

KOKKUVÕTE

Lõputöö eesmärgiks oli kaardistada vesiniku õppetehase jaoks vajaminevaid tehnoloogiaid ja pakkujaid ning võrrelda erinevaid vesiniku tootmise variante. Samuti oli eesmärgiks leida ligikaudne investeringute summa reaalse projekti elluviimiseks. Investeringute summale on oluline juurde veel arvestada hoolduskulud ning kindlasti võib olla ka mingi etteaimamatu kulu, millega ei oska ilma elluviimiseta arvestada.

Töö käigus tutvuti erinevate vesiniku tootmise tehnoloogiatega ning toodi välja plussid ja miinused. Samuti uuriti ka põgusalt vesinikustrateegiat nii Eestis kui ka Euroopas, et mõista selle olulisust ja potentsiaali. Lisaks uuriti millised on suuremad valdkonnad, milles nähakse suuri vesiniku kasutamise potentsiaale ning mis on eesmärgid.

Soovitused TalTech/ ViDRIKule vesinikutootmise õppemooduli arendamiseks järgmised:

- Kuna tegu on väikese vesiniku tootmismahuga õppetehasega, on mõistlik kasutada AEM tehnoloogiat
- Edukuse korral suurendada tootmismahutu ja mõelda vesiniku turustamisele
- Hea mõte oleks soetada Eesti oma tooteid, et toetada ja kasvatada siinset arengutegevust antud valdkonnas

SUMMARY IN ENGLISH

The aim of the thesis was to map the technologies and providers needed for the hydrogen learning facility and to compare different variants of hydrogen production. The goal was also to find an approximate amount of investments for the realization of a real project. In addition to the amount of investments, it is important to consider the maintenance costs, and there may also be some unpredictable costs that cannot be taken into account without implementation. During the work, various hydrogen production technologies were introduced and the pros and cons were pointed out. The hydrogen strategy was also briefly studied both in Estonia and in Europe in order to understand its importance and potential. In addition, it was investigated which are the major areas in which great potentials for the use of hydrogen are seen and what the goals are.

Recommendations to TalTech/ViDRiK for the development of the study module on hydrogen production are as follows:

- Since it is a teaching plant with a small hydrogen production volume, it is reasonable to use AEM technology
- If successful, increase the production volume and think about marketing hydrogen
- It would be a good idea to purchase Estonia's own products in order to support and grow development activities here in this field