# CEZ DISTRIBUCE HAS STARTED THE DEMONSTRATION OF VOLTAGE REGULATION AT SMALL HYDRO PLANT ”VYDRA” 6,4MW

CEZ Distribuce is the biggest Distribution System Operator (DSO) in the Czech Republic and the leader of one of the 5 demonstrators of the InterFlex project.

In cooperation with DER owner (CEZ Obnovitelne zdroje s.r.o.) and its service partner EGÚ Praha Engineering, a.s., CEZ Distribuce has launched the demonstration of voltage regulation systems at the small hydro ”Vydra” installation with 6,4 MW of installed capacity.

Small hydro ”Vydra” is connected to the high voltage distribution network in case of normal operation and to the medium voltage distribution network in case of power outage in high voltage line. The solution aims to reduce voltage fluctuations caused by small hydro in medium voltage distribution networks in selected area by targeted regulation of its reactive power (“volt-var control”) thus allowing a significant increase of the DER hosting capacity. Required voltage set points are sent by the Distribution Management System (DMS) through a fibre optic communication path via primary substation to the DER control system. The targeted regulation of reactive power on DER side is based on the difference between the required voltage set point and the instantaneously measured voltage at the point of grid connection. The voltage regulation system developed and installed by EGÚ Praha Engineering, a.s., is in regular operation today and its performance will be evaluated in detail in the upcoming months.

CEZ Distribuce also successfully continues with the demonstration of volt-var control systems at Wind park Koprivna 4,6 MW and at PV park Zamberk 1,1MWp. Based on the results, CEZ Distribuce already proposed and standardized an update of the actual DER hosting capacity evaluation process in order to allow connection of more DERs to the medium voltage distribution networks (if DERs are equipped with volt-var control system).

*Small hydro Vydra with 6,4MW of installed capacity*