

# POWER EN

Immediately after its establishment, within the planned socialist economy in the former Yugoslavia, *PPT Engineering* was included in designing, manufacturing and commissioning of electro-hydraulic systems for gates on the *HEPP Bajina Bašta*, 1966. After this project, the most significant engagement of *PPT Inženjering* in the field of power engineering ensued, at the *HEPP Djerdap 1* and *2*, which was the crucial reason why the program of electro-hydraulic drive systems for hydro-mechanical equipment became the essential and the most important program of *PPT Engineering* operations. The experience gained in *HEPP Djerdap 1* and *2*, working together with partners from the USSR (later Russia), resulted in the intensive presence of *PPT Engineering* on the Russian market since 2000 and in the significant increase of business volume.

The organizational change in 2011 and presence on the vast territory of Russia, comprising numerous specific requirements for electro-hydraulic drive systems applied on hydro-mechanical equipment on intake structures and spillway bays of hydroelectric power plants, made it possible for *PPT Engineering* to be ranked and formed as a highly-specialized company for this type of electro-hydraulic systems in Europe.

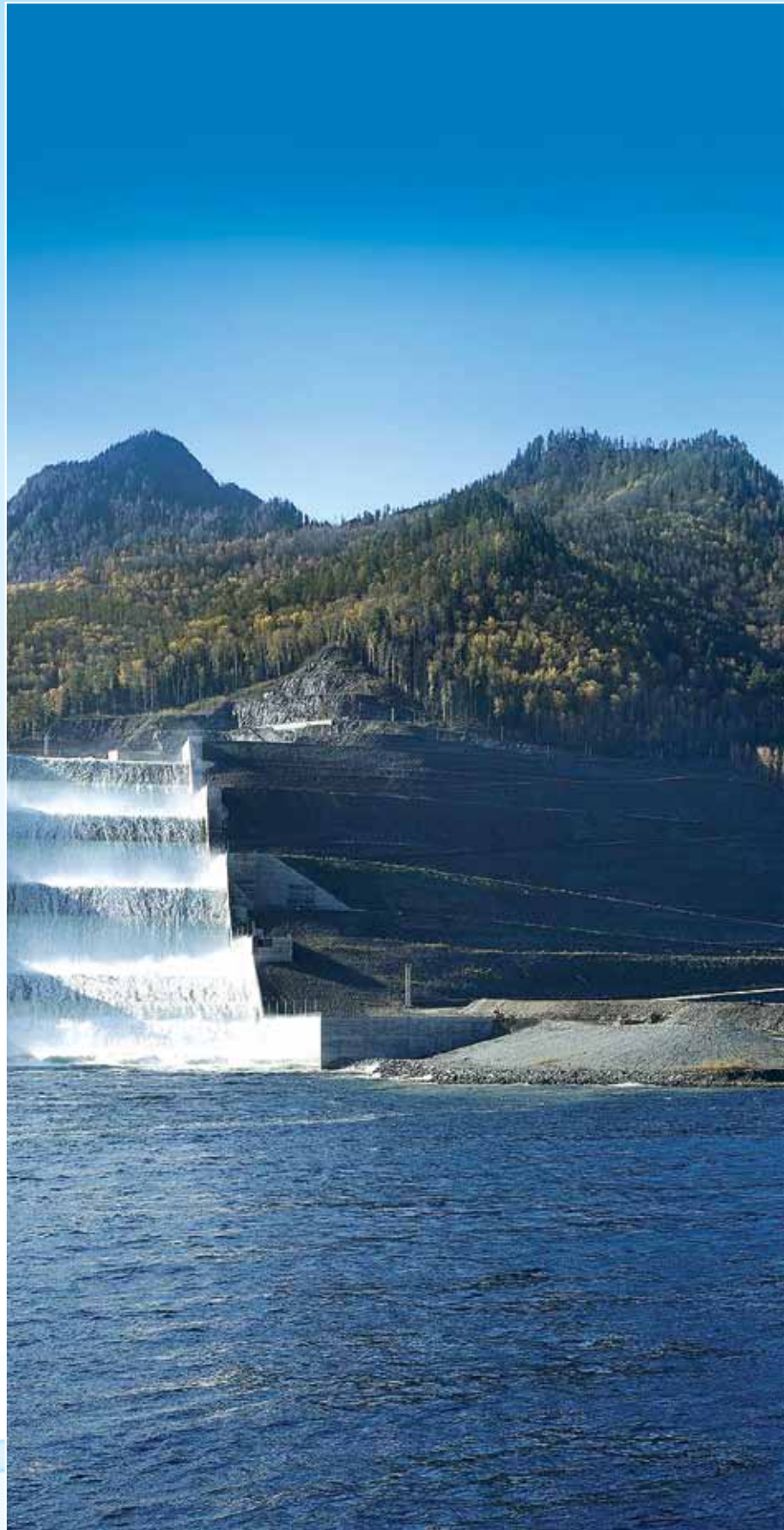
By controlling movement of gates, electro-hydraulic systems control the water inflow to the turbine of the hydroelectric power plant, or stop it instantaneously in case of damage, and therefore it is essential to provide a high level of operation reliability of the system.

It is particularly important that *PPT Engineering* has preserved production resources of *PPT* for large cylinders, having diameters up to 500 mm and stroke up to 10,000 mm.

Projects on the Russian market which especially contributed to the fact that *PPT Engineering* nowadays occupies the unique market position are the following:

- *HEPP Nižnja Bureja*
- *HEPP Zagorska*
- *HEPP Sajano Shushenska*

The electro-hydraulic drive systems for complete hydro-mechanical equipment on previously mentioned hydroelectric power plants were delivered on two particularly important facilities in Tajikistan, *HEPP Ragun* and *HEPP Snagtuda*.



*HEPP Sajano Shushenska, Russia*

*Electro-hydraulic system for control of 10 quick closing gates  
and 2 segment spillway gates*



# ENGINEERING







*Dam spillways – hydraulic installations of double hooked gates*



*Ship lock*



# HEPP Djerdap 1, HEPP Djerdap 2, Serbia



## HEPP Djerdap 1

Buyer: *Elektroprivreda Srbije*, Serbia

Commissioning: 1972

Electro-hydraulic systems for handling gates on water intake structure and on 12 dam spillways

Hydraulic cylinders for water intake structure Ø 600 18 meters stroke, 12 pieces

Hydraulic cylinders for dam spillways Ø 500 11,47 meters stroke, 28 pieces

## HEPP Djerdap 2

Buyer: *Elektroprivreda Srbije*, Serbia

Commissioning: 1989

Electro-hydraulic systems for handling 8 quick closing gates

2009 - reconstruction of control blocks



*Djerdap 2 – Quick closing gate control block*



*Djerdap 1 – Control blocks on ship lock middle head*







*HE Nizhnyaya Bureja, Rusija*



*Segment gate cylinder*



# HEPP *Nizhnyaya Bureja*, Russia

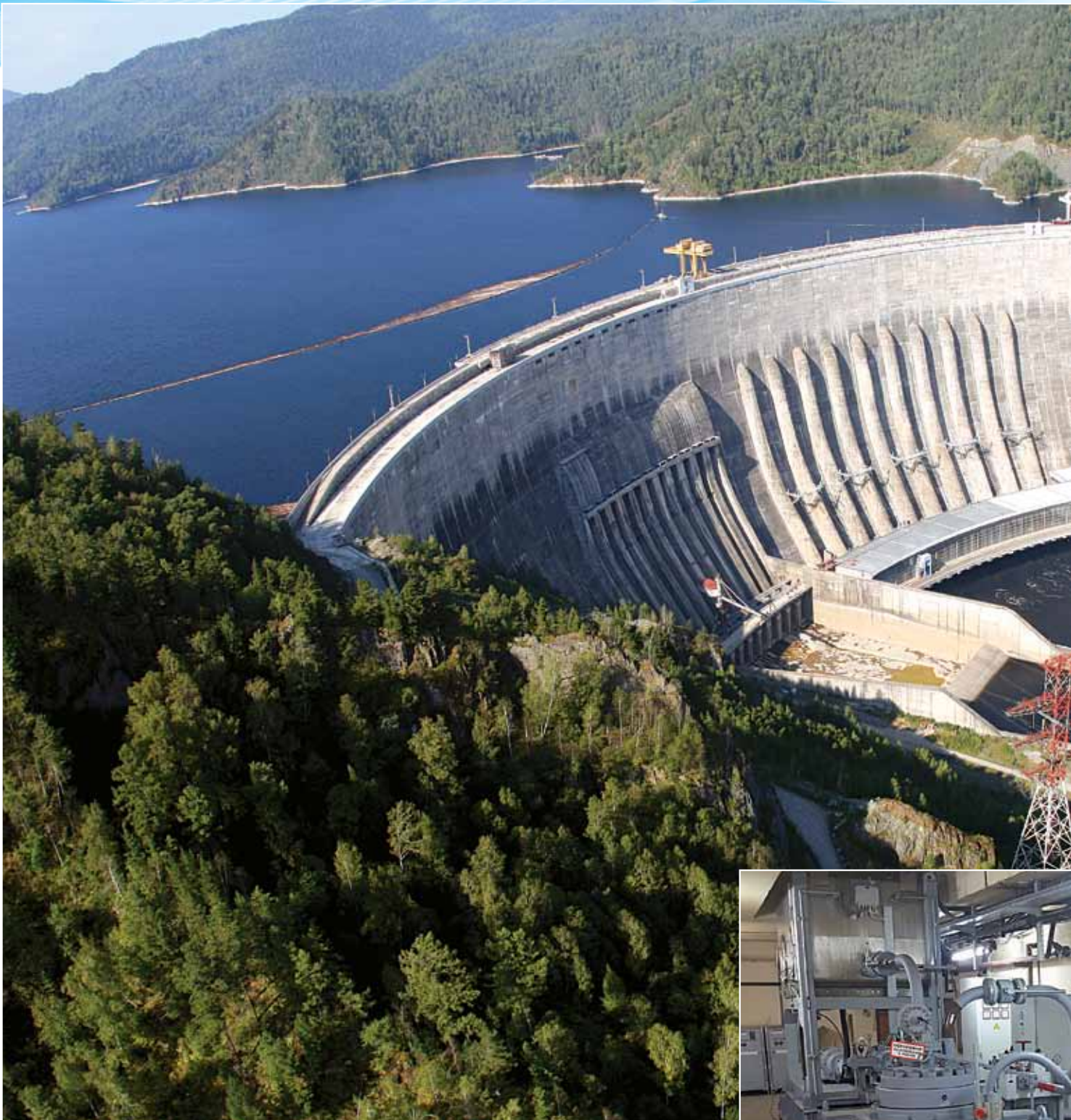
Buyer: *Trust Hydromontazh*, Russia  
Delivery and commissioning: 2016  
Electro-hydraulic systems for handling 5 segment  
gates on dam spillways and  
4 quick closing gates on intake structure

*Segment gate cylinder with support*



*Quick closing gate hydraulic set*





*HEPP Sajano Shushenska*

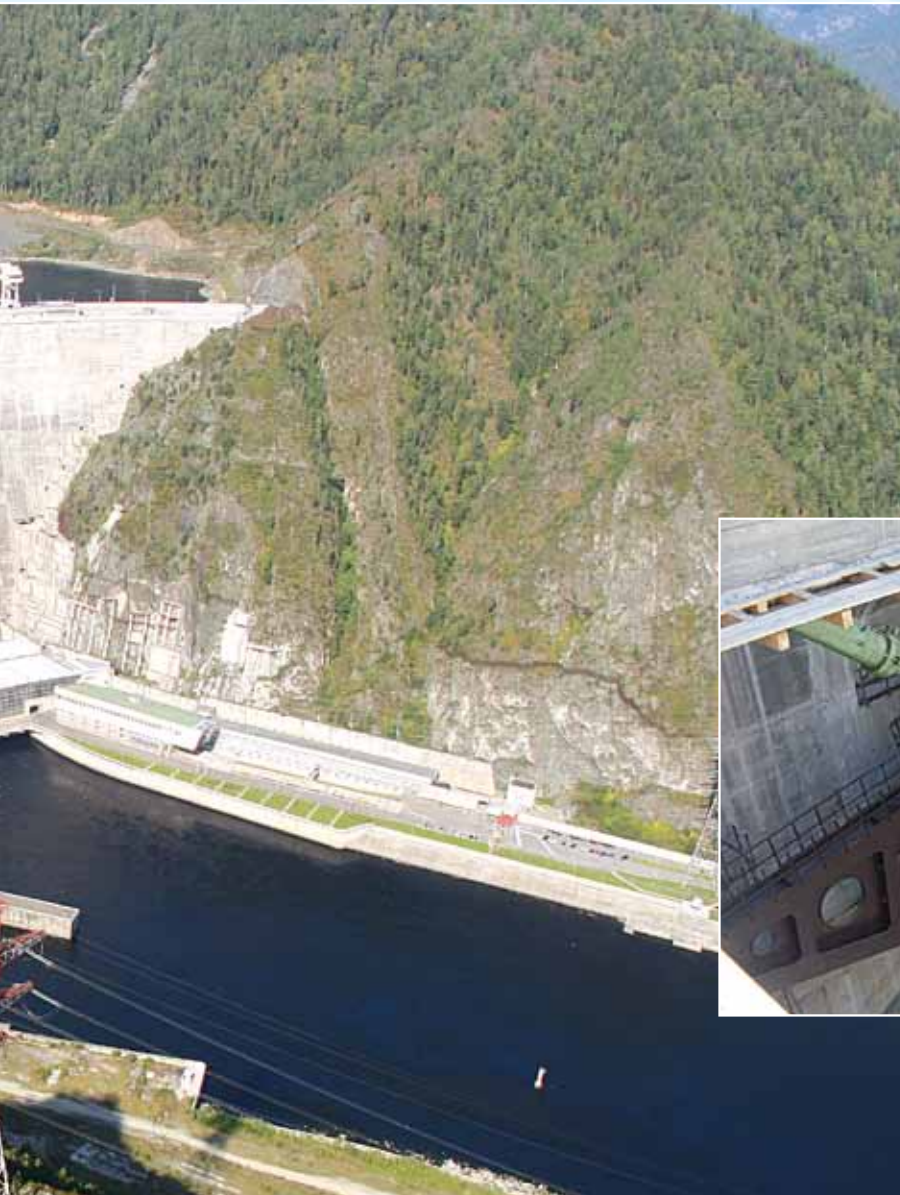
*Quick closing gate hydraulic set with power and automatic equipment cabinets*





# HEPP *Sajano Shushenska*, Russia

Buyer: *Trust Hydromontazh*, Russia  
Delivery and commissioning: 2016. godina  
Electro-hydraulic systems for handling 10 quick  
closing service gates of intake  
structure and 2 segment gates on spillway



*Spillway segment gate cylinder*

*Spillway segment gate cylinder with hoisting  
trunnion and control manifold*





# Pumped-Storage HEPP Zagorska 2, Russia



*Pumped Storage HEPP Zagorska 2, Russia*

*Quick closing gates hydraulic cylinders*



*Control block*

*Quick closing gates hydraulic agregate*



Buyer: *Trust Hydromontazh, Russia*  
Delivery: 2011  
Electro-hydraulic system for 4 quick closing gates drive



# HEPP *Sangtuda*, Tajikistan



Buyer: *Trust Hydromontazh*, Russia  
Delivery and commissioning: 2007, 2008 and 2016  
Electro-hydraulic system for 4 quick closing gates drive, 8 service spillway gates drive and 2 auxiliary spillway segment gates

*HEPP Sangtuda, Tajikistan*

*Quick closing gate cylinder dia 500 millimeters and stroke 8,700 millimeters*



# HEPP *Rogun*, the Vahsha river, Tajikistan



Buyer: *Trust Gidromontaž*, Russia  
Delivery: 2009, 2010, 2011, 2016  
Electro-hydraulic systems for control of segment, emergency-service and service flat gates on tunnels of galleries I and II and of temporary inlet tract gates for the first two sets

*Hydraulic set of temporary inlet tract gate*



# HEPP Zaramagskaya, Russia



Buyer: SSM, Russia  
Commissioning: 2007  
Electro-hydraulic system  
for quick closing gates  
drive on hydroelectric  
power plant intake  
structure

*Hydraulic set*

*1.6.2 Hydraulic cylinders of  
flat and segment gate*



# HEPP Zelenchukskaya, Russia



Buyer: PromGidroenergo Mach, Russia  
Commissioning: 2014  
Electro-hydraulic system for 2 quick closing gates  
drive on reservoir intake tunnel

*HEPP Zelenchukskaya, Russia*



*Hydraulic set*



# HEPP Se San 3, Vietnam

Buyer: *SGEM*, Russia  
Commissioning: 2005

Electro-hydraulic system for control of 2 quick closing gates on intake structure and 6 segment gates on dam spillways

*Segment gate cylinder installation*

*HEPP Se San 3, Vietnam*



# HEPP Shikapa, Angola

Buyer: *Trust Hydromontazh*, Russia  
Commissioning: 2006

Electro-hydraulic system for control of 4 flat gates on water outlet and 1 quick closing flat gate



*Hidraulični cilindri sa spolja ugrađenim davačima hoda*