

Ivanpah's benefits only starting to be felt

David B. Knox, Riverside Press Enterprise, 11-1-15

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A recent news account about the Ivanpah facility left out some important facts: Ivanpah is, first and foremost, a solar energy generating facility. It is not a hybrid plant.

It uses natural gas simply to maintain the system at night and help ensure maximum solar generation during the day. This natural gas usage was always part of the project's comprehensive, three-year permitting process before the California Energy Commission.

Most importantly, California's renewable portfolio standard clearly defines de minimis use of gas to be less than 5 percent of production, and the Ivanpah plant is well within that requirement. During 2014, out of the 421,187 megawatt-hours of production, only 8,071 were attributable to natural gas, based on reports to the California Air Resources Board.

Unfortunately, the article and editorial compared gas usage today to the plant's generation during the first year of a four-year ramp up to full energy production.

This is the first use of solar thermal technology at this scale, and it was always planned that it would take four years to get to full annual energy production. While the energy the plant generates is expected to nearly double over this period, gas usage at night will remain the same as the first start-up year and usage during the day may decrease as the plant's operators develop greater capability to leverage every photon to maximize solar generation, decreasing reliance on natural gas. As the plant ramps up, the percentage of natural gas usage, as compared with solar energy, will continue to decrease.

And integral to meeting state and federal climate change regulations, during the first full year of operations, Ivanpah's generation avoided more than 150,000 tons of CO2 while producing enough power to support almost 100,000 homes, and more than twice that number when operating at maximum capacity during the peak hours of the day. And as the plant increases solar generation, that amount of emissions avoided and homes served will increase as well.

And it should be noted that the solar thermal power technology used at the Ivanpah plant means that it can continue generating later in the evening, when demand is still high, to meet the needs of California homes and businesses in the early evening, when other solar technologies can no longer produce power.

Advanced solar technologies are being developed based on the principles Ivanpah has proven at scale that have the potential to continuing generating after the sun sets and well past the evening demand peak. Diversity of solar production to provide power during this time of the day is key to maximizing the sun's potential and achieving California's climate goals while keeping the lights on.

Lastly, it is important to note that the plant was not built on undisturbed land, as stated in the article. The land had been previously used for cattle grazing and off-road vehicle use, and was littered with abandoned vehicles and crisscrossed with transmission lines and is within walking distance of a 36-hole golf course, an Interstate, a casino and a shopping mall.

With the care Ivanpah is giving to the wildlife, the environment is being treated much better than it has been

in the past. Additionally, the project purchased 7,200 acres of mitigation land, twice the size of the project site, which was set aside in a trust along with an endowment to manage the land.