Smart/Intelligent Grid Development and Deployment in Thailand (Smart Thai)

Introduction of the Project and WADE THAI

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Partners

Main Applicant

World Alliance for Thai Decentralised Energy (WADE THAI)

Partner

World Alliance for Decentralised Energy (WADE)

Associate Partner

Full Advantage Co., Ltd. (FA)

Funded by:
European Union
Introduction of the WADE THAI
WADE THAI Concept

• Set up WADE THAI as a Non Profit Organisation (NPO)
• Complement (not compete with nor duplicate) existing organisations
• WADE THAI should be self sustaining
• Bring about effective power sector reform which eliminates barriers to DE
• Provide Members with value added market intelligence, information and business opportunities
• Aim to have 30-50 members at minimal fees and limited operational budget
• Harness the benefits of EC, ADB, USAID, and other funding for the promotion of DE
• Provide business opportunities for, among, and in collaboration with members
• Provide networking opportunities and learning from members
• Co-ordinate the creation of high quality carbon credits from DE projects and assist members to capture the upcoming carbon market
WADE THAI Mission

1. To promote the development, implementation and dissemination of DE in Thailand
2. To bring about effective power sector reform which eliminates barriers to DE and creates real market opportunity for DE
3. To provide its Members and supporters with value added market intelligence, information and business opportunities
WADE THAI Objectives

1. To form an Alliance among existing global and local associations/organisations to address shared concerns and enhance networking opportunities
2. To conduct advocacy activities for the enhancement of policies and programs that level the playing field for DE
3. To organise events and activities designed to promote and advance the market for DE technology and showcase member product offerings
4. To conduct cutting-edge research and analysis on energy and the environment and disseminate market intelligence and relevant news to keep members informed of the latest developments in the global DE marketplace
5. To formulate projects and activities that will generate business opportunities for members
WADE THAI Structure

WADE Global

Global Alliance

WADE THAI

Advisory Board of Directors

Executive Director

Donors/Sponsors

Administration

Members / Working Groups

Funded by:
European Union
Stakeholders & Memberships

Main Actors / Stakeholders
• Small to medium sized industries/companies/associations relevant for DE
• Government agencies (MoE; DEDE; EPPO; EGAT; PEA; MEA,…)

Memberships
• Founding Members (by invitation - Free)
  – Professional Associations
• Full Members
  – Commercial (15,000 THB)
  – Educational/Non-profit (10,000 THB)
  – Individual (5,000 THB)
Value Propositions

• WADE THAI will be an Alliance of existing associations in Thailand & globally
  – Shared concerns and cross-cutting issues
  – Differentiated solutions
• WADE THAI will be a platform for companies to go ASEAN
• WADE THAI will focus on
  – Financing
  – Technology transfer
  – Climate Change aspects
• WADE THAI will provide access to:
  – Market Intelligence and business opportunities
  – Reports, studies, seminars
  – Global network, members’ experiences
WADE THAI Activities

• Advocacy activities
• Provision of Policy and Regulatory updates
• Market monitoring and intelligence
• Preparation of proposals that will generate business opportunities for, among, and in collaboration with members
• Web-based matching between projects and funders
• Provision of services to members
• Workshops / Seminars / Conferences (Networking Opportunities)
Benefits of Members

• Leveraging of existing set ups to address shared concerns and cross-cutting issues
• Platform for expansion to other ASEAN countries
• Greater access to sources of financing
• Enhancement of market intelligence and business opportunities
• Access to centralised support for information, services and training on DE and Climate Change aspects
• Reports, studies, seminars
• Global network, members’ experiences
Introduction of the Project
Total duration and cost of the action

• 30 Months (Jan 2011 – June 2013)
• Total Project Cost – 255,000 Euros
• EC Contribution – 72%
General Objectives

• Improvement of the sustainable economic and social development of Thailand through the efficient delivery of sustainable, economic and secure electricity using Smart/Intelligent Grid systems based on EU models and technologies
Specific Objectives

• Transformation of the generation, transmission and distribution network of Thailand through the enhancement of the capacity of Thai private and public sector organisations in introducing and promoting Smart/Intelligent Grid systems thereby contributing to the national development goals of Thailand in the area of environment, climate change and energy security
Component 1: Mainstreaming Smart/Intelligent Grid systems in the generation, transmission and distribution activities in Thailand

- Result 1.1: Supporting policies and regulatory frameworks for the adoption of Smart/Intelligent Grid systems strengthened

- Result 1.2: Understanding of relevant government agencies on the application of Smart/Intelligent Grid systems enhanced through dialogues with EU counterparts
Component 2: Capacity building, knowledge management and institutional development

• Result 2.1: Knowledge platform for the promotion and implementation of Smart/Intelligent Grid systems established and operational

• Result 2.2: Handbook on Smart/Intelligent Grid systems development and deployment, including EU best practices, completed and disseminated

• Result 2.3: Capacities of relevant public and private organisations on Smart/Intelligent Grid systems developed through workshops, training, corporate exchanges, and public-private partnerships
Component 3: Supporting the introduction of pilot Smart/Intelligent Grid systems

- Result 3.1: Technical and economic feasibility of implementing Smart/Intelligent Grid systems on a pilot basis, including CDM potential, established

- Result 3.2: Simulation system to demonstrate the technical and economic merits of the pilot Smart/Intelligent Grid system developed and tested
Result 1.1: Supporting policies and regulatory frameworks for the adoption of Smart/Intelligent Grid systems strengthened

- Activity 1.1.1: Review of the existing policies and regulatory frameworks in Thailand to identify areas to enhance the promotion of Smart/Intelligent Grid systems

- Activity 1.1.2: Review of policies, regulatory frameworks and experiences in EU to gain lessons and examples for Thailand

- Activity 1.1.3: Identification of barriers for the development and deployment of Smart/Intelligent Grid systems and devising of measures to remove the barriers

- Activity 1.1.4: Support in the formulation of policies and regulations that encourage the development and deployment of Smart/Intelligent Grid systems
Result 1.2: Understanding of relevant government agencies on the application of Smart/Intelligent Grid systems enhanced through dialogues with EU counterparts

• Activity 1.2.1: Identification of agencies in Thailand relevant for the promotion of Smart/Intelligent Grid systems and their counterparts in EU

• Activity 1.2.2: Preparation and conduct of dialogues in EU between Thai agencies and their EU counterparts
Result 2.1: Knowledge platform for the promotion and implementation of Smart/Intelligent Grid systems established and operational

- Activity 2.1.1: Design and set up of a knowledge platform on Smart/Intelligent Grid systems within the framework of the WADE Thai

- Activity 2.1.2: Creation and management of knowledge base and production and dissemination of information related to Smart/Intelligent Grid systems
Result 2.2: Handbook on Smart/Intelligent Grid systems development and deployment, including EU best practices, completed and disseminated

• Activity 2.2.1: Identification and preparation of case studies on EU best practices

• Activity 2.2.2: Preparation, production and dissemination of the Handbook on Smart/Intelligent Grid systems development and deployment
Result 2.3: Capacities of relevant public and private organisations on Smart/Intelligent Grid systems developed through workshops, training, corporate exchanges, and public-private partnerships

- Activity 2.3.1: Assessment of capacity needs and preparation of an integrated capacity building plan

- Activity 2.3.2: Preparation, organisation and conduct of training and workshops on different aspects of Smart/Intelligent Grid systems

- Activity 2.3.3: Preparation and execution of corporate exchanges and public-private partnerships
Result 3.1: Technical and economic feasibility of implementing Smart/Intelligent Grid systems on a pilot basis, including CDM potential, established

- Activity 3.1.1: Identification of area(s) where Smart/Intelligent Grid system(s) on a pilot basis could be implemented and arrangements of participation of key stakeholders involved

- Activity 3.1.2: Conduct of feasibility study(ies) of the pilot system(s) in the identified area(s), including implementation arrangements

- Activity 3.1.3: Study of the CDM potential and GHG mitigation for the implementation of Smart/Intelligent Grid systems in Thailand
Result 3.2: Simulation system to demonstrate the technical and economic merits of the pilot Smart/Intelligent Grid system developed and tested

- Activity 3.2.1: Design and programming of the computer simulation model to analyse the technical and economic merits of the pilot Smart/Intelligent Grid system

- Activity 3.2.2: Gathering of data and processing of the model

- Activity 3.2.3: Production of modelling report and dissemination of results
Conceptual Framework

Analysis of the Problem

Design and formulation of the Action

Mainstreaming and Policy

Capacity building and Knowledge management

Technology and Piloting

Adaptation and replication of smart grid systems

Transformation of generation, T&D network in Thailand

Contribution to national development goals of Thailand in the area of environment, climate change & energy security
## Main Actors/Stakeholders

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<th>Actor/Stakeholder</th>
<th>Role(s)</th>
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| 1. Small-to-medium-sized industries who are users of energy in Thailand           | -Participation in capacity building activities  
                                        -Potential host of pilot smart grid system                                                                                                                                                       |
| 2. Small-to-medium-sized industries supplying energy equipment in Thailand       | -Provision of information on components for feasibility study and computer simulation  
                                        -Participation in capacity building activities                                                                                                                                                   |
| 3. Utilities and technology suppliers in EU                                      | -Hosting of EU dialogues  
                                        -Provision of experts in corporate exchanges  
                                        -Provision of information on components for feasibility study and computer simulation                                                                                                                                 |
| 4. Private generating companies in Thailand, such as: IPPs; SPPs; VSPPs            | -Participation in capacity building activities  
                                        -Identification of potential areas for piloting of smart grid systems                                                                                                                                 |
| 5. Utilities on generation, transmission and distribution in Thailand, namely: EGAT; PEA; MEA | -Participation in dialogues with EU counterparts and other capacity building activities  
                                        -Hosting of corporate exchanges from EU companies  
                                        -Provision of information on components for feasibility study and computer simulation                                                                                                                                 |
| 6. Relevant Government agencies in the energy sector, namely: MoE; DEDE; EPPO; ERC | -Provision of information on components for feasibility study and computer simulation  
                                        -Participation in training-workshops  
                                        -Regular use of computer simulation for planning and decision-making related to future energy capacity additions in the country and investments in transmission and distribution networks |
THANK YOU