

**Financing and Building SunZia: Is It Possible?**  
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**Summary**

Bid solicitation schedules by California’s large utilities for renewable energy facilities will not permit the signing of power purchase agreements (PPAs) for New Mexico’s wind energy delivered through SunZia before mid to late 2017, and even then, procurement priorities may not permit the signing of sufficient PPAs to finance and build the project. Construction of SunZia cannot begin before late 2017 or early 2018 at the earliest in contrast to what SunZia states. Only Pacific Gas and Electric (PG&E) and Southern California Edison (SCE) can purchase large-enough blocks of renewable energy to support SunZia.

PG&E did not solicit bids for new renewable energy projects in 2014. In 2013 PG&E solicited only incremental resources to maintain California’s 33% Renewable Portfolio Standard after 2020, indicating that the utility has already signed the necessary contracts to achieve the 33% goal by 2020. SCE did seek new bids for utility-scale renewable energy facilities in 2014 but would not accept any that contained Category 2 resources, which would exclude all wind-generated electricity delivered through SunZia.

Arizona’s great difficulty in penetrating the California renewable energy market – even with excellent resources, grid access, and physical location – demonstrates how very difficult it will be for New Mexico to access the California market even by constructing SunZia. California’s intense in-state competition works strongly against Arizona and New Mexico.

**Projected Time Delays for SunZia**

If SunZia does obtain its federal permits in the first half of 2015, it seems unlikely that the project can obtain all Arizona and New Mexico state permits before 2016. The project must also fully secure the right-of-way needed. Only Pacific Gas and Electric (PG&E) and Southern California Edison (SCE) require large-enough blocks of renewable energy to support New Mexico wind development on the scale required to justify a 500-mile-long transmission system. Each of these utilities solicits bids for its next increment of renewable energy projects in December of each year. Because New Mexico developers cannot submit bids for California projects without SunZia having obtained all of its permits, these developers will most likely not be able to submit bids before December 2016.

PG&E signs final agreements on projects after April of each year, whereas SCE makes its final decisions in October of each year. This means that New Mexico developers would not know whether their bids are accepted before well into 2017, and only then could SunZia use any resulting power purchase agreements (PPAs) to secure financing for the New Mexico portion of the project. California utilities are highly unlikely to purchase enough power in one block to convince financiers to fund SunZia, but even if those utilities did, construction of the New Mexico portion of SunZia could not begin before late 2017 or early 2018. Independent construction of the Arizona portion of the project depends on whether the SouthWestern Power

Group can secure a power purchase agreement for the full output of its permitted but not built 1,000-megawatt Bowie, Arizona, natural gas power plant. The SouthWestern Power Group proposed SunZia and manages the project.

SunZia's website says that as of January 2014, project construction will begin in 2015 and be complete by 2018. SunZia also states that financing will be complete by mid-2015. These dates take into consideration the acceptance of DoD's mitigation proposal. If sufficient power purchase agreements must be secured before financing and construction can begin, as SunZia states, these dates are too optimistic by up to 3 years, at least with respect to the New Mexico portion of the project.

If California utilities do not request bids to meet future RPS requirements in 2016 or are unwilling to consider out-of-state power – what has happened in 2014 – then New Mexico developers must wait until California utilities reopen their requests for bids in a subsequent year. This will further delay any potential private funding for SunZia and project construction to central New Mexico until after 2018.

### **Solicitation Requirements of Pacific Gas and Electric and Southern California Edison**

A review of RPS solicitations by Pacific Gas and Electric for renewable energy proposals (December 29, 2014) shows that PG&E is not requesting bids to meet RPS requirements in 2014. In December 2013 the utility made a general request for the incremental amount of renewable energy needed each year *after* 2020 to maintain its 33% RPS as the state's overall electrical use grows. This indicates that PG&E has secured the renewable energy it needs through 2020 to meet the 33% standard. PG&E does not say when it will resume RPS solicitations.

A current review of RPS solicitation requests for Southern California Edison (December 29, 2014) shows that the utility is accepting RPS proposals in December 2014 but will not accept any that contain Category 2 resources. This renders all New Mexico renewable energy resources delivered with SunZia ineligible for consideration.

The Los Angeles Department of Water and Power (LADWP), California's third largest utility, will not increase its use of wind-generated electricity through 2040 and stipulates that all new renewable generation must be directly connected to its transmission system. LADWP will not accept out-of-state power. San Diego Gas and Electric is not soliciting offers to meet RPS requirements in 2014 but did so in 2013. The 2013 solicitation states that new RPS facilities must not exceed 100 megawatts in size, far below what can support SunZia. SG&E's 2013 solicitation did accept Category 2 resources.

These policies greatly affect the amount of New Mexico renewable energy that can qualify for sale to California, which bears directly on SunZia's viability. Any power sales large enough to support funding SunZia to central New Mexico now appear to depend on increasing California's RPS beyond 33%, something the California legislature is considering. No decisions have been made on this yet, however. A likely RPS target is 40%–50%. Without this increase, California utilities are not in a position to consider New Mexico power delivered through SunZia, and even

with the increase, procurement policies and preferences by PG&E and SCE and stiff in-state competition work against New Mexico's – and SunZia's – fortunes.

### **Selling Out-of-State Renewable Energy to California –Arizona's Experience**

In order to understand New Mexico's prospects for helping meet California's Renewable Portfolio Standard (RPS), it is worth examining how a neighboring state such as Arizona has fared with this. Since 2002 when California's initial RPS went into effect, Arizona has contributed only two renewable energy projects to California's renewable energy mix, both solar photovoltaic systems totaling 440 megawatts of power, the 290-megawatt Agua Caliente project near Yuma and the 150-megawatt Mesquite Solar 1 project west of Phoenix. Pacific Gas and Electric has purchased the power from both facilities. Not a single outstanding power purchase agreement with Arizona developers exists for more power, and no additional plants are being constructed in Arizona for California's use. The Mesquite Solar project has the potential to be expanded to 700 megawatts, but no further work is currently scheduled for the site. PG&E and SCE anticipate obtaining 80% of their future renewable energy from solar sources, which strongly favors Arizona over New Mexico if these utilities access out-of-state power.

Even with California's huge need for renewable energy, Arizona has contributed little to California's energy mix in spite of being immediately adjacent to the state and having excellent resources. Currently several thousand megawatts of Arizona renewable energy projects are poised to sell power to California, but California utilities have yet to purchase the power. Penetrating the California market has been extremely difficult even during the height of California's renewable energy boom. In addition, in 2013 the Bureau of Land Management approved BP Wind Energy's 500-megawatt Mohave County Wind Farm in western Arizona, but again, no utility has purchased that power and no prospects for its sale are imminent. This exemplifies the great difficulty that New Mexico developers will have trying to sell renewable energy to California, especially when any sales are contingent upon first building a 515-mile-long transmission system that will require a very costly and complex burial of a portion of its lines.

The enormous competition within California to provide renewable energy to the state's utilities makes securing power purchase agreements for New Mexico developers that much more unlikely without a transmission system in place. In 2011 alone developers submitted 1,000 bids to California utilities for renewable energy projects totaling 91,000 megawatts of capacity, more than the total power requirements of the entire state. In 2012 San Diego Gas and Electric received 238 bids for renewable energy facilities and selected only 2. New Mexico developers must face this level of competition.

### **California Selection of Renewable Energy Providers**

The selection of renewable energy providers by California utilities is a rigorous process designed to protect both the utility and ratepayers. Public utilities go out for bid for RPS projects usually in December and then select a shortlist of projects for review by the state's Procurement Review Group. After final selection of providers by this group, the California Public Utilities Commission must approve the selected projects.

Signing a Power Purchase Agreement with a prospective provider always entails a certain risk that the project cannot be completed and the power delivered by the contract date. Three additional factors increase the risk for projects delivering power through SunZia: (1) a 515-mile-long transmission system must be built in conjunction with the renewable energy facility, (2) a portion of the transmission project must now be buried, adding great complexity to the project's construction and uncertainty to the completion date, and (3) any fulfillment of a power purchase agreement depends on signing sufficient additional power purchase agreements to achieve the level of contractual support needed to finance SunZia. The sum of these four risk factors makes signing contracts for New Mexico wind energy very risky for California utilities. The enormous abundance of other renewable energy projects to choose from strongly disadvantages New Mexico projects that might deliver renewable energy through SunZia.

In addition, before a power purchase agreement can be approved, any prospective renewable energy provider must provide documentation to the California Public Utilities Commission that the full transmission path from the facility to the buyer's service area has been secured. Because SunZia ends at Eloy, Arizona, providers must secure transmission rights on at least two additional transmission systems to deliver power to California markets, the most important system being the new 500-kilovolt line between the Pinal Central substation and the Palo Verde hub. While that line has a maximum capacity of approximately 1500 megawatts, available transmission rights may be less than 1,000 megawatts given other commitments on the line and prior interconnection requests by Arizona solar energy providers. Through 2011 these interconnection requests totaled 3,500 megawatts of capacity, more than double the line's capacity. Most of this Arizona renewable energy would be delivered westward to California if developers can obtain contracts. This competition further reduces the capacity available to New Mexico renewable energy providers.

If the financing of SunZia to central New Mexico depends primarily on the signing of power purchase agreements with California utilities, the transmission constriction in central Arizona will limit the amount of power that can be sold to less than that required to finance even a single SunZia line. As SunZia's David Getts has noted, lenders require contracts for 75%-80% of a merchant line's capacity before being willing to lend. For one SunZia line, the amount of contracted transmission rights would have to be between 1125 and 1200 megawatts. Two lines would require twice this, or between 2250 and 2400 megawatts. The available transmission capacity in central Arizona could easily be less than the minimum 1125 megawatts required to finance even one line to central New Mexico. SunZia has not assessed how much central Arizona transmission capacity will be available for sale given the other commitments on that system. This oversight potentially dooms completion of SunZia to central New Mexico's wind fields.