



Preliminary Findings from Interviews with Private Sector Participants in Thailand's Recent Auction

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- Mobilizes access to public and private finance in adaptation, clean energy, and sustainable landscapes to scale up low-carbon, climate resilient development
- Active in over 18 countries throughout Africa, Southeast Asia, and Latin America and the Caribbean

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CEADIR Interviews with Private Sector Participants

- In March-April 2018, CEADIR requested interviews with all the companies that had winning bids in Thailand's recent auction
- CEADIR also contacted companies that submitted bids that were not selected as winning projects, including key company experts that developed the projects
- CEADIR interviewed all the companies willing to be interviewed
 - Six interviews total, representing seven companies that participated in the recent auction



Photo credit: IRENA

Interviews with Private Sector Participants (cont.)

- Interviewed companies submitted projects using three types of RE technologies
 - Biomass/biogas
 - Photovoltaics
 - Energy storage
- These represent all of the technologies used in proposed projects in the recent auction
 - No indication that wind power or other technologies were used



Photo credit: Power Engineering International

How Bidders Structured Financing

- All interviewees believed their projects could mobilize equity and lending
- Key factor for accessing finance was the power purchase agreement (PPA) with the Electricity Generating Authority of Thailand (EGAT) which has proven bankable
- Expected equity internal rate of return (IRR) ranged from 10-14 percent
- Loans can be locally sourced from local banks at a debt/equity ratio of 70-80 percent



Photo credit: Bangkok Post

How Bidders Structured Financing (cont.)

- All interviewees agreed the resulting prices from the auction were very low
 - Resulting net prices ranged from \$0.06 to \$0.11 USD/kWh
- Uncertainty about whether some biomass projects would be built as planned, due to insufficient biomass supply at such low prices
- Lowest bid prices came from winning biomass projects located inside sugar mills, which could potentially sell surplus power to the grid

Lessons Learned: *High Competition*

- Expected at the start of the auction due to the attractive opening bidding price (\$0.11 USD/kWh)
- 85 projects were submitted
- High level of competition led to efficient price discovery
- Sugar mills proposed biomass projects using bagasse as fuel for cogeneration systems that would be constructed regardless of whether selected as winning bids
 - These projects offered the lowest prices to guarantee winning positions



Photo credit: Asian Development Bank

Uncertainty About Future RE Procurement

- Recent government announcements signal uncertainty or potential delays related to RE procurement
- Recent auction was perceived by the private sector as one of the last potential options for securing power purchase agreements (PPAs) with the Electricity Generating Authority of Thailand (EGAT)
- For private developers and investors that didn't participate, unclear when new opportunities may arise
- Private sector considers PPAs with EGAT to be an easy mechanism for accessing finance

Lessons Learned: *Bidding Documents*

- Only 42 of the 85 submitted proposals passed the initial technical review stage of the auction
- Regulator noted that 43 proposals failed because they lacked completeness or missed certain criteria
 - E.g., evidence related to readiness of fuels, land, or financial sources



Photo credit: Bloomberg

Lessons Learned: *Checking Grid Capacity*

- Each project had to check grid access with distribution utilities
- Required within two weeks of announcement of auction regulations
- Specific data on project location, installed capacity, proposed sale, technologies could not be changed after submitted
- Bidders expressed concern that timeline for checking grid capacity was too short to prepare good projects



Photo credit: Shutterstock

Lessons Learned: *Grid Access and Regional Quotas*

- Some developers prepared projects in areas where there was insufficient grid capacity to accommodate the proposed power supply
- Other proposed projects were expected to be of high value to the government, but were not possible in the auction due to necessary pricing and the limited regional quota



Photo credit: Siemens

Costs Associated with the Auction

- Bidders were required to pay 70,000 THB (approx. \$2,200 USD) for each point of grid interconnection check
- Additional up-front costs associated with engineering, prefeasibility studies, and bid bonds
- Most interviewees view the costs as acceptable and helpful to screen out speculative bidders
- Some recommended the government reduce costs, such as the grid capacity check fee



Photo credit: Greater Mekong Subregion Program

Recommendations for Future RE Auctions in Thailand

Firm definition

- Interviewees noted that “firm” power could be defined in ways that allow private developers and investors to achieve more objectives
 - E.g., firmness could be defined as feasibility for dispatch
 - Projects that combined solar PV and energy storage systems are advanced in generation forecast sensing technologies and considered highly dispatchable



Recommendations for Future RE Auctions in Thailand

Technologies and types of fuel

- Most interviewees recommended holding separate auctions for different technologies/fuel sources
- Some exceptions may relate to RE projects that are driven by specific environmental, social, or other considerations
 - E.g., municipal solid waste projects to address specific environmental problems, or RE projects in areas where insurgency occurs

Recommendations for Future RE Auctions in Thailand

Grid access

- EGAT accepts or rejects grid interconnection requests, but does not provide clear information on how it conducts grid access studies
- Interviewees recommended:
 - Disclosure of information about government's grid assessment study
 - Openness to considering other private sector grid solutions

