

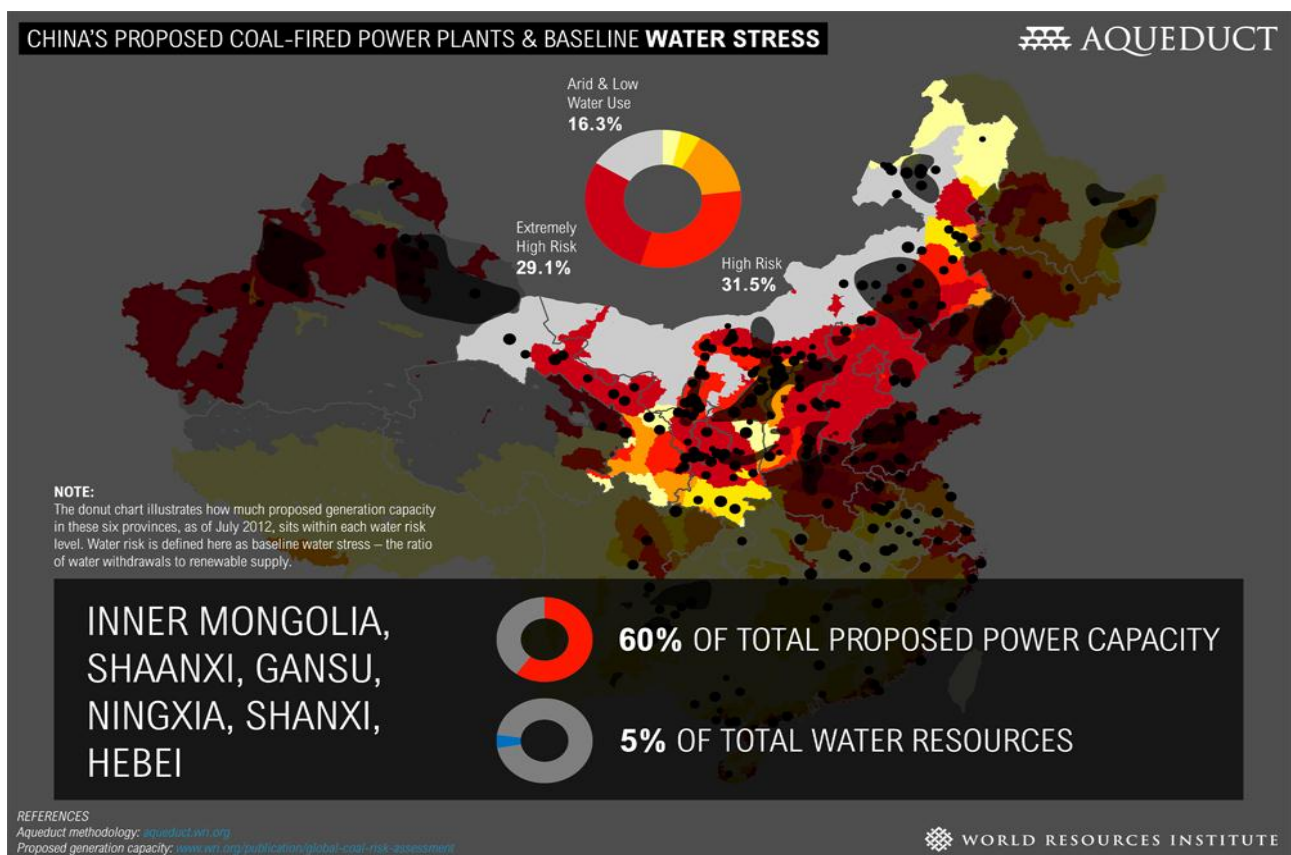
# COAL PLANTS WOULD ADD MORE STRESS TO ALREADY-STRESSED AREAS

## What is Water Stress?

Water stress is the ratio of total water withdrawals to available renewable supply in an area. In high-risk areas, 40 percent or more of the available supply is withdrawn every year. In extremely high-risk areas, that number goes up to 80 percent or higher. A higher percentage means more water users are competing for limited supplies. See the high and extremely high-risk areas highlighted in red and dark red on the maps. For more detailed information, please see Aqueduct's Global Maps 2.0 metadata document. This finding is especially troubling because coal-related industries—mining production, coal-to-chemical, and power generation—are extremely water-intensive. Coal mines depend on water to extract, wash, and process the coal, while coal-burning power plants need water to create steam and cool generating systems. If all of the proposed plants are built, the coal industry—including mining, chemical production, and power generation—could withdraw as much as 10 billion cubic meters of water annually by 2015. That's more than one-quarter of the water available for withdrawal every year from the Yellow River.

## Other major takeaways from our analysis include:

- 60 percent of the total proposed generating capacity is concentrated in six provinces. Those provinces, however, only account for 5 percent of China's total water resources.
- In those six provinces, competition for water between domestic, agricultural, and industrial users is already high: 60 percent of the proposed generating capacity is in areas of high or extremely high water stress.



## **Managing China's Water-Energy Nexus**

The Chinese government has also outlined three national goals for water, called the "Three Red Lines." These "lines" aim to cap annual maximum water use at 700 billion cubic meters (about 25 percent of annual available supply), increase irrigation use efficiency to 60 percent by 2030, and protect water quality to maximize sustainable development.

Those quantity, efficiency, and quality targets are an important first step toward addressing the water-energy trade-off at the heart of China's coal development, but it's important that the country go further. To meet its water cap targets, China needs to slow down coal development and introduce a combination of significant water saving and efficiency programs into the coal industry.

How China responds to its coal conundrum will impact not only the country's water supply, but its farms, ecosystems, other industries, and communities. Will it build out the proposed coal-fired generating capacity without major technology upgrades and exceed water red line targets? Or will it carefully manage water resources and potentially limit coal capacity? Prioritizing water resource management in its decision-making will better position China to balance its competing economic and resource demands.

Source: <http://endcoal.org/resources/majority-of-chinas-proposed-coal-fired-power-plants-located-in-water-stressed-regions/?ref=water>