

# EXPERTISE IN SYSTEMS SERVICES: THE PRIMARY SETTING

The partial liberalisation of the electricity market has made systems services financially attractive for asset managers. This offers an opportunity to enhance the value of hydroelectric plant production.



Primary function integration changes the general operation of the machines, penstock, pressure or surge chambers, as well as the intake tunnels/conduits. Permanent setting of the power of the various groups increases the sustainability of the stress to which the facility is subjected, both mechanically and at the civil engineering level.

The impact on control-command systems is particularly important for run-

of-river sites with low storage volumes. In addition to turbine controllers, the level regulators controlling these facilities must be adapted in order to continuously meet the primary response according to the requirements of the network manager.



Primary service deployment in a power plant requires several areas of specific and advanced expertise. The machines need to be certified. An analysis of the mechanical and civil engineering impact is strongly recommended, or even indispensable. A feasibility analysis of the control-command system is necessary. For run-of-river sites, a strategy must be established and the level regulator adapted.

HYDRO Exploitation has all the assets needed for the management and optimal deployment of the primary setting of a facility, in its entirety. Working in partnership with FMV, several solutions have already been successfully implemented, for example at Ernen/Rhonewerke or Bramois/FMdB.

*Primary setting ensures the restoration after just a few seconds of the correct balance between output and consumption following a network disruption. The frequency is stabilised within permissible limit values. Power activation and adjustment are performed directly in the power plants through the turbine controllers.*

