



**Asia-Pacific
Economic Cooperation**

2017/EWG54/021

Agenda Item: 12c

The Feasibility for Future Cooperation Between PPSTI and EWG

Purpose: Consideration

Submitted by: ACABT



**54th Energy Working Group Meeting
Wellington, New Zealand
22-23 November 2017**



**Asia-Pacific
Economic Cooperation
APEC ACABT**



逢甲大學
Feng Chia University

The Feasibility for Future Cooperation between PPSTI and EWG

Prof. Dr. Shu-Yii WU

CEO of APEC ACABT

APEC Research Center for Advanced Biohydrogen Technology (ACABT)

Feng Chia University, Chinese Taipei

Outline

- About APEC PPSTI
 - Mission & Vision
 - Subgroups & Centers
 - Project Lists
- About ACABT
 - Goal and Mission
 - Chapters & Branches
 - Activities
 - New Proposal Submitted for Energy Efficiency Sub-Fund
- Suggestion for Preliminary Cross-fora Collaboration between EWG & PPSTI

About APEC PPSTI

Policy Partnership on Science, Technology and Innovation

Establishment

- In 2012, Transformed from APEC **Industrial Science and Technology Working Group (ISTWG)** to include issues of innovation policy development. Now established as the primary fora for **science, technology and innovation (STI)** under APEC framework

PPSTI Mission & Vision

Mission

- To support the development of S&T cooperation as well as effective STI policy recommendations through collaboration between government, academia, private sector and other APEC fora

Vision

- By 2025, APEC will have achieved innovative economic growth through PPSTI's efforts.

Operations of PPSTI

- Chair

Ms Christin Kjelland

U.S. Department of State

Bureau of Oceans and International Environmental and
Scientific Affairs (OES)

- Vice Chair

Mr Chen Linhao

Department of International Cooperation

Ministry of Science and Technology, People's Republic of China

- Program Director

Ms LIU Zhongzhen

PPSTI Subgroups(3)&Centers(8)

Subgroup A	Building Science Capacity (Chair: Malaysia, Vice-Chair: China)
Subgroup B	Promoting Enabling Environment for Innovation (Chair: the Philippines, Vice-Chair: Peru)
Subgroup C	Enhancing Regional Science and Technology Connectivity (Chair: Chinese Taipei, Vice-Chair: United States)

APCTP	Asia Pacific Center for Theoretical Physics (est. 1996) (Korea)
APECCTF	APEC Center for Technology Foresight (est. 1998) (Thailand)
ACES	APEC Cooperation for Earthquake Simulation (est. 1999) (Australia)
APECTT	APEC Center for Technology Transfer (est. 2002) (China)
APCC	APEC Climate Center (est. 2005) (Korea)
AMGS	APEC Mentoring Center for the Gifted in Science (est. 2006) (Korea)
ACABT	APEC Research Center for Advanced Biohydrogen Technology (est. 2010) (Chinese Taipei)
ACTS	APEC Research Center for Typhoon and Society est. 2010) (Chinese Taipei)

Recent PPSTI Projects (2014-2017)

Status	Projects	Note
Completed	2014: 6 2015: 15 2016: 2	APEC funded: 6 * Self-funded: 17
On-going	2015: 2 2016: 5 2017: 6	APEC funded: 5 Self-funded: 8

* 3 projects funded by Energy Efficiency and Low Carbon Measures Sub-Fund

Completed Projects (2014-2016)

APEC Funded (6)

	Fund Resources	Project Title	No.	Proposing Economy(ies)
1	ASF: Energy Efficiency	<u>Regional Workshop on Measurement Challenges in Renewable Energy and Climate Science</u>	PPSTI 02 2015A	China; United States
2	ASF: Energy Efficiency	<u>Improving Micro, Small and Medium Enterprises (MSMEs) Competitiveness through Low Carbon Economy</u>	PPSTI 03 2015A	Philippines
3	ASF: Energy Efficiency	<u>Internet of Vehicles — IoV Project Phase 2: A Global Exhibition with a Symposium in the Asia-Pacific Region</u>	PPSTI 01 2015A	China; Chinese Taipei; United States
4	ASF: Connectivity	<u>Young Scientists Workshop for the APEC Roadmap of Science Communication in the 21st Century</u>	PPSTI 01 2014A	Malaysia
5	ASF: Science & Technology Development	<u>Innovation Futures in APEC - Competitiveness and Grand Challenges</u>	PPSTI 05 2014S	Russia; Thailand
6	ASF: Science & Technology Development	<u>Policy Investigation on the Last Mile Solution of Smart Transportation and Its Application on SME Value Chain Development</u>	PPSTI 13 2015S	Chinese Taipei

Completed Projects (2014-2016)

Self-Funded (17)

Fund Resources	Project Title	No.	Proposing Economy(ies)
Self-Funded	APEC Typhoon Symposium	PPSTI 04 2014S	Chinese Taipei
Self-Funded	APEC Green Video Festival	PPSTI 03 2014S	Chinese Taipei
Self-Funded	APEC Workshop on Strategies to Address Non-Communicable Diseases (NCDs) through Science, Technology and Innovation - Nutrigenomics Approach	PPSTI 01 2014S	Philippines
Self-Funded	APEC Technology Commercialization Program	PPSTI 02 2014S	China
Self-Funded	Improving Micro, Small and Medium Enterprises (MSMEs) Competitiveness through Low Carbon Economy	PPSTI 03 2015A	Philippines
Self-Funded	Workshop on Impact Assessment and Monitoring of Science, Technology and Innovation Policies	PPSTI 12 2015S	Peru
Self-Funded	APEC Training Programs for Seismic Design of Structures 2015	PPSTI 10 2015S	Chinese Taipei
Self-Funded	Establishment of Regional Database on Herbal Medicine	PPSTI 09 2015S	Philippines
Self-Funded	The Co-establishment of an Online Service Platform for Collaborative Innovation of SMEs in APEC Member Economies	PPSTI 08 2015S	China
Self-Funded	From Science to Action: The Use of Weather and Climate Information for Efficient Disaster Risk Management	PPSTI 06 2015S	Korea
Self-Funded	APEC Smart City Forum and Exhibition on Information Technology	PPSTI 04 2015S	China
Self-Funded	Building Regional Ocean and Land Observation Systems to Safeguard APEC Resources and Communities	PPSTI 03 2015S	Australia
Self-Funded	APEC Workshop on Commercialization and Popularization of Research and Market-based Innovations through Policy Translation	PPSTI 02 2015S	Philippines
Self-Funded	APEC Workshop on Strategies to Address Non-communicable Diseases (NCDs) through Science, Technology and Innovation: Nutrigenomics Approach	PPSTI 01 2015S	Philippines
Self-Funded	Training and Nurturing Young Scientists (Theoretical Physicists) in the Asia-Pacific Area (APEC Young Scientist Training)	PPSTI 05 2015S	Korea
Self-Funded	Smart Climate Information and Accountable Actions: Achieving Sustainable Food Security in a Changing World	PPSTI 01 2016	Korea
Self-Funded	2016 APEC Typhoon Symposium	PPSTI 01 2016S	Chinese Taipei

On-going Projects (13)

Fund Resources	Project Title	No.	Proposing Economy(ies)
ASF: Connectivity	9th APEC Cooperation for Earthquake Simulation (ACES) International Workshop	PPSTI 07 2015S	China
ASF: Innovative Development, Economic Reform and Growth (IERG)	APEC Internet of Vehicles (IOV), Phase 3 - Training Program in the Asia-Pacific Region based on APEC Connectivity Blueprint and Strategic Blueprint on Global Value Chains	PPSTI 02 2016A	China
ASF: Innovative Development, Economic Reform and Growth (IERG)	Knowledge Transfer Best Practices between APEC Economies	PPSTI 05 2016A	Mexico; Peru
ASF: Micro, Small and Medium Enterprises (MSME)	APEC Symposium on Policy and System for Promoting Micro, Small and Medium Enterprises (MSMEs) Modernization toward Industry 4.0	PPSTI 04 2016A	China
General Project Account	SMEs Cluster Development through STI and Supplier Value Chain Integration	PPSTI 03 2016A	Chinese Taipei

Fund Resources	Project Title	No.	Proposing Economy(ies)
Self-Funded	Promoting Commercialization and Investments for Science and Technology Products and Developing Potential Technology in the APEC Region	PPSTI 11 2015S	Viet Nam
Self-Funded	Simple Human Resources to Symbiotic Green Makers - An Education Platform for STI to SMEs	PPSTI 02 2016S	Chinese Taipei
Self-Funded	Foster International Technology Transfer (ITT) Professionals for the APEC STI Cooperation and Connectivity	PPSTI 01 2017A	China
Self-Funded	APEC Workshop on Cross Border Mobility of Entrepreneurial Mentors to Promote Capacity Building of STI MSMEs	PPSTI 05 2017S	China
Self-Funded	Workshop on Vocational Education Linkage with Labour Market	PPSTI 04 2017S	Indonesia
Self-Funded	Industrial Innovation Outlook	PPSTI 03 2017S	Thailand
Self-Funded	APEC Training on Health and Medical Big Data Innovation	PPSTI 02 2017S	China
Self-Funded	Building Asia-Pacific Standards Dosimetry Laboratories Capabilities toward Regional Sustainable Network	PPSTI 06 2017S	Thailand

ABOUT ACABT



To build a platform for APEC economies using bio-waste in bio-refinery concept for bio-hydrogen and bio-based products and to promote the development of the community economy and drive the bio-economy in APEC region.

GOAL AND MISSION

ACABT Chapters and Branches

2016.04

Malaysia Chapter

CHAIR -Prof. Dr. Jamaliah Md Jahim
UKM, Malaysia



2017.08

Chongqing China Branch

CHAIR-Prof. Dr. Qiang LIAO
Chongqing University, China



2016.07

Indonesia Chapter

CHAIR-Prof. Dr. Eng. Eniya Listiani Dewi
BPPT, Indonesia



2017.08

North Vietnam Branch

CHAIR-Prof. Dr. Le Ha QUAN
Hanoi University of Science and Technology,
Vietnam

2016.07

Thailand Branch

CHAIR-Prof. Dr. Alissara Reungsang
KKU, Thailand

2016.07

Indonesia Branch

CHAIR-Prof. Dr. Enny Sudarmonowati
LIPI, Indonesia



Activities

■ Short-term Training Courses (2010-2017)



2016/7/1 -16
Promoting Community
Empowerment in
APEC's Rural Area

2017/8/14 -31
Green Economy and
Social Innovation



Activities

■ ACABT Workshops (2010-2017)

2016/7/13-15

- 146 participants from 14 economies
- Invited speakers from 6 economies (Japan, Thailand, Vietnam, Indonesia, Philippines, Malaysia)



2017/8/27-31

- 120 participants from 14 economies
- 11 speakers from 8 economies (China, India, Indonesia, Japan, Malaysia, Philippines, Thailand, Vietnam)

Activities

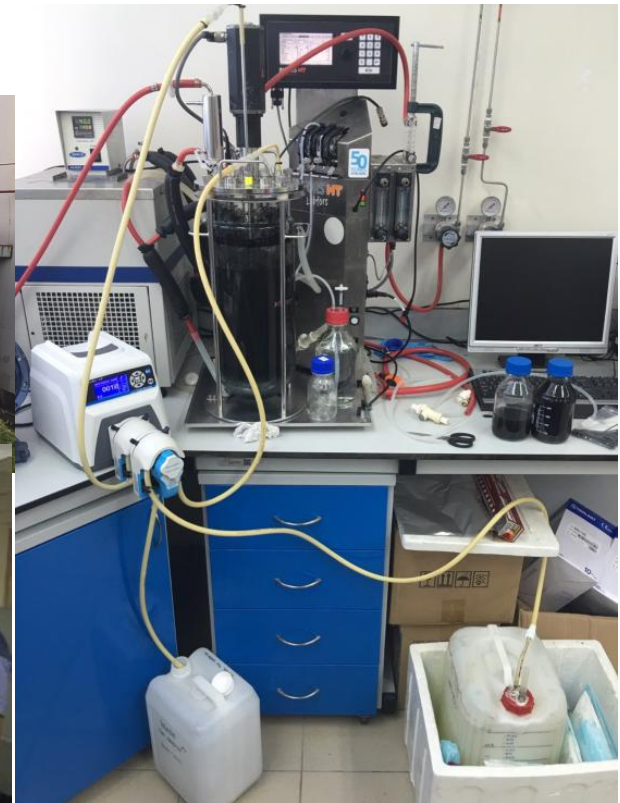
■ APEC Yes Challenge (2017/8/27 -31)



Next Year
2018 Yes-Challenge will be
in Bangkok, Thailand

Regional Science and Technology Connectivity

- **UKM, Malaysia - 1000L Biological Hydrogen Production**
2016/7/25~2016/8/15
- **BPPT, Indonesia - 1000L Biological Hydrogen Production**
2016/10/11~2016/11/11



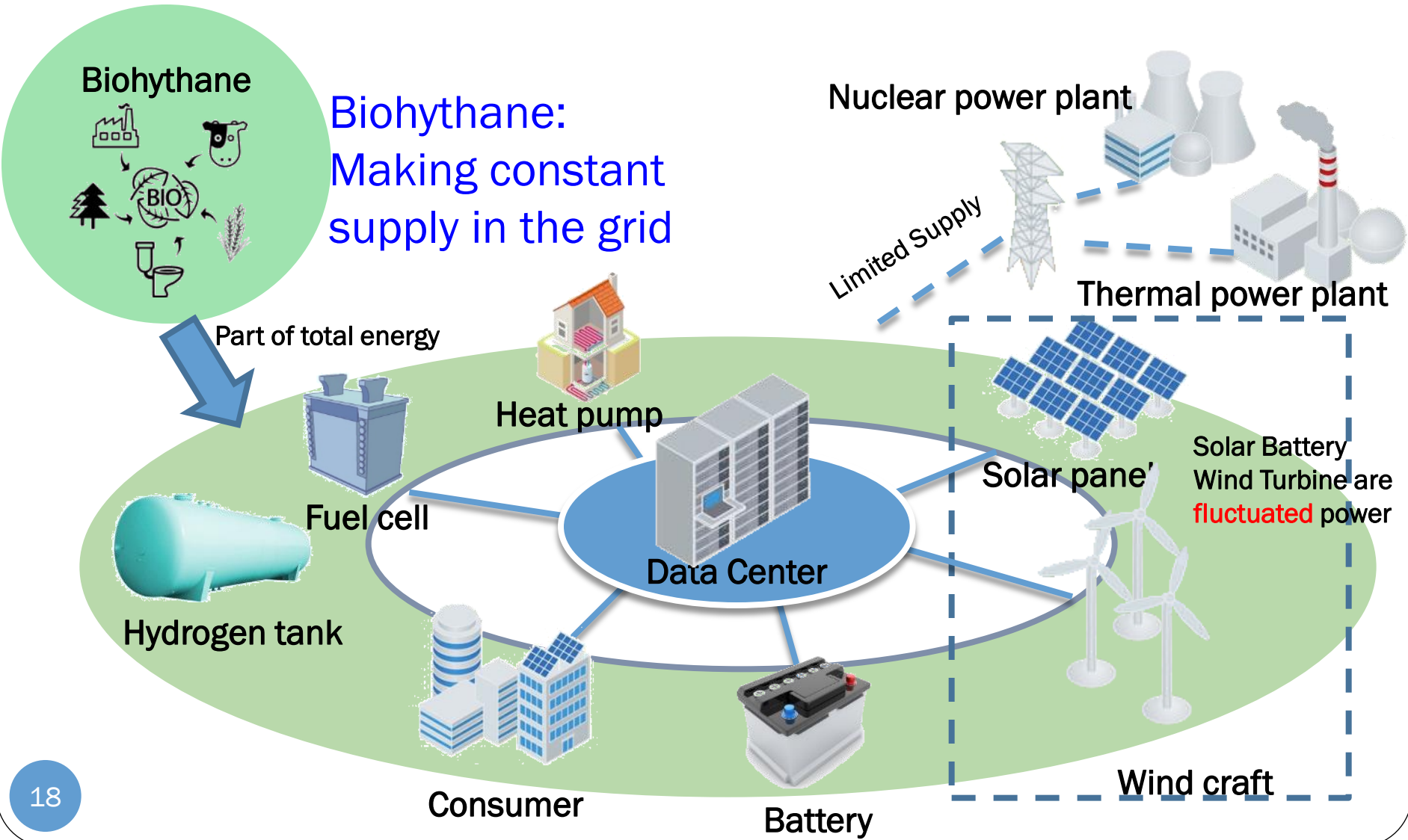
ACABT New Proposal Submitted for Energy Efficiency Sub-Fund

(Session 2, 2017)

ACABT –
Smart Power
Management for
Self-Sustained
Green Community
in APEC Region

- **Proposing APEC economy**
Chinese Taipei
- **Co-sponsoring economies:**
China, Indonesia, Thailand, Viet Nam
- **Goal:**
To provide practices on how to transfer organic wastes to bioelectricity and to the smart power grid; and eventually, to build up a collaboration model in APEC region.

Biohythane Smart Power and Green Cycle Managements



Benefit for APEC Region

To build R&D capability

To promote cross-border
education

The Connectivity Framework:

Demo Plant

Forum & Meeting

Training Course

Newsletter & Website

To extend the value chain of
scientific research

To improve green policies



From biomass to bioenergy to bioeconomy

Suggestion for Preliminary Cross-fora Collaboration between EWG & PPSTI

Attending fora and sub-fora meetings mutually for sharing ideas and experiences

Cross-fora Joint Projects

- Low Carbon Economy and Energy Deployment
- Renewable Energy Technology Development
- Green Transportation Promotion
- Others



Asia-Pacific
Economic Cooperation
APEC ACABT



逢甲大學
Feng Chia University

APEC Research Center for Advanced Biohydrogen Technology (APEC-ACABT)

Thank You for Your Attention



- Contact:
 1. CEO of ACABT
Prof. Dr. Shu-Yii WU
sywu@fcu.edu.tw
 2. Executive Secretary
Dr. Chen-Yeon Chu
cychu@fcu.edu.tw
- ACABT website:
<https://apec-acabt.org/>