	<b>\$ 28,763.97</b>

## Nevada Geothermal

State	County	Project Type	Total Geothermal Rental Fee	County (25%)	State (50%)	Federal (25%)
Nevada	Churchill	Geothermal	\$ 2,134,521.88	\$ 533,630.47	\$ 1,067,260.94	\$ 533,630.47
Nevada	Eiko	Geothermal	\$ 192,413.00	\$ 48,103.25	\$ 96,206.50	\$ 48,103.25
Nevada	Esmerelda	Geothermal	\$ 462,987.64	\$ 115,746.91	\$ 231,493.82	\$ 115,746.91
Nevada	Eureka	Geothermal	\$ 47,207.76	\$ 11,801.94	\$ 23,603.88	\$ 11,801.94
Nevada	Humboldt	Geothermal	\$ 246,328.00	\$ 61,582.00	\$ 123,164.00	\$ 61,582.00
Nevada	Lander	Geothermal	\$ 533,842.52	\$ 133,460.63	\$ 266,921.26	\$ 133,460.63
Nevada	Lyon	Geothermal	\$ 23,844.40	\$ 5,961.10	\$ 11,922.20	\$ 5,961.10
Nevada	Mineral	Geothermal	\$ 116,418.60	\$ 29,104.65	\$ 58,209.30	\$ 29,104.65
Nevada	Nye	Geothermal	\$ 63,919.40	\$ 15,979.85	\$ 31,959.70	\$ 15,979.85
Nevada	Pershing	Geothermal	\$ 294,120.16	\$ 73,530.04	\$ 147,060.08	\$ 73,530.04
Nevada	Washoe	Geothermal	\$ 121,289.72	\$ 30,322.43	\$ 60,644.86	\$ 30,322.43
Nevada	White Pine	Geothermal	\$ 49,899.36	\$ 12,474.84	\$ 24,949.68	\$ 12,474.84
<b>Total</b>			<b>\$ 4,286,792.44</b>	<b>\$ 1,071,698.11</b>	<b>\$ 2,143,396.22</b>	<b>\$ 1,071,698.11</b>

Nevada Wind and Solar

State	County	Project Type	Project Name(s)	Wind Megawatt Capacity	Wind Megawatt Rate	Solar Acres	Solar Base Rate	Solar Megawatt Capacity	Solar Megawatt Rate	Total Rental Fee	County (25%)	State (25%)	Agency (15%)	Renewable Energy Resource Conservation Fund (25%)	Federal Treasury (10%)	
Nevada	Clark	Solar	Silver State Solar Energy Project (North)	50.00	\$ 195.56	\$ 618.00	\$ 195.56	\$ 50.00	\$ 5,256.00	\$ 383,656.08	\$ 95,914.02	\$ 95,914.02	\$ 57,548.41	\$ 440,458.10	\$ 38,365.61	
Nevada	Clark	Solar	Silver State South Solar (PENDING)	250.00	\$ 195.56	\$ 2,290.00	\$ 195.56	\$ 250.00	\$ 5,256.00	\$ 1,761,832.40	\$ 440,458.10	\$ 440,458.10	\$ 264,274.86	\$ 440,458.10	\$ 176,183.24	
Nevada	Clark	Wind	Searchlight Wind Project	200.00	\$ 4,156.00	\$ 1,600.00	\$ 65.18	\$ 110.00	\$ 7,884.00	\$ 831,000.00	\$ 207,750.00	\$ 207,750.00	\$ 124,650.00	\$ 207,750.00	\$ 83,100.00	
Nevada	Nye	Solar	Crescent Dunes Solar Project	150.00	\$ 4,156.00	\$ 1,600.00	\$ 65.18	\$ 110.00	\$ 7,884.00	\$ 971,528.00	\$ 242,882.00	\$ 242,882.00	\$ 145,729.20	\$ 242,882.00	\$ 97,152.80	
Nevada	White Pine	Wind	Spring Valley Wind	150.00	\$ 4,156.00	\$ 1,600.00	\$ 65.18	\$ 110.00	\$ 7,884.00	\$ 623,260.00	\$ 155,812.50	\$ 155,812.50	\$ 83,487.50	\$ 155,812.50	\$ 62,326.00	
<b>Total</b>											<b>\$ 4,571,266.48</b>	<b>\$ 1,142,816.62</b>	<b>\$ 1,142,816.62</b>	<b>\$ 685,659.97</b>	<b>\$ 1,142,816.62</b>	<b>\$ 457,126.65</b>

## Utah Geothermal

State	County	Project Type	Total Geothermal Rental Fee	County (25%)	State (50%)	Federal (25%)
Utah	Beaver	Geothermal	\$ 296,347.56	\$ 74,086.89	\$ 148,173.78	\$ 74,086.89
Utah	Iron	Geothermal	\$ 4,811.44	\$ 1,202.86	\$ 2,405.72	\$ 1,202.86
Utah	Juab	Geothermal	\$ 186,575.28	\$ 46,643.82	\$ 93,287.64	\$ 46,643.82
Utah	Millard	Geothermal	\$ 149,366.32	\$ 37,341.58	\$ 74,683.16	\$ 37,341.58
<b>Total</b>			<b>\$ 637,100.60</b>	<b>\$ 159,275.15</b>	<b>\$ 318,550.30</b>	<b>\$ 159,275.15</b>

Utah Wind

State	County	Project Type	Project Name	Wind Capacity Megawatt	Wind Rate Megawatt	Total Rental Fee	County (25%)	State (25%)	Agency (15%)	Renewable Energy Resource Conservation Fund (25%)	Federal Treasury (10%)
Utah	Beaver	Wind	Milford Wind Corridor	80	\$ 4,155.00	\$ 332,400.00	\$ 83,100.00	\$ 83,100.00	\$ 83,100.00	\$ 49,860.00	\$ 33,240.00
<b>Total</b>						\$ 332,400.00	\$ 83,100.00	\$ 83,100.00	\$ 83,100.00	\$ 49,860.00	\$ 33,240.00

## PRINCIPAL INVESTIGATORS

### **Ken Sim MS**

Institute of Policy Analysis

SOUTHERN UTAH UNIVERSITY

### **Ryan M. Yonk Ph.D**

Institute of Policy Analysis  
Department of Political Science

SOUTHERN UTAH UNIVERSITY

### **Randy T Simmons Ph.D**

Institute of Political Economy  
Department of Economics and Finance

UTAH STATE UNIVERSITY

### **Nicholas S. Hilton**

Strata Policy

## STUDENT RESEARCH ASSOCIATES

### **Tanner Robison**

UTAH STATE UNIVERSITY

### **Grant Patty**

UTAH STATE UNIVERSITY