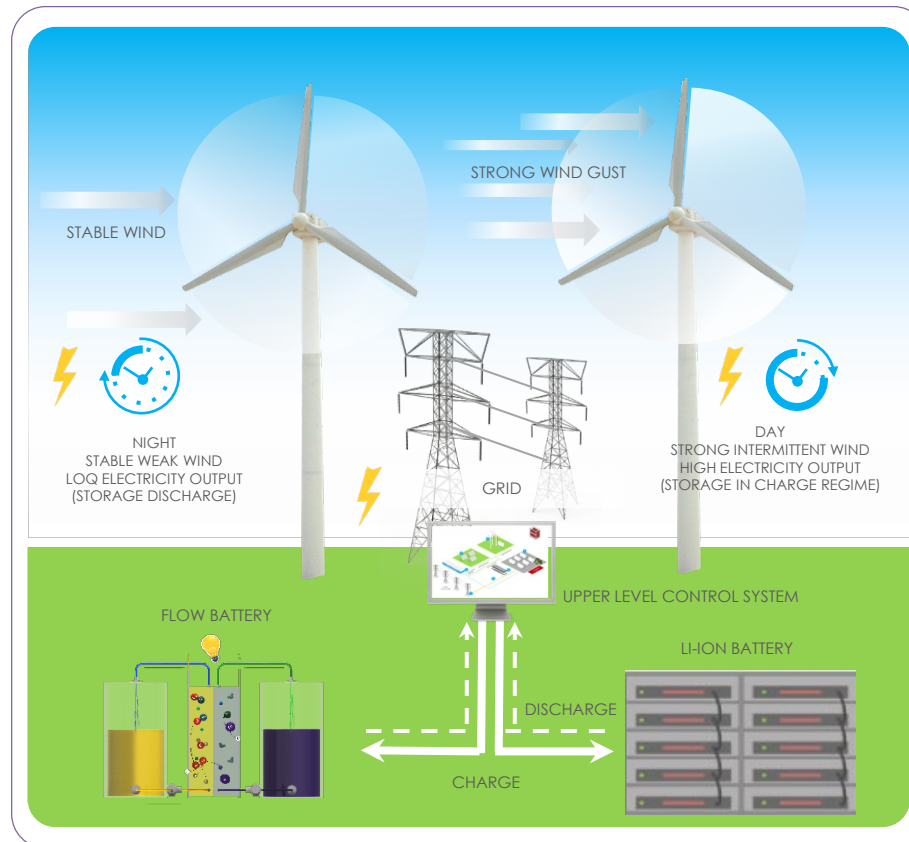
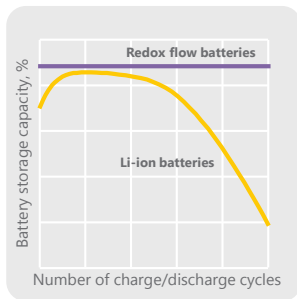
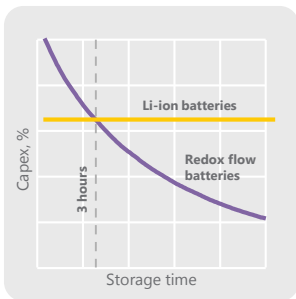


# HYBRID ENERGY STORAGE SYSTEM (ESS)



Hybrid energy system (ESS) combines **high output capacity** of Li-ion batteries with **high storage capacity** of vanadium redox flow batteries. Proportion of each is customized for individual project, based on required output capacity and storage requirements.

BALANCING RES OUTPUT • BACKUP POWER AT CONSUMERS SIDE • PEAK SHAVING • 15-20% SAVING ON COST OF STORAGE



## EXPERTISE IN ELECTROCHEMISTRY

InEnergy Group core competence lies in electrochemical solutions. We employ more than 60 researchers, including 15 with PhD degrees.



## APPLICATIONS



### Grid storage system

- Peak shaving
- Primary and secondary system reserve
- Frequency regulation



### Industry

- Backup power supply
- Price arbitrage
- Reduced capacity payment
- Increased supply reliability
- Increased peak capacity, available for consumption



### Standalone systems

- Enabling dynamic and static stability
- Balancing output and consumption
- Managing reactive power



### Households

- Backup power supply
- Balancing RES output
- Price arbitrage



Design, installation and maintenance of **hybrid energy storage systems** based on redox flow and lithium-ion batteries in containerized version.



Increase storage capacity and cyclic life of existing ESSs based on **vanadium redox flow batteries**



**Vanadium electrolyte** "made in Russia". Electrolyte cost is 50% of overall redox flow batteries cost.