

Information request on your EoI to collaborate with KCI to develop a case study

First of all, the KCI would like to thank you for expressing your interest in collaborating with KCI in the development of the case study in line with the concept note (attached). In order for the KCI to have more clarity on your interest and to consider it for the next step, we would like to request you kindly respond to the following questions:

Questionnaire

1. If you haven't done so, please indicate which of three options you choose from the concept note to develop the case study in collaboration with KCI:
 - a. ***Option 1- Country-specific case study***: Assessing the effects of the global energy transition (such as the reduction of hydrocarbon demand due to global energy transitions and rising climate policies) in a fossil-fuel-dependent economy, taking into account people in vulnerable situations, as well as efforts toward economic diversification and transformation and just transition.
 - b. ***Option 2- Region-specific case study***: Assessing impacts of the implementation of emissions reductions climate policies, on economies, taking into account people in vulnerable situations, as well as efforts toward economic diversification and transformation and just transition.
 - c. ***Option 3- Sector and region-specific case study***: Assessing impacts of increasing fuel costs on resource-dependent, carbon-intensive tourism sectors, taking into account people in vulnerable situations, as well as efforts toward economic diversification and transformation and just transition.
2. If possible, kindly provide a brief description of the case study for the chosen option, e.g. the sector, the climate policy, the country/region, etc.

Energy blueprint of Thailand: The Power Development Plan is the plan for the next 20 years to see the newly installed capacity of power plants responding to the demand forecast of Thailand. Thailand's Power Development Plan (PDP) 2018-2037 (Rev. 1), the latest version, aims to improve energy efficiency and enhance energy security in Thailand. The PDP 2018 focuses on (1) Energy Security: coping with the increasing power demand to correspond to the National Economic and Social Development Plan and taking into account fuel diversification; (2) Economy: maintaining an appropriate cost of power generation for long-term economic competitiveness; and (3) Environment: lessening the carbon dioxide footprint of power generation and focusing on renewable energy sources.

The percentage from renewable energy is planned to be more shared compared to conventional energy. The sharing from solar PV should be more compared to its reduction of cost nowadays. The solar business in Thailand is booming, as the government prepares to hit its Paris Climate Accords target of 30% renewable by 2030. The adder or feed-in tariff has been used but the rate of growth is substantially moved up but it should be higher to reach the target of renewable energy in PDP.

The Energy Regulation Committee (ERC) is the organization that regulates and balances all aspects of the power plant in Thailand. In the past, the management of Thailand's energy sector was under the National Energy Policy Council Act, B.E. 2535 (1992), whereby the National Energy Policy Council (NEPC) was empowered to set the national energy policy and the national energy management and development plan as well as to monitor and supervise energy-related operations, causing the lack of efficiency with regard to performance evaluation, protection of

consumers and those affected from energy industry operations. Therefore, the Energy Industry Act, B.E. 2550 (2007) ("the Act") was enacted, effective on 11 December 2007, with a view to restructuring the energy industry management by distinctly separating the functions of policy-making, regulation, and operation from one another in order to achieve efficient, secure, adequate and extensive energy service provision with reasonable prices and up-to-standard quality to meet the demand and contribute to the sustainable development of the country in terms of social, economic and environmental aspects. The Act also aims to promote competition and enhance greater participation and roles of the private sector, communities as well and the general public in the energy industry.

The "Power Development Fund" is a fund established under the Energy Industry Act B.E. (2) Distributing prosperity to the localities (3) Developing local communities affected by power plant operations (4) Promoting renewable energy and technology for the electricity industry little impact on the environment taking into account the balance of natural resources and creating fairness for electricity users The Act requires the Minister of Energy It has the authority to propose policies for remittance and expenditure of Power Development Fund money to the National Energy Policy Council (NEPC) in order for the Energy Regulatory Commission (ERC), which is the central organization to supervise the business. energy used as a guideline for issuing regulations or announcing the rules, procedures, and conditions for the remittance and expenditure of the Power Development Fund money. in accordance with the policy of After the NEPC delivers the money transfer and payment policy of the Power Development Fund to the ERC, the ERC will proceed with drafting regulations. in accordance with the policy of the aforementioned NEPC and bring the aforementioned draft regulations to listen to opinions from relevant people and stakeholders to bring useful comments to improve the draft regulations to be appropriate. more before it is published in the Royal Gazette for further enforcement, with the Energy Regulatory Commission (ERC) as a juristic person, a state agency. which is an auditing unit under the organic law on state audits Receiving payees, making payments, keeping and managing the Power Development Fund money. according to the regulations set by the Energy Regulatory Commission (ERC) separated from the budget of the OERC, in every fiscal year The Office of the Auditor-General will assess the spending of money and assets of the OERC and the Power Development Fund to ensure that they meet their objectives, are economical, worthwhile, and efficient.

To reach more contributions from solar power plants, the ERC plans to waive the rate of money collected for the power development plan. The increasing internal rate of return from not paying to ERC will loss of some money for ERC but gain more investment from solar power plant investors. The impacts of more investments are higher employment rates, higher personal income tax, higher corporate income tax, reduction of CO2 emission, etc.

The lesson learned from this case study can be moved to capacity building in many countries. The online or onsite training or workshop for exchanging ideas with other countries can be more developed.

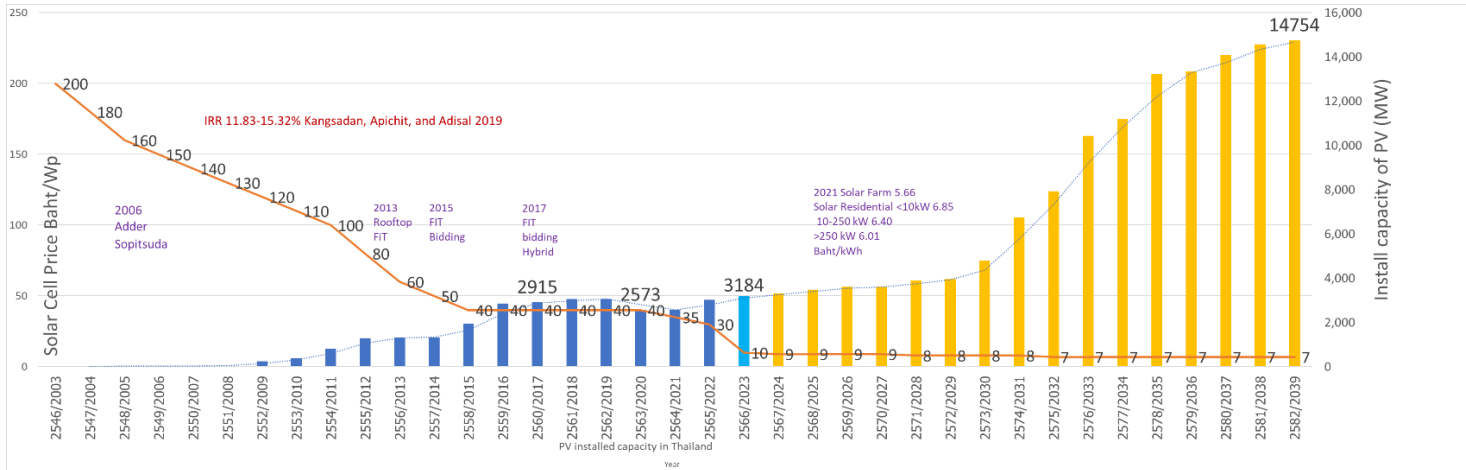
3. What is the status of the assessment of impacts for the specific case study? Choose from below, and elaborate as necessary:
 - a. Assessment of impacts is complete for the case study (published/unpublished)
 - b. Assessment of impacts is in progress/ partially complete for the case study and will be developed together with KCI

Thailand Case is almost done but the case for other countries can be developed under collaboration.

- c. The study will be initiated in collaboration with KCI
- d. Other.....(specify)

4. If the case study is already available, please provide the link to the case study.

Partially as follows:



Reducing of Solar Cell Price and Growth of Installed Capacity PV Plant in Thailand

Business	Growth rate of PV business	
Investment	PV Installed Capacity (MW)	
(mil Baht)	Case 1 Investment (mil Baht)	
	Case 2 Investment (mil Baht)	
	Case 3 Investment (mil Baht)	
	Case 4 Investment (mil Baht)	
Funding	Case 1 BESS PEOPLE FARM FLOAT	
(mil Baht)	Case 2 BESS FARM FLOAT ใช้งาน VSPP<1000kVA	
	Case 3 BESS SPP FLOAT ใช้งาน 1000 kVA และ VSPP	
	Case 4 All exempt	
Tax	PIT new employment (mil Baht)	
Government	Manufacturer profit	3.3%
Income	composition	45.3%
(mil Baht)	CIT	30%
	Contractor profit (10 md/5MW)	4%
	composition 19.84+5.8	25.54%
	CIT	30%
	PPA Holder (22.8%)	22.8%
	composition (100-M-C)	29.2%
	CIT	30%
	Case 1 BESS PEOPLE FARM FLOAT	
	Case 2 BESS FARM FLOAT ใช้งาน VSPP<1000kVA	
	Case 3 BESS SPP FLOAT ใช้งาน 1000 kVA และ VSPP	
	Case 4 All exempt	
Environment	Recycling Plant	260 W/p
Social	Operating Recycling	30kg/px4p/kWx3000B/
	household/MW (cheaper)	200
	Carbon Credit (Bht/ton)	37.66
	Case 1 BESS PEOPLE FARM FLOAT	
	Case 2 BESS FARM FLOAT ใช้งาน VSPP<1000kVA	
	Case 3 BESS SPP FLOAT ใช้งาน 1000 kVA และ VSPP	
	Case 4 All exempt	
Particle Matter	Case 1 BESS PEOPLE FARM FLOAT	
0.02	Case 2 BESS FARM FLOAT ใช้งาน VSPP<1000kVA	
(g/kWh)	Case 3 BESS SPP FLOAT ใช้งาน 1000 kVA และ VSPP	
	Case 4 All exempt	
Ext solar 0.14	Case 1 BESS PEOPLE FARM FLOAT	
Ext NG 0.79	Case 2 BESS FARM FLOAT ใช้งาน VSPP<1000kVA	
Baht/kwh	Case 3 BESS SPP FLOAT ใช้งาน 1000 kVA และ VSPP	
0.65	Case 4 All exempt	

The scenario table shows 4 cases of scenario in collecting money to the Energy Regulatory Fund from all groups in case 1, exempt for VSPP<1,000 kVA, Exempt for VSPP, and all exempt respectively with impact assessment in view of return tax from new employment, corporate income tax from manufacturer, contractor, and power plant. The external cost in view of recycling PV cell after the end of lifetime, reduction of particle matter, and external cost have been evaluated.

5. If you would like to develop or initiate a case study, or further develop your existing case study, in collaboration with the KCI, how can you contribute? (for example: by providing resources, by developing the case study itself, etc.)? Do you have adequate financial and human capital to prepare the case study in collaboration with KCI?

I can be a trainer for the country that plans to develop this simulation and scenarios either online or onsite. In the case of online, I can support myself but if onsite for some countries, I need financial support for traveling and living expense abroad.