Thesis Title	**Electricity storage systems in renewable energy sector: characteristics, cost and applications. A wind power plant case**
Programme of Studies	MSc in Sustainable Energy Systems
Course	SES 515 Capstone Project I
Area of Study	Sustainable Energy Technologies
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Short Description	The following report was conducted with the purpose to investigate the electricity storage systems in the renewable energy sector, their characteristics, cost and basic applications. The last few decades, several steps toward this direction have been done not only in European level but also in international, increasing drastically the interest from simple people till cooperative companies for this kind of energy systems. Obviously, through this system usage the modernization of the central grid could succeed that will eventually lead to better system performance and avoid of unwanted power leakage. For a better and in-depth research process, a hypothetical case scenario (but based on a real life application) of a hybrid system consist of a wind power plant and a lithium ion type of storage system located in a specific area in Greece will be approached. In order to reinforce the evaluation, except the inevitable technical comparison, a more financial point of view should be carried out. The value of this study lies in the fact that our research, concludes many technologies and also aim the constant upgrade of the environmental profile in every possible affected sector of this secondary but valuable form of energy such as electricity.