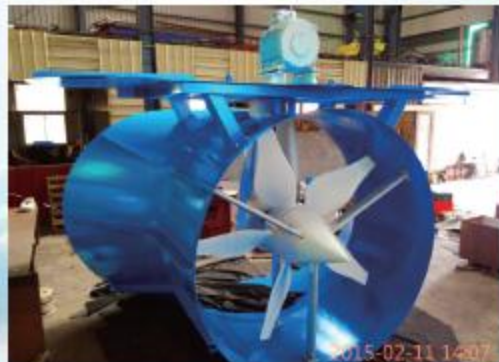


## ► Application Case

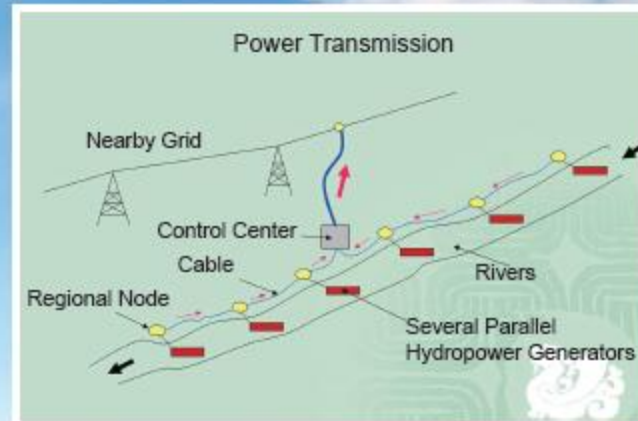


HT60 installed at a tailrace canal



The system will be installed in the Meizhou Power Station in Fuyang, Hangzhou

## ► Power Transmission



## ► Patent

The Canal Turbine System is a patented technology in many countries, including China, the United States, Italy, Germany, Australia, Vietnam, Indonesia, India, South Africa, the Philippines, Thailand, Malaysia, Argentina, Chile, Dominica, Colombia, Mexico, Brazil, Peru, Honduras, Nicaragua, El Salvador, Panama.

# Canal Turbine System




*Floating Type High Performance  
Hydropower Technology*



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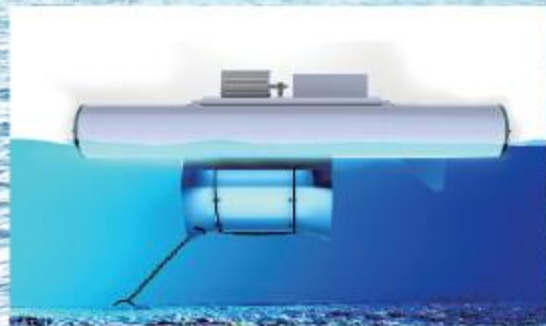
## ► Hydropower Comparison

	Typical Dam	Typical Submerged Turbine-Generator Unit	Canal Turbine System
Type			
Features	<ol style="list-style-type: none"> <li>1. Years for investigation, design and construction</li> <li>2. Expensive cost</li> <li>3. Environmental disputes</li> </ol>	<ol style="list-style-type: none"> <li>1. The whole unit is placed underwater</li> <li>2. Only suitable for deep water region</li> <li>3. Expensive cost for installation and maintenance</li> <li>4. Potential threat to boats and aquatic creatures</li> </ol>	<ol style="list-style-type: none"> <li>1. High energy conversion rate</li> <li>Generator and power transmission equipment</li> <li>2. has no contact with water</li> <li>Low cost for installation</li> <li>3. and maintenance</li> <li>4. Environmentally friendly</li> <li>Several units can be used for generation in series or</li> <li>5. parallel connection</li> </ol>

## ► Canal Turbine System



Floating type hydropower generator in series connection



Simple anchored

## ► Main Features

1. The outer cover is in convergent and divergent shape. The inlet is convergence-shaped to allow more water flowing in and increase the flow rate and kinetic energy
2. The outlet is divergent shaped, therefore the back pressure of the blade would be adjusted, resulting in the pressure difference between the front and back of the blade, and greater torque force can take place, leading to a greater torque output.
3. The floating platform is above the hydraulic turbine, loads the generator on the top, and is connected with the impeller and the chain or pulley to drive the generator. Electronic control and transmission and distribution modules are above the water. Like the generator, they are in dry design, and have longer service life.
4. Drifting on the water surface, the platform can be seen by the passing vessels, or fitted with flashing lights to warn passing ships, effectively preventing collisions.
5. The generator is simply anchored in the riverbed or river bank, pulled with steel cable to prevent drift away. This design allows the generator to always float on the surface, regardless of the water level, in dry season or rainy season. With simple anchor, it has low cost.
6. The directional rudder at the end of the generator can automatically adjust the attitude of the generator, aligning flow, and has sound stability and performance.
7. The floating platform and hydro-generators can be connected with each other to form a larger power generation network and greater power output.
8. The cover can be designed according to the river conditions to a desired inlet angle to achieve the desired flow rate without the need to adjust the blade design.
9. Generator and transmission and distribution are of dry design, as a result, maintenance is relatively easy, and can also be completed directly on the floating platform. The platform can even be dragged to shore for maintenance, benefiting low cost.
10. The hydro-generators are of low-voltage design that can be installed at virtually any location in the river, and people living along the river can enjoy electricity from the river without the need for expensive grid construction.
11. The generators are assembled in the factory or at river side. It is easy to erect in the river. The delivery time is short, only two or three months from the order to delivery.
12. To prevent floating objects in the water from impacting generators, arresting barriers or netting can be set up upstream of the generator, and cleaning work is relatively easy.
13. In case of flooding or mountain torrent in the rainy season, valves or shutters can be added to the entrance or exit of the generator. It is easy to control the blade from over speed to prevent the generator burning

## ► Major Specification

Type	HT60	HT100	HT200	HT60-5	HT100-5	HT200-5
Enclosure Design	Yes	Yes	Yes	Yes	Yes	Yes
Rated Capacity(kW)	2	6	24	6	24	100
Voltage Output(VAC) (can be changed as the client's requirement)	220-380	220-380	220-380	220-380	220-380	220-380
Impeller diameter(m)	0.6	1.0	2.0	0.6	1.0	2.0
Length(m)	1.5	2.0	2.5	1.5	2.0	2.5
Blade number	5	5	5	5	5	5
Water velocity requirement for startup(m/s)	0.7	0.7	0.7	0.7	0.7	0.7
Rated water velocity(m/s)	3	3	3	5	5	5
Weight(kg)	60	110	250	90	230	900

## ► Applicable Installation Site

- Natural river course
- Irrigation canal
- Tailrace secondary generation in the power station
- Other Canals(Industrial service water, drinking water etc.)

## ► Generator installed in an irrigation canal

