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NEWS

PUMPED STORAGE NEAR MOSCOW

No river in the Moscow region is big enough to make possible the construction of a 1.2 million KW hydro-power station, but even the tiny Kunia river in the Zagorsk district has a sufficiently high hydro potential to ensure the reliable operation of a pumped storage of the same capacity to be built here.

The need to build this station has been prompted by the requirements for electricity of Moscow, one of the biggest electricity consumer. Demand for electricity varies with the time of the day. It is at its peak during

the morning and the evening hours, and drops to the minimum at night. To regulate intragrid loads, Moscow needs a pumped storage. At night the pumped storage will use excessive electricity, generated by other power plants, to pump water from the bottom to the upper basin. At the time of greater demand for electricity that water will activate generating units of the pumped storage. (*Soviet Features*, Vol. XXIV, No. 4, January 8, 1985).

COMPACT POWER STATION INSTEAD CAR BATTERY

A RAF minibus with the chemical formula of hydrogen painted on its sides that has appeared in the streets of Moscow recently is hardly different from the ordinary vehicles of this type. Yet there is one special thing about it—it has been fitted out with a unique generator supplying electricity to the electric engine.

An ecologically harmless battery-driven car is a great asset for urban transport, but its major shortcoming is in its storage battery. Heavy, costly and short-lived, it so far does not suit designers of electrically driven means of transportation.

According to some experts, electro-chemical generators can be used instead of the bulky storage batteries. An electro-chemical device code-named Istok and developed by Moscow's scientists differs from the previous models in the efficiency of energy conversion

and simple maintenance. The device is actually a compact electric power station.

The device consists of six fuel cells arranged in three blocs. Electricity is generated in a special reactor during interaction between hydrogen and oxygen. Steam that forms during the process is quickly discharged from the fuel cell. The processes of energy generation in the unit are controlled automatically. Commands to the unit are shot from the instrument panel in the driver's cabin.

Tests of the Istok generator have shown it quite effective when installed at an electrically driven vehicle which can be driven for up to 150 kilometres without hydrogen refuelling. (*Soviet Features*, Vol. XXIV, No. 4, January 8, 1985).
