# AFEGUARDING THE “ORIGIN” OF LIFE, MADE WATER USE SAFER AND MORE COMFORTABLE


Nandan County of the Guangxi Province has adopted an integrated smart pumping station to address the dilemma of insufficient pressure of domestic water production during peak times.

The accelerated economic development in the Nandan County of the Guangxi Province has given rise to a rapid increase in population, which in turn has meant an increased demand for domestic water consumption. The existing water pipeline was outdated, resulting in frequent shortage of water supply during peak hours. However, the booster pumping station project has adopted Grundfos’ digital integrated smart pumping station. This has effectively addressed the pressing issue of insufficient water pressure in the area and now meets the demands for domestic water consumption, for more than 6,000 households and businesses.

## BACKGROUND

Located on Yunnan-Guizhou Plateau, one of the four plateaus in China, Nandan County is characterised by stark vertical difference. The existing water pipeline was outdated and the difficulty in water supply and consumption haunted the local government and residents. Many residents expressed that using water during peak hours had become almost impossible. “Water supply stoppage frequently occurred in the mornings and you had to rise up early or wait until very late the previous night to fetch water if you desperately needed water before going to work,” complained one of the residents.

As a project for community benefits, the county committee and government decided to build a new pumping station and renovate the old water pipeline. The booster pumping station project aimed to extend water supply coverage and tackle the thorny problem of insufficient water pressure. It set out to satisfy the domestic water consumption needs of more than 6,000 households and businesses in both the east area as well as the Jinhai Agricultural Product Warehousing Trade Center, Nanfang Jiayuan and the new Bus Central Station. “The construction of the pumping station has received great attention from the leadership of Nandan County and the government provided us with the construction site free of charge,” said Huang Qingyun, Chief of Engineering Technology Department of Urban & Rural Water Utility Co., Ltd. of Nandan County, Guangxi Province. “It is all for the comfort and safety of our county,” he added.

## SOLUTION

The booster pumping station project is located at the Bus Central Station of Nandan County, adjacent to the residential communities. It poses big challenges to the safety and manageability of the pumping station. “We built this booster pumping station to drive the development of the overall east area and to meet the national pressure standard,” said Huang Qingyun, before continuing, “Considering the huge pedestrian traffic of the bus station after it has been built, we as the constructor further installed safety

systems in the pump room and water tanks to ensure safe operation of this pumping station in the unattended mode."

Grundfos' integrated smart pumping station incorporates security, door access control system and video functions, with multiple smart control systems. The water quality safety monitoring system, flow monitoring system and cloud-based management and maintenance system allow real-time online monitoring and data upload. The monitoring platform then permits timely and accurate control of the operation. Water quality and water flow can be viewed by the administrators, ensuring a continuous, safe operation of the pumping station.

Compared with the conventional concrete pumping station, the integrated smart pumping station has a high level of integration with small footprint, reducing the number of steps in civil engineering approval and project workload. Pipe connections can be made instantly on-site, minimising the impact of production and on domestic water consumption in the surrounding areas. As one of the residents put it, "The construction has hardly interrupted the pace of our daily life. It was very quick. The discontinued water supply resumed when we were off from work."

"It took just one month from start to finish. It was really, really convenient and fast," said Huang Qingyun, continuing, "furthermore, the quiet operation of the pumping station does not cause any noise pollution to the daily life of the residents."

**RESULTS**

"The pumping station of our new Bus Central Station has a complete set of security systems. In case of any problems, it will send alarms in a timely manner so that we could respond quickly to make adjustments and develop solutions," said Huang Qingyun.

He continued: “When it comes to water utility management, you have to consider not only the safety, but also the stability of the water supply system to improve the comfort of water use for the residents within the east area. The integrated pumping station is a solution in response to the call of the government for improving community benefits and to the issue of insufficient production and domestic water supply during peak times.”

The launch of the innovative integrated pumping station by Nandan County has been an initial success in the Guangxi Province and the entire southwest region. It is the first step towards the centralised construction and management of municipal secondary water supply.

“In future, we will continue to use Grundfos products in other locations within Nandan County. We really appreciate the green philosophy held by Grundfos and will strive for continuous improvement in order to provide the residents of Nandan County with better comfort and safety in water use,” concluded Huang Qingyun.

According to one of the residents, “Now when you turn on the faucet in the morning, water comes out immediately, and turns clean. What a delightful sight!”