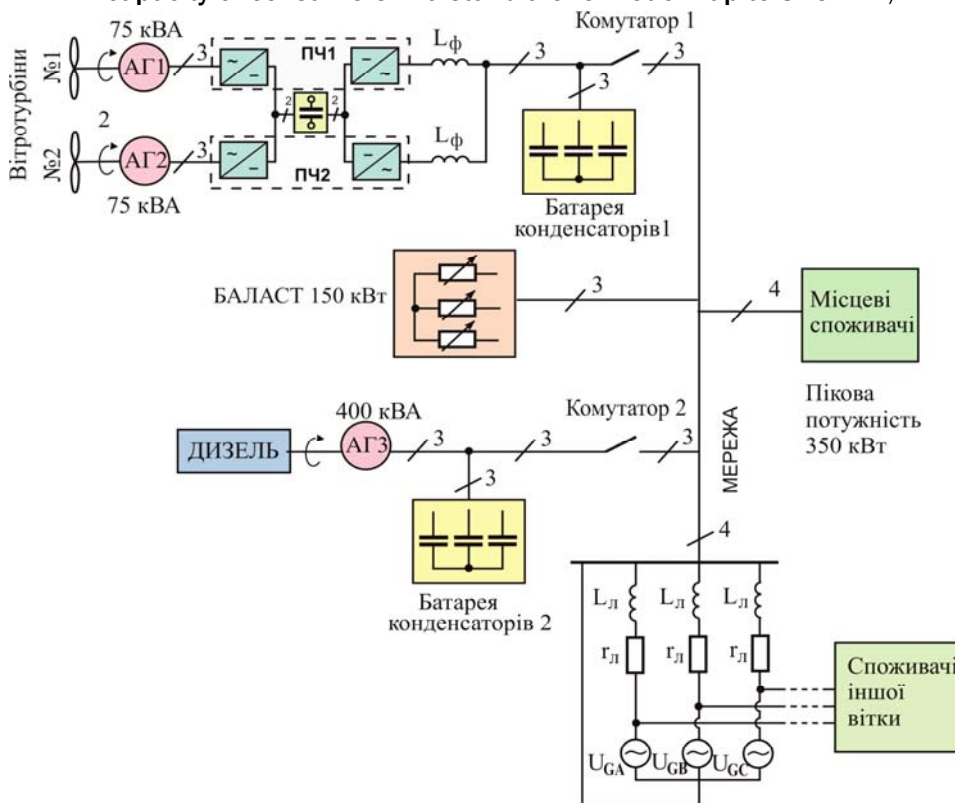


5.02. WIND-DIESEL SYSTEM OF DISTRIBUTED GENERATION

The system is designed for unloading long-distance non-transit power lines and stand-by power supply for small settlements.

Technical specifications of the system:

- contains two wind power plants with a power of 70 ... 110 kVA and diesel generator with a power of 350 ... 400 kVA
- operating modes: network and stand-alone;
- type of generators of wind power plants - asynchronous (AG1 (АГ1), AG2 (АГ2)) with frequency converters (PCH1 (ПЧ1), PCH2 (ПЧ2)) in stator circles;
- generator of diesel unit – asynchronous (AGZ (АГ3)) with condenser excitation;
- capacity of consumers in a stand-alone mode – up to 350 kVA;



- network connection – on the low voltage side 400 V.

Advantages: Electric generators are executed on the basis of serial electric machines. Wind power plants of variable speed produce 8 ... 15% more electric energy per year than wind power plants of constant speed of the same capacity.