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LIFE CYCLE ANALYSIS OF A BATTERY ENERGY STORAGE SYSTEM

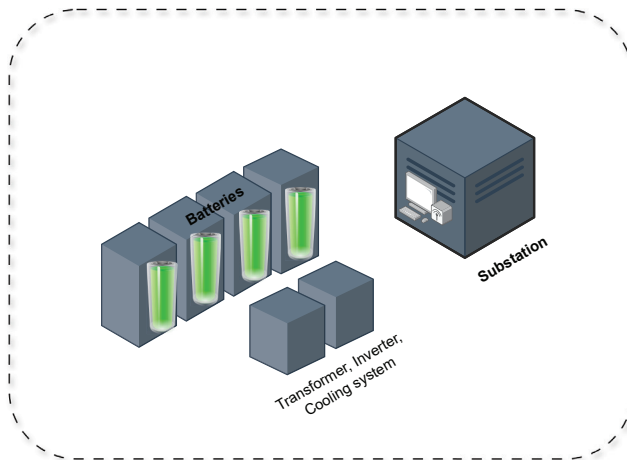
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Abstract – For the Latvian Government and transmission system operator, energy security and independence has been an issue for a long period of time, even more when political situation changed, motivating to act faster in order to switch off from BRELL (grid connection with Russia and Belarus) system completely. Therefore, the three Baltic states have made an agreement on building more stable electricity transmission system within Baltic region and to connect with European transmission systems, building new stations with synchronous compensators and energy storage systems. In order to build a system that allows to include more energy from renewable resources and secure possible imbalances in system, the Latvian transmission system operator (TSO) is building a new battery energy storage system (BESS). This paper aims to look at the costs of this battery energy storage system from climate perspective to Latvia and its society in order to gain energy security and possibility to include more energy from renewable resources.

Keywords – BESS; Energy security; Energy and climate plans; LCA



Battery energy storage system overview.