بسم الله الرحمن الرحيم

AECENAR
Association for Economical and Technological Cooperation in the Euro-Asian and North-African Region
www.aecenar.com

North Lebanon Alternative Power
www.nlap-lb.com

Ras Masqa/Tripoli, Lebanon, 21.02.2018

Discipline

Energetic physics/ Mechanical Engineering / Alternative Energy

PhD Thesis proposal

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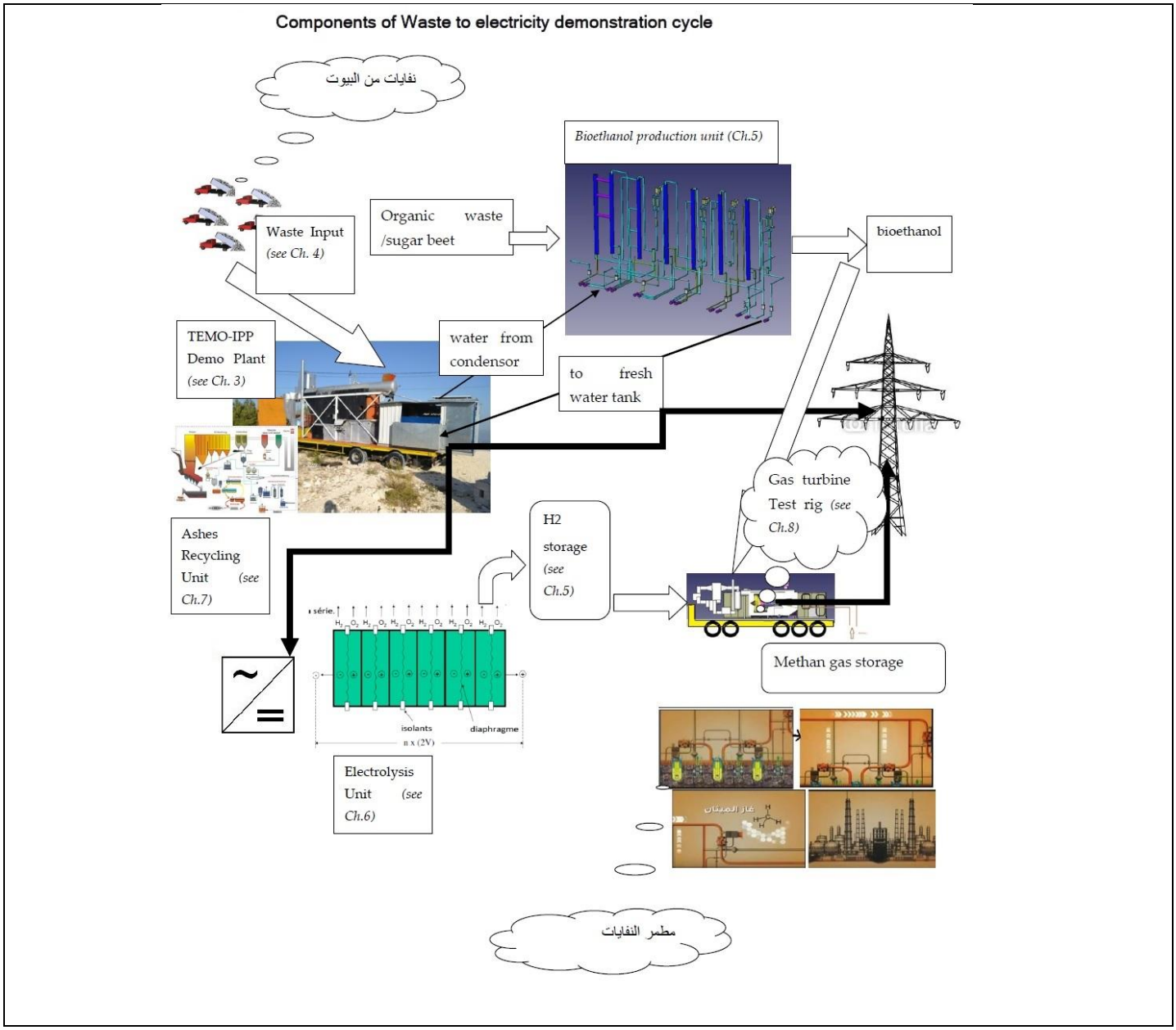

Thesis title:
Optimization of an Electrolysis Unit based Energy Storage System for a combination power plant (NLAP-WEDC)

Working packages:

I. <u>Building the experimental environment:</u>

Modeling and development of a 2 MW experimental electrolysis unit test rig

II. <u>Taking experimental data:</u>

Test data taking during waste incinerator plant operation

III. <u>Optimization:</u>

The Optimization of system concerns the following aspects:

- Aspects of electrode materials, electrolyte additives and bubble management, serving as a comprehensive guide for continuous development of the water electrolysis technology.
- Investigating the characteristics of stainless steel coated with Mo RF and C-Pt electrode-catalyst materials as further potentially low cost electrodes.
- Investigation and optimization of electrolysis unit embedded in a waste incinerator combination power plant system

Key Words: alternative energy, electrolysis, electrode materials, catalysts