

SunZia's Fatal Flaw: Arizona's Transmission System

Terminating SunZia at the Pinal Central substation in central Arizona is a critical deficiency in the project that will greatly restrict development of New Mexico's renewable energy for export and make it very difficult if not impossible to finance the project. Access to the California market is essential to New Mexico's energy plans and SunZia's success, as Arizona has no need for New Mexico's renewable energy. Our state has an overabundance of it just as New Mexico does, and Arizona's focus on renewable energy is the very same as yours – developing it for export to California.

First, by not extending the project to the Palo Verde hub west of Phoenix, SunZia does not deliver New Mexico's power into a California balancing authority, which is required for the power to fall into Category 1 of California's renewable energy classification. By law, at least 75% of California's renewable energy must come from that category, meaning that New Mexico power producers cannot qualify to provide that percentage. By the time SunZia is completed – if completed on schedule – 85%-90% of the renewable energy capacity needed to meet California's 33% renewable portfolio standard will be in place. Of the remaining 10%-15%, New Mexico will qualify to provide only 2.5% to ~4%.

Second, the Pinal Central substation at Eloy, Arizona, is relatively new, with little transmission capacity extending from it until recently. Four utilities (the Salt River Project, Tucson Electric Power Company, and Electrical Districts 4 and 5) have just completed a 500-kilovolt line from the substation to the Palo Verde hub to serve new customers in the south Phoenix metro area and Tucson. Without that line, essentially no transmission capacity is available for sale to deliver New Mexico power westward (see the attached diagram). At most, available capacity would be a few hundred megawatts on much lower-voltage lines, and transmission paths would be very convoluted and indirect.

This new line has a capacity of approximately 1500 megawatts, but Arizona utilities must retain a certain portion of that for their own use. In addition, that line already has >3,500 megawatts of solar energy interconnection requests on it, more than twice its capacity. This line passes through one of the richest solar energy zones in Arizona, and renewable energy developers are eyeing the line for their own export plans. When these two uses are considered, the amount of transmission capacity available on this line for transferring New Mexico power to California is likely to be well less than 1,000 megawatts.

This is likely to be too low to support the magnitude of upfront California power purchases needed to finance even one line to central New Mexico. SunZia cannot be built without utilities first committing to buy a certain level of power. For other merchant projects such as the Wyoming-Colorado Intertie Project, the purchase threshold for financing is 75% of a line's capacity. To build one SunZia line would thus require more than 1,000 megawatts of upfront power purchases. While having commitments from potential energy producers such as First Wind to use SunZia is important, acquiring financing to build the line depends entirely on achieving this power purchase threshold. SunZia has not stated what that is.

In addition, essentially no transmission capacity would be available for transmitting power from the Palo Verde hub to California without Arizona Public Service building its new 500-kilovolt line to Yuma (see the attached diagram). Both this line and the Pinal Central line have been built with Arizona ratepayer money to serve Arizona needs. They have not been built to transfer power across the state, which Arizona Corporation Commission rules prohibit if that is the stated purpose for building them. Without these two lines, SunZia cannot meet its stated purpose. Using them amounts to a \$400 million subsidy to SunZia and to New Mexico power producers, which is extremely unfair to Arizona ratepayers and very exploitative. This is likely to be a major issue when SunZia applies to the Arizona Corporation Commission for its state permits.

Some power might be transferred to California through the connection at the Willow substation at Bowie, Arizona, by purchasing transmission capacity on Tucson Electric Power Company's 345-kilovolt lines back to the Four Corners and San Juan generating stations. Decommissioning some of the coal-fired generation there will free up several hundred megawatts of transmission capacity to California. However, both the Lucky Corridor and Western Spirit transmission projects would need this capacity to export renewable energy from New Mexico, and using it to contractually deliver SunZia's power would greatly reduce if not eliminate its use by these other projects. This would curtail additional planned renewable energy development elsewhere in New Mexico and undermine the purpose and financial viability of these projects.

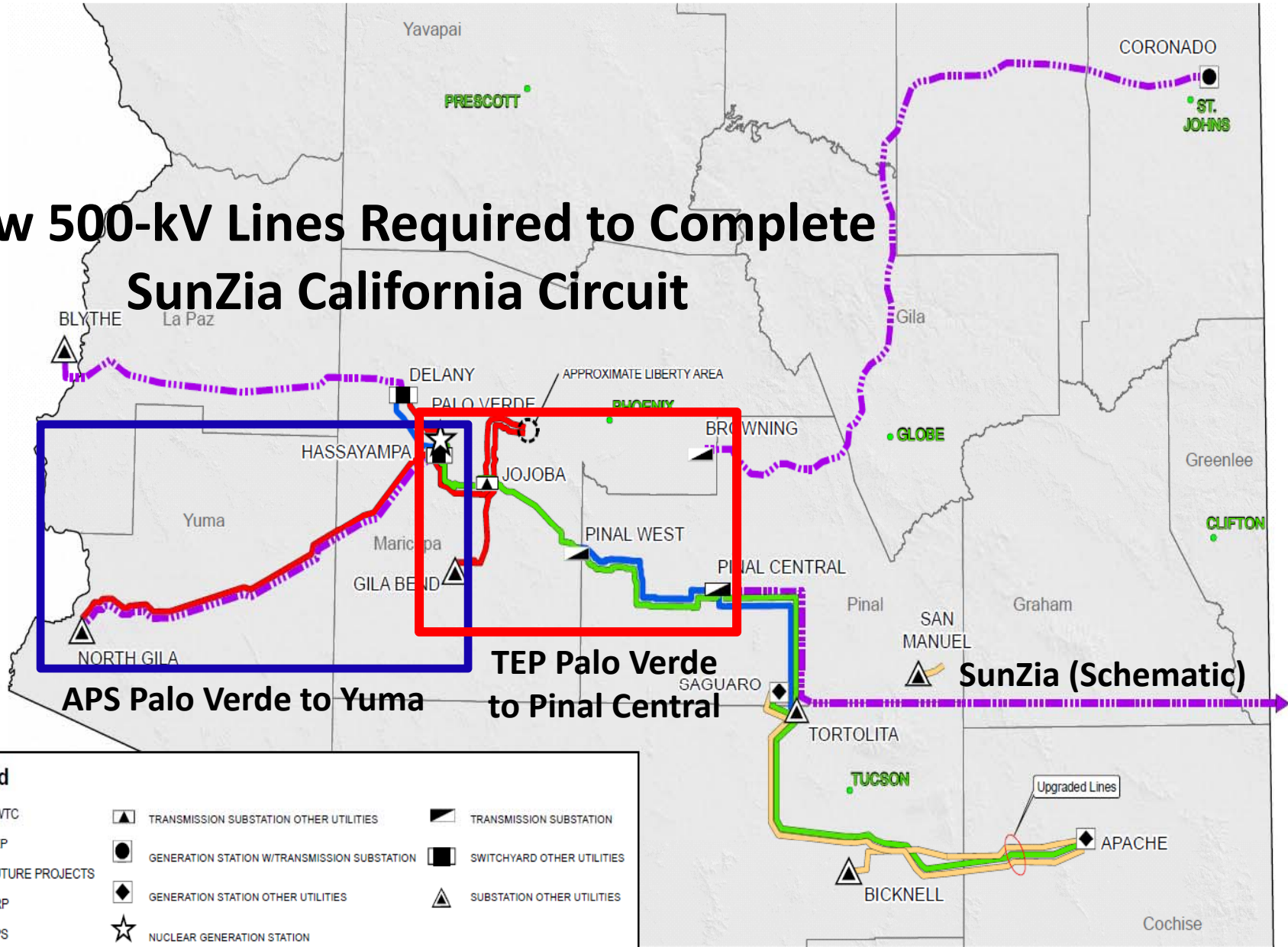
What is needed to meet New Mexico's needs for its energy exports is for SunZia to extend at least one 500-kilovolt line to the Palo Verde hub. In addition, the 500-kilovolt Devers 2 line from the Palo Verde hub to California needs to be completed. The Arizona Corporation Commission blocked this in 2007 because it would not benefit Arizona ratepayers, although it now appears that utilities can work around this and the line will be built. *As things stand, to transfer power to California, New Mexico power producers will be entirely dependent upon what central Arizona utilities build for Arizona's own use, and that will never be sufficient for New Mexico's needs or built on a schedule that can meet them.*

If two 500-kilovolt lines are ever built to central New Mexico, federal financing appears necessary, and then the lines will sit greatly underutilized unless the project is extended across central Arizona. Even then, they may still be underutilized if California utilities decline to purchase sufficient New Mexico power, a very real possibility. For the federal government to proceed with this project as it is – especially with having to bury the lines – would be very wasteful and inefficient. It is certainly unrealistic for a private company to do so.

Norm "Mick" Meader
Co-Chair, Cascabel Working Group
3443 E. Lee Street
Tucson, AZ 85716
(520) 323-0092
nmeader@cox.net

ARIZONA UTILITIES TOP THREE RENEWABLE AND FUTURE TRANSMISSION PROJECTS

New 500-kV Lines Required to Complete SunZia California Circuit



Legend

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| SWTC | TRANSMISSION SUBSTATION OTHER UTILITIES | TRANSMISSION SUBSTATION |
| TEP | GENERATION STATION W/TRANSMISSION SUBSTATION | SWITCHYARD OTHER UTILITIES |
| FUTURE PROJECTS | GENERATION STATION OTHER UTILITIES | SUBSTATION OTHER UTILITIES |
| SRP | NUCLEAR GENERATION STATION | |
| APS | | |

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