

# Summary of Request for Proposals for Thermal Power Plant Purchase – FY2015 Solicitation

September 16, 2015  
Kyushu Electric Power Co., Inc.

## Overview of Okinoerabu Island

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[ Okinoerabu Island ]

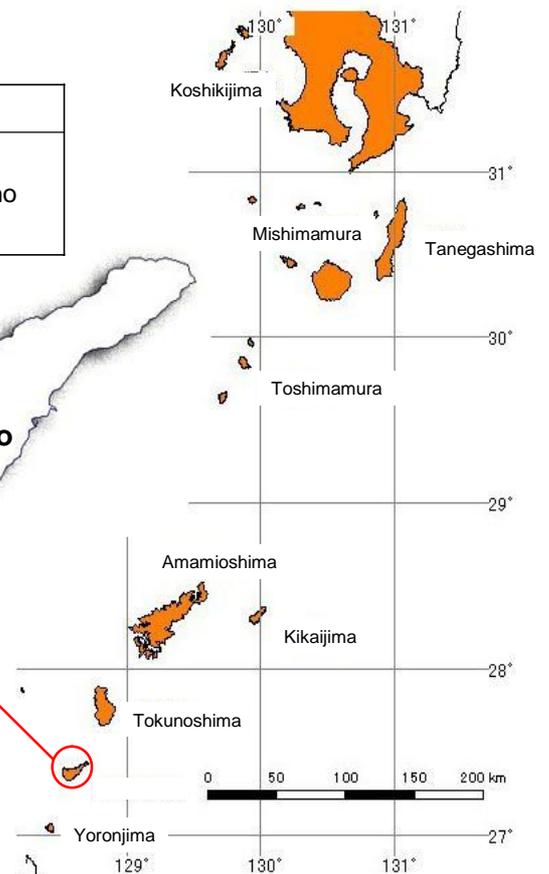
	Numbers	Remarks
Population (Households)	13,220 (6,422)	The numbers published by China-cho and Wadamari-cho (as of July 1,2015)

**Project scale :**  
Declared power  
4,200 ~ 4,500kW



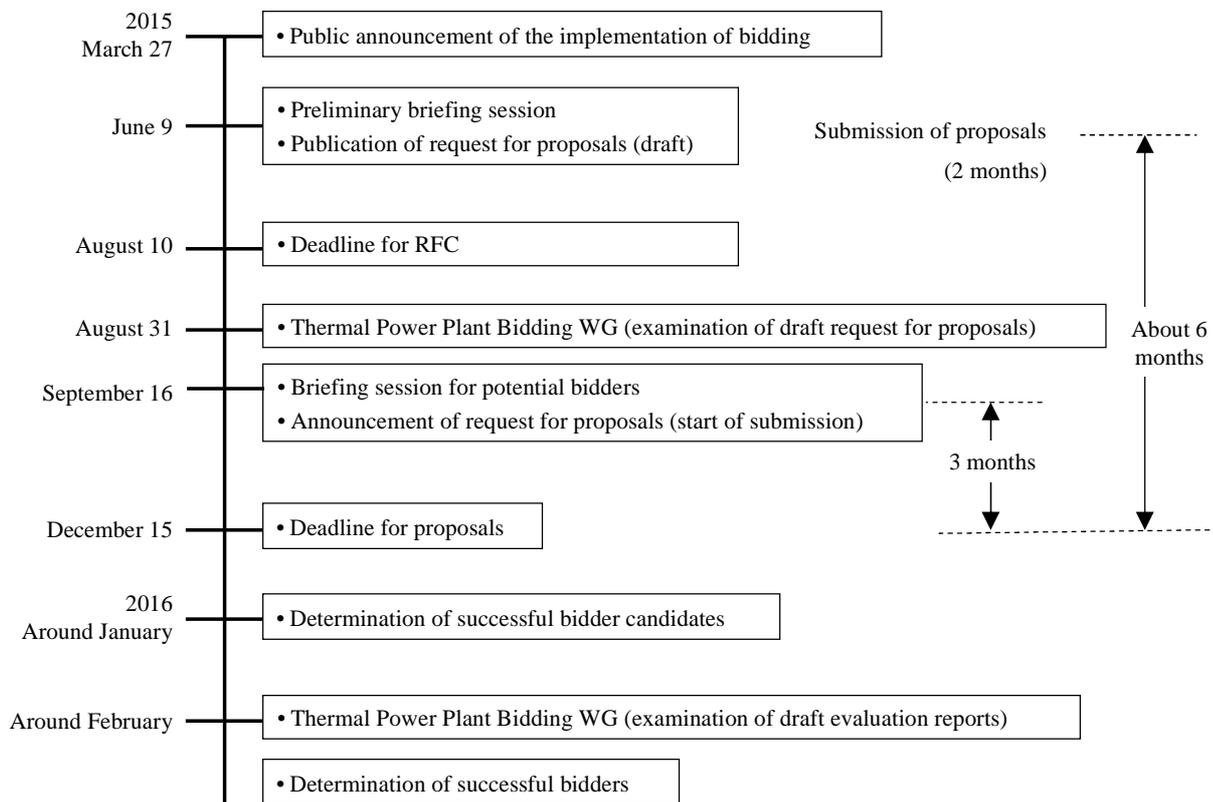
**Shin China Power Station**

	1G	2G	3G	4G	5G	6G
Declared power (MW)	1.1	2.25	2.25	4.5	4.5	4.5



1. Timeline
2. Power Plant for Which Proposals Are Being Requested
3. Proposal Requirements
4. Method for Calculating the Bid Price
5. Evaluation and Determination of Successful Bidders
6. Major Contract Terms
7. Other

## 1. Timeline



\* The schedule above is subject to alteration. In this case, changes will be posted immediately on Kyushu Electric Power’s website.

Project area	Okinoerabu Island (a remote island)
Project scale	4,200 kW to 4,500 kW (receiving end)
Start of power delivery	By June 2020
Delivery term	In general, 15 years (selectable by bidder from 10 to 30 years)
Power plant type	Power plant capable of producing 50% to 70% of annual load factor However, fluctuations are possible due to expanded use of renewable energy.

\* Bids may consist of existing facilities and/or parts of generated power, and they may aggregate multiple power plants to be treated as a single source for the purpose of the bid.

\* Kyushu Electric Power (the company that is soliciting bids) will also submit its own bid.

## 3. Proposal Requirements

### (1) Maximum appraisal price

The appraisal price must not exceed Kyushu Electric Power's own appraisal price (which constitutes the maximum price). (The maximum price will not be publicized.)

$$\text{Appraisal price} = \frac{\text{Bid price}^{*1} \pm \text{Cost of CO}_2 \text{ countermeasures}^{*2}}{(1 - \text{business tax rate}^{*3})}$$

\*1 For Kyushu Electric Power, equal to the cost for the bid power plant.

\*2 When Kyushu Electric Power adjusts the final CO<sub>2</sub> emission coefficient.

\*3 The business tax rate is 1.2888%.

### (2) Technical reliability

The bidder must have either experience generating power using the same generating method as utilized by the power plant described in the bid or technical support from an operator with such experience.

(3) Flexibility in fluctuation of load factor

Annual load factor must be adjustable within  $\pm 10\%$  of the annual notified load factor.

(4) Compliance with laws, ordinances, and other standards

Generating equipment must comply with all laws and regulations related to the electric power generating business.

(5) Connection to the grid

The following procedures must be completed in advance of bid submission:

1. Application for connection (in general, the study period is 3 months or less)
2. Connection and delivery application after receiving response to (1) above (required construction time, share of construction costs, etc.)

(6) Contracted maximum power

The maximum power output that can be supplied continuously throughout the contracted delivery period shall be at least 4,200 kW and not greater than 4,500 kW.

(7) Supply and demand control

The bidder must provide the following supply and demand control in order to ensure the quality of power supplied on the island:

○ Frequency control function

- Governor-free operation

The power plant must have governor-free operation based on frequency fluctuation.

- Automatic frequency control (AFC) function

The power plant must detect the grid frequency or generator RPM based on instructions from Kyushu Electric Power and vary power output from minimum power to declared power (load fluctuation speed = at least 3% of declared power per minute).

○ Voltage regulation function

- The power plant must control the generator bus voltage or generator reactive power based on instructions from Kyushu Electric Power.

○ Start characteristics

- The power plant must start from cold in the following time based on instructions from Kyushu Electric Power:

{ From operation conditions complete to parallel operation with mains: Within 10 minutes  
{ From parallel operation to full power: Within 30 minutes

○ Minimum power output

- The power plant must be able to operate continuously under 50% of declared power output.

- The bid price must be a flat price calculated by averaging total costs for each year over the contracted delivery term.
- The bidder must estimate costs for each year, including capital costs, operating and maintenance costs, fuel costs (CIF price-linked portion), and other fuel-related costs (non CIF price-linked portion). In calculating the bid price, the bidder must allocate variable and fixed costs so as to approximate actual costs as closely as possible.
- An approximation of the portion of grid connection costs to be borne by Kyushu Electric Power as construction costs (capped burden) should be included in the bid price.
- The bidder should adjust the CO<sub>2</sub> emission coefficient to match the base emission coefficient specified in advance by Kyushu Electric Power.

\*Base emission coefficient: 0.000551t-CO<sub>2</sub>/kWh

- Escalation applied to operating and maintenance costs and variable costs (fuel costs and fuel-related costs) should be 0%.
  - \* Escalation correction will be applied to delivery charges separately for operating and maintenance costs and variable costs after the start of delivery.
- The bid price should include costs necessary in order to provide plant power while the power plant is shut down.

**(1) Selection of successful bidder candidates**

○An evaluation price will be calculated for each proposal that satisfies the conditions outlined in “Proposal Requirements” based on the following formula, and the proposals will be ranked based on price. (bidders submitting lower prices will receive a higher rank)

$\text{Evaluation price (yen per kWh)} = \text{Appraisal price} + \text{Construction costs other than connection costs (to be borne by Kyushu Electric Power)}$
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○ If proposals submitted by two or more bidders receive the same evaluation price, the proposals will be ranked based on a consideration of the following non-evaluation factors:

- Items will be considered in this order.
- (1) Proposals for which smoke and other emissions do not exceed allowable levels or conform to existing agreements with local government
  - (2) Proposals that will start operation sooner
  - (3) Proposals for which both the fixed and variable cost components of the appraisal price are less than the fixed and variable cost components of the maximum price
  - (4) In the event that proposals cannot be ranked based on items (1) through (3), they will be subject to an overall decision based on factors such as the reliability of the plan.

○ Bidders receiving the No. 1 rank will be considered successful bidder candidates.

**(2) Determination of Successful Bidders**

○After the selection of successful bidder candidates, Kyushu Electric Power will submit a draft evaluation report to the Thermal Power Plant Bidding WG. If the WG concurs that the evaluation has been carried out in accordance with the request for proposals, the successful bidder candidates will be chosen as successful bidders.

○Kyushu Electric Power will enter into discussions with the successful bidders based on a standard contract, and once those discussions have been completed, Kyushu Electric Power will conclude a contract with the successful bidders.

○Once this contract has been concluded, Kyushu Electric Power will announce the following information at an appropriate time:

- Name of operator offering wholesale supply
- Location (address) at which wholesale supply will be offered
- Contracted maximum power (summer power output)
- Year in which delivery will begin
- Type of fuel

**(1) Delivery charges (two components: capacity charge and energy charge)****1. Capacity charge: Total of capital costs and operating and maintenance costs**

- Capital costs: Capital costs are treated as fixed costs for the year in which the bid was submitted. However, the following corrections will be made before starting commercial operation:
  - Approximation of construction cost burden (capped burden)
  - Civil engineering and construction costs
- Operating and maintenance costs: Adjusted for annual rise in actual prices based on the Compensation of Employees Index (CEI), Corporate Goods Price Index (CGPI), and Consumer Price Index (CPI)

**2. Energy charge: Calculated by multiplying actual energy delivered by the following variable unit prices**

- Basic portion unit price: Variable cost unit price (applied to contracted capacity)
  - Excess capacity portion unit price: Basic portion unit price  $\times$  0.50
- \* Bandwidth: Fluctuations within 3% of contracted capacity are considered part of the basic portion.
- \* Fuel cost adjustment will apply to the CIF-linked portion of variable costs, while price adjustment will apply to the non-CIF-linked portion of variable costs.

**(2) Treatment of failure to deliver contracted capacity, etc.**

1. If the generation output provided by the successful bidder fails to reach the contracted capacity by a margin greater than the bandwidth, charges for the undelivered capacity will be deducted from the capacity charges.
2. If the annual total contracted capacity following a change notification fails to reach the total before the change by more than the allowable amount, successful bidders will compensate Kyushu Electric Power at the end of the fiscal year.

\* Allowable amount: Amount of power equivalent to 10% of the value calculated by multiplying the contracted maximum power output by 8,760 hours

**(3) Trial operation power**

In principle, trial operation power will be purchased at the basic portion power charge unit price.

**(4) Notice operation**

- Kyushu Electric Power will set the annual generation output (notified annual generation output) of which successful bidders are notified using the annual available generation output reported to Kyushu Electric Power by each successful bidder as an upper limit.
- As a general rule, by the end of December every year, Kyushu Electric Power will notify successful bidders of the notified annual generation output for the following year as well as a notification plan outlining planned notifications and an outlook for the notified annual generation output for the two-year period starting the year after that.
- In order to accommodate power supply and demand conditions on the island and provide inexpensive electricity, Kyushu Electric Power may set the notified annual generation output so that it is less than the annual available generation output. In this case, Kyushu Electric Power will provide an explanation of its reason for doing so and correct charges to reflect the decrease in planned generating efficiency (correction for decreased utilization). The specific terms of correction will be determined in consultation with successful bidders.

**(5) Change notifications**

- Kyushu Electric Power may change the notice provided at the beginning of the year to modify the notified annual generation output in response to conditions such as conditions of power supply and demand. Such changes will not exceed the addition or reduction of generation output equivalent to 10% of the value obtained by multiplying the contracted maximum power output by 8,760 hours.

**(6) Utilization of surplus generation capacity**

- In the event Kyushu Electric Power sets notified generation output that is less than the generation output corresponding to the contracted maximum power output, successful bidders may utilize the resulting difference in generation output as surplus capacity (for example, by selling the electricity in question to other power producers and sellers).

**(7) Contract deposit**

- Successful bidders must provide a deposit of ¥5,000 per kilowatt of contracted maximum power output as a guarantee of their intention to execute their obligations under the contract.
- \* Once operation under the contract has begun, Kyushu Electric Power will return the deposit with interest equivalent to interest paid on bank deposits.
- A written guarantee issued by a bank or other equivalent instrument may be substituted for the contract deposit.

**(8) Changes in the delivery start date**

- In the event that start of delivery is delayed, the delaying party must provide written notice to the other party in advance and pay compensation of ¥13.70 per kilowatt of contracted maximum power output per day of delay.
  - \* In general, delays may not exceed one year.

**Exceptions**

- If both parties are forced to delay the delivery start date, for example due to force majeure
- If construction of the power plant is delayed for reasons beyond the control of the successful bidder, for example due to regional circumstances, and the successful bidder provides notice within one year and six months of the conclusion of the contract
- If construction of grid connection facilities is delayed for reasons beyond the control of Kyushu Electric Power, for example for site-related reasons, and Kyushu Electric Power provides notice within one year and six months of the conclusion of the contract (or within one year and six months of agreement by the local parties)

**(9) Dissolution of the contract**

- If either party is forced to dissolve the contract for unavoidable reasons, it must provide written notice in advance as well as compensation as outlined below once agreement has been reached:
1. **Dissolution before the start of commercial operation**
    - If the bidder gives notice, it must provide compensation as follows:
      - a. Amount equivalent to the contract deposit (if a contract deposit has been received, Kyushu Electric Power will keep that deposit as a penalty for breach of contract)
      - b. Actual amount spent on grid connection construction
    - If Kyushu Electric Power gives notice, it will provide compensation as follows:
      - c. Amount equivalent to contract deposit and interest (only if a contract deposit has been received)
      - d. Amount equivalent to contract deposit, amount spent by the bidder on construction of generating equipment, and cost of removing that equipment (if it is to be removed)
      - e. If connection equipment (transmission lines) is being built by the bidder, actual amount spent on that construction and cost of removing those facilities (if they are to be removed)

**2. Dissolution after the start of commercial operation (in general, notice must be given 5 years in advance)**

- If the bidder gives notice, it must provide compensation as follows:
  - a. Difference between the delivery price and bid price (price averaged over the contracted delivery term) from the start of delivery to the time of dissolution
  - b. Remaining book value of grid connection equipment and cost of removing that equipment
  - c. Amount equivalent to the difference between the maximum appraisal price and the appraisal price (both averaged over the contracted delivery term) for the remaining contract term
- If Kyushu Electric Power gives notice, it will provide compensation as follows:
  - d. Amount equivalent to the capacity charge for the remaining contract term
- \* If the remaining contract term is greater than five years, the maximum compensation will be for five years (c and d).
- \* Compensation need not be provided if dissolution is due to an act of God or other unavoidable reason (c and d).
- \* Amounts will be adjusted to reflect value at the time of dissolution (a, c, and d).

**(10) Cancellation of the contract**

- In the event that either party fails markedly to satisfy its obligations under the contract, the other party may demand execution of those obligations in writing. If the offending party fails to perform its obligations within 30 days of receiving this demand, the other party may cancel the contract for reasons attributable to the offending party. In this case, the offending party must provide compensation as described under “Dissolution of the contract.”

### (11) After the end of the contracted delivery term

- If either party requests to extend the term no later than 5 years before the final date of the contracted delivery term, the other party must accede to the contract extension unless there is a special reason to do otherwise.
- \* After the end of the contracted delivery term, in addition to selling power to Kyushu Electric Power, the bidder may sell the contracted power, either in whole or in part, to another company.

### (1) Meters and other equipment

- In general, Kyushu Electric Power will own and install metering equipment and other communications equipment necessary in order to handle load-dispatch instructions. Kyushu Electric Power will seek reimbursement from the bidder for its share of associated construction costs.

### (2) Treatment of subsidiaries, joint ventures, and similar entities

- Shareholders of subsidiaries, joint ventures, and similar entities will be required to submit a letter of joint guarantee. Requests to submit a joint guarantee covering certain shareholders or to use an alternative method of assuring financial soundness will be subject to discussion.

### (3) Bid submission method

- Enclose the documentation for each bid in a sealed envelope bearing your company's seal and hand-deliver it to Kyushu Electric Power by the deadline.