## Industrial batteries. Features summary.

## Chapter 1 - Acronyms

Reading technical literature, white papers or brochures about storage, mobility or lithium ion batteries, you can find a lot of acronyms.

Please see the list of the most frequently used ones that I found and copied for you.

| AGC    | Automatic generation control           |
|--------|--|
| Ah     | Ampere hours                           |
| APU    | Auxiliary oower unit                   |
| BESS   | Battery energy storage system          |
| BEV    | Battery electric vehicle               |
| BMS    | Battery management system              |
| BOL    | Beginning of life                      |
| вом    | Bill of Materials                      |
| BTMS   | Battery Thermal management system      |
| CAES   | Compressed air energy storage          |
| CAES   | Compressed air energy storage          |
| CAN    | Controller area network                |
| СВ     | Circuit breaker                        |
| CCGT   | Combined-cycle gas turbine             |
| CID    | Charge interrupt device                |
| CNT    | Carbon nano-tubes                      |
| COD    | Commercial operation date              |
| C-rate | 1C-current discharges a battery in 1 h |

| СТ    | Combustion turbine                         |
|-------|--|
| DC/DC | Voltage converter (direct current)         |
| DEC   | Diethyl carbonate                          |
| DLC   | Double-layer capacitor                     |
| DMC   | Dimethyl carbonate                         |
| DMC   | Dimethyl carbonate                         |
| DOD   | Depth of discharge                         |
| DR    | Demand response                            |
| DSP   | Digital signal processor                   |
| DUT   | Device under test                          |
| EC    | Ethylene carbonate                         |
| ECU   | Electronic control unit                    |
| ECU   | Electronic control unit                    |
| EES   | Electric Energy Storage                    |
| EESA  | Electrical energy storage assembly         |
| EFR   | Enhanced frequency response                |
| Ege   | Gravimetric energy density                 |
| EIS   | Electric insulation switchgear             |
| EMC   | Electrical Equivalent Circuit              |
| EMC   | Ethyl methyl carbonate                     |
| EMC   | Electromagnetic compatibility              |
| EMI   | Electromagnetic interference               |
| EOL   | End of life                                |
| EPC   | engineering, procurement, and construction |
| ESD   | Electrostatic discharge                    |
| ESS   | BAT  |
| EV    | Electric vehicle                           |

| FES   | Flywheel energy storage                               |
|-------|---|
| FET   | Field effect transistor                               |
| FLA   | Flooded lead acid battery                             |
| FMEA  | Failure modes and effects analysis                    |
| FMECA | Failure modes and effects criticality analysis        |
| FMVSS | Federal Motor Vehicle Safety Standards                |
| GIS   | Gas insulation switchgear                             |
| GW    | Gigawatts   |
| HEV   | Hybrid electric vehicle                               |
| HF    | Hydrofluoric (acid)                                   |
| HF    | Hydrofluoric acid                                     |
| HRR   | Heat release rate                                     |
| HSCB  | High-speed circuit breaker                            |
| ICE   | Internal combustion engine                            |
| IEC   | International Electrotechnical Commission             |
| IEEE  | The Institute of Electrical and Electronics Engineers |
| IGBT  | Insulated gate bipolar transistors                    |
| IPP   | Independent power producer                            |
| ISO   | International Organization for Standardization        |
| JV    | Joint Venture   |
| Kw    | kilowatt  |
| Kwh   | kilowatt–hour   |
| LA    | lead–acid   |
| LCO   | Lithium cobalt  |
| LCOS  | Levelized cost of energy storage                      |
| LFL   | Lower flammability limit                              |
| LFP   | Lithium iron phosphate                                |

| LFP    | Lithium iron phosphate           |
|--------|----------------------------------|
| LiF    | lithium fluoride                 |
| Li-ion | Lithium ion                      |
| LMO    | Lithium manganese (or manganate) |
| LPMS   | Local power management system    |
| LTO    | Lithium titanate                 |
| MEMS   | Micro-electromechanical system   |
| MW     | Megawatt                         |
| MW     | Megawatt                         |
| NaS    | Sodium–Sulfur Battery            |
| NaS    | Sodium-Sulfur Battery            |
| NCA    | Nickel cobalt aluminum           |
| NCM    | Nickel cobalt manganese          |
| NiCd   | Nickel-cadmium                   |
| NiMH   | Nickel metal-hydride             |
| NiMH   | Nickel metal hydride             |
| NMC    | Nickel cobalt manganese          |
| NMP    | N-methylpyrrolidone              |
| NTC    | Negative temperature coefficient |
| O & M  | Operations and Maintenance       |
| OCV    | Open Circuit Voltage             |
| OEM    | Original equipment manufacturer  |
| PAM    | Parallel array of modules        |
| PASC   | Parallel array of series cells   |
| PC     | Propylene carbonate              |
| РСВ    | Printed circuit board            |
| PCC    | Point of common coupling         |

| PCM      | Protection circuit module  |
|----------|--|
| PCS      | Propylene carbonate  |
| PCS      | Power conversion system  |
| PE       | Polyethylene   |
| PHEV     | Plug-in hybrid electric vehicle  |
| PMS      | Power management system  |
| PP       | Polypropylene  |
| PQ       | Power quality  |
| PTC      | Positive temperature coefficient   |
| PTC      | Polymeric thermal cutoff   |
| PV       | Photovoltaic   |
| PVDF     | Polyvinylidene fluoride (also poly vinylidine difluoride)                          |
| PVdF-HFP | Poly(vinylidene fluoride)-hexafluoropropylene                                      |
| PWM      | Pulse width modulation   |
| Q        | Capacity   |
| RESS     | Rechargeable energy storage system   |
| RFB      | Redox Flow Battery   |
| RFI      | Request for Information  |
| RFP      | Request for Proposals  |
| RFQ      | Request for Quote  |
| RH       | Relative humidity  |
| SCADA    | Supervisory Control and Data Acquisition   |
| SCS      | Supervisory control system   |
| SEI      | Solid-electrolyte interface (also solid-electrode interface) INVESTIGAR SALE MUCHO |
| SLFP     | Super Lithium iron phosphate Saft Battery  |
| SOC      | State of charge (0 to 100%)  |

| SOH  | State of health                         |
|------|---|
| SOH  | State of heath                          |
| TCO  | Temperature cutoff                      |
| TOU  | Time of use                             |
| TPC  | Total plant cost                        |
| UFL  | Upper flammability limit                |
| ULD  | Unit load device                        |
| UPS  | Uninterruptible power supply            |
| V2G  | Vehicle to Grid                         |
| VAC  | Alternative courrent voltage            |
| VAR  | Reactive power and volt-ampere reactive |
| VC   | Vinylene carbonate                      |
| VCE  | Collector-emitter voltage               |
| VDC  | Direct courrent voltage                 |
| VEC  | Vinyl ethylene carbonate                |
| Vn   | Nominal voltage                         |
| VRFB | Vanadium redox flow battery             |
| VRLA | Valve-regulated lead-acid battery       |
| WACC | Weighted average cost of capital        |
| Wh   | Watt hour                               |
| WVTR | Water vapor transmission rate           |
| ZBFB | Zinc-bromine flow battery               |

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