

Center for American Progress



Current Patterns and Future Opportunities

Mapping Chinese Direct Investment in the U.S. Energy Economy

By Melanie Hart July 2015

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Introduction and summary

When China's double-digit economic growth rates first began to affect global oil markets in the early 2000s, the energy sector appeared on track to become a new source of U.S.-China strategic competition, distrust, and potential conflict. On the U.S. side, many observers feared that China's rising oil demands would strain global resource supplies, make it harder and more expensive for the United States to secure its own supplies, and potentially undermine security in the Middle East.¹ On the Chinese side, leaders in Beijing worried that their nation's growing dependence on oil and gas imports would make the Chinese economy more vulnerable to a potential U.S. military blockade, a fear that pushed Chinese leaders to strengthen their own naval capabilities and sign energy supply contracts with rogue nations not subject to U.S. influence—two moves that irritated Washington.²

The clean energy technology revolution eased this competitive security dynamic. Once renewable energy facilities are installed, they can keep going regardless of what happens internationally. Thus, renewable energy gives Beijing an avenue to strengthen its energy security without impinging on U.S. interests. Since 2009, the U.S. Departments of Energy and State have been working to help drive this clean energy revolution in China—a nation whose energy policy choices have an unparalleled impact on the global economy. From an energy perspective—and from a climate perspective—it is in the interest of the United States for China's economic growth to occur as efficiently and cleanly as possible. That growth will ideally also create new demand markets for U.S. clean energy products and services.

The Obama administration has made clean energy cooperation a pillar of the U.S.-China diplomatic relationship for two reasons. First, China's move toward a cleaner growth model furthers American national security interests on issues ranging from combatting global climate change to stability in the Middle East. Second, U.S.-China clean energy cooperation creates direct economic benefits for the United States because it helps create new demand markets in China for U.S. clean energy technology, services, and products. The Obama administration has

used the U.S.-China Strategic and Economic Dialogue, U.S.-China presidential summits, and other bilateral diplomatic meetings to launch bilateral clean energy projects that develop and commercialize new technology solutions ranging from smart grids to carbon capture, utilization, and storage, or CCUS. Thus far, most of those efforts have focused on giving U.S. companies access to the Chinese market for technology demonstration, commercialization, and sales.

In parallel with the roster of new U.S.-China projects moving forward to serve Chinese energy demand, a new trend of cooperation is also emerging in the U.S. energy market: Some Chinese companies are venturing across the Pacific to seek investment opportunities in the United States and build new energy projects here.³ When China first joined the global economy in the 1980s, it did so as a low-cost export manufacturer. Consumers in the United States benefitted from access to low-cost goods from China, but some U.S. workers suffered from the loss of manufacturing jobs as factories relocated to China to take advantage of cheap labor costs. Now, Chinese labor costs are rising; export manufacturing is not as profitable as it once was; and Chinese firms are beginning to come to the United States, not for cheap labor—average U.S. wages are still much higher than those in China—but for access to other comparative advantages such as the highly skilled U.S. labor force and a growing U.S. consumer base for clean energy products. Chinese companies are now making direct investments in the U.S. energy economy that support American workers, build new clean energy infrastructure, and, in the case of clean energy projects, lower climate pollution. Many governors and city mayors across the United States view these projects as a boon for economic growth. For example:

- In 2010, Wanxiang America—the U.S. subsidiary of Chinese auto-parts manufacturer Wanxiang Group—invested \$12.5 million to build a solar panel manufacturing plant in Rockford, Illinois. When the project was announced, Illinois’s then-Gov. Patrick Quinn (D) stated that the Wanxiang project “creates important jobs in the renewable energy sector and supports a business that harnesses the sun’s power, undoubtedly the best and most abundant source of renewable energy available.”⁴ In addition to the generation facility, Wanxiang is also building a solar farm in Rockford. Gov. Quinn described the two Wanxiang projects as “creating hundreds of sustainable, green-collar jobs and providing an economic boost to the entire state.”⁵

- In 2012, Xinjiang Goldwind Science and Technology Company—a Chinese wind turbine manufacturer—developed and financed a 20-megawatt wind farm in Shawmut, Montana. Montana’s then-Sen. Max Baucus (D) travelled to Beijing in 2010 to help lock in the investment deal. When it was announced, Sen. Baucus stated that he was “pleased to welcome Goldwind and the local tax revenue and jobs this project will bring to Montana.”⁶
- In 2012, Chinese renewable energy company Hanergy acquired MiaSolé, a Silicon Valley start-up specializing in high-efficiency thin-film solar panels. Since then, Hanergy has injected new capital into MiaSolé to hire more workers and expand the company’s research and development operations in California.⁷ MiaSolé CEO John Carrington stated that the Hanergy acquisition gave MiaSolé “a fully optimized capital structure, enabling us to focus on R&D and capacity breakthroughs, and become more competitive by riding on Hanergy’s global advantages.”⁸

Most of these successful Chinese-invested energy projects are the result of hard work at the state and local government level rather than trickle-down effects from federal government diplomacy. Until 2011, the primary federal government role in foreign direct investment was as a national security watchdog. The Committee on Foreign Investment in the United States, or CFIUS, is a federal interagency committee that screens incoming deals to identify and block foreign investment transactions that could threaten U.S. national security by, for example, putting critical sections of the U.S. electric grid under foreign ownership. When it comes to actually figuring out how to attract investments that do not threaten security, however, the federal government agencies have been much less active. That effort has been primarily a local government story, not a federal one.

In response to the many state and local governments asking for more federal government assistance with investment attraction, the Obama administration launched the SelectUSA program at the U.S. Department of Commerce in 2011 to serve as a federal government one-stop shop for foreign direct investment in the United States.⁹ In 2013, the administration allocated funding to support those efforts and to train Department of Commerce foreign commercial service officers working in U.S. embassies around the world to help U.S. enterprises and U.S. regional governments scout and secure new investors from overseas markets.¹⁰ These were big steps in the right direction. SelectUSA is now connecting state and local governments that are aiming to attract new capital with potential foreign investors—including Chinese investors—that are looking for new project opportunities in the United States.¹¹

As a next step, the Obama administration should assess sector-specific needs to identify areas where a more targeted approach is needed to maximize investment potential. The energy sector in particular is ripe for a more targeted investment attraction approach. The Obama administration has already identified clean energy investment as a national priority.¹² At the state and local level, many American enterprises, governors, and mayors view foreign direct investors as critical allies in this effort. The problem is that clean energy investments are highly technical, both in terms of the technologies deployed and the policies needed to support particular projects. SelectUSA has a general U.S. energy “industry snapshot” page on its website, but SelectUSA does not have a targeted energy program to match foreign investors with specific U.S. energy investment needs.¹³ Many U.S. state and local governments would benefit from that type of targeted investment attraction assistance.

For potential energy investments involving Chinese companies, the Obama administration already has a robust U.S.-China clean energy partnership that the federal government can and should leverage to help state and local governments maximize those direct investment opportunities. To be sure, energy investment attraction programs do not need to be and should not be all China-specific. Most of the work done to assist with one country can also apply to others. But in the energy sector specifically, the United States has a special opportunity to leverage an existing diplomatic track and also grab hold of a rapidly growing trend of outbound Chinese direct investment.

The Center for American Progress has been tracking inbound Chinese energy deals to identify current growth areas and highlight where assistance may be needed to expand that growth in the future. (For more information, see accompanying interactive map)¹⁴ Project surveys done by CAP reveal that there are three actions the United States can and should take in the near term to support the state and local governments working to attract and secure these new energy deals, specifically:

- The Obama administration should establish a clean energy investment attraction initiative under the SelectUSA program to provide targeted support for state- and local-level energy investment needs. That program should be housed in the U.S. Department of Energy in order to best leverage current federal government expertise in this sector.

- SelectUSA should provide evidence-based, sector-specific investment attraction recommendations to help local economic development offices make smart decisions about where and how to direct limited resources for investment attraction activities.
- The Obama administration should make Chinese direct investment in the U.S. energy economy a priority issue in the U.S.-China diplomatic relationship, on par with the projects in the Chinese market. The upcoming presidential summit presents an excellent opportunity to shine a spotlight on these existing projects and create new opportunities.

This report provides an overview of the projects that are already moving forward across the United States and explains why it is crucial for the U.S. federal government to give state and local governments more tools to successfully attract and secure more of these projects.

Mapping current investment patterns

Foreign direct investment projects include both greenfield projects and tangible asset acquisitions. Greenfield direct investments occur when a foreign firm comes to the United States to build a project that did not exist previously—for example, when a Chinese energy firm builds a wind farm or manufacturing plant in the United States. Asset acquisitions, the other form of direct investments examined in this report, can range from minority acquisitions—when the incoming firm acquires a 10 percent to 49 percent stake in a U.S. company—to majority acquisitions or full buy-outs.¹⁵

Direct investments differ from stock purchases and other arms-length portfolio investments in that they generally require more of an investor presence in the host market. Direct investments are also harder to acquire and to off-load. Acquiring a U.S. company or building a new project from the ground up is a complicated endeavor. It requires the incoming investor to have a deep understanding of the U.S. market and regulatory system. Backing out of these types of deals is also a complicated process. It generally takes time and resources to sell off a company and its tangible assets—such as real estate holdings, oil and gas leases, or production equipment—while buying and selling stock holdings is generally a much easier proposition.

When the Chinese economy first began to truly take off in the 1990s, Chinese firms did not feel confident in their ability to operate overseas, nor did they feel pressure to do so. That began to change in the mid-2000s as Chinese companies developed more experience working with foreign partners and selling products in international markets. Recent declining profit margins in China's traditional growth sectors, such as export manufacturing and fixed-infrastructure investments, have accelerated this outbound investment trend.¹⁶ The American Enterprise Institute's China Global Investment Tracker, which follows China's investment and construction activity, estimates that Chinese firms have invested more than \$1 trillion in overseas direct investments as of 2014, up from around \$20 billion in 2006.¹⁷ The United States is currently the top destination for

those investments. The United States received around \$17 billion in Chinese direct investments in 2014, more than any other country in the world.¹⁸ Those are tangible investments that produce real American infrastructure projects and American jobs. The Rhodium Group, a research consultancy and advisory company, estimates that China-to-U.S. direct investment projects currently employ around 80,000 American workers.¹⁹ Many of these Chinese-invested projects are in the U.S. energy sector.

The Center for American Progress interviewed U.S. state and local government officials, American companies, American service firms such as legal and consulting firms, and Chinese direct investors to gain a better understanding of what the China-to-U.S. energy investment landscape looks like and where there may be new opportunities to improve growth.²⁰ As part of that process, CAP surveyed the current landscape of projects and mapped more than 50 key projects to illustrate what types of projects are already in operation; what investment attraction strategies have been successful in the past; and where more assistance might be needed in future. (For more information, see accompanying interactive map)²¹

Accordingly, CAP found that Chinese companies are already building solar farms, utility projects, coal projects, and other greenfield energy projects across the United States. In most cases, state governors, city mayors, and other local government officials have gone to great lengths to attract and secure those projects so that their local economies can benefit from new jobs and other revenue sources. There are also many acquisition investments whereby a Chinese investor acquires an American firm and injects capital to either keep the company afloat or to help it expand its research and development operations. Both greenfield and acquisition investments can be great contributors to U.S. energy economy.

As the accompanying interactive map illustrates, some of these projects are clustered geographically in U.S. states or regions with particular comparative advantages in investment attraction such as significant oil and gas deposits or strong state and local government clean energy development programs. CAP has identified three key clusters for China-to-U.S. energy deals:

1. Fossil fuel investment clusters located around oil and gas deposits in Texas, Oklahoma, and other fossil-fuel-producing states.
2. Clean energy investment clusters in New Jersey, California, Texas, and other states with strong renewable energy investment incentives.

3. Networking clusters in cities and states that have good conduits for connecting local companies and local economic development offices with potential Chinese investors.

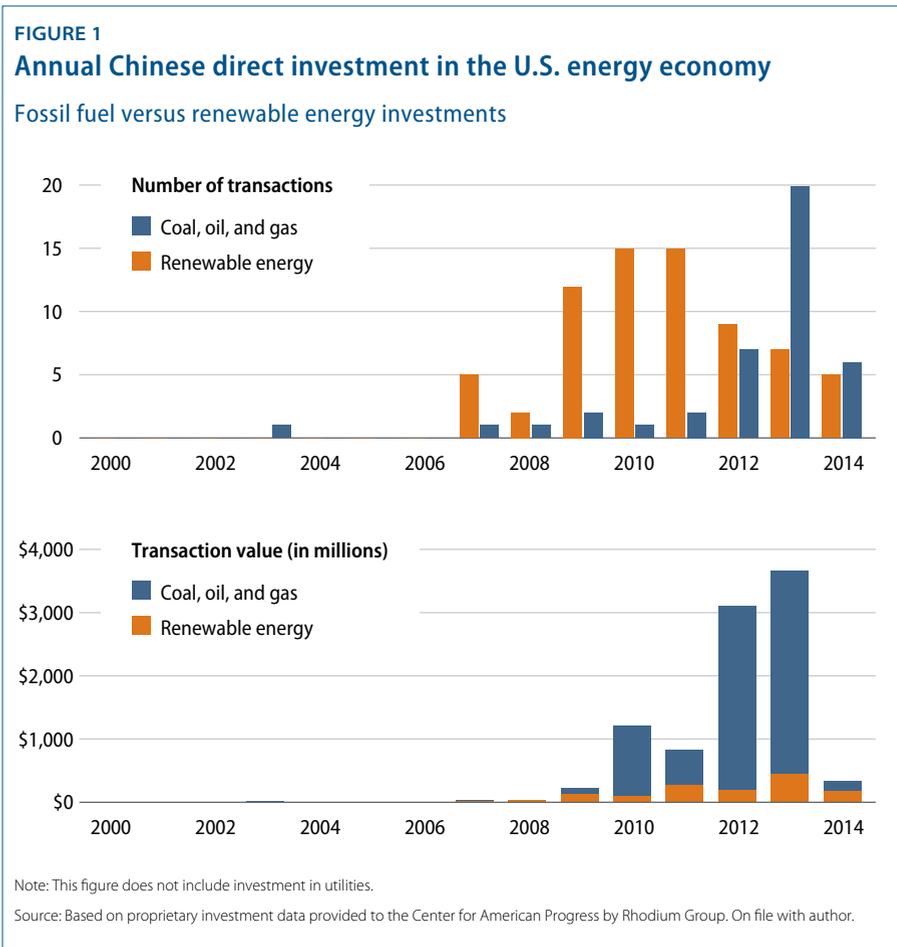
For U.S. state and local governments that wish to attract more direct energy investments from China, improving their clean energy incentive programs and networking conduits will generally be the best path forward. Those are also their best opportunities to leverage existing federal government expertise and programs.

Fossil fuel clusters

Chinese direct investment in U.S. fossil fuel sectors primarily consists of asset acquisitions by China's major state-owned oil and gas companies. China's state-owned energy companies are pursuing a "go-out strategy" to acquire energy production assets around the world.²² In the United States, that takes the form of minority-share acquisitions in U.S. oil and gas leasing rights. For example, the China National Offshore Oil Corporation, or CNOOC, owns 10 percent to 20 percent stakes in Statoil drilling leases in the Gulf of Mexico, a 33 percent stake in Chesapeake Energy drilling leases in the south Texas Eagle Ford shale basin, and another 33 percent stake in Chesapeake Energy drilling leases in Colorado and Wyoming.²³ CNOOC invested more than \$4 billion to acquire those minority shares, which give the Chinese company access to drilling profits but no operational control over drilling operations or marketing decisions, such as where to sell the oil and gas produced from those sites.²⁴

Most fossil fuel investments are based on geology: where oil and gas plays are most active, Chinese firms are interested in acquiring a share of the production profits. In some cases, foreign firms also seek access to U.S. drilling technology. For example, in 2011, China Petrochemical Corporation, China National Offshore Oil Corporation, and Saudi Aramco—three state-owned oil majors—all tried to acquire a stake in Frac Tech LLC, a Texas firm specializing in shale gas exploration and development services.²⁵ The Chinese and Saudi oil majors reportedly wanted to apply Frac Tech technology and drilling expertise to assist with shale gas development in their home markets.

At the enterprise level, these investments can provide U.S. firms with critical capital for drilling expansions. In 2012—when China Petroleum Corporation, or Sinopec, invested \$2.5 billion to acquire a minority share in oil and gas leases owned by Devon Energy Corporation, the independent Oklahoma City oil and gas producer—Devon used those funds to pay off corporate debts and expand drilling operations.²⁶ From an economic development angle, however, these fossil fuel acquisitions have a limited impact because they generally do not create a significant amount of new jobs.²⁷ Furthermore, Chinese investors tend to chase the same assets that everyone else wants rather than develop greenfield energy projects or prop up American companies on the edge of bankruptcy. Oil and gas investments generally follow a herd mentality; when the market is bearish, the big firms all go on buying sprees, but when prices collapse, investment activity can suddenly disappear. According to data from the Rhodium Group, Chinese firms invested more than \$3.2 billion in U.S. oil, gas and coal assets in 2013, but that activity virtually disappeared one year later due to the global market slide in oil and coal prices.²⁸



From a market standpoint, it is natural for exploration and development investments to ebb and flow with commodity prices. However, for local officials aiming to boost economic growth at the state, county, and city level, investors that come in on a boom and bust cycle without directly employing a significant amount of local workers do not provide a good platform for local economic growth. In general, fossil fuel asset acquisitions are not the types of deals that local officials should spend a large amount of time and resources working to attract, nor is it an area where much federal government support is needed beyond monitoring these transactions for security purposes.

Clean energy clusters

Whereas fossil fuel investments chase geological resources, clean energy investments are much more likely to chase good policy. All U.S. states have an opportunity to develop and produce renewable energy. The business case for doing so is heavily influenced by state policy. Over the past century, the U.S. federal government has provided the fossil fuel industry with billions of dollars in grants, subsidies, and tax breaks to bring down infrastructure and production costs. As a result, greenfield renewable projects can sometimes struggle to compete with existing fossil fuel facilities. It is generally more expensive to finance and build a new plant using cleaner and more efficient energy technologies than it is to keep using an old plant that was paid off 20 years ago. It can also be hard to recoup those investment costs in states that do not deploy policy measures to even out those differences. That is the case with all emerging technologies; they generally need some form of assistance to level the playing field with existing market alternatives. When states have Renewable Portfolio Standards, or RPS, and other strong clean energy investment incentives to level the playing field between new and existing energy projects, investors of all stripes are keen to look for new renewable investment opportunities, and that includes Chinese investors.

A few states stand out as leaders in clean energy investment attraction. California has particularly strong clean energy incentive policies and is an investment attraction leader across multiple clean energy sectors. California has a RPS that requires state utilities to source at least one-third of the electricity they sell from renewables by year-end 2020.²⁹ The California state government, county governments, some municipal governments, and the major California utility companies also offer a wide range of incentives to support renewable projects, particularly wind and solar projects.³⁰ California has more installed solar capac-

ity than any other U.S. state and higher electric vehicle use than any other state, and California ranks second in the nation in installed wind capacity.³¹ California's thriving market is very attractive to foreign investors from multiple nations, including China. Key Chinese-invested projects include the BYD electric bus manufacturing facility in Lancaster, California, and more than \$100 million in Chinese-invested solar projects.³²

New Jersey is also strong in attracting solar investments. New Jersey has a RPS that requires utility companies to incorporate a minimum amount of renewable energy into power generation and sales and a Renewable Energy Incentive Program that supports new generation projects on a competitive basis.³³ The New Jersey RPS has an accelerated timetable for solar energy expansion, and the state also has targeted incentives to encourage investors to build solar-generation projects on landfills, brownfields, and other limited-use sites.³⁴ Those policies have made New Jersey a national leader in solar energy—the state is ranked third in installed solar capacity, after California and Arizona—and in attracting Chinese-invested renewable energy projects, particularly solar projects. For example, China's Jiangsu Zongyi company invested \$80 million to build a 19-megawatt solar plant in Tinton Falls, New Jersey; China's ENN Solar Energy built a 4.3-megawatt solar farm on a landfill in East Brunswick, New Jersey; and China Development Bank partnered with China's LDK Solar Company to provide a combined \$28 million in construction financing for a 9.95-megawatt solar plant that supplies power to an Eli Lilly biopharmaceutical manufacturing plant in Branchburg, New Jersey.³⁵

Texas is generally associated with fossil fuel investments, but the state is also a clean energy leader. Texas has a RPS, multiple tax exemptions for renewable energy companies, and a Competitive Renewable Energy Zones, or CREZ, initiative that helps integrate wind power into the state grid system and transmit wind energy from wind production areas in West Texas to electricity demand zones around Houston and other major metropolitan areas.³⁶ The state also has a Texas Enterprise Fund, or TEF, and a Texas Emerging Technology Fund, or TETF; as of 2014, state officials have directed more than \$50 million in TEF and TETF funding to foster new clean energy projects.³⁷ This support has created a strong renewable energy market in Texas. The state produces more wind power and biodiesel than any other U.S. state and is second in the nation on overall renewable energy jobs.³⁸ Texas is particularly strong in wind—only five countries in the world have more installed wind power capacity than Texas—and that has attracted foreign direct investments from multiple nations, including China.³⁹ In 2012, for example,

China's A-Tech Wind Power invested more than \$100 million to build a 61-megawatt wind farm in Lynn County, Texas, and in 2013, Ralls Corporation—a privately owned Chinese firm—purchased the development rights for a 20-megawatt wind farm near Lubbock. Moreover, Texas wind projects support more than 17,000 state jobs, and inbound foreign direct investment provides critical support for that job base.⁴⁰

Other states have a small but growing amount of clean energy investment activity and could become hot investment spots in the future. Illinois is behind leading states such as California and Texas in attracting Chinese-invested energy projects, but the state is a strong Chinese investment destination in other industries and has good renewable development policies that could be leveraged to further expand Chinese investment in clean energy.⁴¹ Illinois has a RPS that requires the state to obtain 25 percent of its power from renewable energy by 2025. Illinois state legislators recently introduced a bill proposing that the state increase that requirement to 35 percent by 2030.⁴² The existing RPS has already helped to drive solar and wind investments, including Wanxiang America Corporation's \$12.5 million solar panel manufacturing facility in Rockford, Illinois; the 3-megawatt solar farm Wanxiang constructed at the Rockford-Chicago international airport; and the Xinjiang Goldwind Science and Technology Company's \$200 million Shady Oaks wind farm project in Lee County, Illinois, which has provided around 300 local jobs and electricity for around 25,000 homes.⁴³

For states that already have strong state and local renewable energy policies but are struggling to attract good foreign direct investment partners, network connection services as outlined below can help to fill the gap.

Networking clusters

Some states have strong networking platforms designed to connect local firms and local government officials with potential Chinese investors, and these programs can provide an edge in investment attraction.

Again, California is in the lead. Although California does not have a state-level office dedicated to Chinese-investment attraction, the state does have particularly strong city-level programs that leverage California's existing commercial and cultural ties with China to bring in new investors, including new clean energy

investors. In Los Angeles, the Los Angeles County Economic Development Corporation, or LAEDC, dedicates staff and resources specifically for Chinese-investment attraction and those efforts have made the city the second largest municipal destination for inbound Chinese direct investments after New York City.⁴⁴ San Francisco runs ChinaSF, a municipal government organization dedicated specifically to attracting Chinese direct investment and supporting local firms aiming to do more business in China.⁴⁵ ChinaSF was founded in 2008, and the program has already brought in more than 50 Chinese companies and 300 new jobs for the City of San Francisco as of year-end 2014.⁴⁶

California state and municipal officials who have developed ties to Chinese investors via those programs often work across county lines to help neighboring cities secure similar investments. For example, after Los Angeles County secured an investment from Chinese electric vehicle manufacturer BYD, Los Angeles County Supervisor Michael D. Antonovich introduced Lancaster City Mayor Rex Harris to BYD officials, and Mayor Harris leveraged that connection to bring a BYD electric bus manufacturing plant to Lancaster City.⁴⁷ Since 2000, these networking clusters around Los Angeles and San Francisco have helped the state bring in more than \$5 billion in Chinese direct investment, and these projects have created more than 8,000 jobs in California.⁴⁸

In Washington state, local businesses can seek networking assistance from the Washington State China Relations Council, a long-running business association that helps connect local businesses with potential Chinese partners.⁴⁹ The Trade Development Alliance of Greater Seattle and the Economic Development Council of Seattle and King County recently conducted a foreign direct investment attraction assessment and found that “the Greater Seattle Region punches below its weight” in foreign direct investment attraction.⁵⁰ To remedy this problem, local economic development authorities are teaming with the Washington state governor’s office to launch a new “Greater Seattle Region Global Trade and Investment Plan,” which will include the formation of a new organization modeled on the ChinaSF program.⁵¹ The new organization, ChinaSeattle, will aim to bring in more Chinese direct investors to the Seattle area.⁵² If that program succeeds, California’s experience suggests that Washington cities and counties outside greater Seattle will also benefit from those connections.

Strong state- and municipal-level investment-scouting networks magnify the impact of a good policy environment for investments across all sectors, including clean energy sectors. This is an area where federal government support can be particularly helpful. When it comes to scouting potential investment partners, there is a huge amount of inequality between regions in terms of resources, personal networks, and experience. Many local development offices simply do not have the resources or overseas connections to scout potential foreign investors, even though those scouting activities, when successful, can bring in big benefits for a local economy. If the U.S. Departments of Commerce, Energy, and State can assist in those efforts, that will help give local governments more power of choice over economic development opportunities. The goal of the assistance should not be to give Chinese firms more access to the U.S. market; rather, it should be to give U.S. state and local governments more options to choose from when looking at how best to build new energy infrastructure and create local jobs.

Securing project financing

Commercial projects cannot break ground without financing. That is an area where foreign direct investors of all stripes can play a particularly critical role. Over the past decade, new energy projects have struggled to obtain financial backing in the United States, particularly clean energy projects. U.S. renewable deployment took off in the mid-2000s right before the global financial crisis crippled lending activity and the U.S. shale gas revolution triggered a long price slide in natural gas.⁵³ U.S. equity investors and debt lenders were conserving capital and, to the extent that they were financing new projects, many assumed renewable energy would not be able to compete in an era of cheap and abundant shale gas.⁵⁴ Traditional U.S. lenders viewed renewable energy as a risky bet. So the few loans that actually were available came with high interest rates, short repayment timelines, and large equity contribution requirements—the amount of capital a borrowing firm contributes to the total project cost—that in some cases required borrowers to have enough cash on hand to cover 50 percent or more of the total development costs.⁵⁵

Foreign direct investment helped fill the gap. Chinese investors were particularly interested to support clean energy projects because Chinese energy demand was escalating along with the nation's rapid economic growth, and Chinese leaders viewed clean energy deployment as the only way to keep the lights on. Many Chinese firms and Chinese banks viewed the sector as a good bet, not only in China but also in the United States. Furthermore, the global financial crisis did not hit as hard in China as it did in the United States, so some Chinese investors saw the slowdown in U.S. lending as an excellent opportunity to go on a building and buying spree. These investors pursued different business models according to their location in the energy value chain. Some Chinese wind and solar manufacturers aimed to build wind and solar farms in the United States to showcase their products in the U.S. market. For example, Xinjiang Goldwind Science and Technology Company—the Chinese wind turbine manufacturer—invested \$10.5 million to build a wind farm in Pipestone, Minnesota, in 2009.⁵⁶ Goldwind's primary objective was to demonstrate the company's turbines in the U.S. market, but they made sure to procure 60 percent of the overall project equipment from U.S. suppliers to make the project a clear win for both nations.

Other investors came to construct manufacturing plants in hopes that manufacturing their products locally would improve U.S. sales. In 2013, Chinese electric vehicle producer BYD constructed an electric bus manufacturing plant in Lancaster, California, to sell electric buses to mass-transit authorities, many of which have “buy local” provisions in their procurement budgets.⁵⁷ In addition to greenfield investments—constructing a new power plant or manufacturing facility—Chinese firms also sought merger and acquisition opportunities. For example, Chinese state-owned oil majors came to the United States to acquire oil and gas assets, and Chinese auto-parts manufacturer Wanxiang has acquired bankrupt U.S. electric vehicle and electric vehicle battery firms.⁵⁸

Today, the United States is no longer in the midst of a financial crisis and renewable energy technologies have proven to be price competitive even in an era of cheap and abundant natural gas. As a result, U.S. equity investors and debt lenders are supporting clean energy projects across the nation. But there are still plenty of gaps to fill, and there is still a high demand for foreign direct investment in this sector.⁵⁹ From a local government perspective, a strong investment market is only helpful to the extent that it supports employment and project development in one’s home region, and in that respect, Chinese investors are still providing critical lifelines. That role includes not only financing new projects but also saving floundering firms. In 2014, Wanxiang invested \$149.2 million to acquire Fisker, the bankrupt U.S. electric-vehicle manufacturer based in Anaheim, California.⁶⁰ The competing bidder, Hybrid Tech Holdings, was only willing to pay up to \$55 million for the company, an amount that would not have covered Fisker’s outstanding debts.⁶¹ Wanxiang injected new capital into the bankrupt firm and is expanding its technology development and vehicle-assembly operations in the United States. With Wanxiang capital support, Fisker is also repatriating production facilities that were previously located in Finland, a move that is expected to create 150 new full-time jobs at a new Fisker factory site in Moreno Valley, California.⁶²

U.S. companies interviewed for this report state that financing is still particularly hard to obtain for breakthrough technology projects. When a U.S. firm is deploying a breakthrough technology solution or combining multiple proven technology solutions in new ways, U.S. investors tend to view those projects as high-risk and back away. Or, in the case of lending institutions, U.S. investors may impose high interest rates and short repayment timelines, thus increasing the overall project cost. Chinese banks tend to have a better risk appetite for breakthrough projects, particularly when those projects involve a Chinese partner. The Export Import Bank of China, for example, has agreed to support a breakthrough clean coal project in

Texas with a nearly \$2 billion loan on favorable lending terms; in return, Summit Power, the project developer, will utilize China Huanqui Contracting & Engineering Corporation as the engineering, procurement, and construction contractor.⁶³ When Chinese firms and Chinese banks step in to fund breakthrough technology deployment projects, it can be a big win for U.S. companies and the U.S. energy economy.

To be sure, Chinese investors are not the only foreign direct investors playing this role; support comes from multiple nations. Japanese firms are currently providing critical financing for the \$1 billion Petro Nova project, a clean-coal and carbon-capture demonstration project currently under construction in Houston, Texas.⁶⁴ NRG Energy, a clean energy company with dual headquarters in Houston and New Jersey, is partnering with the Japanese energy firm JX Nippon Oil and Gas Exploration Corporation to develop the project. NRG and JX Nippon are each contributing around \$300 million, the U.S. Department of Energy Clean Power Initiative has provided a \$7 million grant, and Japanese banks are providing another \$250 million in project financing.⁶⁵ Total Japanese funding exceeds total U.S. funding for a project that is creating American jobs and providing cleaner power for American citizens.

It is also important to note that not every Chinese firm comes with financing in-hand. Chinese direct investors run the gambit from massive state-owned firms to scrappy start-ups. Private Chinese firms can sometimes struggle to hit financing targets, just like any other private firm. For example, in 2011, Wanxiang announced plans to construct a 20-megawatt solar farm at the Chicago-Rockford International Airport, but Wanxiang and Chicago-based New Generation Power later had to break the project down into phases due to difficulties attracting private sector funding.⁶⁶ Thus far, Wanxiang and New Generation are operating a 3-megawatt solar plant on the site; they hope to eventually expand to the full 20-megawatts if they can attract enough funding to support a project of that scale.⁶⁷

U.S. state, county, and city governments often provide targeted financial incentives to attract and support desirable projects, and those incentives can be critical for getting new projects off the ground. In some cases, local officials draw from federal or state grant and loan programs to provide seed funding and make the project more attractive to commercial banks and other private sector investors.⁶⁸ State and local government officials can also provide cost-reduction incentives such as discount land leases, tax abatements, and tax incentives; these local packages can be particularly critical for clean energy projects, which often have narrow profit margins. When structured correctly, these packages can also give local government officials and local citizens a voice in how a project is developed.⁶⁹

For instance, the Clark County Commission in Nevada agreed in 2011 to lease county land to Chinese energy firm ENN Group for a massive solar manufacturing, generation, and technology research complex. In exchange for the discount land rates—and in response to local citizen demands—ENN committed to deliver at least 1,000 local jobs, to source project materials locally, and to meet a timeline for project development benchmarks. ENN signed a land-lease contract with Clark County but was unable to secure a power purchase agreement for the solar generation plant. Based on the terms of the contract with the county, ENN had to forfeit the lease.⁷⁰ Although the ENN project did not move forward, ENN's preliminary investment activity boosted interest in the region, and multiple U.S. solar firms are now bidding against one another to lease the ENN land and build a solar farm in Clark County.⁷¹

In the United States, it is not uncommon for local citizens to object to a potential foreign investment deal. If the investor cannot assuage those concerns, the lack of local political support can undermine the project. For example, in 2014, Guizhou Guochuang Energy Holding Group cancelled plans to acquire Tennessee coal producer Triple H Coal Mining LLC for \$626 million after Tennessee residents opposed allowing a Chinese firm to engage in mountaintop mining.⁷² From a U.S. policy perspective, the primary goal for any foreign direct investment program should be to give U.S. enterprises and U.S. state and local governments a broader array of choices for economic development. Expressing local opposition to undesirable projects is just as important as expressing local support for good projects, and the ability to set a high bar is what separates the United States from many other foreign direct investment destinations around the world.⁷³ The current roster of successful Chinese direct investments suggest that the United States has unique comparative advantages that make the U.S. market a highly attractive destination for foreign direct investors from China and others nations. Setting a high bar for those investors to meet does not prohibit local governments from attracting these projects in regions with good incentive policies and good networking programs.

Managing national security risks

It is important to note that not all sectors of the energy value chain should be open to foreign direct investment. If Chinese state-owned energy companies were allowed to acquire critical sections of the U.S. electric grid, for example, those companies could theoretically utilize that control to disable the U.S. economy during a potential future U.S.-China conflict. That is why the United States has a vigorous national security review process for these types of foreign-invested transactions. The U.S. Committee on Foreign Investment in the United States has the authority to review foreign direct investment transactions to determine whether those transactions pose a national security threat. In the event that CFIUS does identify a threat, the committee can force the involved parties to alter the terms of the deal or block the transaction outright.⁷⁴

CFIUS involvement in inbound Chinese direct investment has attracted significant attention in recent years, particularly from Chinese companies trying to figure out which types of investments are welcome in the United States. High profile cases that are often cited by potential investors include:

- In 2005, China National Offshore Oil Corporation issued an unsolicited \$18.5 billion bid to acquire Unocal Corporation—the petroleum exploration and development firm based in California—and set off a political firestorm in Washington, D.C.⁷⁵ Multiple members of Congress opposed the transaction and called on CFIUS to block the planned acquisition due to the fact that it would give a Chinese state-owned enterprise full control over U.S. oil assets. CNOOC realized that the deal was unlikely to be approved and therefore dropped the bid.⁷⁶
- In 2012, Ralls Corporation invested around \$20 million to acquire development rights for four 10-megawatt wind farms near Echo, Oregon. CFIUS flagged the projects as a security concern due to their location near a U.S. naval facility and, based on CFIUS recommendation, President Obama issued an executive order forcing Ralls to divest the wind projects.⁷⁷

- In 2013, the CFIUS approved Wanxiang America's planned acquisition of U.S. battery-maker A123 Systems. To facilitate CFIUS approval, Wanxiang and A123 Systems had agreed to exclude the A123 business units with U.S. military contracts from the acquisition deal and to sell those units to an Illinois company for \$2.25 million.⁷⁸
- In 2013, the CFIUS approved the CNOOC acquisition of Nexen drilling leases in the Gulf of Mexico but reportedly required CNOOC to cede operational control over those leases in order to mitigate national security concerns and gain CFIUS approval.⁷⁹

Since 2005, this pattern of CFIUS review—which now includes multiple high-profile success cases—has helped establish a precedent for the types of deals that will generally be welcomed, the types of deals that will generally be blocked, and the modifications that may be needed to address U.S. national security concerns. CNOOC's failed 2005 bid for Unocal gave many Chinese firms the perception that the U.S. security review process is biased against Chinese companies. CAP interviewed multiple Chinese companies, U.S. companies, U.S. government officials, and U.S. law firms for this report and found that those complaints of bias are unfounded. Chinese firms who have successfully traversed the CFIUS process report that it is relatively straightforward and can be a transparent process, particularly when Chinese firms obtain expert U.S. legal counsel.

When deals do fall apart over security concerns, it is generally due to a lack of Chinese investor understanding about how to navigate the U.S. market. Some Chinese firms wait until the terms of a deal are already locked in before hiring U.S. legal counsel to guide the company through a potential security review, which makes it much harder to design a transaction to address potential U.S. national security concerns. These problems are getting better over time as Chinese investors gain more U.S. market experience and expertise.

Recommendations and conclusion

As of year-end 2014, Chinese firms have invested more than \$12 billion in the U.S. energy economy.⁸⁰ Those investments have saved floundering U.S. companies, built new wind and solar generation plants, and constructed new clean energy manufacturing facilities. Some analysts estimate that total cumulative Chinese direct investment in the United States—including energy and other sectors—could reach \$200 billion by 2020.⁸¹ Not all proposed Chinese direct investments would make sense for the United States, and the federal government should maintain its rigorous CFIUS national security program to screen out investments that would do more harm than good. But to the extent that state and local governments do see a potential economic benefit from attracting particular investors and particular projects, the federal government should do more to assist with such efforts. In particular, there are three steps the United States can and should take in the near term to boost local government capacity for investment attraction.

- **The Obama administration should establish a clean energy investment initiative under the SelectUSA program to provide targeted support for U.S. clean energy investment needs. That program should be housed in the U.S. Department of Energy in order to best leverage current federal government expertise in this sector.** Attracting and vetting potential Chinese direct investors for U.S. energy projects requires expertise in both energy technology and Chinese energy markets. Potential U.S. commercial partners and local government supporters need to determine whether a particular technology solution is well suited to their needs and evaluate the pros and cons associated with particular Chinese companies. Many potential U.S. investment destinations lack that expertise. The primary federal government program designed to help with that process is the Department of Commerce SelectUSA program, but that program does not include a specific energy-sector component. SelectUSA should leverage the U.S. Department of Energy to better support energy-sector investments. Experts in the Department of Energy are best placed to advise on energy technology solutions, and DOE employees are also on the front lines

of U.S. energy-sector engagement with China, a position that gives them useful insights into which Chinese enterprises may work best as direct investors. Housing a SelectUSA energy investment initiative within the Department of Energy is the best way to take advantage of the China energy expertise that the federal government is already developing via the current array of U.S.-China clean energy projects.

- **The U.S. Department of Commerce SelectUSA program should to provide evidence-based, sector-specific investment attraction recommendations to help local economic development offices make smart decisions about where and how to direct their limited resources.** State economic development officials interviewed for this report state that they welcome SelectUSA support but find it difficult to assess which SelectUSA initiatives best suit their specific economic development needs. For example, SelectUSA launched an online State Business Incentives Database where state officials can advertise the incentive policies they offer potential investors.⁸² SelectUSA has also encouraged state and local governments to include project development opportunities in deal books for investment summits. These are great initiatives, but local government officials interviewed for this report say they would like to receive data on what has worked best in specific regions and specific sectors. For example, deal books are likely to be more useful for attracting real estate investors than clean energy investors. For clean energy projects, what many local governments need most is an introduction to the top 5 or 10 Chinese energy companies that would be an ideal fit for a particular technology development project; that type of support is more likely to come through the Department of Energy.
- **The Obama administration should make Chinese direct investment projects in the U.S. energy economy a highlight of the U.S.-China diplomatic track on par with the bilateral projects going forward in the Chinese market.** U.S. companies involved in these projects report that political nervousness about the U.S. market often slows down potential deals. The executive branch can assist with that problem by signaling to Chinese investors that the federal government is happy to lend support when state and local governments think a deal is good for their local economy and a project does not threaten U.S. national security. This support already exists in an ad-hoc way; for example, it is common for high-profile deals to be mentioned in U.S.-China leadership meetings. But that support needs to be extended to cover not only the biggest and most well-connected U.S. corporations but also the small county governments and

start-up firms that do not know how to get their projects into a Strategic and Economic Dialogue agenda. The best way to do that is to include China-to-U.S. energy direct investment as an official component in the U.S.-China diplomatic relationship. This can be accomplished by launching a new bilateral initiative under the Strategic and Economic Dialogue or at an upcoming presidential summit, for example.

In September, Chinese President Xi Jinping will visit Washington for the next U.S.-China presidential summit. New energy announcements are always a highlight of those meetings, and Washington and Beijing should make this year's summit a showcase for demonstrating how U.S. and Chinese firms can work together to build concrete projects not only in China but also here in the United States.

About the author

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- their experiences in a changing investment and policy landscape. CAP also hosted a closed-door roundtable on Chinese energy investment in spring 2014 to foster a back-and-forth discussion among U.S. energy companies, state government representatives, and federal government experts. This report incorporates information gleaned from the interview series and the spring 2014 roundtable. For the February 2013 issue brief, see Melanie Hart, "Increasing Opportunities for Chinese Direct Investment in U.S. Clean Energy" (Washington: Center for American Progress, 2013), available at <https://www.americanprogress.org/issues/security/report/2013/02/11/52576/increasing-opportunities-for-chinese-direct-investment-in-u-s-clean-energy/>.
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The Center for American Progress is an independent, nonpartisan policy institute that is dedicated to improving the lives of all Americans, through bold, progressive ideas, as well as strong leadership and concerted action. Our aim is not just to change the conversation, but to change the country.

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As progressives, we believe America should be a land of boundless opportunity, where people can climb the ladder of economic mobility. We believe we owe it to future generations to protect the planet and promote peace and shared global prosperity.

And we believe an effective government can earn the trust of the American people, champion the common good over narrow self-interest, and harness the strength of our diversity.

Our Approach

We develop new policy ideas, challenge the media to cover the issues that truly matter, and shape the national debate. With policy teams in major issue areas, American Progress can think creatively at the cross-section of traditional boundaries to develop ideas for policymakers that lead to real change. By employing an extensive communications and outreach effort that we adapt to a rapidly changing media landscape, we move our ideas aggressively in the national policy debate.

