Solar as an Economic Development Tool in American Indian Country

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by

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Introduction

The Obama administration has made a very public commitment to pulling out of the global recession vis-à-vis renewable energy and clean technologies investment. Indeed, one of the first measures taken by the administration was the introduction of comprehensive legislation that allocated billions of dollars toward expanding and accelerating development, deployment, and use of geothermal and solar energy throughout the United States. The U.S. public is on board as well—a recent poll shows the majority of “Americans approve of the way President Obama is handling energy issues and support efforts by him and Democrats in Congress to overhaul energy policy….”1 President Obama is even installing solar panels on the White House.2

The Obama administration also has voiced a strong commitment to Native American economic development; here, too, it has followed through with many of its promises. Surprisingly, the administration was the first in the history of the United States to actually put Native Americans in charge of Indian country. Further, the President has included the Indian Health Service in the Affordable Health Care Act, devoted $3.2 billion in stimulus funding, and endorsed the United Nations Declaration on the Rights of Indigenous Peoples. In all, tribal leaders agree that Obama has brought progress to Indian Country.3

Indian lands have some of the most significant energy potential in the United States.4 In fact, solar electricity forecasts on tribal lands are estimated to be 4.5 times the annual total U.S.
electricity needs.\textsuperscript{5} Oddly enough, tribal lands are also the most economically impoverished and underdeveloped regions in the country.\textsuperscript{6} Yet, 

[n]otwithstanding the much publicized growth and success of the casino gaming enterprises owned by many tribal governments, gaming incomes have been concentrated in a relatively small number of tribes near metropolitan patron populations, and, on average, American Indians residing in Indian Country remain the poorest group in America.\textsuperscript{7} 

To add an unfortunate and incongruous twist, much of Indian country lacks electricity service altogether.\textsuperscript{8} Where electricity service is available, Native Americans pay the highest rates in the nation—usually totaling a disproportionately high proportion of their income.\textsuperscript{9} 

This article will examine the issues surrounding economic development in American Indian country, and how solar projects may pose a solution to many of the issues currently blocking development in these lands. We shall first address Native American economic development in general, focusing on capable institutions, practical sovereignty, and cultural match. This will be followed by a discussion of solar energy projects: the benefits of solar energy when compared to other types of energy production; the ways that these projects specifically will benefit Indian country; and the rationale behind implementing solar energy projects as a means to sustainable economic development in Indian country. Finally, having argued for and laid out a framework for economic development via solar projects, this paper will offer some suggestions on how to implement a successful solar project.

\textbf{Economic Development}

\textbf{Capable Institutions:} One of the fundamental components to successful economic development is putting into place a tribal administration that works and is supported by its citizens. Research conducted by S. Cornell and J. Kalt, in their over 40
collective years studying the subject, submits the conclusion that capable institutions are a necessary condition to successful economic development.\textsuperscript{10}

When tribes are unable to effectively govern themselves, it is largely due to the residual effects of past U.S. policies. Substantially contributing to the failure of current Indian institutions is the fact that many tribal governments are built on remnants of Indian Reorganization Act (IRA) policies.\textsuperscript{11} Congress passed the IRA in 1934.\textsuperscript{12} Under this law, tribes were encouraged to “reorganize” by adopting new U.S.-like boilerplate constitutions, to become valid if approved by the federal government. In fact, under the IRA system practically every political decision that the tribe made would have to be approved by the federal government. On a whole, the IRA recognized tribes as sovereign nations with a right to self-government, but limited that self-government by requiring a set of paternalistic checks and balances mandating that Indian self-government equated to a structure similar to that of the federal system.

The U.S. Civil Rights movement of the 1960s and 1970s saw the first large-scale, self-imposed policy changes in federal Indian law. In addition to addressing policy changes that were apparent in other civil rights movements at the time, the Indian civil rights movement sought reestablishment of political rights of self-rule that sought the absence of civil regulatory “protections” at play in the IRA. In other words, the Indian civil rights movement sought recognition that “Indian peoples are nations, not minorities.”\textsuperscript{13}

Named by Richard Nixon when he announced that the official policy would be the “right to self-determination,”\textsuperscript{14} the Self-Determination era came into full swing in 1975 when Congress passed the Indian Self-Determination and Education Assistance Act (ISDEAA).\textsuperscript{15} The ISDEAA allowed Indians to contract with the federal government for the delivery and administration of federal services to Indians. Aside from ISDEAA, Congress also began enacting a “slew of dynamic programs and progressive laws...committed to involving tribes in the development and
implementation of programs and services, particularly at the community level.\textsuperscript{16}

The federal courts, however, have been slow to catch up with current Congressional intent. Today, courts still fail to acknowledge the U.S. policy shift to tribal self-determination and, in many instances, still compel a federal approval process before changes in tribal projects can be implemented. Even where government-to-government policies are now mandated by federal, international, and local law, federal agencies \textit{habitually} fail to comply.\textsuperscript{17} Adding insult to injury, because many tribes have retained, and sometimes are still required to utilize, U.S.-imposed institutions to implement development programs, these programs that do get off the ground often fail for lack of cultural match (discussed below).\textsuperscript{18} As noted by the court in \textit{California Valley Miwok Tribe v. U.S.},\textsuperscript{19} it has been a bedrock principle of federal Indian law that every tribe is capable of managing its own affairs and governing itself. But tribes that want federal benefits must adhere to federal requirements. The gateway to some of those benefits is the Indian Reorganization Act of 1934.

Despite these impediments, “the fact is that Indian nations took the government at its word” and are finding methods to “give teeth” to the policy where federal agencies have failed.\textsuperscript{20} When Native nations set their own priorities and manage systems, programs, and dollars in their own fashion, responsibility rests with the tribe itself and decision makers are held accountable to their own citizens instead of the federal government. Accountability means legitimacy; it means that rewards and penalties bound in social sentiments are triggered by the social networks of a tribe in ways that give definition via those accountable institutions. Like trying to impose a monarchy in the United States, alien governance systems in Indian country consistently have lacked support, legitimacy, and effectiveness.\textsuperscript{21} Whereas imposed systems only needed to work well enough to keep the money flowing in, a sovereign nation accountable to its
own citizens requires capable institutions to administer tribal affairs, keeping the money inside once it arrives. 

**Practical Sovereignty:** State and federal governments often are pressured to stifle Native nations’ assertions of practical sovereignty because of the political consequences involved. For example, in the current economic climate tribal governments are under a constant attack from insolvent states attempting to tax tribes’ outwardly successful government-run enterprises. From the state and federal governments’ perspective, so the argument goes, letting tribes run their own institutions without outside influence upsets the balance of (economic) power within the system—and if tribes fail then the non-Indian government will be left footing the bill.

However, it is abundantly clear at this point that such an approach has only led, in the long run, to larger burdens on taxpayers and more poverty in Indian country. In fact, no current incident of continued economic development has been found where a tribe is not making its own decisions about resource use, internal organization, or development strategies.

In short, practical sovereignty is necessary for sustainable economic development. Cornell and Kalt have identified two reasons for this. First, “practical sovereignty puts the development agenda in native hands.” This means that tribes themselves set the agenda—rather than outsiders (who reflect foreign cultures, interests, and perceptions)—reflecting tribal culture, perceptions, and interests. As a result, these strategies are best suited to address local needs, conditions, and values. As a practical matter, sovereignty places resources directly in the hands of the native nation, which translates to an increased sense of possession over resources.

The second reason is that self-governance requires accountability. Practical sovereignty weds decisions to consequences, resulting in improved resolutions because tribes themselves have the principal stake in the outcome. The result is more efficient access and use of capital, improved probability of sustainable economic development, more successful defense
of sovereignty, and societies that mesh politically, socially, culturally, and economically.  

**Cultural Match:** The history of Native America is beleaguered with exploitation, fraud, and outright racist policies. This has led to wariness in tribal governments of outside business interests and the “‘get rich’ development scheme that is going to ‘save’ the reservation.” Some tribal leaders, faced with the problem of appearing as “sell outs,” take the stand that “the capitalist model does not fit the culture of many Indian people, and that business and who Indians ‘are’ is in conflict.”

However, as many successful tribal development planners have noted, “developing reservation economies is *vital* to sustaining and developing Native American cultural identities.” Indeed, solid economic research shows that those tribal leaders who oppose “the assimilation of the foreign in the logics of the familiar” may be damaging, rather than assisting, their tribe. By deciding how to partake in the global financial system, what types of businesses to permit on their lands, and what economic ventures a community will support, tribal governments are, in actuality, asserting sovereignty—a necessary step to economic development—rather than losing it. Professor D. Champagne, for example, has argued that

> [m]arket competition forces the Indian communities to consider and engage in market enterprise, but they wish to do it under their own terms, which means subordinating capitalist accumulation to collective goals of community and cultural and political enhancement and preservation.

What is important is for tribal developers to emphasize that, while tribes do not seek to defend a static culture, neither do they wish to embody the “‘non-Indian, Hollywood version of iconic culture.” In fact, some argue that perhaps the most menacing threat to Native sovereignty is the perspective of non-Indians that tribal governments can never be legitimate because what a “real government” is and what a “real Indian” is are mutually
exclusive—that Native nations lose their “Indianess” as they become more conventional. This contention is false. The U.S. public—but especially judges and lawyers—must be re-educated about the sovereign status of Native nations. The key to getting there is to use traditional knowledge to inform the future of Native nations, so the tribe’s identities are not those of “poor Indian” or “casino-rich Indian” but sources of self-conception and awareness that serve to support the lives of Native persons. By providing the resources to achieve cultural integrity and self-determination, escalating economic development on tribal lands supports tribal culture rather than damaging it.

The question then arises: how are tribes to develop economically without throwing away their tradition and culture? The first step is to realize that economic development and native culture are not diametrically opposed. Rather than fighting against development, tribes must redefine development for themselves in a way that matches their own tradition and culture, embracing all outcomes and approaches:

One Native nation may imagine a community and economy heavily integrated into the market-oriented activities of the neighboring society. Another may imagine a community made up largely of subsistence hunters and trappers. Yet another may envision a hybrid economy that mixes customary and market-based activities with continuing transfers from other governments that are fulfilling their treaty obligations.

Defined in this way, economic development is “the process by which a community or nation improves its economic ability to sustain its citizens, achieve its sociocultural goals, and support its sovereignty and governing process.”

It is incumbent upon tribal governments and non-Indians alike to realize that there is no single conduit to successful economic development. Rather than being an impediment to successful development, cultural match—developing strategic and realistic connections between existent cultural values and standards and those required of economic development—is a solution to the disparity that exists in Indian country. Indeed, it is a solution that every Native Nation possesses and to which each has abundant
access. The fundamental concern is that any enterprise the tribe embarks on—be it an economic development project or setting up a new governing institution—should match the tribe’s current Indigenous ideas, be they remnants from older traditions or products from a tribe’s contemporary experience. Development fails where cultural match is low, but thrives where cultural match is high.\(^{44}\)

**Solar Energy**

Next, we turn to the general benefits that tribes may acquire by implementing solar projects, as well as the maintenance of sustainable economic development vis-à-vis solar. The section will conclude by asserting that solar projects not only sustain but also are conduits for capable institutions, practical sovereignty, and cultural match.

**General Benefits:** We shall examine such general benefits as environmentalism, extending electricity to rural areas, investment security, and economic advantages.

*Environmentalism:* Conventional electricity generation, the largest source of air pollution in the United States, causes substantial damage to human health and, as an industry, is the largest contributor to global warming in the country.\(^ {45}\) Native peoples are “directly and disproportionately affected” by the by-products of conventional energy as well as the attempts to mitigate its effects.\(^ {46}\) Examples include: many reservations have been targeted as nuclear waste dumps, by individual energy producers and the federal government;\(^ {47}\) electrical generation facilities on waterways have interfered with tribes’ treaty right to fish in “usual and accustomed areas”—and the fish that are caught are often contaminated with mercury; offshore fossil-fuel development also has obstructed tribal fishing;\(^ {48}\) mines have had devastating impacts at all levels of the energy cycle—from respiratory illness caused by coal-fired power plants and oil
refinery emissions to cancer from radioactive mining waste; and the toxins left by uranium and fossil-fuel development in Indian country are likely to persist indefinitely. On a larger scale, tribes already are noticing the effects of climate change. Tribes in Alaska are losing their properties as their homes and villages are literally falling through the ice. In the Lower Colorado, shorter winters and earlier springs are affecting the animals’ migration and hibernation patterns; many animals are heading north, while tribal hunting rights are fixed to a particular area.

Solar energy is around 10 times less carbon-intensive than conventional energy and is far more efficient than traditional energy uses. Although it has been argued by some that solar energy is unsustainable because of the amount of water that it uses, if this is a concern to tribes it can be sidestepped by implementing photovoltaic (PV) projects rather than thermal solar projects. When implemented domestically, considerable amounts of greenhouse polluting gases are avoided. For the case of a domestic water-heating system, for example, the greenhouse saving, compared to a conventional system, is about 75 to 80 percent. In the case of space heating and hot water systems, the greenhouse saving is about 40 percent. In all, by promoting solar technologies, which displace conventional types of electricity generation, tribes would substantially decrease harm to their citizens and the environment. As a side benefit to those still dependent on non-renewables, instituting solar projects may “decrease fossil fuel use and provide a hedge against fossil fuel price increases.”

**Rural Areas without Electricity:** Because small-scale solar energy projects are highly cost-effective, particularly to provide power for lighting, irrigation, refrigeration, and communication, poor and remote areas on tribal lands that are not served by electricity would benefit directly from solar projects. For instance, when used to provide night lighting, solar light systems in rural areas are “100 times more efficient than kerosene and 500,000 times more efficient than candles.” This phenomenon has already taken place in China, where photovoltaic energy is
being used to respond to the basic services needed by rural citizens. These systems are being used to supply power to rural areas in Africa and Costa Rica. In China, this has led to an increased demand for photovoltaic cells—so much so that China is now the number one producer of PV panels. Although initial costs are high, the price of photovoltaic panels has been declining since the late 1990s. When properly installed and maintained, these systems require modest attention and are a major source of locally generated power. When developed locally, these small-scale solar developments can supply income for tribes that have access to the grid as they can sell their excess power to traditional utilities. In Costa Rica, for example, power generated by private solar developments accounts for about 12.3 percent of the total power put into the grid.

Security of Investment: In 1935, the federal government created the Federal Power Commission to set the electricity rates such that power-generating utilities would receive an assured profit. As part of this regulation, each utility company was given exclusive control of a service area but had a requirement to guarantee against blackouts, serve everyone, and assure a reasonable rate relative to the cost of distribution and production. By the mid-1960s, due to technological and financial plateaus realized by then-current monopolies, alternative providers began seeking entry into the market, in some cases offering cheaper and better energy. In reaction, the Carter administration introduced the National Energy Act, which encouraged increased energy efficiency, stimulated conservation, modernized utility ratemaking, and aided the creation of a new market in electricity by requiring utilities to buy from non-utility-owned small power production facilities and to pay what it would have cost them to generate the power themselves. As a result, there was a “trend in the electric utility industry toward increased reliance on generation by independent producers….“ Today, independent power producers (IPPs) are able to generate as much electricity as they can, use what is needed for themselves, and sell the rest to utilities—and traditional utilities are legally obligated to buy
their power. As far as distribution, the Energy Policy Act of 1992 made it even easier for IPPs to enter the market by requiring traditional utilities to charge themselves the same rate they charge competitors for transmission, that is, even though traditional energy providers have a monopoly over transition lines, independent producers can use the traditional utility’s lines to get into the grid at no disadvantage. Further, because it allows them to maintain control of the market, utilities fully welcome independent producers.

The solar market is an exceptionally safe investment. It has been projected that more solar energy strikes the earth in one hour than all of the energy used by the planet in an entire year. Yet power produced by solar technologies provides less than 0.1 percent of the world’s electricity. The market appears ripe for the picking. Solar energy is abundant, clean, widely available, and relatively simple to extract—as opposed to traditional energies, the cost of which will rise as electricity demand grows and the availability of fossil fuel declines. Investors have virtually limitless potential to tap the energy of the sun and convert it to money.

As noted earlier, the Obama administration actively supports the implementation of solar projects as an economic development tool for tribes. Experts have confirmed that U.S. demand for solar energy will continue to rise as the government tries to fulfill its commitment to reduce greenhouse gases, and tribes will likely continue to have a large role in the government’s plan, given the decided viability of photovoltaic technology in much of Indian country. It is so viable, in fact, that a growing number of large energy companies are establishing systems in Indian country each year.

Moreover, solar projects are relatively uncomplicated. Recent innovation has made installing some solar panels as easy as putting on a decal. Dow Chemical has introduced a line of “solar shingles” that can be nailed to a roof just like ordinary shingles by regular roofers. The shingles look like regular shingles from afar and cost 30 to 40 percent less than other solar-embedded building materials and 10 percent less than the
combined costs of conventional roofing materials and rack-mounted solar panels.\textsuperscript{78}

Carbon offsets are likely to continue to be an extremely profitable market. Solar energy producers are able to sell—internationally or domestically—offset credits to government agencies, individuals, or companies looking to neutralize their own emissions from fossil-fuel consumption, greenhouse gas emissions, and electricity usage. Increasing international attentiveness to “green energy” has led analysts to predict that the offset market will become particularly lucrative.\textsuperscript{79} In 2009, for example, the global carbon market was worth $136 billion.\textsuperscript{80}

Finally, there is a high likelihood that the federal government will soon establish a national “renewable portfolio standard” (RPS), which mandates that electric utilities acquire a definite percentage of their electricity “from renewable resources or purchase renewable energy credits” via independent power producers.\textsuperscript{81} Although RPS has not made it into law yet, RPS legislation has passed the Senate three times since 2002, the House more recently in 2007, and many states have independently implemented their own RPS laws. In all, even without regard to the environmental benefits,\textsuperscript{82} solar projects have proven to be safe investments.\textsuperscript{83}

\textit{Economic Advantages:} Tribes that organize companies to carry out tribal development projects as “an arm of the tribe so that its activities are properly deemed to be those of the tribe” have legal advantages.\textsuperscript{84}

Because tribes are independent sovereign nations, neither states nor the Federal Energy Regulatory Commission (FERC) can block solar projects.\textsuperscript{85} As observed previously, states are currently failing to site the number of power plants needed to meet the country’s projected energy demands.\textsuperscript{86} A major source of the problem is the bureaucratic process whereby states (and, in some circumstances, local governments) are able to deny power projects.\textsuperscript{87}

Non-Native renewable energy projects are particularly hard to implement.\textsuperscript{88} First, they must be sited where the resource is
located. In non-Indian country these are often highly valued public areas that voters are unwilling to sacrifice.⁸⁹ “Not in my backyard” and “tragedy of the commons” collective action problems loom large here.⁹⁰ Second, because of location, many solar projects are likely to fall under the jurisdiction of land stewards such as the Bureau of Land Management (BLM) or the U.S. Forest Service, requiring an environmental review that can take years and cost millions of dollars. Finally, tribes themselves ironically are often an impediment to these projects. In exercising their Treaty, trust, and other consultation rights, tribes frequently have legal standing to object to projects on federal lands.⁹¹ In October 2010, the Quechan Tribe of the Fort Yuma Indian Reservation brought suit against the BLM for violating a number of federal laws in approving the Imperial Valley Solar Project, in which tens of thousands of energy-producing dishes would produce power for the city of San Diego.⁹² The injunction was granted and the project was stopped dead in its tracks.⁹³

Solar projects on tribal lands, however, are not subject to many of these encumbrances. Decisions about development and siting in Indian country are fully up to the tribe. As a part of its federally mandated “right of consent,” a tribe or tribally controlled corporation may choose to develop its own project or to negotiate with outside investors, uninhibited by state/federal constraints in most cases.⁹⁴ The only time that the federal government may interfere with the project is if it affects a federal trust resource (i.e., minerals, water, etc.) or if a lease or sale to a non-tribal entity for a period of more than seven years is involved.⁹⁵ But even where federal laws do apply, the government has pledged only to take into account the most essential factors.⁹⁶ Of course, if an entity of the tribe wants to use tribal land for only tribal purposes—working without an outside partnership—then federal regulation does not apply.⁹⁷ Where the energy goes is of no consequence either, since no “federal action” is required in the sale.⁹⁸

A very viable paradigm would be a photovoltaic panel system on the roofs of buildings throughout the community. Further, in accordance with 25 C.F.R. 224.52, a Tribal Energy Resource
Agreement (TERA) may address development of all or just a portion of a tribe’s energy resources and provide for the tribe to assume all or some of the activities normally carried out by the Department of the Interior. Much of the federal review process does not apply to a project once a TERA is in place.99

Second, tribes have advantages in government contracting. Indeed, contracting has become a vital sovereignty-expanding tool for Native Nations. Particularly influential in this aspect is a system known as the 8(a) program. Under the 8(a) program, tribes are able to obtain sole-source federal contracts as affiliates or under the larger tribal corporate umbrella, if they can show a social and economic disadvantage—which is almost always met. Another “plus” is that there is no capped dollar amount for sole-source contracts obtained through the 8(a) program (whereas non-Indian contractors are limited in award amount when granted non-competitively). Tribes can use the 8(a) program to secure contracts for the development of solar projects on federal lands.

Many of the tribes that have taken advantage of the 8(a) program have seen remarkable results. One example of 8(a) success is the Coeur D’Alene Tribe in northern Idaho’s $400-million contract with the U.S. Army.100 Another is HoChunk, Inc., a multi-million dollar corporation owned and operated by the Winnebago Tribe of Nebraska that has a host of subsidiary companies participating in the 8(a) program, including a computer hardware provider, an IT service, a marketing and advertising agency, a general contractor, and a telecommunication technology and manufacturer of computer hardware.101 In Oklahoma, Chickasaw Nation Industries, Inc. operates contracts with the U.S. Department of Defense, the U.S. Department of Energy, and the U.S. Department of Health and Human Services.102 The Salish and Kootenai Tribes have developed S & K Aerospace, Inc., which has obtained a $325-million eight-year contract to track service parts for U.S. Air Force F-15 fighter aircraft all over the world.103 Were the federal government to put out bids for solar projects, the 8(a) program puts tribes at a huge advantage.
Finally, the Energy Policy Act of 2005 authorized federal agencies to provide a preference for the purchase of any energy product or by-product from a business entity that is majority-owned by an Indian tribe.\textsuperscript{104} Solar power generated by a tribal venture qualifies as one of these products.\textsuperscript{105} Also under this act, a tribal development project will receive Clean Renewable Energy Bonds if it is acting as a political subdivision of the tribe itself, as a sovereign entity.\textsuperscript{106} Importantly, the Department of Energy has indicated that, in regard to fulfilling the mandates of the Energy Policy Act, they are “very committed to government-to-government relationships.”\textsuperscript{107}

**Capable Institutions:** Capable institutions are the basis for sustained economic growth as well as the indispensable key to long-term community development. In order to be effective and accountable, institutions must have the ability and capacity to deliver programs and services to their own people. This means stability and the ability to make binding decisions in a timely fashion and a bureaucracy that can get things done.\textsuperscript{108} The strength of a nation’s institutions is often tied to energy. According to a recent study by Garrick Pursley and Hannah Wiseman, “[w]ithout abundant energy, economies do not move, progress slows, and inspiration stagnates.”\textsuperscript{109} Because of the legal obstacles in place against traditional energy development in Indian country, power may be a large part of the problem faced by tribal governments in more ways than one. The implementation of solar projects in Indian country can help change this tide.

If implemented correctly, solar projects can be a rallying point, something that allows tribes to come together collectively to pursue their own objectives in their own way, promoting cultural awareness and creating a self-image that has been missing in many communities for years. As tribes institute or take over the management and maturity of solar projects, they create a knowledgeable work force of their own.\textsuperscript{110} If a tribe chooses a joint venture with an outside investor, the project can be structured to build tribal capacity over time, with a goal of
creating tribal jobs at all levels of implementation and management. In addition, the joint venture might be planned to augment tribal responsibility, with the opportunity for tribal buy-out in the future. Educational, technical training and hands-on experience opportunities can be made available to tribal citizens in a way that supports conventional strategies of solar development while integrating tribal traditional knowledge and the cultural norms of the community. In this way, tribes also are able to take control of decision making and institution making in their own way, teaching strategic use of capital, location, resources, and other assets that make economic ventures sustainable and successful—in a manner that matches culturally.

**Practical Sovereignty:** Of real benefit to tribes with solar developments is energy independence. In the past, outside investment in tribal energy resources have spawned promises of great economic success. But these projects have done nothing to advance tribal sovereignty:

> tribes are consistently shortchanged in the deals, earning pennies on every dollar that goes to the mining firms and electric utilities whose operations are fully dependent upon the reservations…90 percent of what tribes pay for their energy leaves the reservation.111

This lack of an economic base makes it nearly impossible to reinvest in a tribe’s infrastructure. However, it is likely that federal, state, and local governments’ energy policy shift from fossil fuels to renewable resources will provide the long-needed impetus for expansive policy changes concerning tribal energy resources. Tribally owned/operated solar energy developments change the energy paradigm in Native communities from one of exploitation to one of equity, and from one that undermines the earth-based cultures of Indigenous peoples to one that nurtures cultural revitalization. As an additional bonus, if a tribe chooses to invest in a power-generating plant on-reservation, the tribe will be insulated from the rise in costs of energy that has affected the global market participants where long-distance transportation is needed.
Tribes already have some of the framework available. Again, although the IRA-era laws and policies still in effect create impediments to a tribe’s decision to provide its own services in its own way, where a tribe is providing services to its own people the federal government has largely made a commitment to step out of the way. By building the capacity and aptitude to provide services to its people through a solar project, tribes are able to take full advantage of this policy.

**Cultural Match:** The tribes of North America are, and have always been, diverse. Although some tribes may share similar traits, there exists no such thing as a monolithic pan-Indian culture. That being said, it is possible to “generalize somewhat, and to summarize common traits” when it comes to their relationship with the sun and its energy-creating capacities. As one professor of international affairs has noted, “[i]t is ironic that [those who seek sustainable development] must rediscover principles that the Native Americans ... knew almost intuitively.” Until now, these principles were readily discounted as “a system of myths conceived by superstitious and irrational minds.” It has become apparent that Western energy economics may have been packed with myths of its own, the results of which have played a role in the current energy crisis. Consequently, tribes are finding themselves at the forefront of the renewable energy trend and are embracing alternative energy resources on their land.

Non-Native projects have failed in the past because local needs were not properly met. Understanding this threat, tribes are in a unique situation to address community participation and local-needs assessment in project design. Because of most tribes’ more localist approach, tribal officials, project funders, trainers, educators, maintenance personnel, technical operation staff, suppliers, engineers, architects, and project designers are more apt to meet community needs effectively and to contribute to local assessment efforts.

This is not to say that all tribes will be a perfect fit with solar power; rather, that if a tribe chooses to take this route because it
matches with their vision of the future, solar projects are more likely to be successful in Indian country than elsewhere.

**Measures of Success**

Obama’s hopes of a “clean energy economy” will not be realized unless the existing distribution of energy regulation is upset. Currently, state and federal governments have a virtual monopoly over the allocation of energy policy making and the regulation of alternative energy projects. This article has argued that Native Nations have a very significant role to play in the transition to renewable energy. Further, the implementation of solar projects in Indian country constructs and sustains capable institutions, supports practical sovereignty, and matches culturally—and are thus very likely to be a kickstart to a sustainable economic development in Indian country.

Tribes traditionally have had difficult relations with states. Today, conflict has become commonplace. In 1832 the Supreme Court declared that, as sovereign nations, state law can have no effect in Indian country. State officials, however, often act under the opposite assumption—frequently attempting to assert jurisdiction and responsibility over all activities that occur in Indian country. Typically, the states’ contention is generated by land-use policies for adjacent property, taxation, and unclear jurisdictional difficulties involving business and environmental laws. Siting, grid interconnection, and other land-use concerns will likely fuel the state-tribal conflict if steps are not taken to eradicate the situation up-front. To truly empower tribal governments to exercise regulatory authority and discretion in the method necessary to realize the potential of solar projects in Indian country, the assumed power of state governments to preempt or interfere with tribal affairs must be eliminated—at a minimum in the context of energy regulation.

In other words, federal, state, and local governments need to view indigenous cultures as an asset, rather than an obstacle, to economic development. All too often the viewpoint is: “you are
poor because your culture gets in the way.” However, as we have seen, this is not the case. Usually, a federal agency controls economic projects (or, at the least, these projects are only approved if based upon a “Western model” of management). Typically, neither the economic design nor the asset management principles employed are based on Indian cultures. In result, if a project works, a large majority of revenues, benefits, employment, and profits derived from tribal resources go to external investors. If the project does not work, Native nations are left footing the bill. In order to change the tide, the federal government must allow Native nations to develop their own projects, in their own way, using their own customs and traditions.

Tribes should not become dependent on federal funds for daily operations of the project. Funding dependency holds decision making and answerability hostage to the source of finance, making it difficult for tribal governments to pursue long-term strategic goals for a project. This will lead to project failure. Instead, tribes should use start-up funds from other enterprises, such as gaming, that are already in place. Further, independent funding allows Native nations to take full advantage of their legal status—being exempt from federal and state income taxes, able to levy their own taxes on the projects, and having an exempt status from most state and federal economic regulation.

One of the largest obstacles that lies in the way of getting a solar project off of the ground is internal: “often dissent comes from community members who for political reasons do not want the project to proceed.” This type of vacillation dissuades potential investors, can undermine the project (sometimes before it comes to fruition), and can lead to financial and political ruin. There are, however, steps that tribes can take to ameliorate this risk. In order to carry out the day-to-day operations of a solar project, an institution should include, in one form or another, the following. (1) Stability, meaning regulations and rules, should not be changed frequently and, if by chance they do need to be changed, they must change only by prescribed procedures. (2)
There should be protection from political interference. Project managers who are familiar with the venture and have only to benefit from the success of the project, should make project decisions. (3) A dispute resolution mechanism should be set up in such a manner to take the politics out of project decisions and should send an obvious message to citizens and outsiders that their investments and claims will be dealt with fairly. (4) Turning to reliability, the institution should be able to make management decisions reliably and effectively execute them.

Tribal politics, by way of councils and chairs, can often get in the way of a tribe’s economic ventures. Often, when these situations arise, it is because the corporate structure has backpedaled into a muddle of politics and business, despite a strong beginning. But tribes can take organizational steps to assure that this does not take place. First, on the council and chair levels, tribes should set clear business objectives and focus intently on those objectives. Attempting to juggle different purposes and roles without the proper foundation will permit leadership to alter mandates as changes in personnel take place, resulting in a situation where nothing gets finished. This results in a situation where the rules of the game are unstable—a place where nobody (i.e., investors, grant-approvers, leaders, entrepreneurs, joint-venture partners, etc.) would want to invest.

Moreover, business objectives should be set in a manner that addresses long-term community goals, such as community cohesiveness and self-identification, rather than the immediate need for income and jobs. A fixed connection to a societal value or community priority can help reduce incentives for unproductive political intrusion. Tribes further should insist on transparency in all levels of council matters in order to ensure the trust that is necessary to prevent erosion of the corporate institution. On the corporate/management level, membership should include a mixture of insiders and outsiders where positive dissent is encouraged. In this way, objective guidance is more likely. Putting elected leaders on project boards is likely to weaken enterprise performance and should be done with caution,
if at all. In fact, at least one study has confirmed that removing business from direct council control is associated with a fourfold improvement in profitability rates.\textsuperscript{132}

Haphazardly implemented or designed solar projects will not succeed.\textsuperscript{133} Because solar is still a relatively new technology, tribes should take advantage of every feasibility model or study that is available to them to find a model that works with the tribe’s specific governmental structure and matches culturally.

This is not to say that the barriers are insurmountable. As we have seen, many of these obstacles are already being addressed by tribes and the federal government, while others place tribes in a comparative advantage. What is necessary, however, is that tribes choosing to implement a solar project take a proactive position on these issues in order to assure that the advantages available are utilized to their full potential, and, likewise, that the disadvantages are minimized. Indeed, with this criterion in mind, it is important that tribal governments design their own energy plans.\textsuperscript{134} It is essential that tribes pay ongoing and prior attention to the power and structure of their energy management system.\textsuperscript{135} This should include an assessment of both the internal and external markets, as well as the overall cultures and norms of the community.\textsuperscript{136} These plans likely will include cooperative agreements with off-reservation parties, reducing conflict and increasing government-to-government consultation, while at the same time recognizing the sovereign powers of the on-reservation government.

\textit{Conclusion}

Only time will tell whether the Obama administration’s shift in energy priorities will provide an impetus for long-needed changes involving American Indian law and policy. What tribal attorneys, council members, and federal entities charged with the promotion of tribal interests can be sure of, however, is that the opportunity for economic development via the implementation of solar projects is ripe. In 2011, the global economy is still
facing a tough fiscal course. Now is the time for federal and state policies to integrate tribal economies and resources into the equation, expanding and developing opportunities to create revenue and jobs in a sustainable manner. Tribes and governmental agencies should keep a keen eye turned toward tribes like the Jemez Pueblo, the Augustine Band of Cahuilla Indians, the Oglala Sioux, the Navajo and Hopi Nations, and the Rincon Indian Band of Mission Indians, who are implementing these solar projects. In this way, developers and policy makers may gain a sense of what works, what needs improvement, and what model of development may work for them. Most importantly, it is essential for tribes that resolve to pursue a solar project to become active in the federal bureaucratic process and vigorously assert their sovereignty by insisting that these projects come to fruition.

Solar projects on tribal lands present an opportunity to seize the day when it comes to the “green energy revolution” as well as an opportunity to diversify a tribe’s investment portfolio and assure development that is sustainable—both environmentally and economically.

NOTES

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Editorial advisory: The citation system used here follows the accepted legal style.


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12 Message From the President of the United States Transmitting Recommendations for Indian Policy, H.R. DOC. NO. 91-363, (1970).


15 See e.g. Confederated Tribes and Bands of Yakama Nation v. U.S. Dept. of Agriculture, No. 10-3050, 2010 WL 3434091 (E.D. Wash. Aug. 30, 2010);
see also Gabriel S. Galanda, The Federal Indian Consultation Right: A Frontline Defense Against Tribal Sovereignty Incursion, FEDERAL INDIAN LAWYER, special feature article in conjunction with Fall, 2010, at 1, 11, 12.

18 See infra notes 33-44 and accompanying text.
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21 Id. at 19.
22 Id.
23 Stephen Cornell & Joseph P. Kalt, Two Approaches to the Development of Native Nations: One Works, the Other Doesn’t, in REBUILDING NATIVE NATIONS: STRATEGIES FOR GOVERNANCE AND DEVELOPMENT 14 (Miriam Jorgensen, ed., 2007) [hereinafter Two Approaches].
24 See e.g. Confederated Tribes of Chehalis Reservation v. Thurston County Bd. of Equalization, Slip Copy, 2010 WL 1406524 (W.D. Wash.).
25 Cornell & Kalt, Two Approaches, supra note 23 at 15.
26 Id. at 22.
27 Id. at 21.
28 Id.
29 Id.
30 Id.
31 Id.
32 Id. at 30.
35 Id. at 1301.
38 DUANE CHAMPAGNE, SOCIAL CHANGE AND CULTURAL CONTINUITY AMONG NATIVE NATIONS (2007).
39 STATE OF NATIVE NATIONS, supra note 20, at 13.
40 Id. at 372.

43 Id. at 36.

44 Cornell & Kalt, Two Approaches, supra note 23, at 25; JEANNE M. BRETT, NEGOTIATING GLOBALLY: HOW TO NEGOTIATE DEALS, RESOLVE DISPUTES, AND MAKE DECISIONS ACROSS CULTURAL BOUNDARIES 204-05 (2001).


46 Indigenous Peoples’ Global Summit on Climate Change, Thematic Sessions, http://www.indigenoussummit.com/servlet/content/Thematic%20sessions.html (last visited March 23, 2010); STATE OF NATIVE NATIONS, supra note 20, at 179, 188.


50 Id.


55 Id.

56 Id.


58 See generally Judith Alazraque-Cherni, Renewable Energy for Rural Sustainability in Developing Countries, 28 BULL. SCI. TECH. & SOCY’ 105 (2008).
59 Richard L. Ottinger & Rebecca Williams, Renewable Energy Sources For Development, 32 ENVTL. L. 331, 333 (2002); see also Howard A. Lerner, Cleaning, Greening, and Modernizing the Electric Power Sector in the Twenty-First Century, 14 TUL. ENVTL. L.J. 277, 279 (2001) (noting that “the cost of clean renewable energy is also plummeting as...solar power technologies have improved dramatically.”).

60 Ottinger & Williams, supra note 59 at 338.


65 De Groot, supra note 72, at 163.


67 Nandwani, supra note 72, at 689.

68 Pub. L. Nos. 95-617 to 95-621, 92 Stat. 3117-3411 (codified as amended in scattered sections of 5, 12, 15, 16, 19, 23, 26, 31, 33, 40, 42, and 49 U.S.C.); see also CRC HANDBOOK OF ENERGY EFFICIENCY 671 (Frank Kreith & Ronald E. West eds., 1997).


71 Joseph P. Tomain, The Past and the Future of Electricity Regulation, 32 ENVTL. L. 454-55 (2002). In other words, independent producers can use the traditional utility’s lines to get into the grid, at no disadvantage. Id.

72 Indigenous Peoples’ Global Summit on Climate Change, supra note 57.

73 Id.


See id.


Tribal Energy Self-Sufficiency Act and the Native American Energy Development and Self-Determination Act, Hearing Before the Comm. on Indian Affairs, 108th Cong. 144 (2003) (statement of Affiliated Tribes of Northwest Indians – Economic Development Corporation) (noting that tribes “have always had siting decisions on tribal lands.”) [hereinafter TESSA Hearing]. However, if a tribe chooses to connect into the grid, in order to sell excess energy, FERC’s interconnection rules will likely apply. See RUSTY HAYNES & CHUCK WHITAKER, CONNECTING TO THE GRID: A GUIDE TO DISTRIBUTED GENERATION INTERCONNECTION ISSUES (5th ed., 2007).


See Robert D. Khan, Siting Struggles: The Unique Challenge of Permitting Renewable Energy Power Plants, 13 ELECTRICITY J. 21 (2000) (arguing that “renewable developers have a more difficult time securing their permits than fossil fuel project developers have obtaining theirs.”).

Id. at 23.

Id. at 26-29.


96 Memorandum from the Director of the Bureau of Land Management to all Field Officials, Solar Energy Development Policy, Instruction Memorandum No. 2007-097 (Apr. 4, 2007).


98 Taylor, supra note 95.

99 About Tribal Energy Resource Agreements, http://teeic.anl.gov/abouttera/index.cfm (last visited Apr. 12, 2010); see also STATE OF NATIVE NATIONS, supra note 20, at 165 (discussing the advantages of the TERA).


101 Id.

102 Id.
103 *Id.*
107 TESSA Hearing, *supra* note 85, at 78 (statement of Craig Thomas, U.S. Senator from Wyoming).
113 *Id.* at 303 (1984); Rebecca Adamson, *Indigenous Economics: Ancient Knowledge Inspires Economic Reform of Capital Markets, THE CANADIAN, Jul. 1, 2009; but see Indigenous Peoples Global Summit on Climate Change, supra note 57 (“Too often attempts to compare and contrast traditional ecological knowledge...with scientifically acquired data imply that the Indigenous people’s way of knowing is inadequate in contrast with science.”).
116 See e.g. U.S. v. Kagama, 118 U.S. 375, 384 (1886) (“Because of the local ill feeling, the people of the states where they are found are often their deadliest enemies.”).
117 31 U.S. at 520.
120 *Id.*
121 See Cornell & Kalt, *Two Approaches*, supra note 23, at 9 (noting that “in general, where there is a match between the approach a tribe pursues and the social organization and culture of the tribe, the odds of successful development increase.”).

122 *Id.* at 31.

123 Interview with Andrew Moore, Project Director, T’Sou-ke Nation, in Sooke, B.C. (Nov. 12, 2009).


127 *Id.* at 187.


130 TAIAAKEY ALFRED, PEACE, POWER, RIGHTEOUSNESS: AN INDIGENOUS MANIFESTO 65 (1999) (noting that Native nations today “are so polarized between Indian and white that no one dares criticize an Indian leader publicly, so we let them get away with murder.”).

131 Grant & Taylor, supra note 126, at 190.


133 Ferrey, supra note 83, at 541.


135 Cornell & Kalt, *Reloading the Dice*, supra note 125, at 5.