Before the
United States Senate
Committee on Indian Affairs

Field Oversight Hearing, Crow Agency, MT
Empowering Indian Country: Coal, Jobs, and Self-Determination
April 8, 2015

Statement of
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I would like to take a moment to thank you for the opportunity to visit the land of the Apsáalooke and to speak today. My name is Eric Henson, and I am a Senior Vice President at Compass Lexecon, which is an economics consulting firm with offices located around the world.[1] I primarily work out of the Compass Lexecon offices in Boston, MA and Tucson, AZ. I also serve as a Research Affiliate with the Harvard Project on American Indian Economic Development,[2] and in that position I am engaged in an ongoing effort to understand what makes tribal economies work best.[3] I am a citizen of the Chickasaw Nation, and I grew up in one of the country's great oil producing regions, the Permian Basin of West Texas.[4]

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1 Compass Lexecon is an international economics consulting firm and is part of FTI Consulting.

2 Referred to herein as "HPAIED" or "Harvard Project." The Harvard Project is based at Harvard's John F. Kennedy School of Government in Cambridge, MA. We partner with the Native Nations Institute, which is located at the University of Arizona in Tucson, AZ. The Native Nations Institute provides executive education and leadership programs, uniquely tailored to senior executives and managers within the Native communities in Canada and the United States.

3 See, e.g., The Harvard Project on American Indian Economic Development, *The State of the Native Nations: Conditions Under US Policies of Self-Determination*, New York: Oxford University Press, 2008.

4 I appear today not as a representative of Compass Lexecon or Harvard University. Furthermore, I have no financial interest in legislation that might impact tax rates applicable to coal production on Indian lands.

I have a Master's Degree in Public Policy from the John F. Kennedy School of Government at Harvard University, an MA in Economics from Southern Methodist University, and a BBA in Business Economics from the University of Texas at San Antonio. I attended Harvard as the Kennedy School's Christian Johnson Native American Fellow. I have been engaged in Indian affairs since graduate school; my Master's thesis at Harvard examined the importance of a uniform commercial code for economic development on the Crow Reservation.[5] I've had the great privilege of visiting these tribal lands on several occasions.

THE HARVARD PROJECT ON AMERICAN INDIAN ECONOMIC DEVELOPMENT

Since its inception in 1987, the Harvard Project has collaborated with Native Nations to understand how and why tribal economies, social institutions, and political systems either succeed or fail. At the Harvard Project, my colleagues and I undertake research and teaching specifically tailored to meet the needs of tribal communities and tribal leadership.

One of the major questions the Harvard Project has been grappling with is: How is it that, despite widely-cited poverty and social distress, which is prevalent across numerous American Indian reservations, more and more tribes have been able to cast off the bonds of external economic dependence? We have seen more and more tribes taking part in what we have often referred to as an "Indian Renaissance," where dynamic self-sustaining economies are created by tribal actions. These economies are built upon, and supported by, vibrant political and social institutions. The success stories are wide-ranging, from the property development and management of the Tulalip Tribes in Washington State, to sustained energy-based projects at Southern Ute, to the diverse array of professional and construction services offered by Ho Chunk, Inc. in Nebraska. Many tribes have begun actively challenging century-long economic paradigms and demonstrating effective self-determination and governance. It is curious that, contemporaneously, a number of other tribes experience continued economic hardship, high unemployment, rampant social and physical health challenges, and the like. What might be the causes of the striking economic and social divergences within Indian Country?

In the first years of HPAIED, the founding researchers recognized that what was needed in Indian Country was not additional unsolicited interference from outsiders, but culturally-specific educational programs and research, developed for tribes, and undertaken hand-in-hand with tribal governments. The results of these studies are channeled back to those who must deal with the daily challenges of improving the economies and social conditions in Native communities (i.e., Indian people working in Indian Country).

[5] A copy of my curriculum vitae is attached as Appendix A.

In accordance with the above-mentioned approach, graduate students at the Kennedy School of Government and at the Native Nations Institute, working in close coordination with tribes; have completed several hundred projects and field research reports, many of which were on matters specifically requested by the tribes. These field projects have ranged from welfare reform at the Navajo Nation to bison ranching at Cheyenne River, and from judicial reform at Hualapai to ski resort management for the White Mountain Apache. As part of our organization's mission, many of these reports are available on our website for all tribes to learn from.[6]

Another important facet of the Harvard Project's work is our *Honoring Nations* program. *Honoring Nations* is a competitive awards program that identifies, celebrates, and shares outstanding success stories in tribal governance. We honor tribes that exemplify successful tribal governance, and to date the Harvard Project has recognized tribal governmental programs ranging from the Eastern Band of Cherokee for their Tribal Sanitation Program (in 1999) to the Effective Law Enforcement Program of the Gila River Police Department (in 2003) to the Seniors Skilled Nursing Facility at the Tohono O'odham Hospice (in 2008). Since 1999, we have honored nearly 120 tribal governmental initiatives.[7] HPAIED remains committed to empowering Native Nations through identifying the common characteristics of tribes that are successfully charting a course towards a socially, culturally, politically, and economically healthy future.

RESEARCH FINDINGS

Prior to the 1980s, there was a notable lack of research pertaining to economic development in Indian Country. The small amount that was available contained at least two consistent themes: First, the overriding focus of thinking and policymaking was on what the federal government could do to create jobs, raise income, and increase household wealth. This helped contribute to the unbalanced relationship between the Bureau of Indian Affairs, other federal programs, and the tribes, which often became dependent on federal funding and expertise.

Second, the federal policies and programs that did exist within Indian Country constituted what we refer to as a "Planner's Approach" to economic and community development. The Planner's Approach was simplistic in treating economic development as a fundamental question of resources and expertise, as opposed to one of incentives and institutions. Viewing the world

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6 See the Harvard Project website at http://www.hpaied.org/.

7 For more examples, see "Honoring Nations: Directory of Honored Programs 1998-2010," *Honoring Nations Program*, The Harvard Project on American Indian Economic Development, at pages 9 and 11, at http://hpaied.org/sites/default/files/documents/finalhndirectory.pdf.

through the lens of the Planner's Approach, academics, government officials, and tribal leaders interpreted the underdevelopment seen on reservations as stemming from a lack of access to financial capital, technical skills, and managerial expertise. The Planner's Approach typically provided grants and loans in a well-intended effort to stimulate economic development. However, this heavy-handed approach was driven by federal budget allocations and has had a strong adverse impact on many Native communities. This approach created a world in which grant writers were always in short supply and tribal politics revolved around which elected officials could most effectively capture (or perhaps extract), funds from the federal government. Under the Planner's Approach, what was originally intended to be a solution to underdevelopment instead seems to have perpetuated it, degrading the core tenets of economic development into a series of rent-seeking behaviors.[8]

A fundamental flaw of the Planner's Approach was the erroneous assumption that a nation's economic development is a mechanical process that can be achieved by way of the imposition of a predetermined blueprint. While it is advisable and even advantageous to plan ahead, it is an exercise of hubris to think that one can "plan" an economy, in the sense of expecting tribal councils, national legislatures, or federal planners to correctly select a portfolio of businesses, projects, and activities that will not only survive, but will meet the needs of tribal citizens, and will thrive over time.[9]

The discussion above raises one obvious question: If one cannot "plan" an economy to arrive at productive and sustainable development, what is the alternative? While there is no predetermined blueprint for success, there are some general tenets for effective, long-term economic development, and these tenets are now being demonstrated by a large number of tribes in Indian Country. We have found that these tenets of sustainable development are applicable to developing nations the world over, and are being acted upon by many successful tribes in Indian Country. A discussion of these tenets is found below, and in contrast to the Planner's Approach,

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8 "Rent seeking" is a term from economics and occurs when an organization or individual(s) seeks to obtain economic gain from others without reciprocating in the form of further wealth creation.

9 Consider the natural experiment of the German economies after World War II. The parts of former Germany subjected to market forces (i.e., West Germany) became a powerhouse of development in post-war Europe. The parts of the former Germany subjected to centralized planning (i.e., East Germany) stagnated and the citizenry had to be forcefully restrained from leaving for better opportunities elsewhere. For a discussion in the context of Indian Country, see, the Statement of Joseph P. Kalt, *Establishing a Tribal Development Corporation, Before the United States Senate Committee on Indian Affairs*, September 20, 2004 (hereinafter, "2004 Kalt Testimony"), noting that "Economic development is an organic process. In an environment in which opportunities are subject to the vicissitudes of competition and continually changing marketplace conditions, economic development occurs as the sum of small, adaptive decisions of myriad individuals who by luck or preparation are in the right place at the right time to take advantage of unplanned prospects. Economic development is much more analogous to tenacious plants looking for places to pop up and take root, than to an engineered system."

we refer to tribes that are building their communities under these principles as governments engaged in a "Nation Building" process.[10]

Institutions Matter: The nature of a society's institutions, whether social, cultural, and/or governmental, determines the incentives around productive or unproductive activity. Within the scope of our research, the Harvard Project and the Native Nations Institute have consistently found that a tribe's economic development is anemic, or worse, unless the tribe's institutions personify at least three characteristics. The key attributes are:

- *A Rule of Law.* A respect for tribal law and the establishment of legitimate means for dispute resolution.

- *Separation of Politics from Day-to-Day Administration and Business Affairs.* Enterprises and economic transactions are free from societal politics and power struggles.

- *Efficient Bureaucracy*. Clarity of procedures, good record-keeping, efficient administration processes, reliable computer networks, and the like.

Culture Matters: Given the importance of institutions within a society, the social norms and worldview of the citizens that interact with those institutions also matter.[11] This lesson, observed repeatedly in our research with Native Nations, is an important tenet regarding economic development. The importance of local conditions and political willpower in building and promoting effective institutions as part of economic development cannot be understated.[12] Our research in Indian Country indicates that, for governing institutions to provide the foundation upon which sustained economic development can take place, there first must be a *cultural match*.

One can think of cultural match as the consonance between the structure of a society's formal institutions of governance (and its economic development initiatives) and its underlying norms of political power and authority (i.e., culture).[13] In order to function effectively, a society's institutions and corresponding economic development must be consistent with underlying cultural, political, and organizational norms. Simply put, they must be seen as legitimate in the eyes of the society's citizenry.

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[10] For more information on the Nation Building approach, see: The Harvard Project on American Indian Economic Development, *The State of the Native Nations: Conditions Under US Policies of Self-Determination*, New York: Oxford University Press, 2008, starting at page 26.

[11] Miriam Jorgensen, *Bringing the Background Forward: Evidence from Indian Country on the Social and Cultural Determinants of Economic Development*, Doctoral Dissertation, May 2000, at page 129.

[12] 2004 Kalt Testimony at page 13.

[13] 2004 Kalt Testimony at page 14.

Sovereignty Matters: Self-determination is a key issue within Indian Country and its importance to economic development cannot be overlooked. There are four inseparable issues connecting sovereignty and self-determination to economic and community development within Indian Country. They are:

- *Design issues*. Without self-determination, it is impractical (and perhaps impossible) to change institutions so that they more closely match those of Native Nations and their unique economic needs.

- *Ownership issues*. Absent a strong sense of ownership, it is unquestionably difficult to get a local community involved and interested in how tribal economic investments pay off.

- *Accountability issues*. Linked closely with the concept of ownership, those making the investments and program decisions need to be held accountable for how all federal (and tribal) resources are used.

- *Leadership development issues*. There are an increasing number of astute, capable, highly experienced leaders emerging within Indian Country. This is demonstrated by tribes (and tribal leadership) taking charge of issues irrespective of historical (or concurrently existing) federal support.

After years of research, it has become clear that tribes must have autonomy in order to foster institutions that are a cultural match for their societies. Successful tribal governments all exhibit effective institutions paired with a cultural match. We have come to believe that this is why policies of sovereignty and self-determination have been the only strategy that has shown any prospect of breaking the patterns of poverty and dependence that became so familiar on reservations from the late 1800s until at least the 1990s. It is only logical that it requires self-rule for a culture to put in place institutions that are a cultural match. Thus, we can restate the uniform qualities that have marked successful economic development in Indian Country as aggressive assertions of sovereignty, resulting in self-governed institutions that are characterized by a cultural match. It has repeatedly been shown that, when a tribe takes control of its own institutions and runs them in congruence with its own culture, the result is a set of economic, social, and political systems that work for its citizens.[14] Continued dependence on the federal government for grants and guidance removes accountability for tribal leadership and undermines the processes necessary for stable and lasting economic development. The negative results of such dependence should not be surprising.

The core tenets of Nation Building, which are required for effective economic development, are directly related to the issues that bring us here today. Over the past couple of

[14] Stephen Cornell and Joseph P. Kalt, "Reloading the Dice: Improving the Chances for Economic Development on American Indian Reservations," *Joint Occasional Papers on Native Affairs*, No. 2003-02, 2003.

decades, the Crow Nation has continued to push for increased autonomy and self-sufficiency and has made great strides in its efforts to build a sustainable economy. However, "the economic condition of the Crow is very poor. Jobs number few."[15] The Crow's efforts to play an active role in the regional economy by developing the tribe's abundant natural resources have brought jobs and revenue into the tribal economy, and have also benefited Big Horn County and the State of Montana. Similarly, proposals to maintain, and potentially expand, mining operations stand to substantially benefit the Crow Nation, the County, and the State. As noted by Chairman Old Coyote, "There are vast resources that can be developed to improve economic conditions of the Crow."[16] Harvard Project researchers, with support from the economics consulting firm where I work, recently undertook a study of coal mining on the Crow Reservation. Our study explicitly addressed the implications of continued/expanded mining for the Tribe, the County, and the State.[17] The complete study is attached as Appendix B (see below). I next summarize our findings and discuss the implications for economic development on the Crow Reservation.

ECONOMIC DEVELOPMENT AND COAL MINING ON THE CROW RESERVATION

Great progress towards sustainable economic development has been made on the Crow Reservation in recent years. However, efforts to revitalize the tribal economy began from such a low base (in terms of very low income levels, high poverty and unemployment rates, alarming health indicators, etc.) that much still needs to be done. Consider a few basic statistics, illustrated in Figures 1 and 2. As shown in Figure 1, between 2006 and 2010, the annual per-capita income of American Indians living on the Crow Reservation was $11,987 (compared to the US average of $27,334; median household income showed a similar divergence). Figure 2 shows that during that same time period, when the national unemployment rate was approximately 8%, Crow unemployment hovered at about 32%.[18] Had we also included

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[15] Dennis Zotigh, "Darrin N. Old Coyote, Chairman: the Smithsonian National Museum of the American Indian's Meet Native America Series," October 31, 2013, at http://blog.nmai.si.edu/main/2013/10/darrin-n-old-coyote-crow-nation.html.

[16] Dennis Zotigh, "Darrin N. Old Coyote, Chairman: the Smithsonian National Museum of the American Indian's Meet Native America Series," October 31, 2013, at http://blog.nmai.si.edu/main/2013/10/darrin-n-old-coyote-crow-nation.html.

[17] Professor Joseph P. Kalt, *The Mining of Crow Nation Coal: Economic Impact on the Crow Reservation, Big Horn County, and Montana*, The Harvard Project on American Indian Economic Development, February 4, 2014 (hereinafter, "2014 Kalt Report").

[18] See, e.g., 2014 Kalt Report. According to the Montana Department of Labor & Industry, official unemployment on the Crow Reservation in 2012 was 25.1% (see Crow Nation, "Crow Reservation: Demographic and Economic Information," at page 6, October 2013, at http://lmi.mt.gov/media/9409/rf13-crow-web.pdf). This was still dramatically higher than the United States, which had an average unemployment rate of 8% throughout 2012 (see the US Department of Labor, Bureau of Labor Statistics, "Labor Force Statistics from the Current Population Survey," 2012, at http://data.bls.gov/timeseries/LNS14000000).

community members who had already given up searching for work, this unemployment rate would have been closer to 47%.[19] As noted above, per-capita income levels on the Crow Reservation are less than half that on the US average, and family poverty levels reflect this same shortfall: During the five-year time period used in our recent study of coal development, the family poverty rate for the Crow Nation averaged 24% which was more than twice that of the average for the United States. Sadly, the poverty rate among Crow children during the study period was even more pronounced: Childhood poverty rates are alarming all across America, but on the Crow Reservation we saw a 39% rate (compared to the 19% rate for the United States).[20]

It is striking that such socio-economic conditions were (and are) present on the Crow Reservation, despite the tribe's abundance of valuable and accessible natural resources. These include "approximately 1.2 million acres of grazing land, 150,000 acres of dryland farmland, 30,000 acres of irrigated farmland," and of course a substantial reserve of coal, estimated at 17 billion short tons.[21] We are meeting here today to discuss coal development, and by any measure, the potential resource base of the Crow is impressive; the recoverable coal reserves in the Crow Nation account for nearly 12% of those in Montana and more than 3% of those of the US as a whole.[22] These potential assets offer significant, unique, and potentially life-changing opportunities for individual Crow Indians and the entire Crow community. These opportunities should arise in the form of well-paying jobs, substantial royalty revenues to the tribe, and greater access to critical healthcare and social services, to name just a few. If the Crow Nation becomes unable to access these resources, then what is already a set of complex socio-economic challenges could easily degrade further.

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19 Statement of Darrin Old Coyote, Chairman, Crow Nation, *Mining in America: Powder River Basin Coal Mining the Benefits and Challenges, Before the House Committee on Natural Resources, Subcommittee on Energy and Mineral Resources*, 113th Congress 2013 (hereinafter, "2013 Old Coyote Testimony"), at page 3.

20 The US Census, American Community Survey ("ACS") 5-year data were presented because the US Census typically provides the most complete and reliable data available. The ACS was utilized to ensure the accuracy and reliability of our study of coal development on the Crow Reservation. The ACS 5-year data for the years 2006-2010 were chosen because 2010 represents the last year that the necessary demographic information is available for American Indian or Alaskan Native residents on the Crow Reservation (and Off-Reservation Trust Land). More recent data (i.e., the ACS 5-year information for 2009-2013) show the combined demographic information of both American Indian or Alaskan Native residents and all other races residing in the area. According to these more recent data, combined unemployment on the Crow Reservation (and Off-Reservation Trust Land) was 29.2%, again dramatically higher than that of the US as a whole (which was 9.7%). Family poverty rates were similarly divergent, 22.1% on the Crow Reservation and trust lands compared to 11.3% in the US as a whole. As before, the child poverty rate on the Crow Reservation and trust lands was far too high, at 39.5% on the reservation, compared to 21.6% in the United States as a whole (see the US Census Bureau, 2009-2013 5-Year American Community Survey, at http://factfinder. census.gov/faces/tableservices/jsf/pages/productview. xhtml?fpt=table).

21 LAO Environmental, Inc., "Crow Indian Tribe: Resource Report," at pages 20 and 71, April 15, 2002, reported by the Bureau of Land Management, at http://www.blm.gov/style/medialib/blm/mt/field _offices/miles_city/og_eis/crow.Par.79832.File.dat/minerals.pdf.

22 Montana's recoverable coal reserves are reported as 74.6 billion short tons and the total coal reserves in the United States are reported as 256.7 billion short tons (US Energy Information Administration, "US Coal Reserves with Data for 2012," December 16, 2013, at www.eia.gov/ coal/annual/pdf/table15.pdf).

As many already know, Westmoreland Coal Company has leased and operated the Absaloka Mine since the 1970s. The mine has been a significant part of the local economy ever since. In recent years, the Absaloka Mine alone has accounted for nearly two-thirds of the Crow Nation's non-federal budget; these are revenues that allow the tribe to pay for governmental salaries, provide social services, and to supplement federal funding to vital community programs such as Family Preservation, Tribal Elders, Head Start, and the Boys & Girls Club.[23]

Our 2014 study of coal on Crow lands evaluated the Absaloka Mine, and also assessed the potential economic value of the proposed Big Metal Project, an ongoing development initiative between the Crow Nation and Cloud Peak Energy ("Cloud Peak"). Our research found that in 2013, the average annual compensation and benefits for unionized Absaloka Mine workers exceeded $91,000 per person.[24] We found that expansion of operations at the Absaloka Mine, and/or initiation of mining at Cloud Peak's Big Metal Project, would be expected to create an impact of similar magnitude.[25] However, the benefits of such development do not accrue only to the specific workers with jobs in the mining industry. We must bear in mind that the economic impacts of mining operations on Crow lands extend far beyond just those to the local community. Big Horn County, the State of Montana, and the United States federal government also receive considerable economic benefits from coal produced on the Crow Reservation.

Our estimate is that the combined contribution of continued operation of the Absaloka Mine, along with the potential mining operations of the Big Metal Project, could contribute more than $370 million dollars annually to what is referred to as Gross Regional Product ("GRP").[26] Annual state and federal tax revenues from the projects are estimated to be approximately $22.9 million and $21.9 million respectively. The government of the Crow Nation would likely benefit

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[23] Although the tribal budget is modest overall, services covered by the Crow Nation include important line items such as provision of supplemental money for staffing at the BIA-funded police department (see, e.g., Special Session of the Crow Tribal Legislature, *Approval of the Annual Budget for the Operation of the Crow Tribal Government and the Expenditure of Tribal Revenue for Fiscal Year 2012*, CLB 11-04, September 29, 2011, at http://www.crowlaws.org/tribal_legislation_2002-present, at page 3).

[24] Salary and benefits data were provided for the 2014 Kalt Report by Westmoreland. The average annual salary for the unionized workforce at the Absaloka Mine was $56,264. Overtime and benefits, such as retirement funding and healthcare provision, brought the average annual compensation for all workers at the mine to $91,408.

[25] Due to its operation of the Absaloka Mine, employment opportunities with Westmoreland have been of great importance to the Crow Nation's citizens; roughly 70% of the mine's workforce is associated with the Crow Tribe (2013 Old Coyote Testimony at page 3). The mine typically employs on the order of 100 to 125 Crow Nation citizens or affiliated individuals (see, "Daines introduces bipartisan legislation to encourage investment in Indian coal," *Sidney Herald*, June 7, 2014, and Statement of Scott Russell, Secretary, Crow Nation, *Tribal Development of Energy Resources and the Creation of Energy Jobs on Indian Lands, Before the House Committee on Natural Resources, Subcommittee on Indian and Alaska Native Affairs*, 112th Congress, April 1, 2011 (hereinafter, "2011 Russell Testimony"), at page 11).

[26] GDP is defined by the US Bureau of Economic Analysis as "the market value of goods and services produced by labor and property in the United States…" (See the BEA at http://bea.gov/glossary/glossary_g.htm). GRP is similar to GDP, but it measures the total output of an economy within a specific region/area, rather than the national economy.

from as much as $107 million in royalties and taxes each year (see Figure 3) in addition to $3.75 million in initial option payments already received for the Big Metal Project. Such benefits, whether they be to the state, county, federal government, or tribal nation, could easily be lost if coal development and/or expansion at Crow is curtailed.

Research has noted that tribes that engage in the natural resource industries (such as the Crow Nation) are often overly and unjustly burdened by the current system. The Crow have been subjected to these burdens in multiple sectors of development. Consider, for a moment, an example from the oil and gas industry. In January 2005, the Crow Tribal Council approved an oil and gas lease on tribal lands,[27] but development of the resource was blocked until September 2007 due to the incomprehensibly slow review and approval process in place at the BIA.[28] Issues with the BIA persist: For example, the Crow Nation reports that BIA's records for surface and mineral ownership are repeatedly missing or out-of-date.[29] Bureaucratic inefficiencies, layers of regulatory oversight, near-complete lack of access to markets, higher-than-elsewhere permitting costs, and persistent infrastructure challenges create an environment of uncertainty and contribute to lackluster economic development.[30] In order to level the playing field for tribes, and allow them to overcome such hurdles to self-sufficiency, federal action can and should be taken at once.

One such action would be making the Indian Coal Production Tax Credit ("ICPTC") permanent. Those present today know that the ICPTC assists mining firms in absorbing part of the production cost for coal operations on reservation land. The potential economic benefits of the tax credit include positioning of tribal coal so that it is better able to compete in both national and international marketplaces. In addition, the tax credit provides an incentive which serves to promote expansion beyond current production levels on the Crow Reservation. However, this federal tax credit has heretofore been temporary, and has thus been consistently threatened. The temporary nature of this tax credit has contributed to instability in the limited number of tribal economies that rely on coal for their well-being. The uncertainty surrounding the tax regime applicable to coal production on tribal lands increases risk, and thus contributes to potential under-investment by mining firms operating within Indian Country (and, among those *considering* operations on tribal lands). Indeed, economics teaches that uncertainty around

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[27] Clair Johnson, "Crow Tribe signs lease with oil exploration firm," *Billings Gazette*, May 16, 2005, http://billingsgazette.com/news/state-and-regional/montana/crow-tribe-signs-lease-with-oil-exploration-firm/article85763605-8812-5993-a56d-8717f7c71bff.html. See also, "Crow Tribe Signs oil and gas development deal," May 17, 2005, http://www.indianz.com/News/2005/008205.asp.

[28] 2011 Russell Testimony at page 13.

[29] See, e.g., *On Improving Tribal-Corporate Relation in the Mining Sector: A White Paper on Strategies for Both Sides of the Table*, HPAIED, April 2014, at http://hpaied.org/sites/default/files/ documents/miningrelations.pdf, at page 91.

[30] 2014 Kalt Report at page 2.

future tax rates can prevent firms from undertaking investments which cannot be reversed once they are made, and which pay off over long time horizons.

Although the ICPTC has (temporarily) provided a more level playing field for coal mining on the Crow Reservation, the tax credit alone is not sufficient to redress the bureaucratic impediments that stymie coal production on Native lands. An additional step that is critical for the Crow Nation to fully benefit from its coal resources would be securing equal access to expanded markets, both domestic and foreign.

Projected increases in international coal consumption highlights the importance of increasing access to foreign markets for coal produced on the Crow Reservation (as can be seen in Figure 4).[31] According to the US Energy Information Administration, global consumption of coal is expected to increase from 147 quadrillion Btu in 2010 to 220 quadrillion Btu in 2040 (i.e., a 50% increase),[32] while domestic consumption is expected to remain relatively flat.[33] The disparity between the projected growth of global and domestic consumption emphasizes the importance of providing Native Nations access to international markets. However, the importance of access to international markets is not only derived from projected global demand growth. As with any product, providers need to mitigate the risks associated with having only a limited customer base.

The Crow Nation has recently suffered the consequences of only being able to access a limited market. In November 2011, the Sherburne County Generating Station ("Sherco") in Becker, Minnesota, suffered a turbine malfunction which caused a fire in Unit 3. This fire shut the unit down for nearly two years.[34] The Absaloka Mine was specifically developed to supply coal to the Sherco plant.[35] The temporary shutdown of the plant resulted in a loss of

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31 US Energy Information Administration, "International Energy Outlook 2013," July 25, 2013, at http://www.eia.gov/pressroom/presentations/sieminski_07252013.pdf, at page 6.

32 US Energy Information Administration, "International Energy Outlook 2013," July 25, 2013, at http://www.eia.gov/forecasts/ieo/pdf/0484(2013).pdf, at page 67.

33 US Energy Information Administration, "Annual Energy Report 2014: Early Release Overview," at http://www.eia.gov/forecasts/aeo/er/pdf/0383er(2014).pdf, at page 11. Consider the emerging economies of China and India. Coal consumption between those two countries has been projected to increase from 82 quadrillion Btu in 2010 to 144 quadrillion Btu in 2040, an increase of 76%. Compare this to the United States, which consumed 21 quadrillion Btu of coal in 2010 and is expected to remain at or below that level through 2040 (see Figure 5). The data cited here can be found at the US Energy Information Administration, "International Energy Outlook 2013," July 25, 2013, at http://www. eia.gov/forecasts/ieo/pdf/0484(2013).pdf, at pages 68-69 and 71.

34 Elizabeth Dunbar, "Xcel Energy Sherco plant returns to service after repairs," *MPR News*, October 21, 2013, at http://www.mprnews.org/story/2013/10/21/environment/xcel-energy-sherco-plant-returns-to-service-after-repairs.

35 Tom Lutey, "Soft Demand for Coal Ripples through Area Mines, Plants," *Billings Gazette*, June 24, 2012, http://billingsgazette.com/news/state-and-regional/montana/soft-demand-for-coal-ripples-through-area-mines-plants/article_ce7eb1fc-56e9-5a33-aa22-509c3f621ab9.html.

approximately 50% of the Absaloka Mine's coal sales in 2012.[36] The drop-off in demand for coal produced on the Crow Reservation was followed by a curtailment of the workforce at the mine, which hurt individual tribal employees of the mine, the tribal government, and the community.[37] This loss clearly highlights the risk the tribe faces to its budget as a direct result of the Absaloka Mine's limited access to a wide range of potential buyers.[38]

The proposed Big Metal Project will exacerbate the need for access to international markets for coal produced on the Crow Reservation. In early 2013, Cloud Peak announced an agreement with SSA Marine ("SSA") that provides an option to transport up to 17.6 million tons of coal through SSA's planned Gateway Pacific Terminal at Cherry Point ("Gateway Pacific").[39] Completion of the Gateway Pacific facility is subject to obtaining the required permits and estimates for commencement of commercial operations appear to target a start date no earlier than 2018.[40] If completed, the Gateway Pacific facility would be the key export terminal to reach overseas markets for coal produced on the Crow Reservation, and basic economics tells us that a more diversified customer-base would mitigate the marketplace risks currently faced by those producing (or contemplating production of) coal on the Crow Reservation.[41] A level playing field for production on the Crow Reservation translates into more jobs for the citizens of the Crow Nation, with a number of benefits spilling over to Big Horn County and the State of

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36 Westmoreland Coal Company, FY 2011 Form 10K, at page 22.

37 2013 Old Coyote Testimony at page 3.

38 There is also increasing pressure for the Absaloka Mine to supply a wider range of markets due to policy changes underway at Xcel Energy ("Xcel"). Xcel operates the Sherco Power Plant, and is one of the most important outlets for coal produced on the Crow Reservation. In January 2015, Xcel put forth plans to implement a reduction in coal-generated electricity at the Sherco plant (from 37% in 2015 to 29% in 2030), as part of an effort to transition to more renewable energy (see, e.g., David Shaffer, "Xcel to Double down on Renewable Energy in Minnesota," *Star Tribune*, January 2, 2015, at http://www. startribune.com/business /287387921.html).

39 Cloud Peak Energy, "2013 Annual Corporate Report," Gillette, WY, 2014, at page 3. Cherry Point is on the northern coast of Washington State in Whatcom County, just 17 miles south of the Canadian border and approximately 108 miles north of Seattle.

40 Cloud Peak Energy, Press Release, "Cloud Peak Energy Announces Option Agreement with SSA Marine for Capacity at Future Cape Size Export Terminal in Pacific Northwest," February 13, 2013, http://investor.cloudpeakenergy.com/press-release/business-development/cloud-peak-energy-announces-option-agreement-ssa-marine-capacity. Current information indicates that final environmental impact statements are not going to be issued until 2017 (see, Washington State Department of Ecology, "Environmental Review: Gateway Pacific Terminal at Cherry Point Proposal," at http://www. ecy.wa.gov/geographic/gatewaypacific/). According to Cloud Peak, upon completion of the permitting process the Gateway Pacific facility must undergo two years of construction before it can begin operations, so prior indications of a 2018 start date are likely to slip back by more than a year.

41 I note that the Gateway Pacific facility has stirred controversy, much of which involves the sovereign territory rights of the Lummi Nation of Washington State. The Lummi Nation asserts that Gateway Pacific infringes upon its ancestral fishing grounds, which are guaranteed by treaty. This is a delicate issue, and deserves respectful consideration by all parties involved. As discussed above, tribal sovereignty and autonomy are vital to economic growth and building well-functioning tribal communities, and these findings of the Harvard Project hold for all tribes (Crow, Lummi, and the hundreds of others found throughout Indian Country alike).

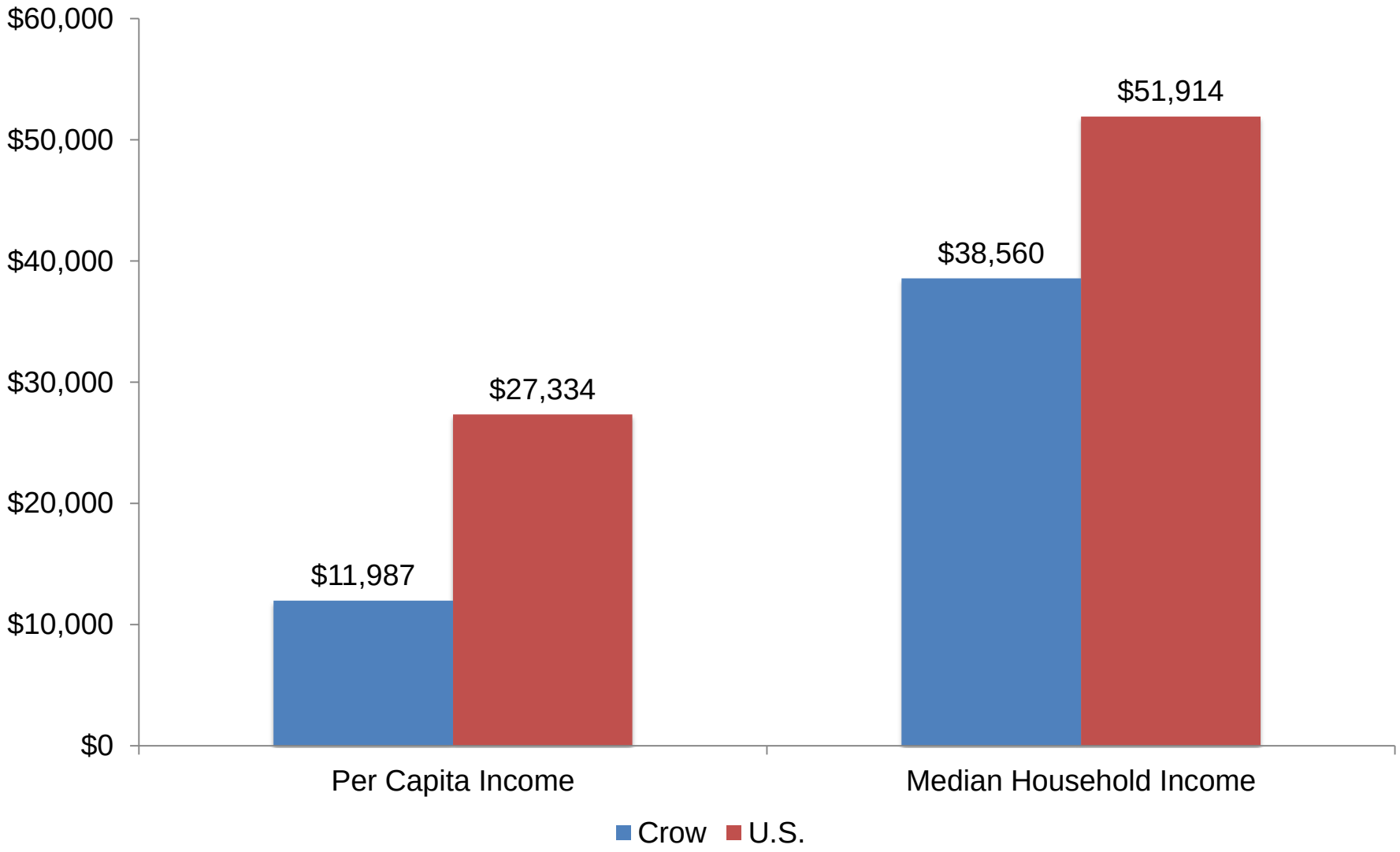
Montana (e.g., increased tax revenues).[42] As noted above, the combined impact of continued production at the Absaloka Mine, along with operations getting underway at the Big Metal Project, is projected to be worth as much as $107 million in revenue to the Crow Nation's annual budget. This represents a four-fold increase in non-federal dollars currently available to the Crow government, and will markedly increase the tribe's ability to be self-sustaining and to provide for the needs of its citizenry.

[42] Analysis provided by the House Committee on Ways & Means indicates the 10-year cost of the most recent one-year ICPTC extension is expected to be $38 million. This decrease in federal tax revenues is insignificant in the federal budget, so much so that USA Today has commented, "The budgetary cost of the Indian coal production credit is so small it doesn't show up in most Congressional Budget Office estimates." It is not surprising that a number of Montana's legislators have been working to make the ICPTC permanent (see, Gregory Korte, "In Montana, Crow Tribe sees perils to 'fiscal cliff'." See also, *USA Today*, November 19, 2012, at http://www.usatoday.com/story/news/2012/11/18/crow-tribe-fiscal-cliff/1706695/. Finally, see the United States House of Representatives, Committee on Ways & Means, "Section-by-Section Summary of HR 5771, The 'Tax Increase Prevention Act of 2014'," at https://rules.house.gov/sites/republicans .rules.house.gov/files/113-2/PDF/113-HR5771-SxS.pdf).

FIGURES 1-5

Figure 1

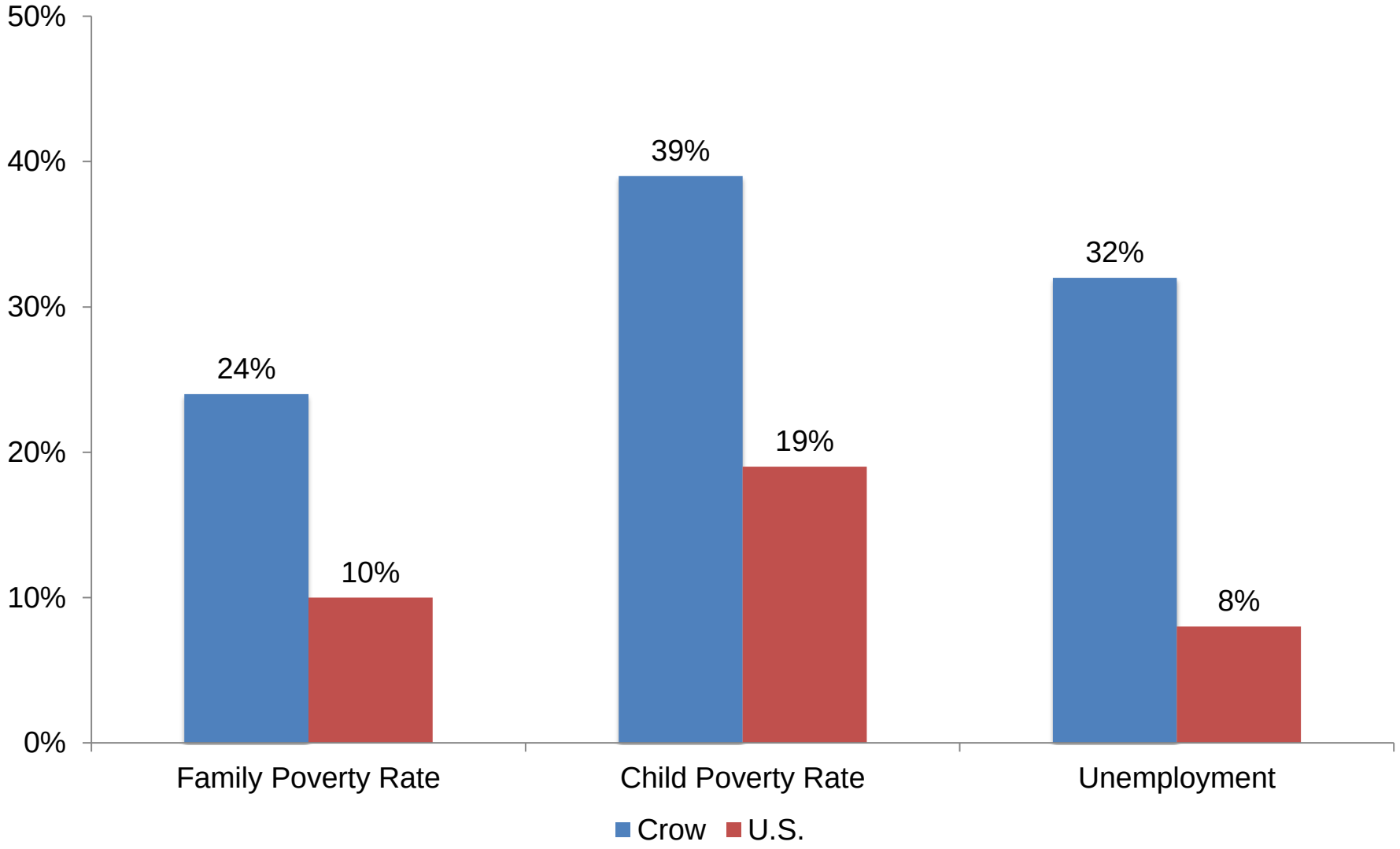
PER-CAPITA AND MEDIAN HOUSEHOLD INCOME 2006-2010



Source: Census Bureau, American Community Survey 5-Year Estimates

Figure 2

POVERTY RATES AND UNEMPLOYMENT
2009-2013



Source: Census Bureau, American Community Survey 5-Year Estimates

Figure 3

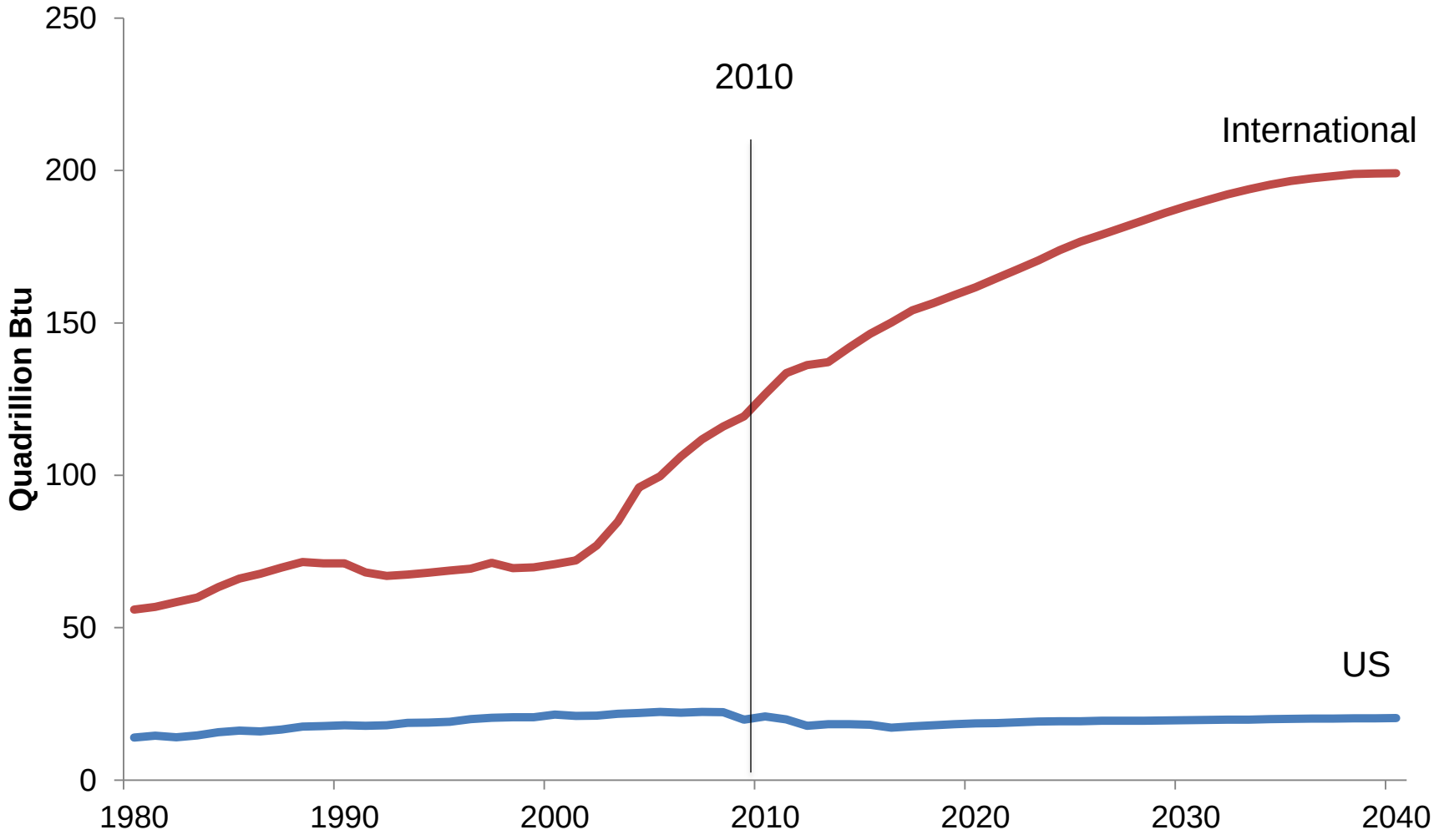
COMBINED ANNUAL ECONOMIC CONTRIBUTIONS OF ABSALOKA MINE AND PROPOSED BIG METAL PROJECT ($ millions)

	Montana Total	Big Horn County Total
Gross Regional Product	$376.5	$279.5
Labor Income	$94.7	$64.5
Crow Nation Taxes and Royalties	-	$107.4
State and Local Taxes	$22.9	$19.2
Federal Tax	$21.9	$16.2

Source: 2014 Kalt Report

Figure 4

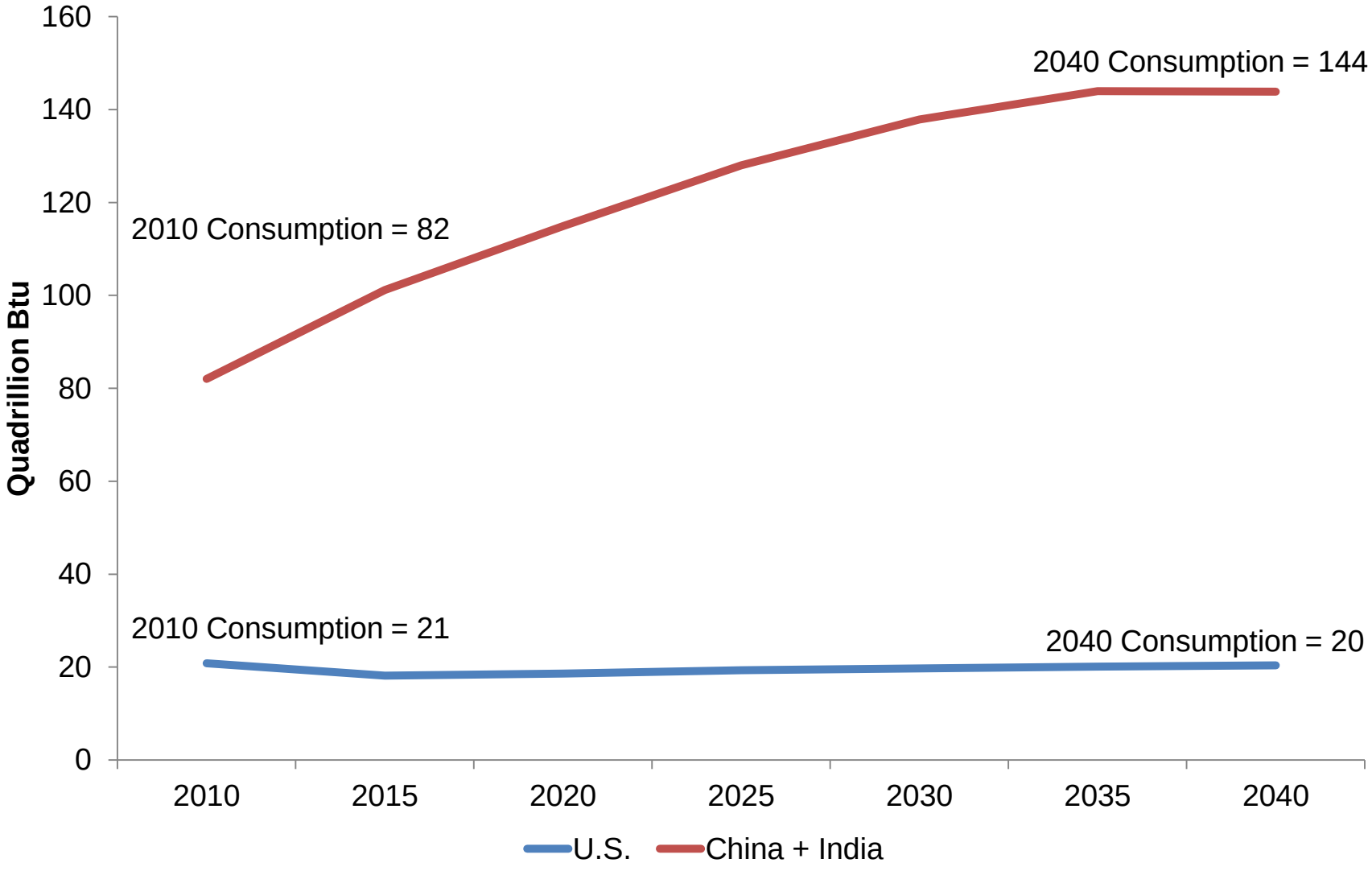
COAL CONSUMPTION
1980-2040 (Quadrillion Btu)



Source: Energy Information Administration

Figure 5

PROJECTED COAL CONSUMPTION: UNITED STATES v. CHINA + INDIA



Source: Energy Information Administration

APPENDIX A

Curriculum Vitae

CURRICULUM VITAE

Eric Conrad Henson

Compass Lexecon 200 State Street, 9th Floor Boston, MA 02109 617-520-0200 main 617-520-0201 direct ehenson@compasslexecon.com	and	Compass Lexecon 4280 N. Campbell Ave, Ste 200 Tucson, AZ 85718 520-615-5300 main 520-615-5334 direct ehenson@compasslexecon.com

PROFESSIONAL EXPERIENCE

Compass Lexecon
Boston, MA and Tucson, AZ
Senior Vice President, 2013-present
Vice President, 2009-2013; *Managing Director*, 2006-2008; *Director*, 2005; *Managing Consultant*, 2004; *Senior Consultant*, 2001-2004; *Consultant*, 1998-2001

Provides economic analysis in the areas of oil and gas valuation, antitrust claims, and market structures and researches Native American economic development and governmental design.

Harvard Project on American Indian Economic Development, John F. Kennedy School of Government, Harvard University, Cambridge, MA
Research Fellow/Research Affiliate, 1998-present

Researches governmental design and economic development in Indian Country, at the John F. Kennedy School of Government at Harvard University (and its affiliate the Udall Center for Public Policy at the University of Arizona). Serves as a program evaluator for the Honoring Nations program.

Fidelity Investments, Boston, MA
Industry Analyst, 1997-1998

Assisted in the development of quantitative models to forecast outperformance of S&P 500 Industry groups. Programmed econometric software and built macros in MS Access to process performance reports.

Haver Analytics, New York, NY
Manager, United States Economics Database, 1995-1996

Interacted as a consultant with leading economists, governmental department heads, and private industry clients. Solved technological problems associated with the electronic transfer of data and found solutions for anomalies in the data.

Clean Environments, San Antonio, TX
CAD Operator, 1993

Created site maps for environmental consultants and prepared materials for client presentations.

EDUCATION

John F. Kennedy School of Government, Harvard University, Cambridge, MA
MPP, 1998
Thesis: "The Importance of a Uniform Commercial Code for Economic Development on Native American Reservations"

Southern Methodist University, Dallas, TX
MA, Economics, 1995

University of Texas at San Antonio, San Antonio, TX
BBA, Business Economics, 1992

SELECT CONSULTING EXPERIENCE

For an On-Reservation School District

Analysis of cash flows for a school district located on tribal lands. Project centered on evaluation of the feasibility of issuing construction bonds to replace aging school buildings. (2015)

For a Small Oil and Gas Company

Examination of allegations of underpayment in a take-private transaction for a previously publicly traded oil and gas company. Case addresses valuation of producing and prospective properties in several locations throughout the United States. (2014-present)

For a Class of Indian Tribes and Tribal Enterprises

Analysis of harms arising from the US government's failure to provide for contract support costs when contracting or compacting with tribes for the provision of governmental services by the tribes. (2014)

For a Midsize Oil and Gas Company

Examination of the marketplace for oil and gas leases in Oklahoma. Case addresses measurement of bonus and royalty rates paid for "investigated" transactions and comparable "non-investigated" transactions. (2014-present)

For Three Telecommunications Companies and a Standard Setting Organization

Analysis of mechanisms by which specifications and standards are set in the telecommunications industry. Case addressed allegations that marketplace participants could unfairly influence the decision-making process. (2013-2014)

For an Indian Tribe

Evaluation of a coal production tax credit on Indian lands. Analysis of tax incentives for continuing/expanding production and measurement of regional impacts from economic activity associated with mining operations. (2013-2014)

For an Indian Tribe

Evaluation of inputs for use in the calculation of a gasoline tax rebate for a tribe in the Pacific Northwest. Analysis addressed determination of annual fuel usage and an assessment of the number of tribal individuals eligible for the rebate. (2013)

For an Indian Tribe

Evaluation of damages arising from the failure of the federal government to complete a major farming/irrigation project in the southwestern United States. Analysis addresses lost rents, forgone use of water rights, unfunded project completion costs, and ongoing operations and maintenance expenditures. Engagement has included sworn testimony before the tribe's Resources and Development Committee. (2013-present)

For a Small Oil and Gas Company

Evaluation of alleged underpayments of oil royalties arising from production off the coast of California. Case addressed the proper economic framework for valuation along the chain of commerce from production to refinery usage, the value of crude oil transportation services, and sound techniques for utilization of price benchmarks. (2013)

For a Large Pipeline Company

Evaluation of alleged damages stemming from the purchase and reversal of a crude-oil transporting pipeline in Oklahoma and Texas. Case addressed crude oil price differentials between major trading hubs, the value of crude oil transportation services, and sound techniques for damages estimates. (2013-2014)

For a Midsize Oil and Gas Company

Examination of the marketplace for natural gas and carbon dioxide in Texas. Case addressed marketplace infrastructure, netback pricing, prudence of development of processing assets, and the marketability of natural gas and carbon dioxide at the point of production. (2012-2013)

For an Indian Tribe

Evaluation of harms arising from denial of funds required to provide health services to community members. Case addressed damages stemming from direct harm due to lack of health care, multiplier effects in the community, and indirect harms arising from the lack of health funding undermining the ability to provide a range of other governmental services. (2012)

For a Midsize Oil and Gas Company

Examination of the marketplace for natural gas in Oklahoma. Case addressed marketplace infrastructure, netback pricing, and the marketability of natural gas at the point of production. (2011-2012)

For an Indian Tribe

Evaluation of damages stemming from construction of a major highway built over Indian land, allegedly without proper compensation. (2010-2011)

For a Non-Profit Sports Organizing Body and a Professional Sports League

Evaluation of alleged antitrust/anticompetitive behavior leading to the bankruptcy of a promoter of international exhibition matches. Project addressed a non-profit's role in administration of a sport that provides public goods, the role in development of the sport by a professional league, allegations of discriminatory behavior, and proper definition of a relevant market. (2010-2012)

For an Indian Tribe

Strategy consulting relating to economic development initiatives geared toward enterprise diversification. Project addressed financial analysis, the roles played by Board members and economic development staff, cost-benefit analysis, and prioritization of investment decisions. (2010)

For an Energy Trading Firm

Evaluation of damages allegedly arising from actions undertaken by a mercantile exchange in the Middle East, which resulted in economic loss of the trading firm's equity position in the exchange, and loss of access to trading activities on the exchange. Project addressed potential evolution of trading in the Middle East, a range of valuation methodologies, and determination of an appropriate discount rate. (2010-2011)

For an Indian Tribe

Evaluation of ability to access federal stimulus funds for infrastructure refurbishment. Project addressed the requirements for funding application, expected demand for restored rail service, cost-benefit analysis, and the impact more efficient rail service would imply for surrounding areas. (2009)

For a Large Natural Gas Producing Joint Venture

Examination of the marketplace for natural gas in an Australian state. Case addressed the natural gas supply chain, the history of the marketplace, long-term contracting, marketplace infrastructure, the economic principles of fair market value, LNG exports, and the relevant marketplace for determining fair market value. (2008-2009)

For a Large Oil and Gas Company

Examination of various marketplaces for gasoline in the northeastern United States and Puerto Rico. Cases address marketplace infrastructure, gasoline manufacturing, transportation assets, storage and terminal accessibility, imports from abroad, and supply shares brought to the marketplace by various producers and manufacturers. (2007-present)

For a Major Oilfield Services Firm

Analysis of antitrust claims stemming from provision of fluids used in deepwater drilling environments. Examination of the marketplace participants which provide such fluids, and their substitutes, as well as the history of development of the fluids in dispute. (2007-2008)

For a Major Global Chemical Manufacturer

Examination of the marketplace for industrial metals used in high-tech applications. Case included analysis of the marketplace for these products and the commercial interactions of the major players on the buyers' side and the sellers' side of long-term contracts. (2007-2009)

For a Publisher of Weekly Newspapers

Examination of the marketplace for advertising space in the San Francisco Bay area. Analysis of changing marketplace conditions, substitutes for print advertising space, and the economics of pricing to cover marginal costs. (2007-2008)

For a Large Oil and Gas Company

Examination of the marketplace for natural gas processing services in the southwestern United States. Case addressed marketplace infrastructure, netback pricing, appropriate discount rates, asset valuation, appropriate levels of processing charges, and value of similar production for leases in the surrounding area. (2007)

For a Group of Large Oil and Gas Companies

Damages assessment following harm to a major offshore pipeline caused by a ship dropping anchor onto the pipeline. Analysis addressed valuation techniques, calculation of appropriate discount rates, and utilization of expectations of future oil and gas prices. (2007-2008)

For Two Refining Companies

Examination of the competitive implications of the proposed merger of two refining companies. The analysis focused on assertions that the merger would adversely affect competition in the gasoline marketplace in the southwestern United States. (2007)

For an Indian Tribe

Analysis of tax burdens and public policy relating to sound taxation policies. (2006-2007)

For a Group of Natural Gas Producing Companies

Royalty valuation analysis focused on lease-level transactions. Principal areas of research included market structure analysis of domestic natural gas industry, effects of transaction costs on the determination of value, the economic functions of different contract structures found within the natural gas industry, and the economic role of and the determination of value provided by various market participants operating between the lease and the downstream markets. (2006-2010)

For Six Large Telecommunications Companies

Analysis of mechanisms by which specifications and standards are set in the industry. Case addressed allegations that marketplace participants could unfairly influence the decision-making process. (2006-2007)

For a Large Natural Gas Pipeline and Defendant Shippers

Analysis of class certification issues surrounding a proposed class of natural gas marketers. Case addressed transportation and storage options available during times of pipeline congestion, allegations of preferential treatment for a subset of Defendant shippers, and appropriateness of certification of the class action. (2006-2009)

For a Native Corporation

Valuation of oil and gas properties relating to a tax dispute. Analysis addressed comparable properties, valuation techniques, and calculation of appropriate discount rates. (2005-2006)

For a Large Natural Gas Marketer

International arbitration regarding a breach of contract in the marketplace for LNG. Case addressed size of LNG marketplace in the US, LNG tanker availability, natural gas prices, evaluation of damage estimates submitted by adverse party, and calculation of an appropriate discount rate. (2005-2006)

For a Large Mobile Phone Company

Analysis of terms of service agreements for mobile phone customers, evaluation of contracting, and assessment of the structure of the marketplace for mobile phone services. (2005-2008)

For a Large Oil Company

Determining market value for inputs into the oil exploration and production process. Case addressed market structure analysis, input valuation, and allegations of breach of prior settlement terms. (2005)

For an Indian Tribe

Evaluation of economic development opportunities arising from a revision to the National Park Service's management plan for the Colorado River. Analysis addressed assumptions underlying projections of use, appropriate discount rates, and likely damages arising under various management scenarios. (2005)

For a Large Oil Company

Evaluation of market value for natural gas produced from offshore State lands. Case addressed marketplace infrastructure, netback pricing, appropriate discount rates, and similar production for neighboring onshore fields. (2004)

For a Large Oil Company

Royalty valuation analysis focused on lease-level cash transactions and implementation of an enhanced oil recovery (EOR) operation. Principal areas of research included market structure analysis of domestic oil industry, effects of transaction costs on the determination of value, the economic role of and the determination of value provided by various market participants operating between the lease and the downstream markets, and the prudence of the timing of the initiation of EOR floods in Texas. (2002-2004)

For Two Large Oil and Gas Companies

Evaluation of the upstream market for natural gas in one of the prominent US producing regions. Principal areas of research included structure of the regional marketplace, analysis of the factors influencing the value of natural gas, and the economic role of and the determination of value-added by various market participants operating between the wellhead and points downstream. (2001-2003)

For Two Large Oil Companies

Determining market value for inputs into the oil exploration and production process. Case addressed pipeline tariff rates, market structure analysis, prudent development, and input valuation. (2000-2006)

For an Indian Tribe

Prepared expert witness testimony related to a damages assessment of tribal non-recognition by the federal government. Assessed tribal rights and modeled tribal finance in the absence of federal recognition. (2002-2003)

For a Consortium of Indian Tribes

Examined the economics of natural resources applicable to fishing rights and protection policies for internal use by the consortium. Conducted economic literature review and prepared frameworks for continuing consortium analysis. (2002-2003)

For a Municipal Solid Waste Disposal Company

Calculation of appropriate discount rate and determination of damages from a temporary taking that led to the bankruptcy of the company and the cancellation of the construction of the disposal facility. Principal areas of research included application of valuation techniques to a project that had gone through multiple rounds of litigation prior to our retention, determination of similarly situated companies, and industry practices regarding financial and cash flow analysis. (2002-2003)

For a Large Oil Company

Tax valuation analysis focusing on lease-level cash transactions. Principal areas of research included market structure analysis of the domestic oil industry, effects of transaction costs on the determination of value, and the economic role of and the determination of value provided by various market participants operating between the lease and the downstream markets. (2002)

For a Group of Three Large Oil and Gas Companies

Calculation of appropriate discount rates and gas price forecasts in light of a breach of contract claim. (2001-2002)

For an Indian Tribe

Lease negotiations between a tribe and a multinational corporation with cobalt and tungsten processing operations on tribal land. Prepared financial analysis regarding value of lease extension, participated in multi-party negotiations, and advised tribe and legal counsel on economics of facility viability. (2001-2002)

For a Petroleum Products Company

Evaluation of the downstream (refinery to pump) market for petroleum products in Hawaii. Investigation of alleged collusion between downstream products companies and harm to consumers from asserted artificially high products prices. (1999-2002)

For a Large Oil Company

Royalty valuation analysis focusing on lease-level cash transactions. Principal areas of research included market structure analysis of domestic oil industry, effects of transaction costs on the determination of value, and the economic role of and the determination of value provided by various market participants operating between the lease and the downstream markets. (1999-2001)

For an Oil Company and an Energy Marketer

Assessed fair market rental value of oil-bearing property temporarily taken by the federal government. (1999-2001)

For Two Large Oil Companies

Determined market value for inputs into the oil exploration and production process. Case addressed pipeline tariff rates, market structure analysis, and input valuation. (1998-2001)

For Two Large Oil Companies

In a case before the Federal Trade Commission, examined the competitive implications of the proposed merger of two major oil companies. Focused on assertions that the merger would adversely affect competition in the bidding for rights to explore on the Alaska North Slope and that the combined company would have increased control over the supply of light sweet crude oil deliverable under futures contracts and thus would have increased ability to manipulate NYMEX trading. (2000)

For a Western Pipeline Company

Market power analysis in support of an application for rerouting an oil products pipeline. (1999)

For a Group of Oil Companies

Royalty valuation analysis focused on lease-level cash transactions. Principal areas of research included market structure analysis of the domestic oil industry, effects of transaction costs on the determination of value, the economic functions of different contract structures found within the oil industry, and the economic role of and the determination of value provided by various market participants operating between the lease and the downstream markets. (1998-2000)

SELECT REPORTS, PUBLICATIONS, AND LEGISLATIVE TESTIMONY

The Mining of Crow Nation Coal: Economic Impact on the Crow Reservation, Big Horn County, and Montana, Research support for the Crow Nation and Professor Joseph P. Kalt, The Harvard Project on American Indian Economic Development, February 4, 2014.

The State of the Native Nations (Harvard Project on American Indian Economic Development, with JB Taylor, CEA Curtis, S Cornell, KW Grant, MR Jorgensen, JP Kalt, and AJ Lee), Oxford University Press, June 2008.

"Remember Our Indian Heritage" (with Kevin Red Star), opinion piece in The Oklahoman, August 2007.

"Wealth Building in Rural America: Potential in Human Diversity" (with coauthors), Washington University, Center for Social Development, 2006.

"Rural Wealth Building" (with Luxman Nathan and Anna Lee), Washington University, Center for Social Development, March 2005

Comments on "Myths and Realities of Tribal Sovereignty: The Law and Economics of Indian Self-Rule," by Professors Kalt (KSG) and Singer (HLS), written and oral comments presented at the Native Issues Research Symposium, Harvard Business School, December 5, 2003.

"Toward a Complete Picture," Let's Go: Southwest USA Adventure Guide, St. Martin's Press, December 2003.

Statement to US Senate Committee on Indian Affairs, Hearing on S.519, The Native American Capital Formation and Economic Development Act of 2003, April 30, 2003.

"Native America at the New Millennium" (with JB Taylor, S Beane, K Bishop, SS Black, KW Grant, MR Jorgensen, J King, AJ Lee, H Nelson, and Y Roubideaux), in *American Indian Research & Grants Assessment Project*, The Harvard Project on American Indian Economic Development, April 2002.

"The Political Economy of Indian Gaming: The New England Experience" (with Luxman Nathan), *Communities and Banking*, No. 28 (publication of the Federal Reserve Bank of Boston), Winter 2000.

"Reserve-Based Economic Development: Impacts and Consequences for Caldwell Land Claims" (with Kenneth W. Grant, Joseph P. Kalt, and Manley A. Begay, Jr.), August 10, 1999.

"Adopting Commercial Codes: Overcoming Lending Barriers on Reservations" (with Luxman Nathan), *Communities and Banking*, No. 24 (publication of the Federal Reserve Bank of Boston), Winter 1999.

"Tool of Sovereignty: The Crow Commercial Code" (with Luxman Nathan), Harvard Project Report Series 98-4, April 1998.

SELECT PRESENTATIONS AND SPEAKING ENGAGEMENTS

February 2015
Economic Modeling and Scenario Analysis – Litchfield Park, AZ (Tuba City Unified School District)

February 2015
Nation Building: Research in Indian Country – Flagstaff, AZ (Northern Arizona University)

April 2014
Economic Development Isn't Only About Economics – Rock Hill, SC (American Indian Chamber of Commerce of South Carolina)

Jan/Feb (annually) 2011-2014
Nation Building: Research in Indian Country – Tucson, AZ (University of Arizona)

January (annually) 2009-2015
Perspectives on the Challenges Facing Native America – Cambridge, MA (Harvard University)

March 2013
Nation Building Through Economic Development – New Town, ND – Three Affiliated Tribes of the Fort Berthold Reservation

July 2012
Energy Resources and Sustainable Economic Development – New Town, ND –Three Affiliated Tribes of the Fort Berthold Reservation

August 2010
Strategic Planning for Sustainable Economic Development – Watervliet, MI – Pokagon Band of Potawatomi Indians

July 2010
Governance Analysis for Native Nations – St. Michael, ND – Spirit Lake Sioux Tribe

April 2010
Long-Term Planning and Strategic Orientation – East Lansing, MI – Michigan Economic Development Corporation

June 2007
The State of the Native Nations – New York, NY

December 2006
United We Thrive – Oklahoma City, OK

April 2005
To the Point – National Public Radio

March 2005
The State of American Indian Economic Development – Palm Springs, CA – Western Knight Center (Annenberg School for Communication, University of Southern California)

December 2004 to October 2005
Rosebud Economic Development Corporation – Advisory Project – Mission, SD (REDCO Board of Directors)

January 2004
Best Practices in Aboriginal Business and Economic Development – Banff, Alberta – Aboriginal Leadership and Management Program (The Banff Center)

December 2003
Native Issues Research Symposium – Cambridge, MA – The Law and Economics of Tribal Self-Government (HUNAP)

October and November 2003
Advisory Council Member, Tribal Asset Building Project – Mystic Lake, MN – Kathryn M Buder Center for American Indian Studies and the Center for Social Development (Washington University)

July 2003
Economic Development in Indian Country – Angoon, AK – Tongass Leadership Team Meeting (USDA Forest Service)

June 2003
Economic Security and Good Governance – Phoenix, AZ – National Congress of American Indians (NCAI) Mid-Year Session

April 2003
S.519 The Native American Capital Formation and Economic Development Act of 2003 – Senate Committee on Indian Affairs (Washington, DC)

August 2002
Sovereignty Matters – Cross Lake, Manitoba – Pimicikamak Cree Nation

Jan/Feb/Mar 2002
Native Edge Training Project – Phoenix, Portland, Oklahoma City – Department of Housing and Urban Development

July 2001
Models for Economic Development – Washington, DC – Tribal Diplomats' Circle

HONORS AND AWARDS

Christian Johnson Native American Fellow, John F. Kennedy School of Government, Harvard University

American Express Philanthropic Scholar, University of Texas at San Antonio

Chaparral Presidential Scholar, University of Texas at San Antonio

Golden Key National Honor Society, University of Texas at San Antonio

APPENDIX B

The Mining of Crow Nation Coal: Economic Impact on the Crow Reservation, Big Horn County, and Montana

February 4, 2014

The Mining of Crow Nation Coal: Economic Impact on the Crow Reservation, Big Horn County, and Montana

THE HARVARD PROJECT ON
AMERICAN INDIAN ECONOMIC DEVELOPMENT

MALCOLM WIENER CENTER FOR SOCIAL POLICY
JOHN F. KENNEDY SCHOOL OF GOVERNMENT - HARVARD UNIVERSITY

Report Prepared for the Crow Nation

by

Prof. Joseph P. Kalt
The Harvard Project on American Indian Economic Development

February 4, 2014

The Mining of Crow Nation Coal: Economic Impact on the Crow Reservation, Big Horn County, and Montana

by

Joseph P. Kalt[1]
The Harvard Project on American Indian Economic Development
John F. Kennedy School of Government
Harvard University

Overview and Summary

The Crow Nation, centered in Big Horn County, Montana, presents a striking mosaic of economic contrasts. Although the region is blessed with abundant natural resources, particularly in the form of huge reserves of commercial quality and accessible coal, economic underdevelopment, family poverty, and social stress make the region one of the most distressed in the United States. Few social conditions are more oppressing than grinding poverty, and the Crow Nation has embarked on an integrated strategic effort to overcome decades of economic hardship. In its struggle to improve the well-being of its citizens, the Nation is striving for economic self-sufficiency, and it sees expanded coal development as key to achieving that goal.

This study analyzes the economic stakes at issue for continuing and expanding coal development on the Crow Reservation and in Big Horn County. I present impact results for the economies of the Crow Nation, Big Horn County, and the State of Montana. Employing the tools of regional economic modeling, I assess the direct,

[1] I am the Ford Foundation Professor (Emeritus) of International Political Economy at the John F. Kennedy School of Government at Harvard University. I am also Co-Director of The Harvard Project on American Indian Economic Development (www.hpaied.org). This report has been prepared at the request of the Crow Nation. I gratefully acknowledge the research assistance of Dr. Sam Flaim, Eric Henson, Amy Medford, and Josh Stamm of Compass Lexecon for their gathering of the necessary statistical information, as well as Dr. Flaim's application of the IMPLAN regional modeling system to the pertinent U.S. Department of Commerce multi-sector input-output system. Compass Lexecon has been compensated for the research performed by these individuals. I have not been compensated for my work on this research project. The views and opinions expressed in this report are solely my own and do not necessarily reflect the views and opinions of any of the organizations with which I am affiliated or which have supported the research reported herein.

indirect, and induced impacts of the continued development and expansion of Crow coal production on employment, incomes, Crow and other regional governmental revenues and expenditures, and the gross regional products of Big Horn County and the State of Montana. The economic impacts of coal development are only part of ongoing debates regarding the development of Indian coal, but they are an important part. Sound policy cannot be made without consideration of the economic impacts, particularly when those impacts affect the welfare of American Indian citizens.

Current and planned mining of Indian coal is discouraged by an uneven "playing field." In the case at hand, disproportionate layers of regulatory oversight, disadvantages in transportation infrastructure and logistics, lack of access to markets, coal quality, and higher-than-elsewhere permitting hurdles demonstrably disadvantage minerals extraction on Indian reservations. Recently, a federal Indian coal tax credit—the Indian Coal Production Tax Credit ("ICPTC")—provided to private developers of Indian coal has helped to level the playing field for tribes. This policy, however, expired on December 31, 2013, and its renewal depends on informed understanding and support in Congress.

The research reported here measures the regional economic impacts of continued development and expansion of Crow coal—development and expansion that are at risk if the playing field is permitted to tilt further against Indian coal. The stakes are high, not only for the Crow Nation, but also for Big Horn County and the entire State of Montana. I find that the continued ability of the Absaloka Mine to operate and serve its customers, and the potential expanded production under a recent option-to-lease agreement between the Crow Nation and Cloud Peak Energy for the Big Metal Project (summarized in Table 1), will jointly contribute:

- Approximately $377 million annually to the Gross Regional Product ("GRP") of Montana,[2] with more than $230 million of this value arising directly from the coal mining sector, and another $146 million arising in the other sectors of the State's economy that expand as the coal sector grows, the sector buys more supplies, and its workers spend their incomes.
- Approximately $280 million annually to the GRP of Big Horn County, amounting to a 40% increase in the size of the County's economy.
- More than 1,600 jobs statewide and 1,000 jobs in Big Horn County.

[2] The U.S. Bureau of Economic Analysis defines Gross Domestic Product ("GDP") as "the market value of goods and services produced by labor and property in the United States…" (http://bea.gov/glossary/glossary_g.htm, accessed January 27, 2014). GRP is akin to GDP—the measure of the total output of an economy—but limits the measurement to a specific area/region rather than an entire national economy.

- Compensation for Montana workers of about $95 million per year, over two-thirds of which—almost $65 million—accrues to workers in Big Horn County.
- Annual tax revenues (e.g., payroll taxes) for Montana and the federal government of $22.9 million and $21.9 million, respectively.
- Annual royalty (as the mineral owner) and tax (as a government) revenue for the Crow Nation of more than $107 million—a 426% increase from current revenues—thereby enabling the Tribe to move to overwhelming reliance on non-federal funding for its operations.

Table 1
Combined Economic Contributions of
Absaloka Mine and Proposed Big Metal Project for 1 Year
in the State of Montana and Big Horn County
$2013 millions unless indicated

	Montana Total	Big Horn County Total
Gross Regional Product	$376.5	$279.5
Labor Income	$94.7	$64.5
Total Employment, Persons	1,626	1,006
Coal Mining Output	$230.9	$232.4
Crow Nation Taxes and Royalties	-	$107.4
State and Local Taxes	$22.9	$19.2
Federal Tax	$21.9	$16.2

Source: IMPLAN model year 2013, from 2011 state, county, and zip code data inflated to $2013.
Note: Absaloka Mine is currently operational, while the Big Metal Project is under consideration.

Background

The Crow Reservation extends from the northern slopes of the Big Horn and Pryor Mountains onto the plains of south central Montana. The reservation spans approximately 2.3 million acres, or 3,600 square miles.[3] Over 1.9 million of its acres are in Big Horn County.[4] There are approximately 13,000 citizens of the Crow Nation, with about 9,000 of those living on the reservation.[5]

Like many other American Indians living on-reservation, the Crow Nation and its citizens struggle with poverty. As shown in Figures 1 and 2, the U.S. Census estimates that in 2006-2010 the annual per capita income of American Indians on the Crow Reservation ($11,987) was less than half that of the U.S. as a whole ($27,334). The median household income for Crows ($38,560) was markedly lower than that reported for U.S. households ($51,914), and the Crow family poverty rate (24%) was more than double that of the U.S. population as a whole (10%). The poverty rate for Crow children (39%) was also twice that of children throughout the U.S. (19%).

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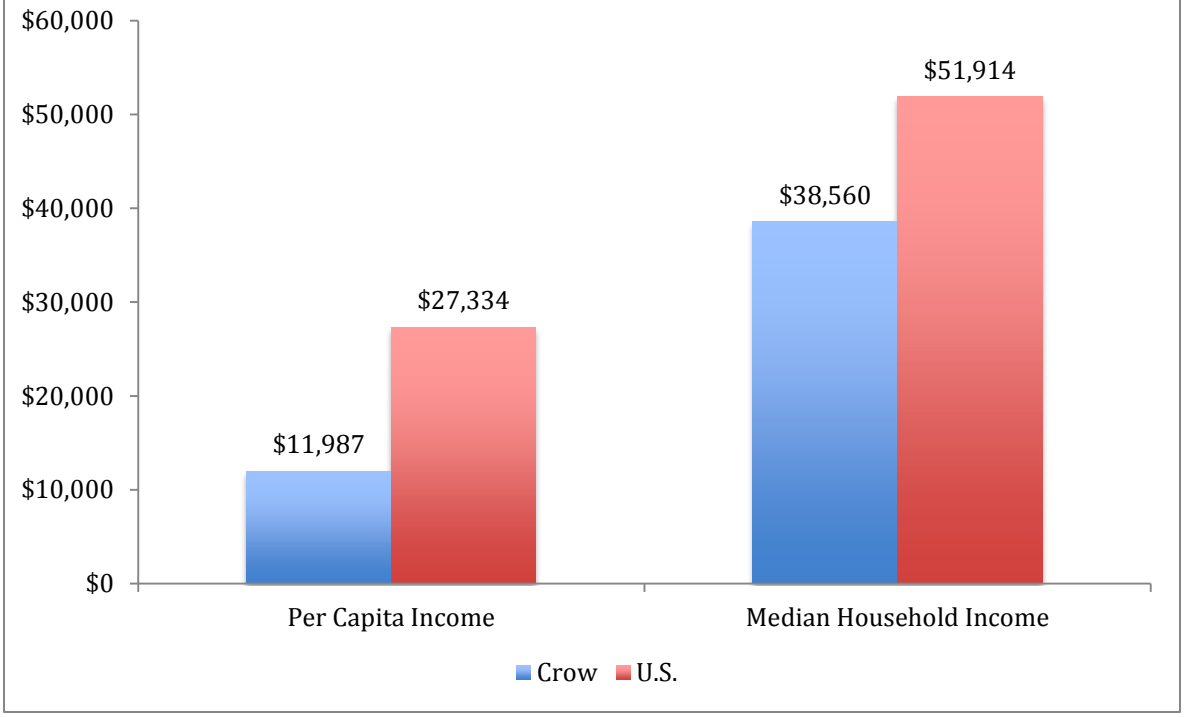
3 LAO Environmental, Inc., Crow Indian Reservation: Natural, Socio-Economic, and Cultural Resources Assessment and Conditions Report, April 2002 (hereinafter, "LAO Environmental"), at page 20, (http://www.blm.gov/pgdata/etc/medialib/blm/mt/field_offices/miles_city/og_eis/crow.Par.46663.File.dat/landuse.pdf, accessed January 22, 2014).

4 U.S. Department of Interior, Geological Survey, *Geology of Big Horn County and the Crow Indian Reservation Montana, with Special Reference to the Coal, Oil, and Gas Resources*, by W.T. Thom, Jr., G.M. Hall, C.H. Wegemann, and G.F. Moulton, Bulletin 856 (Washington, D.C.: United States Government Printing Office, 1935), at page 1, at http://pubs.usgs.gov/bul/0856/report.pdf, accessed January 23, 2014.

5 *Mining in America: Powder River Basin Coal Mining the Benefits and Challenges, Before the House Committee on Natural Resources, Subcommittee on Energy and Mineral Resources,* 113th Cong. (2013) (statement of Darrin Old Coyote, Chairman, Crow Nation (hereinafter "Old Coyote Testimony, 2013")).

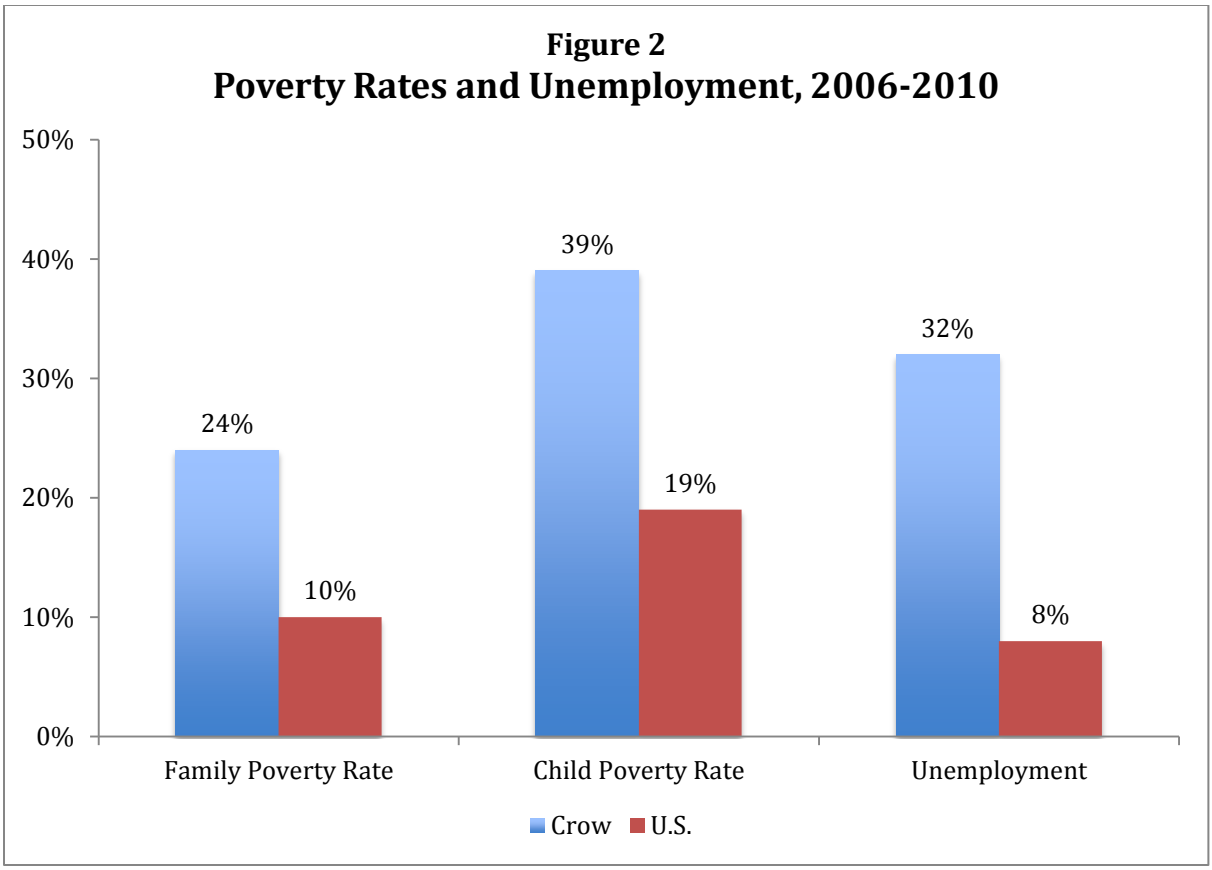
Figure 1
Per Capita and Median Household Income, 2006-2010



Source: U.S. Census Bureau, American Community Survey 5-Year Estimates; at http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml, accessed on January 9, 2014.

Official unemployment at Crow (32%) was four times that observed in the U.S. economy as a whole (8%). Recognizing that official unemployment only counts a would-be worker as unemployed if the worker is looking for work but cannot find it, actual unemployment—including workers who have given up looking for work in a setting of such economic distress—is much higher than officially reported. The Crow Nation reports that current unemployment is fully 47%.[6] This means that only about one in two Crow adult workers has a job.

6 Old Coyote Testimony, 2013.



Source: U.S. Census Bureau, American Community Survey 5-Year Estimates; at http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml, accessed on January 9, 2014.

The dire socio-economic conditions found on the Crow Reservation would be even worse without the Nation's abundant natural resources. In a 2002 report requested by the federal Bureau of Land Management, it was estimated that the Crow Nation controlled mineral rights to 17 billion short tons of coal,[7] accounting for coal deposits found under both reservation and ceded lands. Nine billion of these tons are considered recoverable.[8] These recoverable reserves make up about 12% of the recoverable coal in Montana and 4% in the U.S.[9]

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7 LAO Environmental at page 71 (http://www.blm.gov/pgdata/etc/medialib/blm/mt/field_offices/miles_city/og_eis/crow.Par.79832.File.dat/minerals.pdf, accessed January 23, 2014).

8 *Tribal Development of Energy Resources and the Creation of Energy Jobs on Indian Lands, Before the House Committee on Natural Resources, Subcommittee on Indian and Alaska Native Affairs*, 112th Cong. (2011) (statement of Scott Russell, Secretary of the Crow Nation (hereinafter "Russell Testimony, 2011")).

9 Montana recoverable coal reserves are reported as 74.6 billion short tons and the U.S. total is 257.6 billion. U.S. Energy Information Administration, "U.S. Coal Reserves with Data for 2012," December 16, 2013, at http://www.eia.gov/coal/annual/pdf/table15.pdf, accessed January 9, 2014. It is worth noting that coal production in Montana in 2012 was only around 36 million short tons, while production in its

Since 1974, the Absaloka Mine, owned and operated by Westmoreland Resources, Inc. ("Westmoreland"), has provided much needed royalty and tax revenues to the Crow Nation. The Absaloka Mine has the capacity to produce up to 7.5 million tons of coal annually. Running at about 70% of capacity, it generated over $20 million in government revenues for the Tribe in 2010.[10] These revenues fund everything from Crow government salaries to operational expenses. They also supplement federal and community services programs such as Head Start, Boys & Girls Club, Tribal Elders, and Family Preservation.[11] In fact, coal royalties and taxes from the Absaloka Mine alone are projected to represent about two-thirds of the Crow Nation's non-federal budget this year.[12]

The Absaloka Mine is the largest private employer on the Crow Reservation. Approximately 70% of its workforce identifies as Crow or Crow-related, and the average annual salary, including benefits and overtime, is over $91,000.[13] Given a reservation unemployment rate of at least 32% (47% according to the Crow Nation), these jobs, combined with the tribal government staffing positions that are paid for with funds from coal royalties and taxes, are critically important to the Tribe and its citizenry. With that in mind, the Crow Nation has entered into an agreement with Westmoreland to extend the life of the Absaloka mining operation with a lease of approximately 145 million tons of Rosebud-McKay seam coal.[14] If Westmoreland can continue to find customers at remunerative prices, this expansion will sustain operations at the mine past 2020. This will provide additional years of royalty and tax collections, while maintaining and potentially bringing more jobs to the region.

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neighboring State of Wyoming was around 401 million short tons (http://www.eia.gov/state/rankings/?sid=MT, accessed January 23, 2014).

10 Westmoreland Coal Co., FY 12 Form 10K for the Period Ending December 31, 2012 (filed March 12, 2013), at pages 5 and 7 (http://westmoreland.com/investors/sec-filings/, accessed January 27, 2014), and Old Coyote Testimony, 2013. According to the 10K filing, Absaloka Mine produced approximately 5.5 million tons in 2010.

11 Special Session of the Crow Tribal Legislature, *Approval of the Annual Budget for the Operation of the Crow Tribal Government and the Expenditure of Tribal Revenue for Fiscal Year 2012*, CLB 11-04 (September 29, 2011) at http://www.crowlaws.org/tribal_legislation_2002-present, accessed January 30, 2014.

12 Fiscal Year 2014's projected non-federal revenue budget provided by the Crow Nation.

13 Data provided by Westmoreland. The average annual salary for the workforce at the Absaloka Mine is $56,264. Overtime and benefits—such as retirement and health—bring the average annual compensation for all workers at the mine to $91,408.

14 "Westmoreland Partners with Crow Tribe for Additional Reserves," Westmoreland Coal Co. press release, March 27, 2013, at http://westmoreland.com/news/, accessed January 9, 2014.

The influence this one mine has on the Tribe also demonstrates a weakness in the economies of the Crow Nation and Big Horn County. Any unforeseen circumstance that could halt production or sale of coal from the mine would decrease the royalty and tax collections available to the Crow Nation and would immediately and powerfully impact the finances of the Tribe (and, likewise, of the County). Consider a recent example of lost marketing opportunities for Crow coal: In November 2011, the Sherburne County Generating Station ("Sherco") in Becker, Minnesota, experienced a catastrophic turbine failure and oil fire that shut down operations at the plant.[15] Sherco has been Absaloka Mine's largest customer since the mine's first shipment of coal in 1974,[16] and the incident meant a loss of approximately 50% of Absaloka's coal sales in 2012.[17] Not only did the Crow Nation government's budget suffer, but the community did as well, as the workforce at the mine was sharply curtailed during a prolonged period of lower sales volumes.[18]

Recognizing this weakness, the Crow Nation has pursued a strategy of reducing its dependence on the Absaloka Mine. This has led to a recent option-to-lease agreement between the Crow Nation and Cloud Peak Energy ("CPE") to potentially expand operations of CPE's off-reservation coal mines onto the reservation. This expansion is referred to as the "Big Metal Project."[19] Already approved by the Bureau of Indian Affairs,[20] this long-term project represents an important opportunity to reduce the Crow Nation's dependence on a single company (i.e., Westmoreland), while also bringing in much-needed revenues and increasing employment opportunities. The project also promises major positive contributions to Big Horn County and the State of Montana. Let us examine the magnitude of the stakes.

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15 MPR News, at http://www.mprnews.org/story/2013/10/21/environment/xcel-energy-sherco-plant-returns-to-service-after-repairs, accessed January 17, 2014.

16 Westmoreland Coal Co., FY 12 Form 10K, at pages 7 and 32.

17 Westmoreland Coal Co., FY 12 Form 10K, at page 20.

18 Old Coyote Testimony, 2013.

19 Cloud Peak Energy, 2012 Annual Corporate Report, at page 13 (http://investor.cloudpeakenergy.com/annual-reports, accessed January 9, 2014).

20 "U.S. Bureau of Indian Affairs Approves Option to Lease and Exploration Agreements between Cloud Peak Energy Subsidiary and the Crow Tribe of Indians," Cloud Peak Energy press release, June 20, 2013, at http://investor.cloudpeakenergy.com/press-release/us-bureau-indian-affairs-approves-option-lease-and-exploration-agreements-between-clou, accessed January 22, 2014.

Measuring the Economic Contributions of Crow Coal Development

Using economic modeling software and U.S. Department of Commerce data from IMPLAN—tools widely used by government agencies and the academic community for regional economic impact analysis—I am able to quantify the direct, indirect, and induced effects of Crow coal mining operations. Table 2 (found below at the end of this report) presents a single-year snapshot of the contribution of the Absaloka Mine and the projected potential contribution of the Big Metal Project to the Crow Nation, Big Horn County, and the State of Montana. Results are shown scaled to the size and composition of the regional economies as of 2013. This allows the Big Metal Project to be assessed as if it were already up and fully running, and the model is then asking: What would the fully developed project mean for the regional economy as that economy looked in 2013? Actual impacts would, of course, arise in subsequent years, depending on the timing of discontinued development of the Absaloka mine and/or expansion of Cloud Peak's Big Metal Project.[21]

As described above, current coal mining operations on Crow lands are extremely important to the Tribe and its citizens. Unfortunately, the Absaloka Mine struggles financially to compete with other regional operations located off-reservation. My analysis indicates that while access to markets and coal quality do limit the marketability and profitability of Crow coal to some extent, it is bureaucratic obstacles, additional federal regulatory and trust requirements, and higher financial costs associated with mining on Indian lands that make it difficult to compete with off-reservation operations. For example, Westmoreland has found that it typically takes approximately twice as long, and costs twice as much, to re-permit operations once they cross over the reservation boundary.[22] Unlike nature's designation of geographic location and mineral content, these obstacles can be addressed through federal policies. In this regard, the Indian Coal Production Tax Credit has heretofore played an important role in offsetting the additional burdens that must be overcome to undertake new production or expansion on Indian lands by companies such as Westmoreland. For the Absaloka Mine, the ICPTC has helped keep the mine open and competitive since 2006. Without the ICPTC, Westmoreland reports that it would experience negative

[21] An extrapolation of these single year benefits over the 25+ years of mining operations indicates that Crow coal revenues at stake exceed $510 million for continued operations of the Absaloka Mine and $2.2 billion for the proposed Big Metal Project (undiscounted).

[22] Douglas P. Kathol, Executive Vice President Westmoreland Coal Co., letter to the Honorable Max Baucus, July 22, 2013.

effects on earnings and cash flow and it would have to seriously consider shuttering the mine.[23]

Shuttering the Absaloka Mine would financially devastate the Crow Nation. As noted above, coal revenues in FY 2014 are projected to make up about two-thirds of the Tribe's non-federal budget. A loss of this magnitude (approximately $20.4 million per year) could only throw the Tribe into deeper poverty and drastically decrease the likelihood of the Crow Nation becoming economically self-sufficient. However, the Absaloka Mine and the Big Metal Project present substantial opportunities for sustained improvement in the economy of the Tribe. These mining operations combined would provide the Crow Nation with about $107 million each year in coal revenues, a 426% increase from current revenues. This would dramatically increase tribal self-sufficiency and allow the Crow Nation to better meet the needs of its citizens.

While critical to the economic self-sufficiency, if not the survival, of the Crow Nation, Crow coal is also extremely important to Big Horn County. In 2013, the County GRP was nearly $471 million, and it is estimated that shuttering the current mining operations would reduce that number by more than $89 million in a single year (representing about a 19% decline). With respect to the Big Metal Project, because coal mining is a primary industry and some of the incremental production from the proposed expansion is likely destined for export, impacts at the County level are multiplied through the indirect and induced economic impacts of mining operations, particularly transportation. They pass through almost every other sector of the economy.[24] The modeling here finds that the Big Metal Project would contribute fully $191 million to Big Horn County's annual GRP—representing a contribution equal to more than 40% of the current County GRP. Together, the continued operation of the Absaloka Mine and the Big Metal Project are worth $280 million per year in GRP, almost $65 million per year in worker compensation, and $3.1 million in taxes to Big Horn County. These development opportunities also create employment in the County for more than 1,000 workers.

Table 2 also reports the impacts of Crow coal on the State of Montana as a whole. The combined economic contributions of the Absaloka Mine and the proposed Big Metal Project would amount to about $377 million to the annual GRP of Montana. Yearly compensation of workers in Montana would be almost $95 million. The increased economic activity and payrolls, in turn, would result in increases in State of Montana

23 Russell Testimony, 2011.

24 Barkey, Patrick M., "The Economic Impact of Increased Production at the Spring Creek Mine," Bureau of Business and Economic Research, The University of Montana, October 2012, http://www.bber.umt.edu/MBQ/default.asp, accessed January 9, 2014.

and federal tax collections, totaling $22.9 million and $21.9 million, respectively. Over the life of the mining operations, additional tax collections (undiscounted) would total to approximately $573 million for State and local government in Montana and $548 million for the federal government. These tax collections would substantially, if not completely, offset reductions in revenues associated with continuation of the ICPTC.[25] Indeed, such State and federal revenues are already uncertain and might never be generated by mining operations on Crow land. If the ICPTC is not renewed and the consequence is that Indian coal goes unmined, there will be missed opportunities to collect State and/or federal tax revenues.

My research indicates that the Big Metal Project is very likely contingent on increased terminal capacity to export produced coal to markets overseas.[26] Federal Energy Information Administration ("EIA") figures show that coal production in the U.S. fell by 12% from 2008-2012.[27] U.S. coal production is predicted to rebound after 2016, largely due to an anticipated increase in exports. The EIA projects that coal production in the U.S. will increase about 0.6% annually to 2040, influenced mostly by consumption in China. China is the leading consumer of coal in the world, and, in 2010, it used three times as much coal as the U.S., which is the 2nd largest coal-consuming nation. From 2010 to 2040, EIA projections show that world coal consumption will increase at an average rate of 1.3% annually, while consumption in the U.S. is anticipated to remain flat (see Figure 3).[28]

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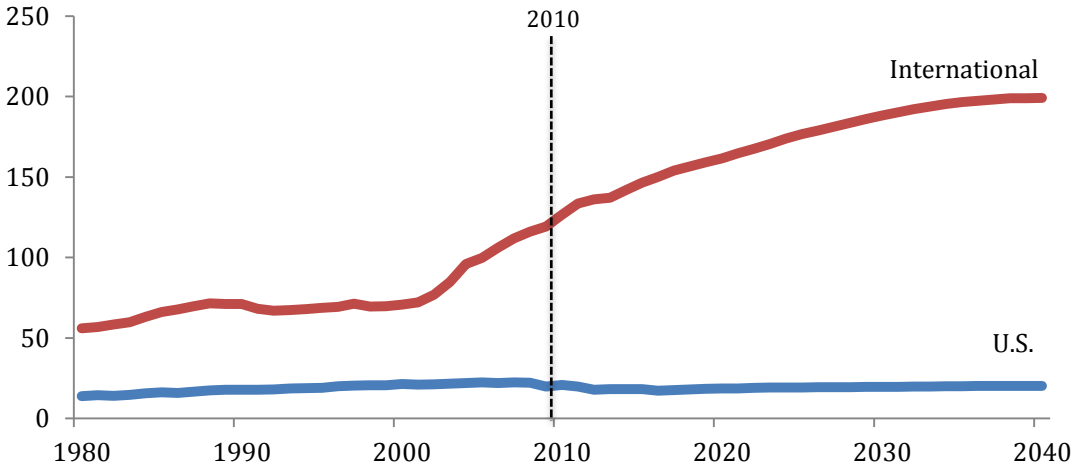
25 Looking at the Absaloka Mine's contributions alone, annual federal tax collections in Montana arising from continued operation of the mine amount to approximately $7.0 million (see Table 2 below). These tax collections would substantially offset any federal budgetary cost of renewal of the ICPTC.

26 According to information provided by CPE, anticipated coal production and sales from the Big Metal Project to potential domestic customers could amount to approximately 5 million tons per year. However, if export terminal capacity becomes available, production could potentially include another 10 million tons for the export market.

27 U.S. Energy Information Administration, "Annual Energy Outlook 2013," April 15–May 2, 2013, Figure 104, at http://www.eia.gov/forecasts/aeo/source_coal_all.cfm#coal, accessed January 22, 2014.

28 U.S. Energy Information Administration, "Annual Energy Report 2012," September 27, 2012, at http://www.eia.gov/coal/data.cfm#consumption, accessed January 22, 2014, and "International Energy Outlook 2013," July 25, 2013, at http://www.eia.gov/forecasts/ieo/coal.cfm, accessed January 22, 2014. Other potential U.S. trading partners with projected increases in coal consumption include India, South Korea, Taiwan, Indonesia, Malaysia, Thailand, and Vietnam, according to the EIA (see the "International Energy Outlook 2013").

Figure 3
Coal Consumption, 1980-2040
Quadrillion Btu



Sources: U.S. EIA, "Annual Energy Outlook 2013," "Annual Energy Report 2012," and "International Energy Outlook 2013."

The foregoing absolute impacts of the Absaloka Mine and the Big Metal Project are translated into their relative importance of Crow coal to the Crow Nation, Big Horn County, and the State of Montana in the "percent change" columns presented in Table 2. Given the Crow Nation's current heavy dependence on coal royalties and taxes, shuttering the Absaloka Mine would have tremendous negative consequences for the Tribe: The Crow Nation would immediately face a 100% loss in coal revenues. This would translate into a 67% decrease in its non-federal budget. For the Big Metal Project, in the economic environment of uncertain and evolving markets for coal, continuation of the ICPTC necessarily increases the viability of expansion of operations onto Crow lands. If the Big Metal Project were able to secure an export terminal on the West Coast, coal production could bring about a 426% increase in coal revenues for the Crow Nation. While no precise count is available, the increase in employment and associated worker compensation would accrue directly to Crow citizens hired into the mining sector.

For Big Horn County, the stakes are similarly large. Continued operations at the Absaloka Mine annually contribute approximately 19% of the County's GRP, 8% of worker compensation, and 4% of tax collections. The Big Metal Project would increase the annual GRP of the County by almost 40% and would also increase jobs in Big Horn

County by 11%, worker compensation by 16%, and annual County tax revenues by 15%.

Finally, we can see the economic importance of Crow coal and the ICPTC to the State of Montana as a whole. Not surprisingly, the largest impacts are in the mining sector: The annual economic contribution of the Absaloka Mine is approximately 16% to the sector's output and employment, while the comparable figures for the Big Metal Project are 34%-35%. Combined, the two mines add approximately a percentage point to the overall Montana GRP and substantially increase the State and federal tax collections in Montana, as compared to a scenario with a shuttered Absaloka Mine. The overall potential total of taxes and royalties for the Crow Nation, Big Horn County, and the State of Montana from Crow coal produced from the Absaloka Mine and the Big Metal Project is approximately $3.8 billion over 25 years.

Conclusion

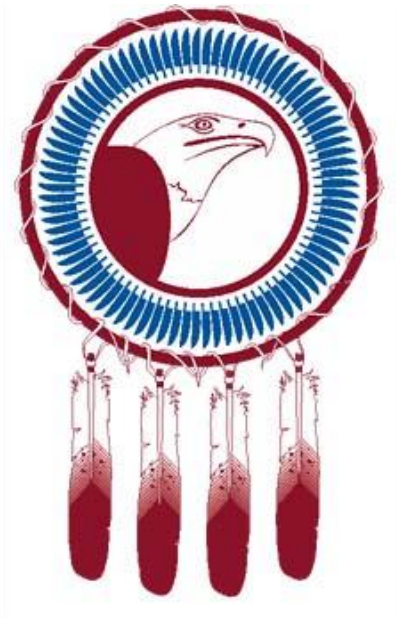
Given the long history of economic underdevelopment, family poverty, and social stress experienced on the Crow Reservation, it is imperative that the tribal government utilize what it can to improve the conditions for the Crow people. Meeting the basic needs of citizens has long been a priority for leadership throughout Indian Country. The vision from Crow leadership is best described in the words of Chairman Darrin Old Coyote: "I desire to improve the Crow people's quality of life, create a future with good-paying jobs and employment benefits within the Crow Reservation, and provide hope and prosperity for the next seven generations of Crow citizens."[29] As we have seen here, the Crow Nation's coal resources have a critical role to play in meeting these goals. At the same time, Big Horn County and the State of Montana have very large economic stakes in the continued and expanded development of Crow coal. Through the direct, indirect, and induced effects of continued and expanded operations, the entire region's income, employment, and government budgets will hinge critically on whether or not the Crow Nation's coal can continue to be mined and developed.

[29] Old Coyote Testimony, 2013.

Table 2
Crow Coal Study Impacts Summary
Montana, Big Horn County, and Selected Zip Codes
$2013 millions unless indicated

	-a-	-b-	-c-	-d-	-e-	-f-	-g-	-h-
			Montana Impact Percent		*BH County* Impact Percent	*BH County Apportioned by Zip Code*		
	2013	**Montana**	**Change**	**Big Horn County**	**Change**	**59034 Hardin**	**59025 Decker & 59016 Busby**	**All Other Zip Codes[1]**
	Population[2]	989,199		13,091		5,680	1,192	6,219
	Gross Regional Product[2]	$42,260.0		$470.9		$250.8	$94.8	$125.3
	Employee Compensation, $[2]	$22,309.0		$267.2		$139.3	$54.0	$73.9
	Total Employment, persons[2]	639,733		6,489		3,594	872	2,023
	Coal Production mmt/yr[3]	45.3		27.1		7.1	20.0	-
	Coal Mining Employment, persons[2,3]	1,346		564		188	376	-
	Coal Mining Output[2]	$448.0		$185.3		$61.8	$123.5	-
	Crow Nation Taxes and Royalties[4]			$20.4		$20.4	-	-
	Big Horn County Budgetary[5]			$16.2		$16.2	-	-
	State and Local Final Demand[2]	$8,172.0		$158.1		$92.7	$24.5	$40.9
	Federal Final Demand[2]	$4,794.0		$117.7		$60.5	$19.0	$38.2
	Economic Contribution of Absaloka Mine 2013							
	Gross Regional Product[2]	$120.0	0.3%	$89.0	18.9%	$89.0		
	Labor Income, $[2]	$30.2	0.1%	$20.6	7.7%	$20.6		
	Total Employment, Persons[2]	519	0.1%	321	4.9%	321		
	Coal Production mmt/yr[3]	7.1	15.7%	7.1	26.2%	7.1		
	Coal Mining Employment, Persons[2]	218	16.2%	218	38.7%	218		
	Coal Mining Output[2]	$73.7	16.5%	$74.0	39.9%	$74.0		
	Crow Nation Taxes and Royalties[2]	-	-	$20.4	100%	$20.4		
	Big Horn County Budgetary[2]	-	-	$0.7	4.3%	$0.7		
	State and Local Taxes[2]	$7.4	0.1%	$6.1	3.9%	$6.1		
	Federal Tax[2]	$7.0	0.1%	$4.6	3.9%	$4.6		
	Big Metal Project, Increase in 2021							
	Gross Regional Product[2]	$256.5	0.6%	$190.5	40.5%		$125.7	$64.8
	Labor Income, $[2]	$64.5	0.3%	$43.9	16.4%		$38.9	$5.0
	Total Employment, Persons[2]	1,107	0.2%	685	10.6%		475	210
	Coal Production mmt/yr[3]	15	33.1%	15	55.4%		15	-
	Coal Mining Employment, Persons[2]	466	34.6%	475	84.2%		475	-
	Coal Mining Output[2]	$157.2	35.1%	$158.4	85.5%		$158.4	-
	Crow Nation Taxes and Royalties[2]	-	-	$87.0	426%		$87.0	-
	Big Horn County Budgetary[2]	-	-	$2.4	14.8%		$2.4	-
	State and Local Taxes[2]	$15.5	0.2%	$13.0	8.2%		$11.2	$1.8
	Federal Tax[2]	$14.9	0.3%	$11.6	9.9%		$6.3	$5.3

[1] Includes: 59022 Crow Agency, 59031 Garryowen, 59035 Fort Smith, 59050 Lodge Grass, 59066 Pryor, 59075 St. Xavier, 59089 Wyola.
[2] IMPLAN model year 2013, from 2011 state, county, and zip code data inflated to $2013.
[3] Coal Mining Companies' 10-K, Annual Reports, and Investor Presentations.
[4] Crow Tribal Budgets(FY14) and Westmoreland Resources, Inc.
[5] Big Horn County Treasurer, FY14 and projection. Includes property taxes and business personal property tax on coal companies.



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