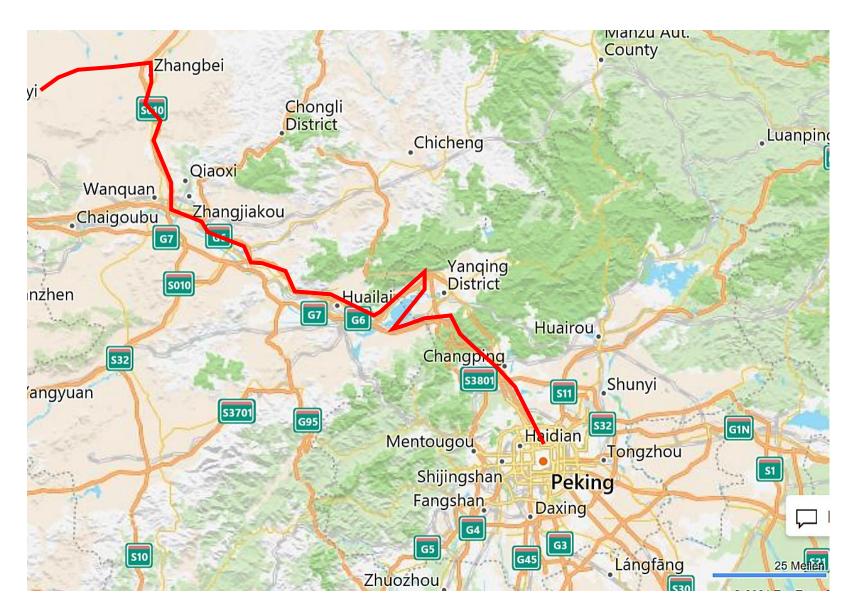


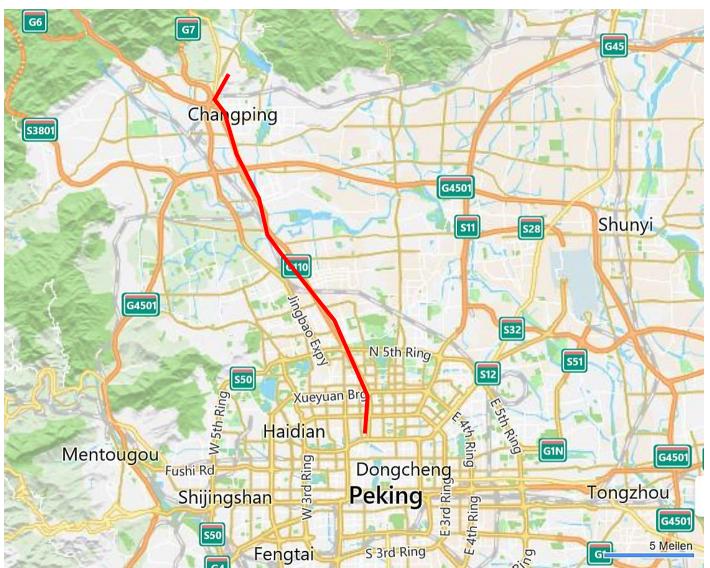
# From Beijing via the Chinese Great Wall towards ZhangBei and the Renewable Energy Pilot Plant of State Grid of China Cooperation





#### The Ming Tombs near Changping





The Ming tombs are a collection of mausoleums built by the emperors of the Ming dynasty of China. The first Ming emperor's tomb is located near his capital Nanjing. However, the majority of the Ming tombs are located in a cluster near Beijing and collectively known as the Thirteen Tombs of the Ming Dynasty. They are located within the suburban Changping, 42 kilometers north-northwest of Beijing's city center

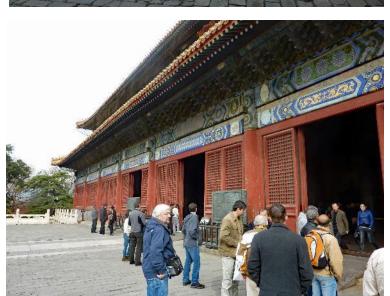
Taken from Wikipedia

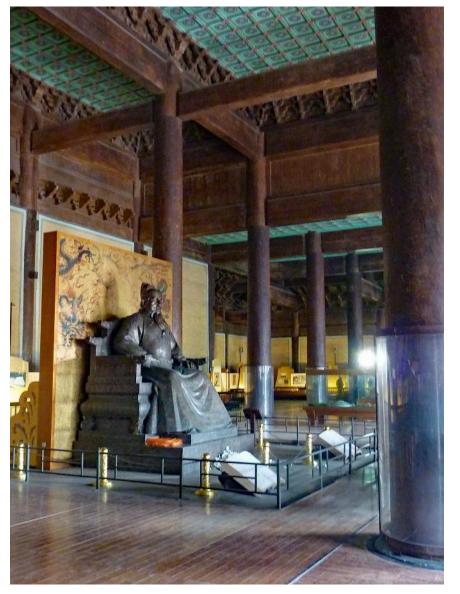


#### **The Ming Tombs near Changping**













Pictures taken by Prof. Schwarz, maps are taken from BING

#### **The Ming Tombs near Changping**









#### A Jade Grinding Workshop near Changping



Jade is an ornamental mineral, mostly known for its green varieties, though it appears naturally in other colors as well, notably yellow and white. Jade can refer to either of two different silicate minerals: nephrite (a silicate of calcium and magnesium in the amphibole group of minerals), or jadeite (a silicate of sodium and aluminum in the pyroxene group of minerals).

China is one of the world leading producers of jade art. It is well known in China for about 8000 years. One of the largest mining areas are in the inner Mongolia region north west of Beijing. So several jade grinding shops are located also in the area. So time to have a look into such an grinding shop

Taken from Wikipedia

#### A Jade Grinding Workshop near Changping









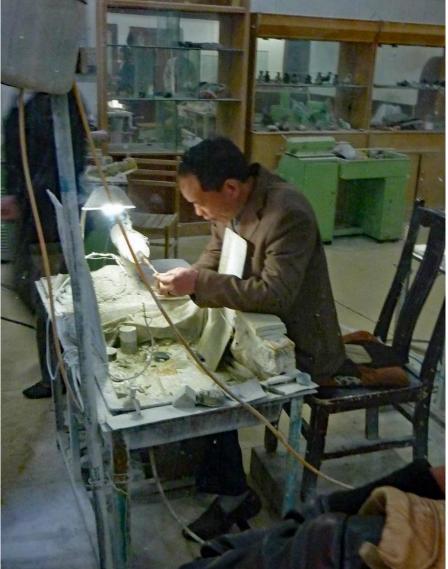
# A Jade Grinding Workshop near Changping











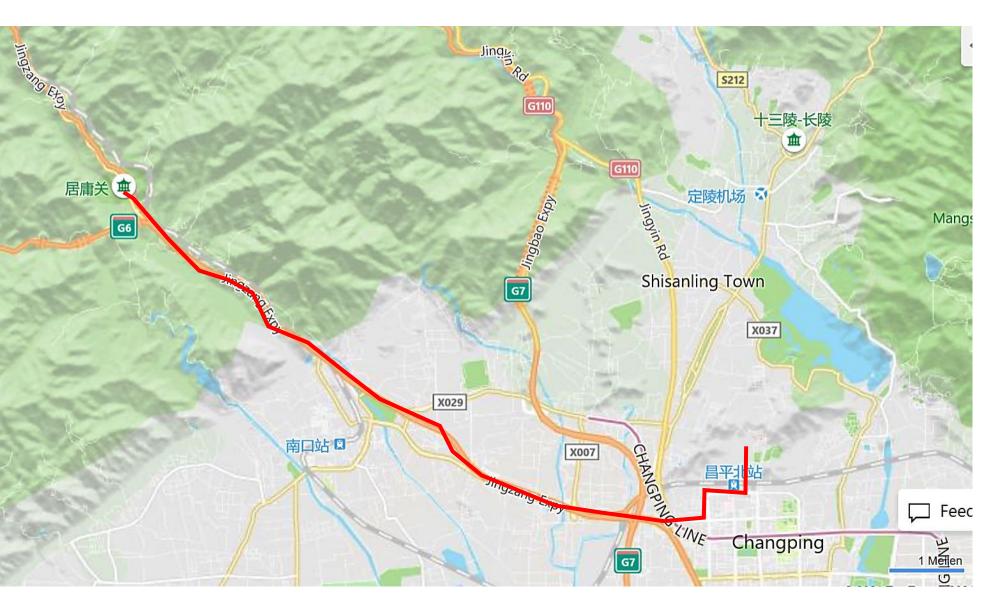




Pictures taken by Prof. Schwarz, maps are taken from BING

#### From Changping towards Juyongguan





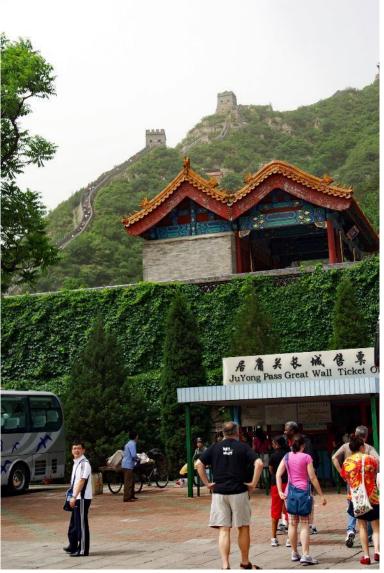
Juyong Pass (Jūyōng guān) is a mountain pass located in the Changping District of Beijing Municipality, over 50 kilometers (31 mi) from central Beijing. The Great Wall of China passes through, and the Cloud Platform was built here in the year 1342.

Taken from Wikipedia









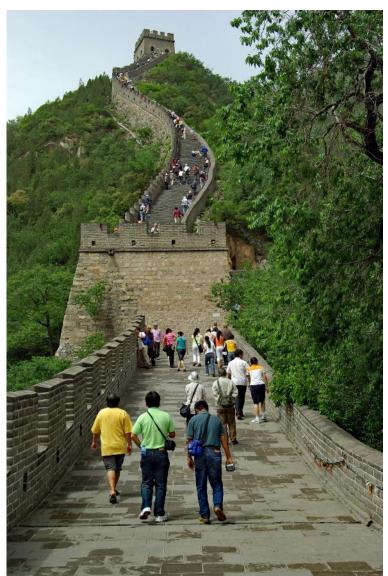


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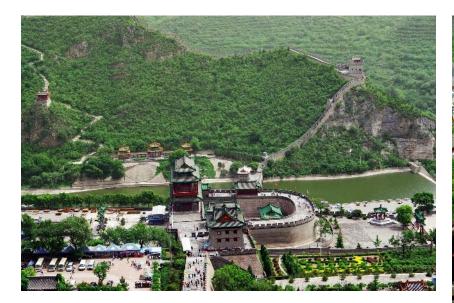




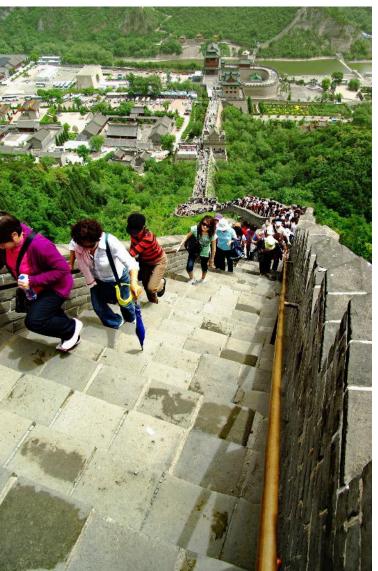


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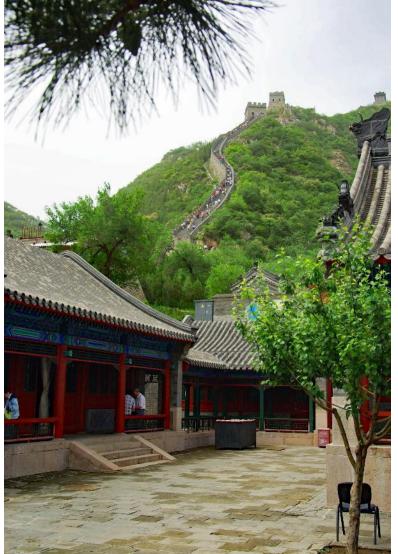




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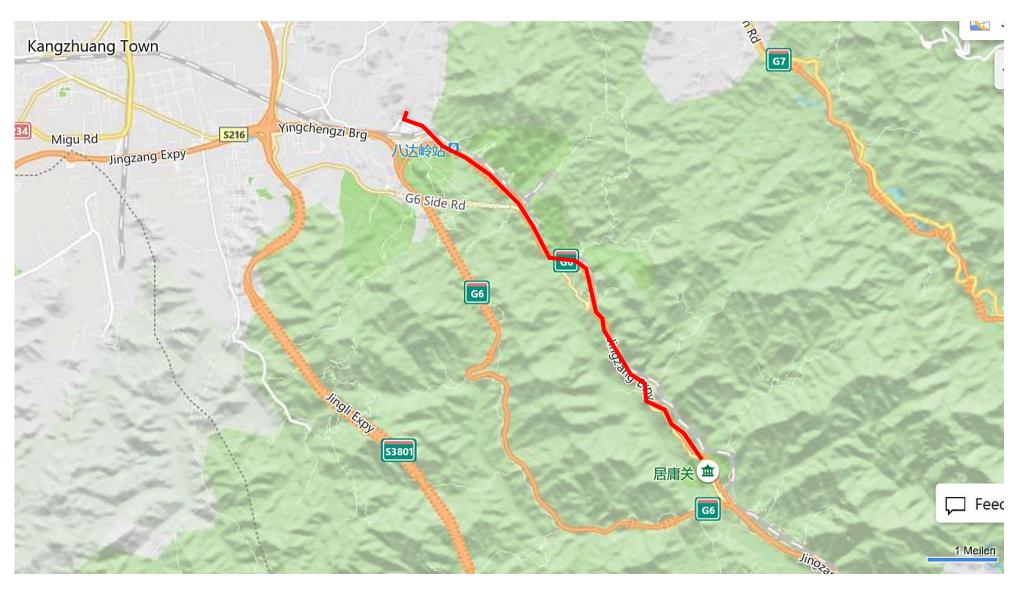






#### From Juyongguan to the Chinese Great Wall in Badaling

















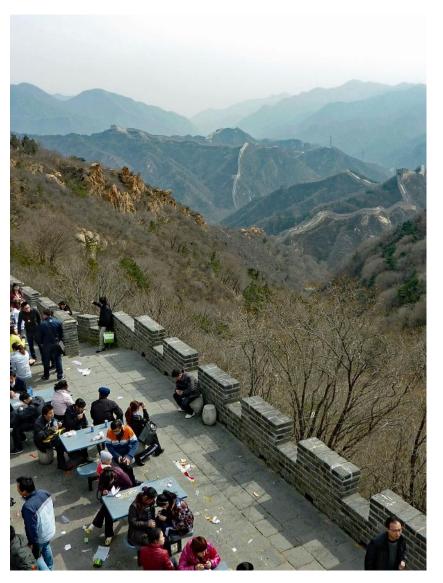


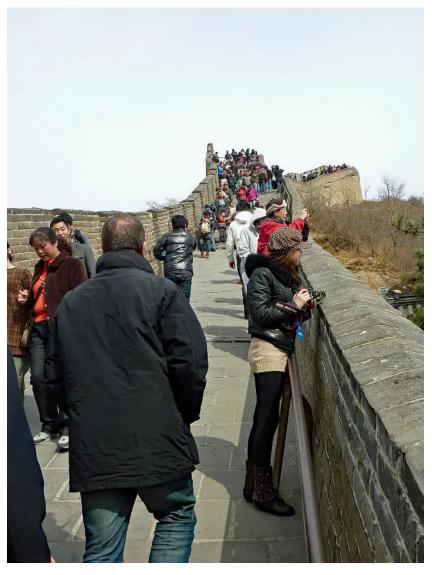
Pictures taken by Prof. Schwarz, maps are taken from BING







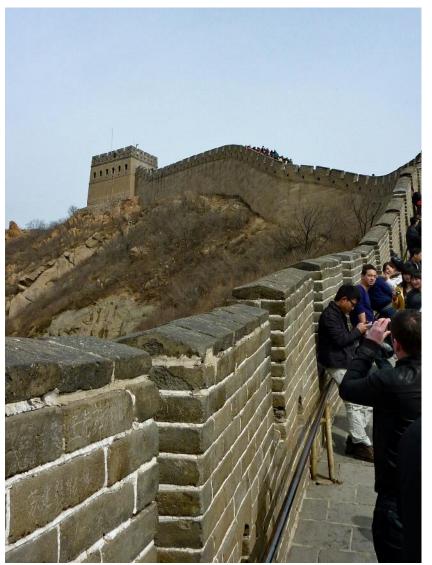


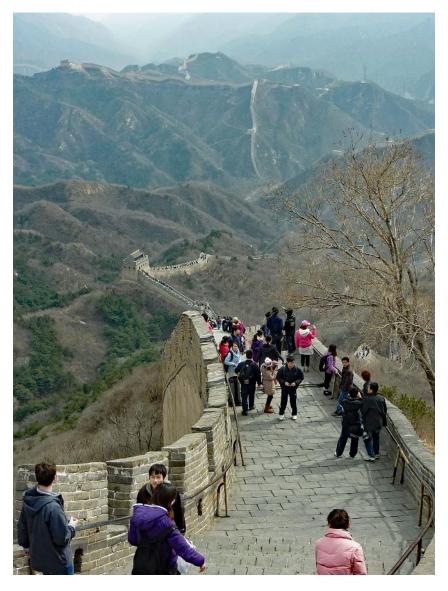












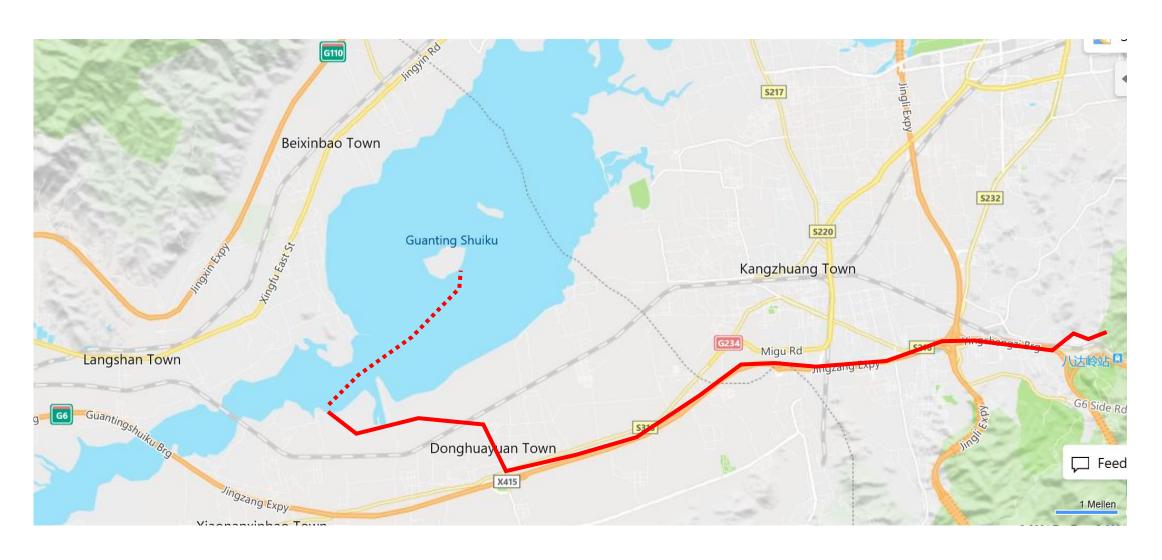
Pictures taken by Prof. Schwarz, maps are taken from BING

















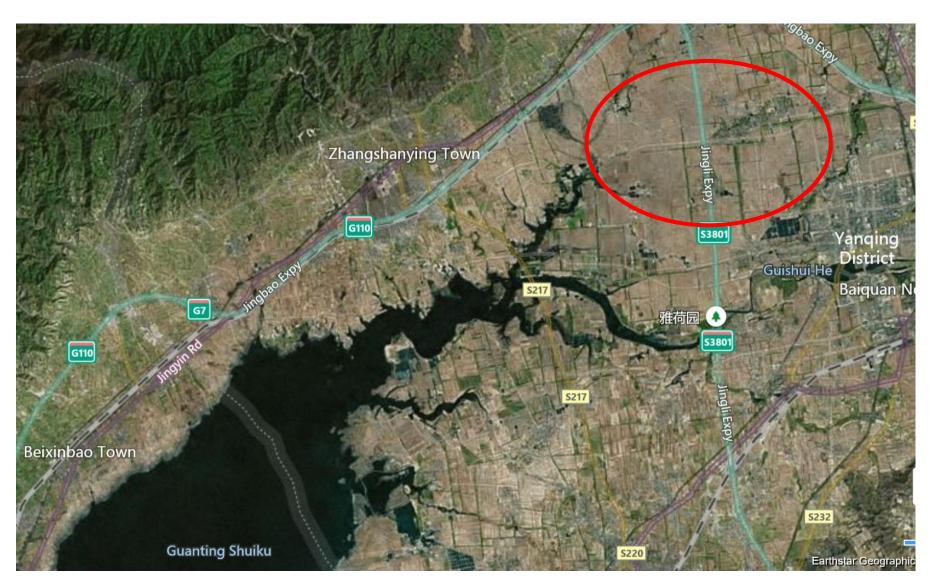












After the boat trip we decided to go for lunch in a Mongolian restaurant.

Whenever you come with a smaller group to such an restaurant the cook want to prepare the meal as fresh as possible. So you must be aware that you will be invited to the cage and will be asked which of the goats you want to have.















... and as it always is, the best will be offered at the end. So we got a soup with the head of the goat inside.





After lunch they offered us to see a bit of the inner Mongolian landscape, either by horse or motor cycle

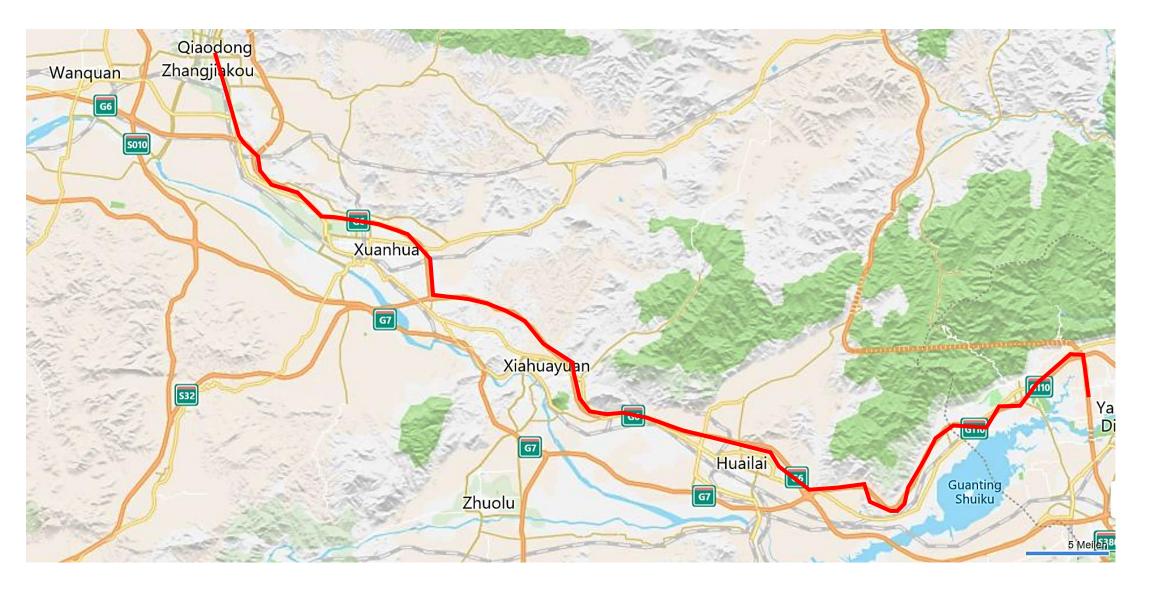






#### Going ahead to Zhangjiakou, the place of the winter Olympic games 2022





#### Going ahead to Zhangjiakou, the place of the winter Olympic games 2022











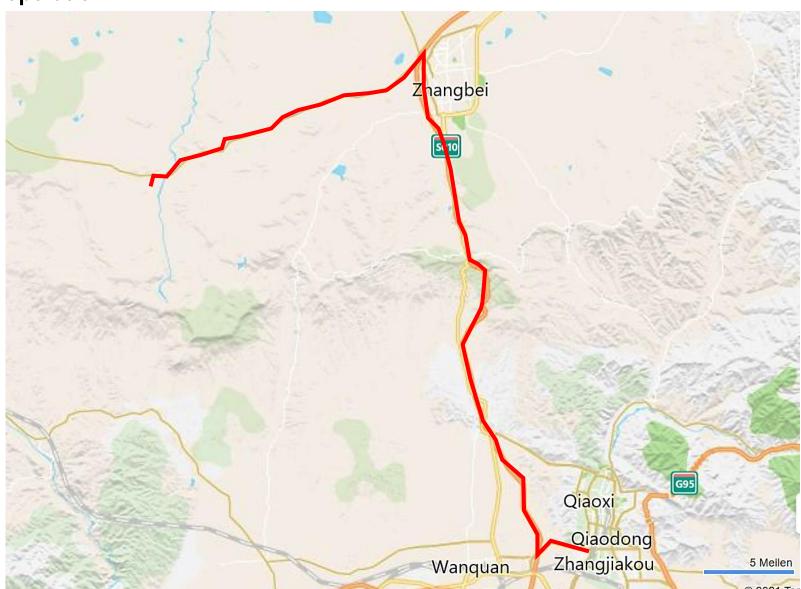




Pictures taken by Prof. Schwarz, maps are taken from BING

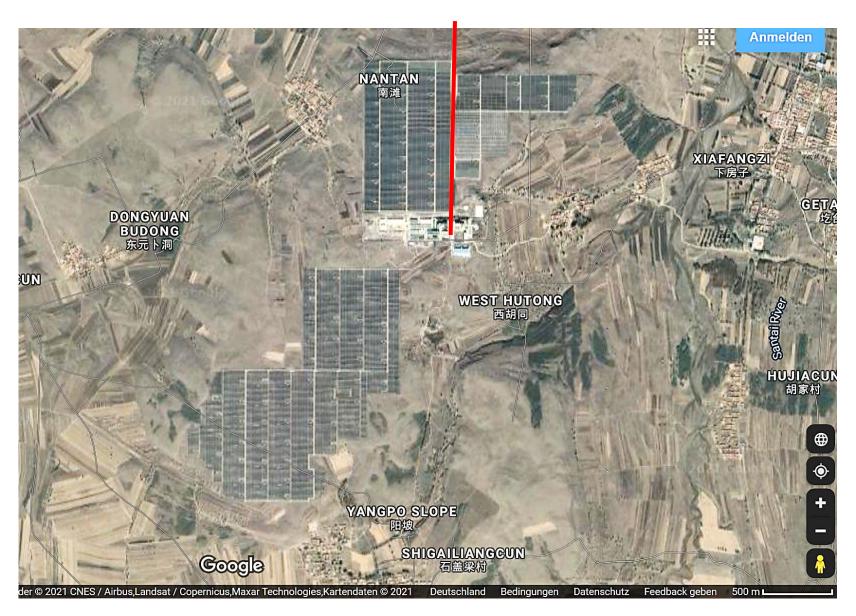
# From Zhangjiakou to Zhangbei and the pilot project of SGCC – State Grid of China Cooperation





The SGCC pilot plant is located about 50 km west of Zhangbei





It consists of about 100 MW of photovoltaic, about 500 MW of wind energy and a large battery of 32 MWh (in 2018). SGCC operates this huge installation as a hybrid power station and investigates how a reliable profile can be generated by these units, e.g. to supply the power demand of Zhangjiakou during the winter Olympic games.





Entering the control building and the visitor center of the pilot plant











The PV installations with 100 MW north and south of the control building area











The wind installations with 500 MW in the background, the high voltage feeding and the filter banks and the buildings with the storage battery.









