

# 印尼美娜多市農村氣態生質能設備示範計畫

執行單位

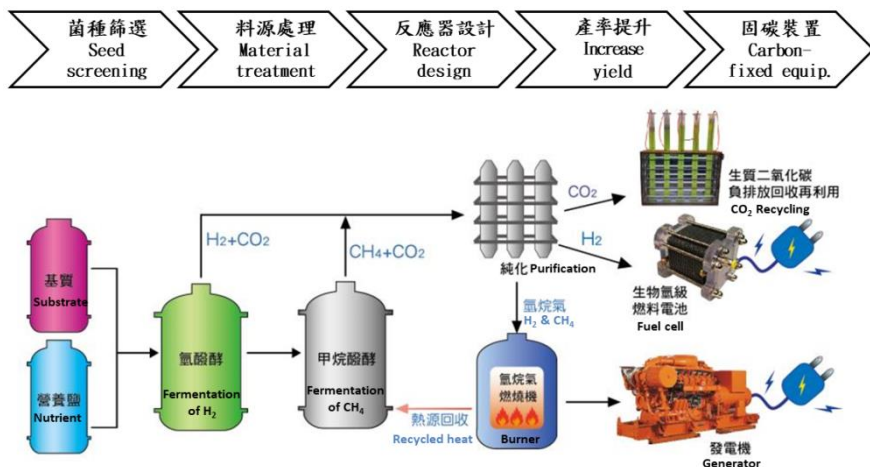
逢甲大學

計畫主持人

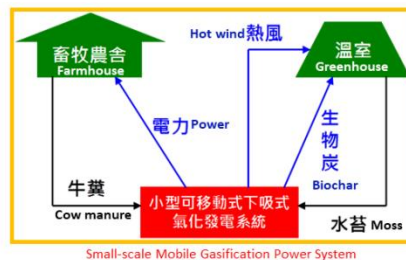
朱正永 副教授

- 本計畫預計可應用於國內**綠色能源產業**的發展，提升我國氣態生質能源科技產業之競爭力。逢甲大學生質氫烷氣能源技術已是國際領先，將持續擴大技轉範圍(包含中興大學之廢棄物氣化發電系統)給國內廠商，**進軍東協**。

## 逢甲大學 HyMeTek(流程示意圖) 移動式二階段醱酵氫烷氣產能系統



## 中興大學 移動式小型農牧廢棄物氣化發電系統



移動式小型農牧廢棄物氣化發電系統  
Small-scale Mobile Gasification Power System for Agricultural Waste



12 kg cow manure = 1 kWh

- 本計畫擬在**印尼北蘇拉維西省的美娜多市**完成一座含有生物法與熱化學法之「**協作氣態生質能源製造系統**」，推動綠能基礎建設與示範推廣。
- 印尼的農村擁有非常廣大的生質資源，如**POME(棕梠油廠出流液)**等農業廢棄物；以這些物料當料源藉生物法產氫、烷氣或熱化學法轉換的氣化方式來發電，既可生產能源也可處理廢水/有機固體廢棄物，**發展新興循環經濟**。
- 本計畫目前已於**3月30日**邀請印尼代表共同參與綠能交流研討會，並媒合印尼代表與國內多家綠能相關企業(如睿光科技、亞洲氫能、瑞助營造、金緯綠建材等)交流磋商，計畫將先進之協作氣態生質能源製造系統技轉國內廠商，驅動國內氣態生質能產業之發展與技術深耕，帶動經濟之成長並進軍東協市場。

# Gaseous Biomass Energy System Demonstration in Rural Area of Monado City Indonesia

Execution Unit

Feng Chia University

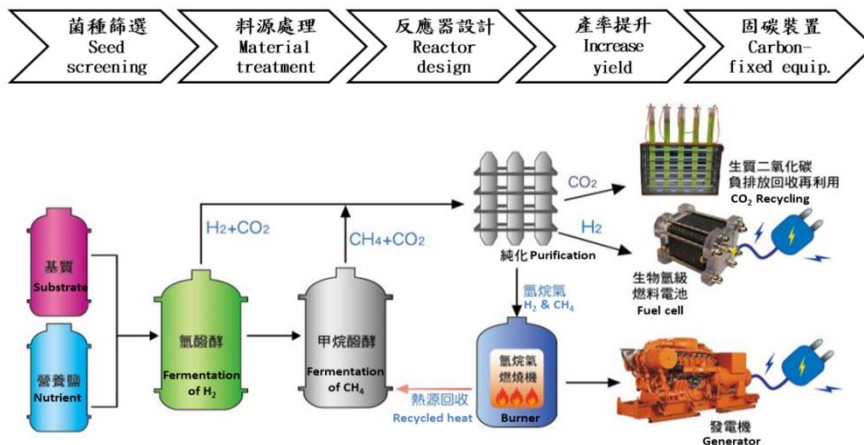
Project Director

Associate Prof. Chen-Yeon Chu

- This project aims to develop the green energy industry and enhance the competitiveness of Taiwan's gaseous bioenergy technologies. The biohydrogen and biomethane productions technology (HyMeTek) of FCU has already leading the world. This project will transfer the technology not only HyMeTek but also includes the organic wastes gasification generator technology from National Chung Hsing University to domestic companies and promote them to ASEAN area.

## FCU (HyMeTek)

### Flow Chart for BioHythane Production System



## NCHU

### Gasification Generation System by Using Agricultural Wastes



- The project plans to setup a "synergistic gaseous biomass energy production system which includes Taiwan's advanced biological and thermochemical technologies" in Manado City, North Sulawesi, Indonesia.
- There are abundant of biomass resources in Indonesia's rural areas, such as POME (palm oil mill effluent). We can not only produce energy but also treat waste water/organic solid waste by advanced biological and thermochemical technologies. It also can develop a circular economy module in ASEAN country and Taiwan.
- The project held a Mini Workshop on Green Energy, Environment and Community Issues at Feng Chia University on 30<sup>th</sup> of March 2018. We matched several Taiwan's companies such as bioenergy, photovoltaic, green building and eco-tourism with the delegations from Indonesia. This project aims to license transfer of advanced green energy technologies to Taiwan Company and promote them ASEAN.