

Customer Analysis: 2019

Renewable Power Business

Major Customers

As of 2019, EA Group owns and operates four solar power plants and two wind power plants with a total capacity of 664 MW. Due to Thailand's regulatory framework and the enhanced single-buyer model governing the energy sector, our power plants are categorized as small power producers (SPPs), or private power producers whose maximum capacity do not exceed 90 MW, with the exception of our solar power plant at Lopburi province, which is categorized as a Very Small Power Producer (VSPP) with a maximum capacity of less than ten MW. Based on this existing framework, the sole buyers of electricity from our renewable power plants are state-owned enterprises who own and operate transmission and/or distribution networks, namely:

- 1) The Provincial Electrical Authority (PEA): PEA is responsible for the generation, distribution, and sale of electricity to provinces around Thailand, excluding the Bangkok Metropolitan Area, Nonthaburi, and Samut Prakarn provinces which are overseen by the Metropolitan Electricity Authority (MEA). The Company signed a Power Purchase Agreement (PPA) with PEA for EA Solar Lopburi (8 MW) for five years from the COD with automatic renewal for an additional five years, effective until the agreement is terminated.
- 2) The Electricity Generating Authority of Thailand (EGAT): EGAT is responsible for electricity generation and governs the operations of Independent Power Producers (IPPs) and SPPs and also acts as the sole owner and operator of the country's transmission network. The Company signed a PPA with EGAT for EA Solar Nakornsawan (90 MW), EA Solar Lampang (90 MW), EA Solar Phitsanulok (90 MW), EA Wind Hadkanghun (126 MW), and EA Wind Hanuman (260 MW). All PPAs with EGAT also last for five years from the COD with a renewal option for an additional five years under the condition that the party who wishes to renew the agreement has the obligation to inform the other party in writing at least 30 days before the expiration date.

Power Plant	Production Capacity (MW)	Production Output in 2019 (KW)	Name of Major Customer
EA Solar Lopburi (ESLO)	8	14,120,160	PEA
EA Solar Nakornsawan (ESN)	90	181,460,703	EGAT
EA Solar Lampang (ESL)	90	205,161,256	EGAT
EA Solar Phitsanulok (ESP)	90	225,734,349	EGAT
EA Wind Hadkanghun (HKH)	126	297,655,828	EGAT
EA Wind Hanuman (HNM)	260	475,142,066	EGAT

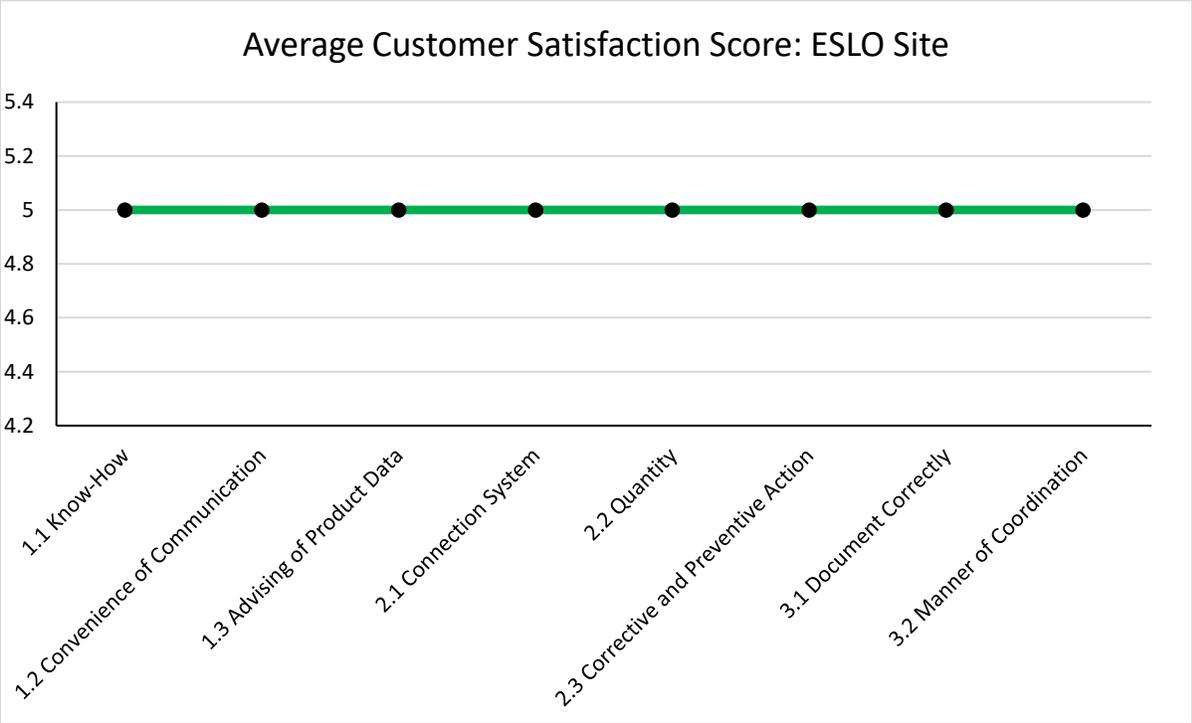
Customer Satisfaction

The Company prioritizes the satisfaction of our customers and thus perform customer satisfaction surveys with our major customers monthly to measure and keep track of our performance and to use it as a point of reference for making improvements to the quality of our products and services. Our Company uses ISO 9001:2015 to manage customer relations, and in 2019, there are no major complaints from our customers. Our survey has a rating scale from 1 to 5 with 1 being “Improvement Needed” and 5 being “Excellent” and covers a total of eight items, ranging from topics such as the convenience of communication and the quality of guidance or advising on the Company’s product and services. A suggestion box is also provided to collect any concerns, complaints, feedback, or questions regarding the Company’s products and services. Our target is to maintain an average score above 4 (Good) for all of our sites and across all survey items. When the average score falls below a 4, serious corrective measures will be arranged and implemented to ensure that the quality of our products and services continues to meet the expectations of our customers. The average total customer satisfaction scores for all of our sites in 2019 are as follows:

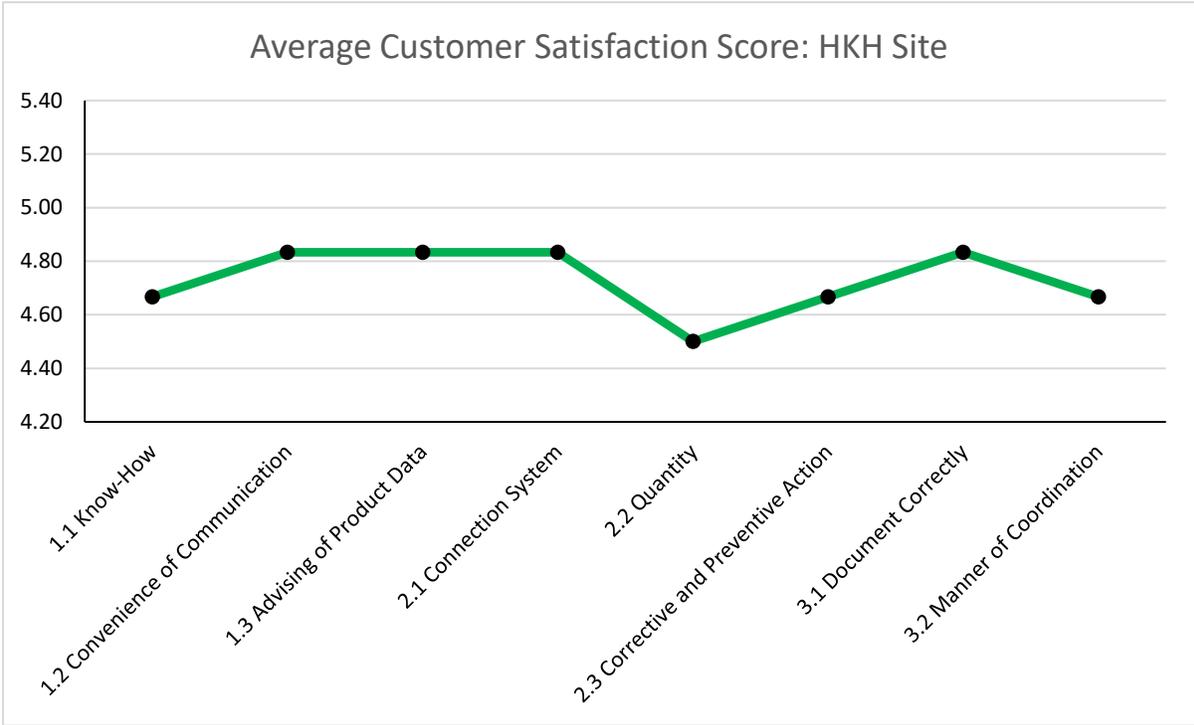
Power Plant	Average Total Score (%)
EA Solar Lopburi (ESLO)	100.00
EA Solar Nakornsawan (ESN)	93.40
EA Solar Lampang (ESL)	98.80
EA Solar Phitsanulok (ESP)	100.00
EA Wind Hadkanghun (HKH)	94.60
EA Wind Hanuman (HNM)*	90.00*
Average Total Score Across All Sites	96.10

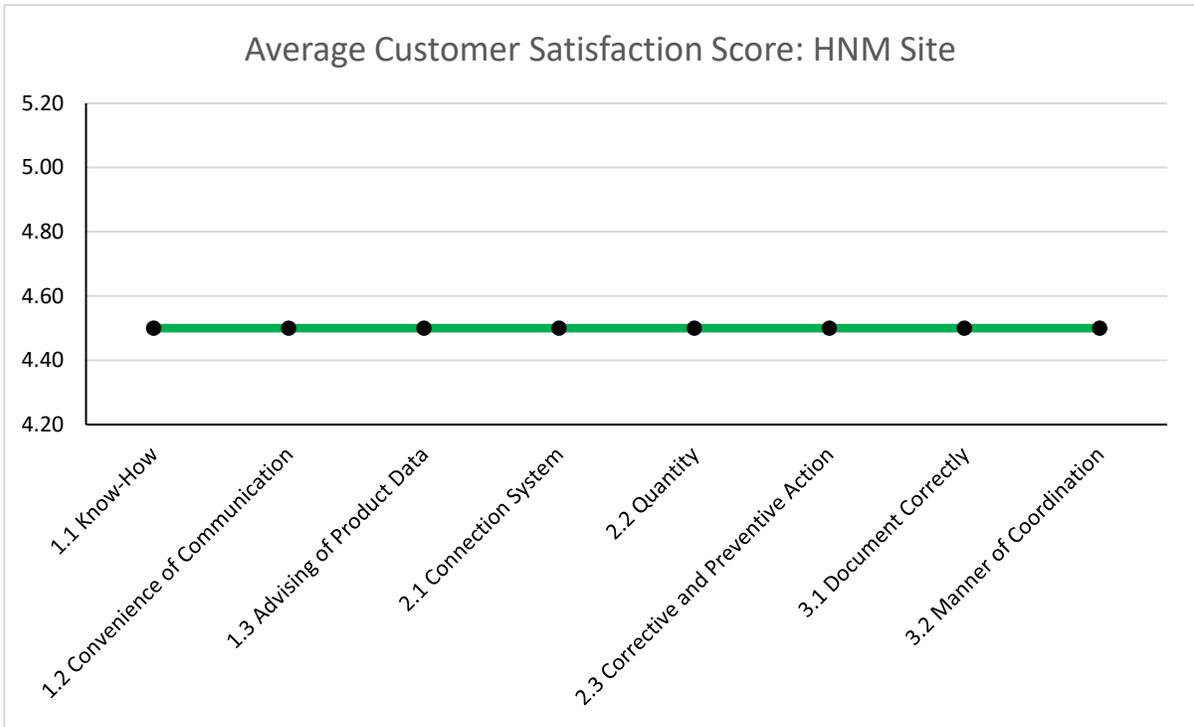
* EA Wind Hanuman (HNM) started its full commercial operation in 2019. HNM's slightly lower score compared to the scores of other sites can be explained by hiccups associated with new plant operations and the smaller survey sample size. The Company aims to increase the number of respondents in the upcoming years to enhance the accuracy of the assessment and to improve HNM's operational performance

Score Breakdown by Site









Biodiesel Business

Major Customers

As of 2019, our biodiesel business unit produces and distributes products such as biodiesel (B100), purified glycerin, and other byproducts (crude glycerin, free fatty acid, and palm fatty acid distillate). Furthermore, our Company has been conducting R&D projects on crude palm oil-based value-added products, including green diesel and bio phase change material (PCM), which is used in the construction industry and packaging industry to help with thermal regulation and energy efficiency. Our Company expects to scale up both new products for commercial operations in 2020.

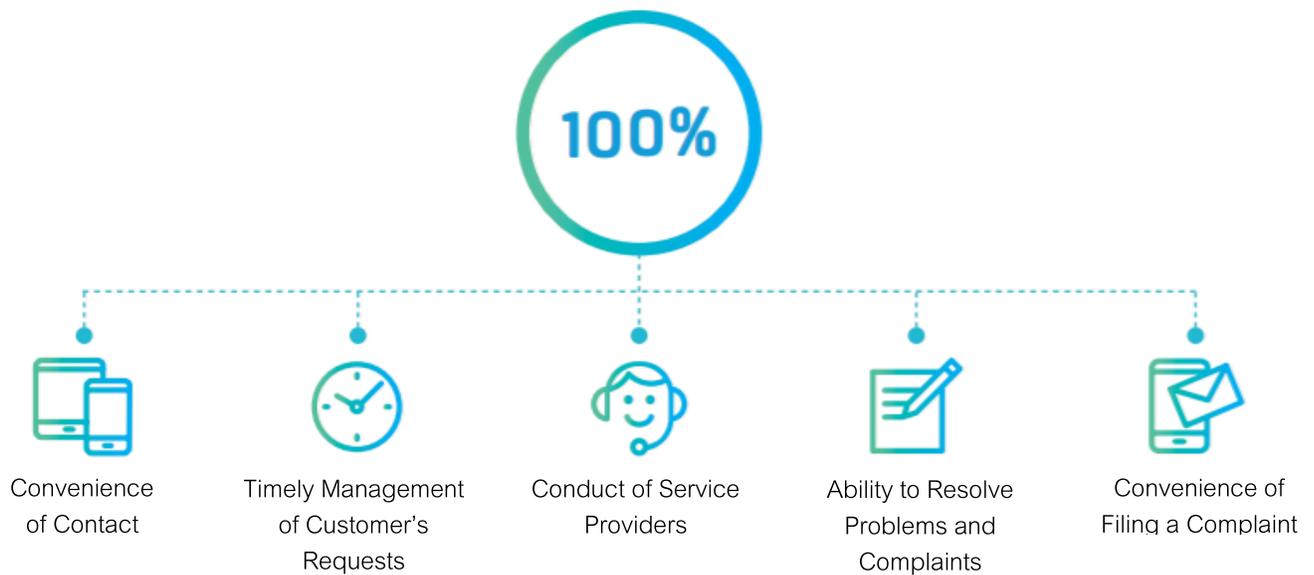
- 1) **Biodiesel (B-100):** Our biodiesel is distributed domestically where the majority of our customers are classified as fuel and oil traders. Over 99% of our biodiesel sales are conducted with large oil traders in Thailand. The biodiesel trading contract made with major customers are valid for three months and can be renewed until a maximum length of three years. Such major customers include seven oil refinery companies in Thailand which include: PTT, Esso, Shell, ThaiOil, Chevron, IRPC, and SRPC. Based on trade value, our revenue from B-100 sales are generated mainly from five customers, but none of their trade values exceed 30% of the total trade value. Maintaining a high diversification, avoiding customer dependency, and increasing business transactions with smaller customers are covered by the Company's risk management policies.
- 2) **Purified Glycerin:** Our Company produces purified glycerin with a purity level ranging from 99.50% to 99.85%, thus our products meet the criteria to be categorized as pharmaceutical grade. As of 2019, 92% of our purified glycerin customers are based in Thailand, while 8% are from overseas from countries such as India. Our major customers use purified glycerin as a raw product in their manufacturing process and operate within the pharmaceutical and chemical industries.
- 3) **Other Byproducts:** Our customer groups for our byproducts include producers and distributors of chemical supplies both from within Thailand and from overseas.

4) **Bio PCM:** Our target customer groups include manufacturers of construction materials, producers of fibers, and packaging companies both from within Thailand and from overseas, including countries such as Japan and Germany.

Customer Satisfaction

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Services



Products

