

**APPENDIX 11**  
**CALCULATION OF PAYMENT**

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1. GENERAL

1.1 Definitions

The following capitalised terms shall have the following meanings:

"**Actual Fuel Demand**" or "**FD<sub>a</sub>**" means the Fuel consumed by the Company as measured at the Delivery Point in accordance with Clause 11 of this Agreement;

"**Actual Loss of Net Energy Generation due to Unavailability and Derating**" or "**LC<sub>a</sub>**" means the net electrical energy determined in accordance with Section A.4 of Attachment A (Agreed Values for Payment Calculation) of this Appendix 11;

"**Availability Notice**" means any notice from the Company to Offtaker which declares:

- (i) any change to the most recently determined Net Dependable Capacity as a result of Planned Deratings, Maintenance Deratings and Forced Deratings;
- (ii) Forced Outages, Maintenance Outages and Planned Outages as well as the extension of such Maintenance Outages and extension of such Planned Outages.

Each notice shall supersede all previous notices, notwithstanding that an Availability Notice may specify a duration, finish time or revised dependable capacity upon a resumption of operation following an outage;

"**Available**" or "**Availability**" means the state in which a Group is capable of providing service, whether or not it is actually generating Net Electrical Energy. For purposes of clarification, a Group may be Available regardless of whether (a) Offtaker is able to take delivery of Net Electrical Energy, (b) Offtaker is able to deliver, or procure the delivery of Fuel, provided that the Company is not in breach of its obligations under Clause 8 of this Agreement, (c) the Company is prevented from generating Net Electrical Energy due to a Natural Force Majeure Event under Clause 15.2.3 or 15.2.4 of this Agreement: (i) in relation to any contamination of the Site from any Hazardous Substances which occurred prior to the earlier of the date of the issue of the limited notice to proceed under the EPC Contract and the Closing Date; or (ii) in relation to any such event occurring at or otherwise attributable to the Existing Offtaker Land.

"**Capacity Payment**" means a monthly payment by Offtaker to the Company, which covers the capital cost recovery payment for the Plant as well as the fixed operation and maintenance payment, and is determined in accordance with Section 2 of this Appendix 11;

"**Capital Cost Recovery Charge Rate**" or "**CCR**" means the amount specified by the Company in Section A.2 of Attachment A (Agreed Values for Payment Calculation) to this Annex and applied to the Capacity Payment calculation for a Billing Period after being adjusted in accordance with Attachment B (Indexation / Adjustment to Charge Rates) of this Appendix 11;

**"Contracted Capacity"** or **"CC"** means the capacity defined in Section 1.5 of this Appendix 11 and specified in Section A.1 of Attachment A (Agreed Values for Payment Calculation) of this Appendix 11;

**"Derating"** means a component failure or other condition that requires the capacity of a Group to be reduced;

**"Early Contract Period"** means a period of operation prior to the Project Commercial Operation Date from the Commercial Operation Date of a Group until the Commercial Operation Date of the subsequent Group;

**"Electrical Energy Payment"** means a monthly payment by Offtaker to the Company, or the Company to Offtaker that covers the Fuel Consumption Adjustment Payment and the variable operation and maintenance payment, and is determined in accordance with Section 2 of this Appendix 11;

**"Fixed O & M Cost Recovery Charge Rate"** or **"FOMR"** means the amount specified by the Company in Section A.7 of Attachment A (Agreed Values for Payment Calculation) of this Appendix 11 and applied for Capacity Payment calculation for a Billing Period after being adjusted in accordance with the provisions of Attachment B (Indexation / Adjustment to Charge Rates) of this Appendix 11;

**"Forced Derating"** means an unplanned component failure (immediate, delayed or postponed) or other condition that requires the capacity of a Group to be reduced, immediately, or within six hours, or before the end of the next weekend;

**"Forced Outage"** means an unplanned component failure (immediate, delayed or postponed) or other condition that requires a Group be removed from service immediately, or within six hours, or before the end of the next weekend;

**"Fuel Demand Model"** means the computer program as described in Attachment C (Calculation of Projected Fuel Demand) to this Appendix 11, for the calculation of Projected Fuel Demand;

**"Maintenance Derating"** means the removal of a component for scheduled repairs that can be deferred beyond the end of the next weekend, but requires the capacity of a Group to be reduced before the next Planned Outage;

**"Maintenance Outage"** means the removal of a Group from service to perform work on specific components that can be deferred beyond the end of the next weekend, but requires the Group be removed from service before the next Planned Outage;

**"Measuring Tolerances for Fuel Demand"** or **"MTFD"** means the applicable correction factor in the determination of the Fuel Consumption Adjustment Payment as set forth in Section 2.2 of this Appendix 11 and takes into consideration measuring tolerances of (i) the actual fuel metering as set forth in Section A.9.2 of Attachment A (Agreed Values for Payment Calculation) of this Appendix 11 and (ii) the measured values required for the calculation of the Projected Fuel Demand as set forth in Attachment C (Calculation of Projected Fuel Demand) of this Appendix 11;

**"Net Dependable Capacity"** or **"DC"** means prior to the Project Commercial Operation Date, the net capacity (in MW) of a Group or Groups, and on and from the Project Commercial Operation Date, the net power capacity (in MW) of the Plant, determined on the basis set forth defined in Section 1.5 of this Appendix 11;

**"Net Electrical Energy"** or **"E<sub>a</sub>"** means the sum of the net electrical energy delivered by the Company to Offtaker at the Power Delivery Point;

**"Planned Derating"** means the removal of a component for scheduled repairs that requires the capacity of a Group to be reduced and is scheduled not less than 90 days prior to the Contract Year in which it is to be undertaken and has a predetermined start date and duration;

**"Planned Outage"** means the removal of a Group from service to perform work on specific components that is scheduled not less than 90 days prior to the Contract Year in which it is to be undertaken and has a predetermined start date and duration;

**"Power"** means the product of power generated in the Plant;

**"Projected Available Net Energy Generation"** or **"AG<sub>p</sub>"** means the net potential electrical energy defined in Section 1.5 of this Appendix 11 and calculated according to the provisions of Section A.3 of Attachment A (Agreed Values for Payment Calculation) of this Appendix 11;

**"Projected Fuel Demand"** or **"FD<sub>p</sub>"** means the projected Fuel demand of the Plant calculated in accordance with Section 2.2.1 of this Appendix 11;

**"Projected Loss of Net Energy Generation due to Unavailability and Derating"** or **"LC<sub>p</sub>"** means the net electrical energy determined in accordance with the provisions of Section A.3 of Attachment A (Agreed Values for Payment Calculation) of this Appendix 11;

**"Reference Exchange Rate"** has the meaning set forth in Section B.1 (a) of Attachment B (Indexation/Adjustment to Charge Rates) of this Appendix 11;

**"Reference Site Conditions"** means ambient air temperature of 46°C, ambient relative air humidity of 42%, seawater temperature of 38°C and seawater salinity of 46 g/kg;

**"Scheduled Deratings"** means a combination of Maintenance Deratings and Planned Deratings;

**"Scheduled Derating Extension"** means the extension of a Maintenance Derating or Planned Derating;

**"Scheduled Outages"** means a combination of Maintenance Outages and Planned Outages;

**"Scheduled Outage Extension"** means the extension of a Maintenance Outage or Planned Outage;

"**Scheduled Successful Start**" means any start-up of a power generation unit to achieve a period and level of operation in accordance with the Dispatch Instructions, where such power generation unit was shutdown as a result of a Dispatch Instruction or a disruption in the Electricity Transmission Facilities;

"**Summer Period**" or "**Summer**" means the Months of May, June, July, August, and September;

"**Unavailable**" or "**Unavailability**" means the state in which a Group is not capable of operation because of the failure of a component, external restriction, testing, work being performed, or some other adverse condition;

"**Unplanned Outages**" means Forced Outages and all other outages, which are not Planned Outages as defined hereunder;

"**Variable O & M Cost Recovery Charge Rate**" or "**VOMR**" means the amount specified by the Company in Section A.11 of Attachment A (Agreed Values for Power Payment Calculation) of this Appendix 11 and applied in the Electrical Energy Payment calculation for a Billing Period, after being adjusted in accordance with Attachment B (Indexation/Adjustment to Charge Rates) of this Appendix 11;

"**Winter Period**" or "**Winter**" means the Months of October, November, December, January, February, March and April;

## 1.2 **Payment Structure**

1.2.1 The unit price to be paid for Net Dependable Capacity and Net Electrical Energy shall consist of two parts 1.2.1.1 and 1.2.1.2 as follows:

### 1.2.1.1 Capacity Payment

This part of the unit price shall constitute payment for Net Dependable Capacity and shall consist of Component A and Component B, each such component to be calculated as provided in Section 2 (Payment Formulas) of this Appendix 11.

### 1.2.1.2 Electrical Energy Payment

This part of the unit price shall constitute payment for Net Electrical Energy and shall consist of Component C and Component D, each such component to be calculated as provided in Section 2 (Payment Formulas) of this Appendix 11.

## 1.2.2 **Supplemental Payment Adjustments**

In addition to the unit price, supplemental payments as described in Attachment D (Supplemental Payments Adjustments) shall be payable to the Company by Offtaker in cases of:

- Start-up Payments,
- Costs relating to the use of Back-Up Fuel; and

- Costs of Net Electrical Energy prior to the Commercial Operation Date of a Group and the cost of Net Dependable Capacity during a successful Reliability Test Run.

And shall be payable by the Company to Offtaker in the cases of:

- Start up Deductions

### 1.3 **Term and Structure of Capacity Payments**

The Capacity Payments shall be payable in accordance with the provisions of Clause 9 of this Agreement.

The Capacity Payments shall be calculated based on Base Capital Payment (FCP) set out in Sections 2.1.1.1 of this Appendix 11, where FCP is based on the Net Dependable Capacity.

Deductions from FCP will be applied for temporary reductions in Availability and for temporary Derating.

### 1.4 **Fuel Consumption Adjustment Payment**

#### 1.4.1 **Adjustment Payment Conditions**

The Projected Fuel Demand required for generation of Net Electrical Energy will be determined in accordance with the fuel calculation procedures set out in Section 2.2 of this Appendix 11.

Fuel consumption adjustment payments will be billed by Offtaker or by the Company, as the case may be, when the Actual Fuel Demand differs from the Projected Fuel Demand, after taking into account the MTFD for both Actual Fuel Demand and Projected Fuel Demand, as follows:

- on and from the Project Commercial Operation Date, if the Actual Fuel Demand is greater than the Projected Fuel Demand by an amount greater than the defined tolerances, the Fuel Consumption Adjustment Payment will be paid by the Company to OFFTAKER;
- on and from the Project Commercial Operation Date, if the Actual Fuel Demand is less than the Projected Fuel Demand by an amount greater than the defined tolerances, the Fuel Consumption Adjustment Payment will be paid by Offtaker to the Company.

For the period up to the Project Commercial Operation Date no Fuel consumption adjustment payment will be taken into account.

#### 1.4.2 **Redeclaration of the Fuel Charges**

At any time on or after the first anniversary of the Project Commercial Operation Date, the Company can propose (redeclare) the Fuel consumption data referred to in the formula of Projected Fuel Demand for the Plant set out in Section 2

of this Appendix 11 which is less than the corresponding values already agreed to in Attachment A (Agreed Values for Payment Calculation) of this Appendix 11.

After agreement with Offtaker in writing, such proposals (redeclarations) as agreed to by Offtaker will be the basis for the Dispatch and for the calculation of the Projected Fuel Demand.

#### 1.5 **Performance Criteria**

The formulas for payment set forth in Section 2 of this Appendix 11 (Payment Formulas) include factors related to the performance of the Plant. The derivations of these performance factors are as follows:

**DC:** means the net capacity of the Plant (in MW) made Available to Offtaker and measured at the infeed bays of the 380/230 kV grid station (Electrical Special Facilities) on 380kV and 13.8kV levels.

DC (i) is based upon initial and periodic tests in accordance with Appendix 8 (Inspection, Start-up Testing, Commissioning and Net Dependable Capacity Testing) of this Agreement with the test results corrected to the Reference Site Conditions and with no other adjustments for purported degradation or otherwise, (ii) is based on Gas operation, (iii) is based on the base load setting of the gas turbines, (iv) takes into consideration the mean degradation due to ageing and fouling during each such period, and (v) excludes all electrical auxiliary loads of the power plant, seawater intake and outfall facilities, Fuel facilities, desalination units, common facilities (air conditioning, ventilation etc.).

At no time shall the DC exceed the CC.

**CC:** means the net capacity of Groups or the Plant, as the case may be (in MW), as agreed in Table A-1 of Attachment A (Agreed Values for Payment Calculation) for each Early Contract Period or Contract Year. CC (i) is based on the Reference Site Conditions, (ii) is based on Gas operation, (iii) is based on the base load setting of the gas turbines, and (iv) shall take into consideration the mean degradation due to ageing and fouling during each such period.

CC excludes all electrical auxiliary loads of the power plant, seawater intake and outfall facilities, Fuel facilities, desalination units, common facilities (air conditioning, ventilation etc.), etc. required for continuous operation of the Plant at Reference Site Conditions.

**AG<sub>p</sub>:** means in an Early Contract Period or a Contract Year the net potential electrical energy, which shall be derived from (i) the maximum potential net energy that could have been produced if the Plant had been operated at the Contracted Capacity during the total number of hours in such Early Contract Period or Contract Year, (ii) minus the total number of anticipated hours of Forced Outage, Maintenance Outage, Planned Outage, Forced Derating, Maintenance Derating and Planned Derating in such Early Contract Period or Contract Year, multiplied by the loss of projected net power capacity due to the corresponding outages and deratings.

**1.6 Payment Formulas**

The formulas for calculation of the payment components are defined in Section 2 of this Appendix 11.

In applying the payment formulas for each Billing Period, the factors to be used shall be, where applicable, those to be in effect for such Billing Period as specified in or derived from Attachment A (Agreed Values for Payment Calculation) and shall, where applicable, be adjusted in Attachment B (Indexation/Adjustment to Charge Rates).

**1.7 Rounding of Calculations**

In making the calculations required in this Appendix 11, values shall be calculated to five (5) decimal places of accuracy.

**2. PAYMENT FORMULAS**

**2.1 Capacity Payment**

$$CP_m = A_m + B_m$$

where:

$CP_m$  = Capacity Payment (in SINGAPORE \$) for the Billing Period m

$A_m$  = Component A of the Capacity Payment (in SINGAPORE \$) for the Billing Period m

$B_m$  = Component B of the Capacity Payment (in SINGAPORE \$) for the Billing Period m

m = Billing Period

**2.1.1 Component A of the Capacity Payment**

$$A_m = FCP_m - DRA_m$$

where:

$A_m$  = Component A of the Capacity Payment (in SINGAPORE \$) for the Billing Period m

$FCP_m$  = Base Capital Payment (in SINGAPORE \$) for the Billing Period m

$DRA_m$  = Deductions from  $FCP_m$  for Reduced Availability (in SINGAPORE \$) for the Billing Period m

m = As previously defined

2.1.1.1 Base Capital Payment

$$\mathbf{FCP_m = CCR_m * DC_m * PH_m * 10}$$

where:

$FCP_m$  = as previously defined

$CCR_m$  = Capital Cost Recovery Charge Rate (in Hals/kWh) for Billing Period m

$DC_m$  = Net Dependable Capacity (in MW) for Billing Period m

$PH_m$  = Total hours in the Billing Period m

m = as previously defined

2.1.1.2 Deduction for Reduced Availability

2.1.1.2.1 For the Billing Periods during the Summer Period

**Case One:**

$LC_{am}$  for such Billing Period exceeds  $LC_{pm}$  for such Billing Period, i.e.

$$\mathbf{LC_{am} > LC_{pm}}$$

In this case:

$$\mathbf{DRA_m = CCR_m * DF_m * LC_{am} * 10}$$

**Case Two:**

$LC_{am}$  for such Billing Period is equal to or less than  $LC_{pm}$  for such Billing Period, i.e.

$$\mathbf{LC_{am} \leq LC_{pm}}$$

In this case:

$$\mathbf{DRA_m = CCR_m * DF_m * (LC_{pm} - b * (LC_{pm} - LC_{am})) * 10}$$

where in both cases:

$DRA_m$  = Deductions from  $FCP_m$  for Reduced Availability (in SINGAPORE \$) for the Billing Period m

$CCR_m$  = Capital Cost Recovery Charge Rate (in Hals/kWh) for Billing Period m

$DF_m$  = Payment Deduction Factor, for Billing Period m, calculated according to Section A.6 of Attachment A (Agreed Values for Payment Calculation)

$LC_{am}$  = Actual Loss of Net Energy Generation (in MWh) due to Unavailability and Derating in Billing Period m

$LC_{pm}$  = Projected Loss of Net Energy Generation (in MWh) due to Unavailability and Derating in Billing Period m

b = Coefficient, which during the Summer Period is equal to 0.5

2.1.1.2.2 For the Billing Periods during the Winter Period

For the first six Billing Periods during the Winter Period (months of October, November, December, January, February and March):

$$DRA_m = CCR_m * DF_m * LC_{pm} * 10$$

For the last Billing Period during the Winter Period (month of April):

$$DRA_m = CCR_m * DF_m * (LC_{pm} + c * (LC_{an}^W - LC_{pn}^W)) * 10$$

where in both cases:

$DRA_m$  = as previously defined

$CCR_m$  = as previously defined

$DF_m$  = as previously defined

$LC_{pm}$  = as previously defined

$LC_{an}^W$  = Sum of all Actual Losses of Net Energy Generation  $LC_{am}$  (in MWh) due to Unavailability and Derating in the Winter Periods in the Contract Year n

$LC_{pn}^W$  = Projected Loss of Net Energy Generation due to Unavailability and Derating during the Winter Period in the Contract Year n

n = Contract Year

c = Coefficient, which is

$c = 1$ , if  $LC_{an}^W > LC_{pn}^W$

$c = 0$ , if  $LC_{an}^W \leq LC_{pn}^W$

#### 2.1.2 Component B of the Capacity Payment

$B_m = FOMP_m - DOM_m$
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where:

$B_m$  = Component B of the Capacity Payment (in SINGAPORE \$) for the Billing Period m

$FOMP_m$  = Base Fixed O & M Payment (in SINGAPORE \$) for the Billing Period m

$DOM_m$  = Deduction from  $FOMP_m$  for Reduced Availability (in SINGAPORE \$) for the Billing Period m

2.1.2.1 Base Fixed O & M Payment

$$\mathbf{FOMP_m = FOMR_m * DC_m * PH_m * 10}$$

Where:

FOMP<sub>m</sub> = as previously defined

FOMR<sub>m</sub> = Fixed O&M Cost Recovery Charge Rate (in Hals/kWh) for Billing Period m

DC<sub>m</sub> = as previously defined

PH<sub>m</sub> = as previously defined

m = as previously defined

2.1.2.2 Deduction for Reduced Availability

2.1.2.2.1 For the Billing Periods during the Summer Period

**Case One:**

LC<sub>am</sub> for such Billing Period exceeds LC<sub>pm</sub> for such Billing Period, i.e.

$$\mathbf{LC_{am} > LC_{pm}}$$

In this case

$$\mathbf{DOM_m = FOMR_m * DF_m * LC_{am} * 10}$$

**Case Two:**

LC<sub>am</sub> for such Billing Period is equal to or less than LC<sub>pm</sub> for such Billing Period, i.e.

$$\mathbf{LC_{am} \leq LC_{pm}}$$

In this case:

$$\mathbf{DOM_m = FOMR_m * DF_m * (LC_{pm} - b * (LC_{pm} - LC_{am})) * 10}$$

where in both cases:

$DOM_m =$  as previously defined

$FOMR_m =$  as previously defined

$DF_m =$  Payment Deduction Factor for Power, for Billing Period  $m$ ,  
calculated according to the Section A.6 of Attachment A (Agreed  
Values for Payment Calculation)

$LC_{am} =$  as previously defined

$LC_{pm} =$  as previously defined

$b =$  Coefficient, which during the Summer Period is equal to 0.5

2.1.2.2.2 For the Billing Periods during the Winter Period:

For the first six Billing Periods during the Winter Period (months of October, November, December, January, February and March):

$$DOM_m = FOMR_m * DF_m * LC_{pm} * 10$$

For the last Billing Period during the Winter Period (month of April):

$$DOM_m = FOMR_m * DF_m * (LC_{pm} + c * (LC_{an}^W - LC_{pn}^W)) * 10$$

where in both cases:

$DOM_m =$  as previously defined

$FOMR_m =$  as previously defined

$DF_m =$  as previously defined

$LC_{pm} =$  as previously defined

$LC_{an}^W =$  as previously defined

$LC_{pn}^W =$  as previously defined

$c =$  Coefficient, which is

$$c = 1, \text{ if } LC_{an}^W > LC_{pn}^W$$

$$c = 0, \text{ if } LC_{an}^W \leq LC_{pn}^W$$

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2.2 **Component C of the Electrical Energy Payment**

2.2.1 **Projected Fuel Demand**

The Projected Fuel Demand of the Plant ( $TFD_{pm}$ ) in Billing Period  $m$  means the Fuel Demand (in GJ), calculated as follows:

$$FD_{pm} = \sum_{i=1}^{PH_m} (E_{ai} * SHR_{CCn} * CFSHR_i) / 1,000,000$$

where:

$E_{ai}$  = Actual Net Electrical Energy (in kWh) of the Groups in each hour  $i$ , as specified below

$SHR_{CCn}$  = Contracted Specific Net Heat Rate (in kJ/kWh) for each Contract Year  $n$  as specified in Section A.9 of Attachment A (Agreed Values for Payment Calculation)

$i$  = each Hour ( $i$ ) in Billing Period  $m$

$PH_m$  = As previously defined

$CFSHR_i$  = Correction Factor of Specific Net Heat Rate, applicable for each respective hour  $i$  in the Billing Period  $m$ , as specified for relevant operation conditions in Section A.8 of Attachment A (Agreed Values for Payment Calculation) and determined with the Fuel Demand Model described in Attachment C (Calculation of Projected Fuel Demand)

There may be reasons why the Fuel Demand Model is unable to calculate correct results or why it fails to derive results, where such reasons might be:

- input or output performance data outside of allowable range;
- transient operating conditions, such as start-ups; or
- Back-up Fuel operation.

In such cases the Correction Factor  $CFSHR_i$  will be calculated as follows:

$$CFSHR_i = SHR_{CCna} / SHR_{CCn}$$

where:

$SHR_{CCna}$  = Actual Specific Net Heat Rate (in kJ/kWh) of the Plant, as calculated on basis of readings from the kWh metering system and from the fuel metering system in each hour  $i$  of operation outside the scope of the Fuel Demand Model

$SHR_{CCn}$  = As previously defined

The Actual Net Electrical Energy  $E_{ai}$  of the Plant in each hour  $i$  is determined as follows:

$$E_{ai} = \sum_{u=1}^N E_{aiu}$$

where:

$E_{aiu}$  = Actual Net Electrical Energy (in kWh) of each Plant Unit  $u$ , as read from the kWh metering system at the 380/230kV gridstation in each hour  $i$  of such Billing Period  $m$

$u$  = Number of Group

$N$  = Number of total installed Groups

The Actual Net Electrical Energy in Billing Period  $m$   $E_{am}$  is determined as follows:

$$E_{am} = \sum_{i=1}^{PH_m} E_{ai}$$

where:

$E_{ai}$  = as previously defined

$i$  = as previously defined

$PH_m$  = as previously defined

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2.2.2 **Fuel Consumption Adjustment Payment**

The Fuel Component C of the Electrical Energy Payment for the Billing Period m shall be calculated as follows:

$$C_m = (FD_{pm} - FD_{am}) * c * GP_m$$

where:

$C_m$  = Component C of the Electrical Energy Payment (in SINGAPORE \$) for Billing Period m

$FD_{pm}$  = Projected Fuel Demand (in GJ) for Billing Period m

$FD_{am}$  = Actual Fuel Demand (in GJ) as read at the relevant Delivery Point at the end of the Billing Period m

$GP_m$  = The price for Fuel (in SINGAPORE \$/GJ) as determined in accordance with Attachment B (Indexation / Adjustment to Charge Rates)

$c$  = 1.0 for Case A and 0.5 for Case B as defined below

The Component  $C_m$  will be paid:

**Case A (under performance)**

- by the Company to Offtaker if:

$$FD_{pm} * (1 + |MTFD|) < FD_{am} * (1 - |MTFD|)$$

**Case B (over performance)**

- by Offtaker to the Company if:

$$FD_{pm} * (1 - |MTFD|) > FD_{am} * (1 + |MTFD|)$$

in both cases after taking into account the Measuring Tolerances for Fuel Demand (MTFD).

where in both cases:

$FD_{pm}$  = Projected Fuel Demand of the Plant (in GJ) in Billing Period m

$FD_{am}$  = as previously defined

MTFD = Measuring Tolerances for Fuel Demand (in decimal fraction) as set forth in Section A.9.2 of Attachment A (Agreed Values for Payment Calculation) of this Appendix 11.

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2.3 **Component D of the Electrical Energy Payment**

$$D_m = E_{am} * VOMR_m / 100$$

where:

$D_m$  = Component D of the Electrical Energy Payment (in SINGAPORE \$) for Billing Period m

$E_{am}$  = as previously defined

$VOMR_m$  = Variable Operation and Maintenance Cost Recovery Charge Rate (in Hals/kWh) for Billing Period m

2.4 **Total Payment for Power**

$$TP_m = A_m + B_m + C_m + D_m$$

where:

$TP_m$  = Total Payments (in SINGAPORE \$) for the Billing Period m

$A_m$  = Component A of the Capacity Payment (in SINGAPORE \$) for the Billing Period m

$B_m$  = Component B of the Capacity Payment (in SINGAPORE \$) for the Billing Period m

$C_m$  = Component C of the Electrical Energy Payment (in SINGAPORE \$) for Billing Period m

$D_m$  = Component D of the Electrical Energy Payment (in SINGAPORE \$) for Billing Period m

m = Billing Period

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**ATTACHMENT A: AGREED VALUES FOR PAYMENT CALCULATION**

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**A.1 Contracted Capacity (CC)**

The Contracted Capacity  $CC_n$  of the Plant is as stated in Table A-1 for each Early Contract Period and each Contract Year  $n$ .

The values reflect the average  $CC_n$  for any given Early Contract Period or Contract Year taking into account an average yearly degradation factor due to ageing of equipment.

The Early Contract Periods  $e1, e2, etc.$  cover the periods of operation of any Groups after their corresponding Commercial Operation Dates by the Company in the chronological order of any capacity change up to the Project Commercial Operation Date. The Commercial Operation Date of the last Group shall be the same as the Project Commercial Operation Date.

Contract Year 1 starts on the Project Commercial Operation Date (PCOD).

*[In the following Table A-1, the Bidder is requested to fill in this table with its projected values.]*

**Table A-1: Contracted Capacity**

Contract Year n	Contracted Capacity CCn (MW)	Periods		Remarks
		Day of capacity change	Period hours (h)	
e1				
e2				
e3				
e4				
CY1		1 June 2014	8,760	Start: PCOD
CY2		1 June 2015	8,784	
CY3		1 June 2016	8,760	
CY4		1 June 2017	8,760	
CY5		1 June 2018	8,760	
CY6		1 June 2019	8,784	
CY7		1 June 2020	8,760	
CY8		1 June 2021	8,760	
CY9		1 June 2022	8,760	
CY10		1 June 2023	8,784	
CY11		1 June 2024	8,760	
CY12		1 June 2025	8,760	
CY13		1 June 2026	8,760	
CY14		1 June 2027	8,784	
CY15		1 June 2028	8,760	
CY16		1 June 2029	8,760	
CY17		1 June 2030	8,760	
CY18		1 June 2031	8,784	
CY19		1 June 2032	8,760	
CY20		1 June 2033	8,760	

The Net Dependable Capacity must be continuously dependable, as demonstrated by the Dependable Capacity Tests according to Appendix 8 (Inspection, Start-up Testing, Commissioning and Net Dependable Capacity Testing).

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**A.2 Capital Cost Recovery Charge Rate (CCR)**

The Capital Cost Recovery Charge Rate CCR to be used in the calculation of the Payment Component A is:

$\text{CCR} = \quad ^1 \text{ Cents /kWh}$
--

The CCR is expressed as one level charge rate from the first Early Contract Period to Contract Year 20, subject to adjustment according to Attachment B (Indexation / Adjustment to Charge Rates) of this Appendix 11.

The foreign portion of CCR indexed to the USD/SINGAPORE \$ Exchange Rate as specified in Attachment B (Indexation / Adjustment to Charge Rates) of this Appendix 11 is:

$Y_{\text{CCR}} = \quad ^2 \%$
--------------------------------

Note: The CCR is determined by the Company as a ratio of the annual capital costs to the Projected Available Net Energy Generation, as determined in Section A.3 of this Attachment A.

The annual capital costs cover without limitation:

- Facilities debt service payments (commission paid on outstanding debt and principal repayment),
- returns on Equity, and
- all costs arising out of taxes, levies and duties (except for redeemable taxes such as Value Added Taxes)

which arise out of the total project budget, which includes, but is not limited to:

- Construction cost of Plant
- Construction cost of Electrical Special Facilities
- Initial Working Capital
- Development Costs

---

<sup>1</sup> Bidder to insert.

<sup>2</sup> Bidder to insert.

- Financing Costs during Construction
  
- Net Operating Costs prior to corresponding Commercial Operation Dates of Groups.

**A.3 Projected Available Net Energy Generation (AGPp)**

The Projected Available Net Energy Generation AGPp (in MWh/a) is defined to be the maximum potential net energy generation of the Plant during an Early Contract Period or a Contract Year at Reference Site Conditions, less the Projected Loss of Net Energy Generation due to Unavailability and Derating.

The Projected Available Net Energy Generation AGPpn (in MWh/a) for each Early Contract Period and each Contract Year n is determined as per Table A-3.

The formulas in this section and in following sections are referred to Contract Years. They shall also be applied to Early Contract Periods, with the necessary Singapore \$ changes, and should be adjusted by the Company accordingly.

Planned Outages are not acceptable during the Summer Period.

*[In the following Table A-3 the determination of Projected Available Net Energy Generation is presented with a sample calculation for Bidder's guidance in the preparation of his Bid. The Bidder is required to fill in this table with its projected values.]*

**Table A-3: Projected Available Net Energy Generation**

Contract Year  n	Hours in Contract Year		Projected Available Net Energy Generation AGP <sub>pn</sub> (MWh/a)	Projected Loss of Net Energy Generation due to Unavailability & Derating (MWh/a)			
	Summer PH <sub>S</sub>	Winter PH <sub>W</sub>		Summer	Winter		Total, LC <sub>pn</sub>
				LC <sub>pn</sub> <sup>S</sup>	Planned, LC <sub>pn</sub> <sup>PW</sup>	Unplanned, LC <sub>pn</sub> <sup>UW</sup>	
<i>Example only</i>	3672	5088	16,456,360 (Energy at CC = 2000MW - Total LCP)	146,800 (=2%)	713,320 (=7%)	230,520 (=2%)	1,063,640
e1							
e2							
e3							
e4							
1	3672	5088					
2	3672	5112					
3	3672	5088					
4	3672	5088					
5	3672	5088					
6	3672	5112					
7	3672	5088					
8	3672	5088					

Contract Year  n	Hours in Contract Year		Projected Available Net Energy Generation AGP <sub>pn</sub> (MWh/a)	Projected Loss of Net Energy Generation due to Unavailability & Derating (MWh/a)			
	Summer PH <sub>S</sub>	Winter PH <sub>W</sub>		Summer	Winter		Total, LC <sub>pn</sub>
				LC <sub>pn</sub> <sup>S</sup>	Planned, LC <sub>pn</sub> <sup>PW</sup>	Unplanned, LC <sub>pn</sub> <sup>UW</sup>	
9	3672	5088					
10	3672	5112					
11	3672	5088					
12	3672	5088					
13	3672	5088					
14	3672	5112					
15	3672	5088					
16	3672	5088					
17	3672	5088					
18	3672	5112					
19	3672	5088					
20	3672	5088					

The Projected Available Net Energy Generation  $AG_p$  during each Contract Year  $n$  is calculated as follows:

$$AG_{pn} = PH_n * CC_n - (LC_{pn}^S + LC_{pn}^{UW} + LC_{pn}^{PW})$$

where:

- $AG_{pn}$  = Projected Available Net Energy Generation in Contract Year  $n$
- $PH_n$  = Total hours in Contract Year  $n$
- $LC_{pn}^S$  = Projected Loss of Net Energy Generation due to Unplanned Unavailability and Derating during Summer Period in the Contract Year  $n$
- $LC_{pn}^{UW}$  = Projected Loss of Net Energy Generation due to Unplanned Unavailability and Derating during Winter Period in the Contract Year  $n$
- $LC_{pn}^{PW}$  = Projected Loss of Net Energy Generation due to Planned Unavailability and Derating during Winter Period in the Contract Year  $n$
- $n$  = Number of Contract Year
- $CC_n$  = as previously defined

The payment calculation is based on the following conditions:

- the projected losses of output during Summer  $LC_p^S$  will be evenly distributed throughout the five (5) Summer Billing Periods,
- the projected losses of output during Winter  $LC_p^W$  will be reconciled and adjusted at the end of the seventh (7<sup>th</sup>) Winter Billing Period against the actual losses of output during the whole Winter Period.

For the payment calculation during Winter the following procedure will be applied:

- the capacity payments for the first six Winter Billing Periods will be based on the projected  $LC_p^W$  evenly distributed throughout the seven (7) Winter Billing Periods,
- the capacity payment for the final Winter Billing Period (month of April) will be based on the reconciliation for the whole Winter Period.

The Projected Loss of Net Energy Generation due to Planned Unavailability and Derating  $LC_p^{PW}$  as agreed in Table A-3 must be allocated in the Winter Period of the Contract Year concerned in the manner to be agreed between the Company and OFFTAKER.

The Projected Losses of Net Energy Generation due to Unplanned Unavailability and Derating  $LC_p^S$  and  $LC_p^{UW}$  as agreed in Table A-3 will be equally distributed over the Billing Periods  $m$  of the corresponding season of the Contract Year concerned.

The Projected Loss of Net Energy Generation due to Unavailability and Derating  $LC_p$  in Billing Period  $m$  of Contract Year  $n$  to be used in the Capacity Payment calculation of Section 2.1.1.2 and in Section 2.1.2.2 of this Appendix 11 shall be calculated as follows:

- for such Billing Period  $m$  during Summer Period

$$LC_{pm} = LC_{pn}^S / 5$$

- for such Billing Period  $m$  during Winter Period

$$LC_{pm} = (LC_{pn}^{UW} + LC_{pn}^{PW}) / 7 = LC_{pn}^W / 7$$

where for both:

$LC_{pm}$  = Projected Loss of Net Energy Generation due to Unavailability and Derating in the Billing Period  $m$

$LC_{pn}^W$  = Projected Loss of Net Energy Generation due to Unplanned and Planned Unavailability and Derating during Winter Period in the Contract Year  $n$

$LC_{pn}^S$  = as previously defined

$LC_{pn}^{UW}$  = as previously defined

$LC_{pn}^{PW}$  = as previously defined

#### A.4 Actual Unavailability

The Actual Loss of Net Energy Generation due to Unavailability and Derating  $LC_a$ , shall be determined as follows:

$$LC_{am} = \sum_{j=1}^J (UD_j * (DC_m - DC_j) * WF_{wn})$$

where:

$DC_m$  = as previously defined

$UD_j$  = Length of Actual Period of Unavailability or Derating (in hours), as per Availability Notice, for each Period  $j$

$DC_j$  = Capacity (in MW) of the Plant available for the Period  $j$  based on the Reference Site Conditions, after adjusting for Unavailability or Derating as specified in the Availability Notice, provided that  $DC_j$  is equal to or less than  $DC_m$  in the applicable Billing Period

$j$  = Each Period of Unavailability or Derating (as per Availability Notice)

$J$  = Number of periods of Unavailability or Derating (as per Availability Notice) in Billing Period  $m$

$WF_{wn}$  = Period Weighting Factor, for availability period  $w$  during Contract Year  $n$ , in accordance with Section A.5 of this Attachment A

For the determination of the Actual Loss of Net Energy Generation due to Unavailability and Derating  $LC_a$ , the Company shall notify (or transfer via SCADA signals) to Offtaker all the Planned and Unplanned Outages and Deratings.

If Offtaker has grounds to believe that the Company has failed to provide notice of Unavailability at the earliest time notice is possible in accordance with the requirements of this Agreement, Offtaker may request the Company to, and the Company shall, provide Offtaker with such information as may be necessary for Offtaker to determine whether earlier notice by the Company was, under the circumstances, possible. If, after such investigation, Offtaker determines that earlier notice was possible, Offtaker may reduce the Capacity Payments payable to the Company by an amount for such Unavailability that will not exceed one full day's Capacity Payment.

In order to simplify the Availability declarations, the main power outage configurations of the Plant are as stated in Table A-4. The net capacities of the outage modes shown in such Table are based on the definition of the Contracted Capacity stipulated in Section 1.5 of this Appendix 11. The net capacities of Table A-4 are subject to adjustment due to calculations based on results of the Performance Tests and Commercial Operation Testing in accordance with Appendix 8 (Inspection, Start-up Testing, Commissioning and Net Dependable Capacity Testing).

Subject to approval by SEC, Planned Outages not used in a Winter Period may be shifted to following Winter Periods, but not otherwise, which approval shall not be unreasonably withheld or delayed.

*[Bidder to define the outage modes based on the considered maintenance schedule and include the resulting power capacities for each operation year.]*

**Table A-4: Outage Modes for Power**

Main Outage Modes  OM	Configuration GT/HRSG/ST	Capacities (MW) in Contract Years																			
		Values are subject to adjustment due to calculations based on results of Performance Tests and Commercial Operation Testing																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Full																					
OM1																					
OM2																					
OM3																					
OM4																					
OM5																					
OM6																					

**A.5 Period Weighting Factor (WF)**

The Period Weighting Factor  $WF_w$  will be applied during the Contract Years 1 to 20; for the Early Contract Periods the Period Weighting Factor is 1.

The Table A-5 summarizes the Period Weighting Factors for Contract Year 1 during Summer Period, in Winter Period the Period Weighting Factor is 1.

**Table A-5: Period Weighting Factors**

Availability Period (w)	Description	Applicable Times			Applicable hours in Contract Year $H_{wn}$	Period Weighting Factor $WF_{wn} (-)$
		Dates	Days	Times		
1	On peak Summer	01 May - 30 Sep	Sat, Sun, Mon, Tue, Wed except public holidays	9 - 21	1,308	1.360
2	Off peak Summer	01 May - 30 Sep	Sat, Sun, Mon, Tue, Wed except public holidays and Thu, Fri, public holidays	21 - 9 0 - 24	2,364	0.801

Not later than 12 months before the beginning of each Contract Year after the first Contract Year, Offtaker may issue to the Company a Table of Period Weighting Factors prepared in accordance with the provisions in this Section A.5 of Attachment A.

A Table of Period Weighting Factors may differ from the Table of Period Weighting Factors applied during the precedent Contract Year by modifying for calendar change, by advancing or postponing the starting or finishing days and times of any Availability period, or changing the applicable Period Weighting Factor which applies to an Availability period, provided that:

- no Period Weighting Factor may be greater than 2.0 or less than 0.4 (except when doubled in relation to short-notice non-availability), and
- the following condition shall be satisfied in any Contract Year:

$$\sum_{w=1}^2 (WF_{wn} * H_{wn}) = PH_s$$

where:

$WF_{wn}$  = As previously defined

$H_{wn}$  = Number of hours of Availability period w during Contract Year n

$PH_s$  = Total number of hours in the Summer Period of Contract Year n

w = Availability period, (1 = on peak, 2 = off peak)

The applicable Period Weighting Factor for any period of non-availability shall be doubled in the event that the non-availability is short-notice peak hour non-availability.

Short-notice peak hour non-availability shall be deemed to occur, where the Company provides a notice of Unavailability with less than four (4) hours notice before the commencement of such period of non-availability and the period of non-availability falls within an on peak Summer Period.

Short-notice peak hour non-availability shall apply to the first four (4) hours only of any such period of non-availability, following which the Period Weighting Factor will no longer be doubled.

**A.6 Payment Deduction Factor (DF)**

**(a) For the Summer Period:**

**Table A-6: Payment Deduction Factor during the Summer Period**

$LC_{am}$ (MWh /a)	$DF_m$
• Up to $LC_{pm}$	<b>1.0</b>
• $> LC_{pm}$ through $1.1 LC_{pm}$	<b>1.10</b>
• $1.1 LC_{pm}$ through $1.25 LC_{pm}$	<b>1.20</b>
• $1.25 LC_{pm}$ through $1.5 LC_{pm}$	<b>1.30</b>
• $> 1.5 LC_{pm}$	<b>1.5</b>

Where:

$LC_{am}$  = Actual Loss of Net Energy Generation during such Billing Period during a Summer Period due to Unavailability and Derating, calculated according to Section A.4 of this Attachment A.

$LC_{pm}$  = Projected Loss of Net Energy Generation during such Billing Period during a Summer Period due to Unavailability and Derating, calculated according to the Section A.3 of this Attachment A.

**(b) For the Winter Period:**

The Payment Deduction Factor for the Winter Period is

<b><math>DF_m = 1.0</math></b>
--------------------------------

**A.7 Fixed O&M Payment Calculation**

**Fixed O&M Cost Recovery Charge Rate (FOMR)**

The Fixed Operation and Maintenance (O&M) Cost Recovery Charge Rate FOMR to be used in the calculation of the Payment Component B is:

$$\text{FOMR} = \text{}^3 \text{ Cents /kWh}$$

The FOMR is expressed as one level charge rate from the first Early Contract Period to Contract Year 20, subject to adjustment according to Attachment B (Indexation/Adjustment to Charge Rates) of this Appendix 11.

The foreign portion of FOMR subject to indexation to the USD/SINGAPORE \$ Exchange Rate as specified in Attachment B (Indexation/Adjustment to Charge Rates) of this Appendix 11 is:

$$Y_{\text{FOMR}} = \text{}^4 \%$$

$$Y_{\text{FOMR}} = \text{Foreign portion of FOMR}$$

Note: The FOMR is determined as a ratio of the total annual fixed O&M costs to the Projected Available Net Energy Generation, as determined in Section A.3 of this Attachment A.

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<sup>3</sup> Bidder to insert.

<sup>4</sup> Bidder to insert.

## **A.8 Capacity Correction Curves**

The correction of the net power output of the total Plant with the ambient air temperature is shown in Diagram A-8.1.

The correction of the net power output of the total Plant with the ambient air relative humidity is shown in Diagram A-8.2.

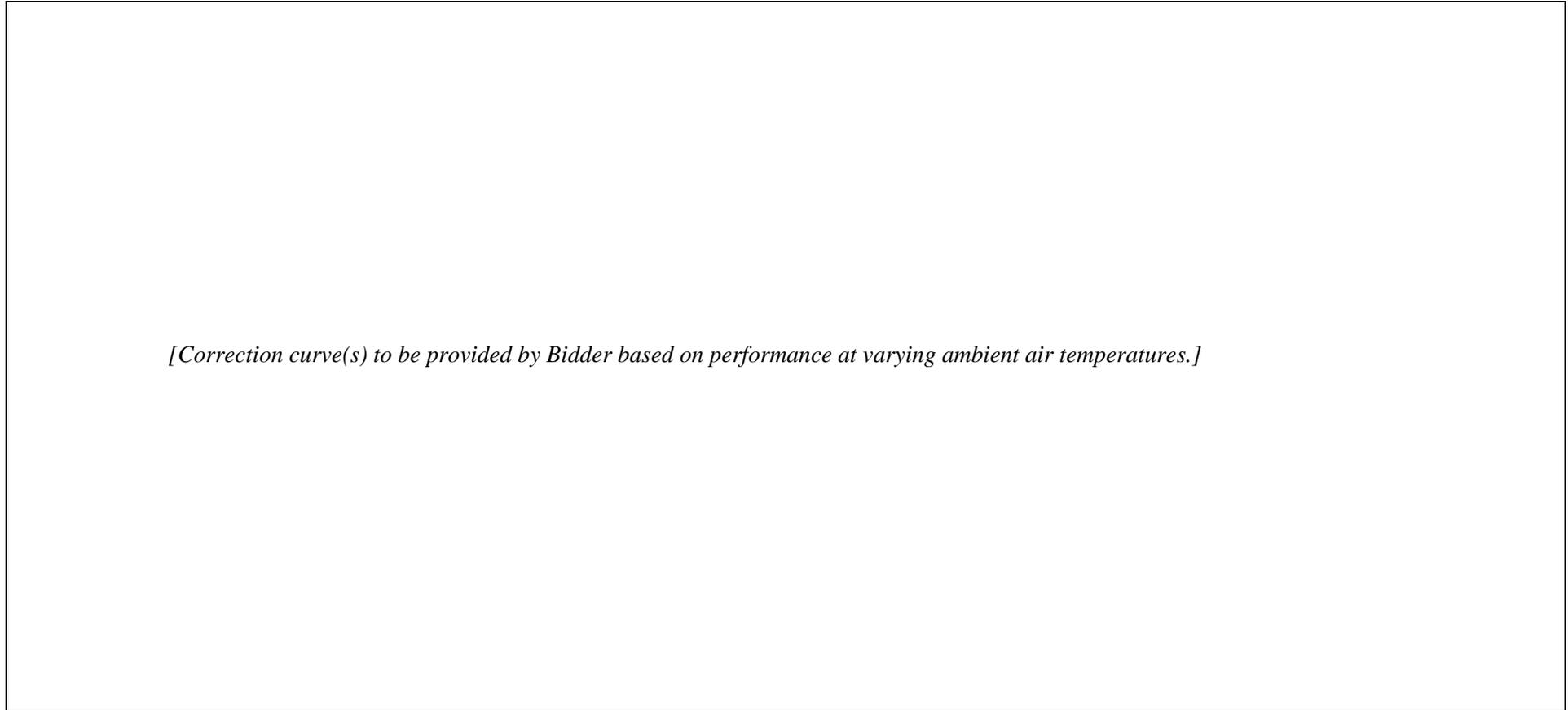
The correction of the net power output of the total Plant with the seawater temperature is shown in Diagram A-8.3.

The correction curves are applied to correct measured:

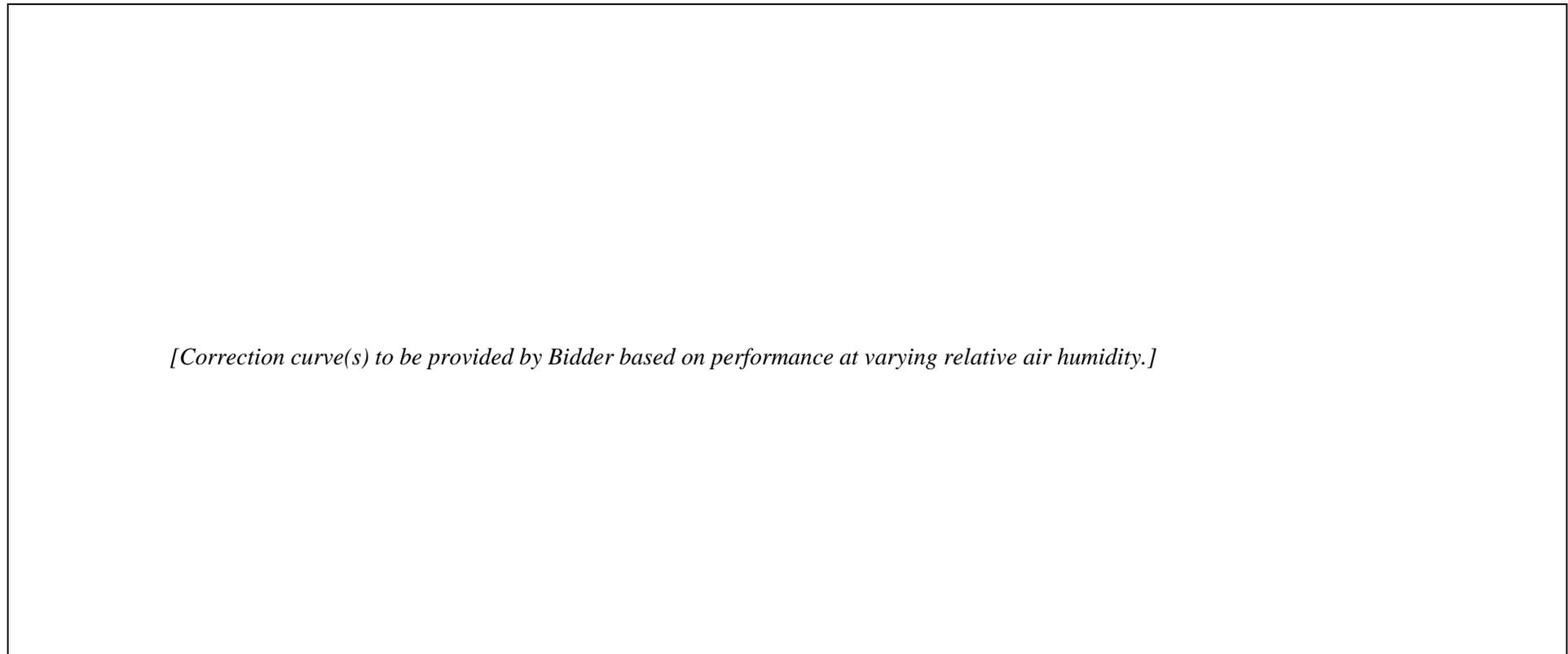
- output to Reference Site Conditions during Performance Tests; and
- capacity to Reference Site Conditions during Net Dependable Capacity Tests.

The correction curves shown in Diagrams A-8.1, A-8.2 and A-8.3 are subject to verification by Offtaker during the detailed engineering of the Plant in accordance with Appendix 8 (Inspection, Start-up Testing, Commissioning and Net Dependable Capacity Testing).

**Diagram A-8.1: Correction factor of net power output of the total Plant with ambient air temperature, if applicable**



**Diagram A-8.2: Correction factor of net power output of the total Plant with ambient air relative humidity, if applicable**



**Diagram A-8.3: Correction factor of net power output of the total Plant with seawater temperature, if applicable**

*[Correction curve(s) to be provided by Bidder based on performance at varying seawater temperatures.]*

**A.9 Fuel Demand**

**A.9.1 Fuel Demand of Plant**

The Contracted Specific Net Heat Rate of the Plant ( $SHR_{CC}$ ), is stated in Table A-9.1 for each Early Contract Period and Contract Year n and shall reflect the average  $SHR_{CC}$  for any Contract Year and Early Contract Periods taking into account a mean degradation factor during each such period due to ageing of equipment.

**Table A-9.1: Contracted Specific Net Heat Rate for Gas Operation**

Contract Year n	Contracted Specific Net Heat Rate $SHR_{CC}$ at fuel LHV basis (kJ/kWh)
e1	
e2	
e3	
e4	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
15	

16	
17	
18	
19	
20	

The  $SHR_{CC}$  is defined to be the total amount of fuel demand (in kJ) based on lower heating value (LHV) of Gas which is necessary to generate one kWh of net power capacity dedicated to such Plant at full load and Reference Site Conditions.

In order to determine the Projected Fuel Demand of the Plant at actual operating and site conditions for various Operating Modes, the Fuel Demand Model as described in Attachment C (Calculation of Projected Fuel Demand) of this Appendix 11 will be used to calculate the Correction Factors of Specific Net Heat Rate CFSHR. For purposes of verification of the Fuel Demand Model by SEC, certain CFSHR values of relevant operating points are to be stipulated in Table A-9.2.

The values as stipulated in Table A-9.2 are generally calculated for Contract Year 1 and the resulting Correction Factors of Specific Net Heat Rate CFSHR are applicable for all Contract Years 1 through 20 considering the corresponding value as agreed in Table A-9.1 for Contracted Specific Net Heat Rate  $SHR_{CCn}$  in such Contract Year.

The Correction Factors of Contracted Specific Net Heat Rate CFSHR given in Table A-9.2 are subject to verification by Offtaker during the detailed engineering of the Plant and, if required by SEC, shall be adjusted to conform to the results of performance tests within the start-up and operational testing of the Plant, Equipment and Systems in accordance with Appendix 8 (Inspection, Start-up, Testing, Commissioning and Net Dependable Capacity Testing).

*[Bidder is requested to complete Table A-9.2 as set forth below in order to verify its Bid . It is to be noted, that during the negotiation of the PPA the Bidder may be requested to state more operating points than requested within Table A-9.2.*

*The Bidder shall submit with its Bid the heat balance diagrams on which the calculation of the correction factors of Specific Net Heat Rates are based for all operating points of Contract Year 1 of Table A-9.2.*

*For Table A-9.2, Bidder is requested to propose optimised figures for fuel consumption in the different Operating Points regarding configuration in operation]*

**Table A-9.2: Correction Factor of Specific Net Heat Rate (CFSHR) and Projected Fuel Demand of the Plant at Reference Site Conditions during Contract Year 1<sup>1)</sup>**

Item	Unit	Contract Year 1 <sup>2)</sup>				
		OP 1	OP2	OP 3	OP 4	OP 5
<b>Operating Point</b>						
<b>Configuration</b>	<b>GT/HRS G/ST</b>					
Fuel	-	Gas	Gas	Gas	Gas	Gas
Net Output of the Plant	MW					
Power partload	%	100%	80%	65%	50%	30%
Ambient Conditions	-	RSC				
Ambient Temperature	°C	46	40	35	30	24
Relative Humidity	%	42	50	60	70	70
Seawater Temperature	°C	38	38	27	24	22
Seawater Salinity	%	46	46	44	44	42
Gross Power Output	MW					
Auxiliary Power Consumption	MW					
Net Fuel Heat Requirement based on Gas LHV <sup>3)</sup>						
Specific net heat rate, based on LHV	kJ/kWh					
<b>Correction Factor of Specific Net Heat Rate CFSHR, in relation to CC conditions<sup>4)</sup></b>	-	1.00				
Corresponding Heat Balance Diagram	No.					

- Note: 1) All figures shall be valid for Contract Year 1  
2) Bidder to confirm that the Correction Factors of Specific Net Heat Rate CFSHR are generally applicable for all Contract Years considering the values agreed for  $SHR_{CCn}$  in Table A-9.1

### A.9.2 Measuring Tolerances for Fuel Demand

The Measuring Tolerances for Fuel Demand MTFD, applicable for Actual Fuel Demand ( $FD_{am}$ ) and for Projected Fuel Demand ( $FDP_{pm}$ ), to be used in Fuel Consumption Adjustment Payment determination shall be as follows:

$MTFD = \pm 1.0 \%$
---------------------

These Measuring Tolerances for Fuel Demand take into consideration the measuring and computation uncertainties of variables such as

- Gas volume stream,
- Gas density,
- Gas temperature,
- Gas pressure,
- Gas lower heating value,

in case of metering of the Actual Fuel Demand, and they take into consideration the measuring and computation uncertainties of variables such as

- Net Electrical Energy,
- ambient conditions,

in case of calculation of the Projected Fuel Demand.

However, this procedure does not relieve the Company under its duties to comply with the Metering Requirements of OFFTAKER. Furthermore the Company has the responsibility to submit certificates for the measurement apparatus including all measuring uncertainties.

OFFTAKER has the right but not the obligation to adjust the applicable MTFD according to the certificates, which will be submitted by the Company.

**A.10 Variable O & M Payment Calculation (VOMR)**

Component D of the Electrical Energy Payment uses the following agreed value. The value for VOMR is subject to further adjustment in the manner specified in Attachment B (Indexation/Adjustment to Charge Rates) of this Appendix 11.

$\text{VOMR} = \quad \quad \quad ^5 \text{ Cents / kWh}$
--

where:

VOMR = Variable Operation & Maintenance Cost Recovery Charge Rate (in Cents / kWh) of Net Electrical Energy produced, to be used in the calculation of Component D of the Energy Payment

The foreign portion of VOMR indexed to the USD/SINGAPORE \$ exchange rate as specified in Attachment B (Indexation/Adjustment to Charge Rates) of this Appendix 11 is:

$Y_{\text{VOMR}} = \quad \quad \quad ^6 \%$
---

where:

$Y_{\text{VOMR}}$  = foreign portion of VOMR

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<sup>5</sup> Bidder to insert.

<sup>6</sup> Bidder to Insert.

**ATTACHMENT B: INDEXATION / ADJUSTMENT TO CHARGE RATES**

**B.1 General**

The Charge Rates used in the Payment Formulas shall be adjusted in accordance with the provisions of this Attachment B.

- (a) Adjustments for fluctuation of the USD / SINGAPORE \$ exchange rate: The Charge Rates as agreed to in Attachment A (Agreed Values for Payment Calculation) of this Appendix 11 are based on an exchange rate of USD 1 = SINGAPORE \$ 3.75 (hereinafter called the “**Reference Exchange Rate**”). Any change between the Reference Exchange Rate and the arithmetic average exchange rate for the Billing Period m shall result in an adjustment of the foreign portion of those Charge Rates (as such foreign portion is agreed to in Attachment A (Agreed Values for Payment Calculation) on a monthly basis. Any exchange rate adjustment will use the USD / SINGAPORE \$ exchange rate quoted by the Singapore Monetary Authority on each relevant Day.
- (b) Indexation based on KSA Consumer Price Index: The local portions of the Charge Rates as specified in Attachment A (Agreed Values for Payment Calculation) will be adjusted annually according to the Consumer Price Index of the KSA as published by official statistics, or, if the index is not available or if the parties agree otherwise, then another mutually agreed index, or in the event of a failure to agree then such index or method of calculation as shall be determined by the Independent Expert as nominated and appointed in accordance with the provisions of Clause 22 (Dispute Resolution) of this Agreement. The local portions of the Charge Rates will be adjusted for the first time on June 1, 2013 and after that once a year on each anniversary of that date. The effective value of the index on June 1, 2010 shall be considered to be the reference index.
- (c) Indexation based on US Producer Price Index: The foreign portions of the Charge Rates as specified in Attachment A (Agreed Values for Payment Calculation) will be adjusted annually according to the US Producer Price Index (NAICS code 3336113336117 relating to parts and accessories for turbines, turbine generators and turbine generator sets), or, if the index is not available, then another mutually agreed index or in the event of failure to agree then such index or method of calculation as shall be determined by the Independent Expert as nominated and appointed in accordance with the provisions of Clause 22 (Dispute Resolution) of this Agreement. The foreign portions of the Charge Rates will be adjusted for the first time on June 1, 2013 and after that once a year on each anniversary of that date. The effective value of the index on June 1, 2010 shall be considered to be the reference index.

The Charge Rates subject to indexation are:

**Capacity Payment:**

- Capacity Component A: CCR
- Capacity Component B: FOMR

**Electrical Energy Payment:**

- Energy Component D: VOMR

## B.2 Adjustment of CCR

The charge rate CCR to be used for any Billing Period m shall be the rate to be applied in such Billing Period as specified in Attachment A (Agreed Values for Payment Calculation) after such charge rate has been adjusted in accordance with this Attachment B.

To determine CCR for any Billing Period, the value of CCR in accordance with Attachment A (Agreed Values for Payment Calculation) shall be adjusted as follows:

$$\text{CCR}_m = \text{CCR} * Y_{\text{CCR}} * \text{EXR}_m / \text{EXR}_r + \text{CCR} * (1 - Y_{\text{CCR}})$$

where:

$\text{CCR}_m$	=	CCR in the Billing Period m (in Cents / kWh )
CCR	=	Capital Cost Recovery Charge Rate as specified in Attachment A (Agreed Values for Payment Calculation) (in Hals/kWh)
$Y_{\text{CCR}}$	=	foreign portion of CCR as specified in Attachment A (Agreed Values for Payment Calculation) (in % of CCR)
$\text{EXR}_m$	=	the USD / SINGAPORE \$ exchange rate to be applied for the Billing Period m
$\text{EXR}_r$	=	the Reference Exchange Rate between USD/SINGAPORE \$, 1USD = 3.75 SINGAPORE \$

## B.3 Adjustment of FOMR

The charge rate FOMR in any Billing Period m shall be calculated as follows:

$$\text{FOMR}_m = \text{FOMR} * Y_{\text{FOMR}} * (\text{USPI}_m / \text{USPI}_r) * (\text{EXR}_m / \text{EXR}_r) + \text{FOMR} * (1 - Y_{\text{FOMR}}) * (\text{KSACI}_m / \text{KSACI}_r)$$

where:

$\text{FOMR}_m$	=	Fixed Operation and Maintenance Cost Recovery Charge Rate (in Hals/kWh) used in the calculation of Component B of the Capacity Payment for the Billing Period m.
FOMR	=	Fixed Operation and Maintenance Cost Recovery Charge Rate (in Hals/kWh) as specified in Attachment A (Agreed Values for Payment Calculation)
$Y_{\text{FOMR}}$	=	foreign portion of FOMR as specified in Attachment A (Agreed Values for Payment Calculation) (in % of FOMR)

USPI <sub>r</sub>	=	Reference US Producer Price Index (NAICS code 3336113336117 relating to parts and accessories for turbines, turbine generators and turbine generator sets) on June 1, 2010
USPI <sub>m</sub>	=	US Producer Price Index (NAICS code 3336113336117 relating to parts and accessories for turbines, turbine generators and turbine generator sets) as applicable for Billing Period m
KSACI <sub>r</sub>	=	Reference KSA Consumer Price Index on June 1, 2010
KSACI <sub>m</sub>	=	KSA Consumer Price Index as applicable for Billing Period m
EXR <sub>m</sub>	=	as previously defined
EXR <sub>r</sub>	=	as previously defined

#### **B.4 Fuel Consumption Adjustment Payments**

The Fuel Consumption Adjustment Payments for Component C of Electrical Energy Payment will be calculated based on the actual price for Fuel in Billing Period m according to the provisions of the fuel supply arrangements between Offtaker and Saudi Aramco.

### B.5 Adjustment of VOMR

The charge rates VOMR in any Billing Period m shall be calculated as follows:

$$\text{VOMR}_m = \text{VOMR} * Y_{\text{VOMR}} * (\text{USPI}_m / \text{USPI}_r) * (\text{EXR}_m / \text{EXR}_r) + \text{VOMR} * (1 - Y_{\text{VOMR}}) * (\text{KSACI}_m / \text{KSACI}_r)$$

where:

- $\text{VOMR}_m$  = Variable Operation and Maintenance Cost Recovery Charge Rate (in Cents / kWh) used in the calculation of Component D of the Electrical Energy Payment for the Billing Period m.
- $\text{VOMR}$  = Variable Operation and Maintenance Cost Recovery Charge Rate (in Cents / kWh) as specified in Attachment A (Agreed Values for Payment Calculation).
- $Y_{\text{VOMR}}$  = foreign portion of VOMR as specified in Attachment A (Agreed Values for Payment Calculation) (in % of VOMR)
- $\text{USPI}_r$  = as previously defined
- $\text{USPI}_m$  = as previously defined
- $\text{KSACI}_r$  = as previously defined
- $\text{KSACI}_m$  = as previously defined
- $\text{EXR}_m$  = as previously defined
- $\text{EXR}_r$  = as previously defined

### B.6 Adjustment of Start-up Payments and Start-up Deductions

The Start-up Payment  $SU$  in any Billing Period  $m$  shall be adjusted to the USD/SINGAPORE \$ exchange rate as follows:

$$SU_m = SU * (USP1_m / USP1_r) * (EXR_r / EXR_m)$$

where:

- $SU$  = Start-up Payment (in SINGAPORE \$) as specified in Section D1.1 of Attachment D (Supplemental Payments).
- $SU_m$  = Start-up Payment (in SINGAPORE \$) applicable in Billing Period  $m$ .
- $EXR_m$  = as previously defined
- $EXR_r$  = as previously defined
- $USP1_m$  = as previously defined
- $USP1_r$  = as previously defined

The Start-up Deduction  $SD$  in any Billing Period  $m$  shall be adjusted to show the actual price for Fuel in Billing Period  $m$  according to the provisions of the fuel supply arrangements between Offtaker and Aramco as follows:

$$SD_m = SD * (GP_m / GP_r)$$

where:

- $SD$  = Start-up Deduction (in SINGAPORE \$) as specified in Section D1.2 of Attachment D (Supplemental Payments).
- $SD_m$  = Start-up Deduction (in SINGAPORE \$) applicable in Billing Period  $m$ .
- $GP_m$  = The price of Fuel (in SINGAPORE \$/GJ) based on LHV in Billing Period  $m$  according to the provisions of the fuel supply arrangements between Offtaker and Aramco.
- $GP_r$  = The price of Fuel (in SINGAPORE \$/GJ) based on LHV on June 1, 2010 according to the provisions of the fuel supply arrangements between Offtaker and Aramco.

**ATTACHMENT C: CALCULATION OF PROJECTED FUEL DEMAND**

**C.1 General**

For the calculation of the Projected Fuel Demand for various main operating configurations at various part loads and at various ambient conditions a computer programme, the Fuel Demand Model, will be used.

The determination of the Projected Fuel Demand with the Fuel Demand Model shall be based on heat flow calculations.

The following information and data will be used for the Fuel Demand Model:

- The basic measured values (average hourly values) required for payment calculation, such as electrical energy and ambient conditions;
- The status of gas turbines, steam turbines, HRSGs, as available from the SCADA system of the Plant.

The Projected Fuel Demand calculated with the Fuel Demand Model shall be based on the maximum fuel efficiency, which can be achieved within the dispatched operating configuration for the dispatched capacities of Power.

## **C.2 Description of Fuel Demand Model**

The Fuel Demand Model shall provide a mathematical representation of the Plant, including its dispatched operating configuration and dispatched capacities of power, and shall be designed to provide the following outputs:

- Gas turbine fuel consumption: Projected fuel demand;
- Specific Net Heat Rate, based on LHV heat content of the fuel;
- Correction factor of Specific Net Heat Rate, in relation to CC (Contracted Capacity) conditions;
- Confirmation of the applicable gross and net power outputs

In order to define the applicable operating conditions, the following inputs to the Fuel Demand Model shall be entered, either via the Input/Output screen or (in a subsequent upgrade) in the form of a data file:

- Required net power output (in kW);
- Generated gross power output of a gas turbine or Group, if necesSingapore \$y;
- Number of gas turbines and their heat recovery steam generators in operation;
- Number of steam turbines in operation;
- Ambient air conditions (temperature, humidity, pressure), seawater temperature;
- Fuel heating value (LHV);

Error messages shall be given when the input data results in performance outside the allowable range.

Due to the general procedure of determination of the Projected Fuel Demand as stated in Section 2.2.1 of Appendix 11, the Fuel Demand Model shall calculate all values, in particular the Correction Factor of Specific Net Heat Rate CFSHR based on those as agreed for new and clean conditions at PCOD at begin of Contract Year 1. This resulting CFSHR value shall be applicable then for all Contract Years 1 to 20 and Early Contract Periods. The multiplication of this CFSHR with the Contracted Specific Net Heat Rate SHR<sub>CC</sub> (which takes into account degradation due to ageing of equipment) as stated in Table A-9.1 of Attachment A (Agreed Values for Payment Calculation) of this Appendix 11 for the respective Contract Year results in the specific net heat rate at the respective output.

The Fuel Demand Model shall interact with the Settlement System as described in Appendix 15 (Invoicing and Payment Procedures) to this Agreement in such a way as to ensure proper communication within both softwares (for Fuel Demand Model and for Settlement System). In case that the Fuel Demand Model is not able to calculate a

correct value the Fuel Demand Model shall take the actual Fuel consumption as being the calculated value of the Projected Fuel Demand. Reasons for calculating incorrect results or failing to derive results might be:

- Input or output performance data outside of allowable range;
- Transient operating conditions, such as start-ups; or
- Back-up Fuel operation.

### **C.3 Accuracy of Calculated Values**

For verification of the Projected Fuel Demand of the Plant  $FD_p$  as calculated with the Fuel Demand Model the following condition must be fulfilled:

The values as calculated with the Fuel Demand Model must not be higher than the values of the Projected Fuel Demand as agreed in Table A-9.2 of Attachment A (Agreed Values for Payment Calculation) of this Appendix 11.

The applicable Measuring Tolerances for Fuel Demand MTFD, applicable for the Projected Fuel Demand shall be the same as stated in Section A.9.2 of Attachment A (Agreed Values for Payment Calculation) of this Appendix 11. The MTFD shall take into consideration the measuring and computation uncertainties of:

- Net Electrical Energy,
- ambient conditions,

in case of calculation of the Projected Fuel Demand.

The Company is required to submit to Offtaker (i) certificate showing measuring uncertainties of all measurement apparatus which influence the MTFD and (ii) propagation calculation of individual measurement uncertainties of Projected Fuel Demand uncertainty calculated with the Fuel Demand Model based on a sensitivity analysis (Procedure according to ASME PTC).

OFFTAKER has the right but not the obligation to adjust the applicable MTFD according to the certificates, which will be submitted by the Company.

**ATTACHMENT D: SUPPLEMENTAL PAYMENT ADJUSTMENTS**

**D.1 Start-Up Costs Attributable to Load Dispatch Centre’s Action**

“**Scheduled Successful Start**” means any start-up of a gas turbine to achieve a period and level of operation in accordance with the Dispatch Instructions, where such gas turbine was shutdown as a result of Dispatch Instruction or a disruption in the Electricity Transmission Facilities.

**D.1.1 Start-up Payment**

From and after the Project Commercial Operation Date, for each Scheduled Successful Start requested or required by Load Dispatch Centre in any Contract Year n by a gas turbine, (i) in excess of ten (10) Scheduled Successful Starts by such gas turbine within such Contract Year, and (ii) prior to the Project Commercial Operation Date by a gas turbine, in excess of ten (10) Scheduled Successful Starts by such gas turbine, Offtaker shall make a payment (a “**Start-up Payment (SU)**”) to the Company.

The Start-up Payment SU to be made by Offtaker for such Scheduled Successful Starts shall include additional O&M costs and electrical costs incurred by the Company due to such starts attributable to Load Dispatch Centre’s action.

The Start-up Payment SU is:

<b>SU =                   <sup>7</sup> SINGAPORE \$</b>
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The Start-up Payment SU is subject to Indexation according to Attachment B (Indexation / Adjustment to Charge Rates) of this Appendix 11.

The Start-up Payment SU will be paid by Offtaker under the following conditions:

- in the case of a Scheduled Successful Start of a gas turbine, and
- the number of Scheduled Successful Starts of such gas turbine in one Contract Year exceeds the Scheduled Successful Starts (as defined above).

The required Fuel for a Scheduled Successful Start will be supplied free of cost by Offtaker (see Projected Fuel Demand of the Plant in Section 2.2.1 of this Appendix 11).

**D.1.2 Start-up Deduction**

From and after the Project Commercial Operation Date, Fuel requirements for starts not at the request of Load Dispatch Centre, such as start-ups following a period of

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<sup>7</sup> Bidder to insert.

Scheduled Outage or Forced Outage and start-ups not declared as successful are included in the determination of Projected Fuel Demand with the Fuel Demand Model and shall result in a deduction (a "**Start-up Deduction**" or "**SD**") from the payments made by Offtaker under this Appendix 11.

The Start-up Deduction SD is:

<b>SD =           <sup>8</sup> SINGAPORE \$</b>
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The Start-up Deduction is subject to Indexation according to Attachment B (Indexation/Adjustment to Charge Rates) of this Appendix 11.

The Start-up Deduction SD will be billed by Offtaker in the case of each start-up of a gas turbine other than a Scheduled Successful Start.

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<sup>8</sup> Bidder to insert.

## **D.2 Net Electrical Energy Prior to Commercial Operation**

Prior to the Commercial Operation Date of a Group or the Plant, as the case may be, the Company may sell to SEC, and if it does so, Offtaker shall purchase from the Company the Net Electrical Energy, only if and to the extent that:

- the operation or test is scheduled with the SEC's agreement in accordance with the terms of this Agreement, and
- the Net Electrical Energy output is stable for a duration of at least six (6) hours.

The payments for such Net Electrical Energy purchased by Offtaker from the Company shall be calculated in accordance with the provisions of Section 2.3 (Component D of Electrical Energy Payment) of this Appendix 11 (including for the avoidance of doubt any applicable Supplemental Payment Adjustment related to the use of Back-up Fuel in accordance with the provisions of Paragraph D.4 of this Attachment D) and subject to the provisions of Clause 8 (Fuel Supply) of this Agreement.

Subject to Paragraph D.3, Capacity Payments in accordance with the provisions of Section 2.1 (Capacity Payment) and Fuel adjustment payments in accordance with the provisions of Section 2.2 (Component C of Electrical Energy Payment) will not be applicable for such Net Electrical Energy purchased by Offtaker from the Company.

## **D.3 Net Dependable Power Capacity during Reliability Test Run of the Plant**

During the period of a successful Reliability Test Run for the Plant accepted by Offtaker in accordance with [Section 5.4.2] of Appendix 8 (Inspection, Start-up, Testing, Commissioning and Net Dependable Capacity Testing) up to the Project Commercial Operation Date, the Company may sell to Offtaker and if it does so, Offtaker shall purchase from the Company the Net Dependable Power Capacity made available during such Reliability Test Run up to the Project Commercial Operation Date.

The payments of such Net Dependable Capacity purchased direct from the Company shall be calculated in accordance with the provisions of Section 2.1 (Components A and B of the Capacity Payment) of this Appendix 11.

The Net Dependable Capacity, determined in accordance with [Section 6.3] of Appendix 8 (Inspection, Start-up, Testing, Commissioning and Net Dependable Capacity Testing) will be applied for payment calculations related to the Reliability Test Run of the Plant.

## **D.4 Use of Back-up Fuel**

### **D.4.1 Procurement of Back-up Fuel and Payment Structure**

Subject to the conditions set forth in Clause 8 (Fuel Supply) of this Agreement, the Company can use Back-up Fuel for power generation which will be provided by OFFTAKER.

For operation with Back-up Fuel as permitted under Clause 8.2 of this Agreement, payments will be made for Net Dependable Power Capacity and for Net Electrical Energy.

The payment calculation for the operation with Back-up Fuel is based on the payment structure set forth for Gas operation in Section 2 of this Appendix 11, considering the following particularities in the application of the formulae.

#### **D.4.2 Capacity Payment**

The Capacity Payments shall be calculated in accordance with Section 2 (Payment Formulas) of this Appendix 11 and to Attachment A (Agreed Values for Payment Calculation) of this Appendix 11.

The Net Dependable Capacity DC shall be based upon the latest test in accordance with Appendix 8 (Inspection, Start-up Testing, Commissioning and Net Dependable Capacity Testing) of this Agreement for Gas operation.

#### **D.4.3 Variable O&M Payment**

The Variable O&M Component  $D^b$  (in SINGAPORE \$) of the Electrical Energy Payment for Back-up Fuel operation in the Billing Period  $m$  shall be calculated as follows:

$$D_m^b = E_{am}^b * VOMR_m / 100 + \Sigma PH_m^b * BUFC$$

where:

- $E_{am}^b$  = Actual Net Electrical Energy (in kWh) of the Plant as read from the kWh metering system during Back-up Fuel operation at the end of such Billing Period  $m$ .
- $VOMR_m$  = Variable O&M Cost Recovery Charge Rate (in Hals/kWh) for the Billing Period  $m$  as defined and specified for Gas operation in Section A.10 of the Attachment A (Agreed Values for Payment Calculation) to this Appendix 11 and subject to indexation as per Attachment B (Indexation/Adjustment to Charge Rates) to this Appendix 11.
- $\Sigma PH_m^b$  = Sum of the total operating hours (in h) during Back-up Fuel operation in the Billing Period  $m$  for each gas turbine.
- BUFC** = Additional hourly O&M Costs required due to Back-up Fuel operation (in SINGAPORE \$) of one gas turbine as specified

below and subject to indexation as per Attachment B (Indexation/ Adjustment to Charge Rates) to this Appendix 11.

The Additional Hourly O&M Costs BUFC are for a gas turbine in combined cycle, which constitutes a power generation unit in the Plant:

<b>BUFC = <sup>9</sup> SINGAPORE \$/h</b>
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**D.4.4 Testing of Back-up Fuel Demand, Exceeding Expected Back-up Fuel Requirement**

OFFTAKER is entitled at any time to require that a test be performed by the Company for the verification of the projected values in Appendix A (Plant Description, Design Conditions and Technical Data) to this Agreement for Back-up Fuel firing.

The test of the Plant under Back-up Fuel firing will be carried out in accordance with Appendix 8 (Inspection, Start-up Testing, Commissioning and Net Dependable Capacity Testing) of this Agreement.

Should the guaranteed consumption values for Back-up Fuel firing not be met, the Company is obliged to make corrective changes and/or remedy the defects to the Plant and make payments to OFFTAKER.

Payments to Offtaker for exceeding the Guaranteed Back-up Fuel Requirement FOE (in SINGAPORE \$), which will be calculated if

<b><math>FHR_a &gt; FHR_g</math></b>
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and represent the portion of the actual costs of such Back-up Fuel excess requirement, which shall be calculated as follows:

<b><math>FOE_m = FD_m^b * GP_m^b * (FHR_a / FHR_g - 1)</math></b>
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where:

**FD<sub>m</sub><sup>b</sup>** = Actual Back-up Fuel Demand (in GJ) as read from the Liquid Fuel Delivery Metering System of the gas turbines at the end of such billing period m.

**GP<sub>m</sub><sup>b</sup>** = The price of Back-up Fuel (in SINGAPORE \$/GJ), based on the actual price for Fuel in Billing Period m according to the provisions of the fuel supply arrangements between Offtaker and Saudi Aramco.

**FHR<sub>a</sub>** = Actual hourly fuel heat demand under Back-up Fuel operation, at the guarantee conditions in accordance with Appendix A

(Plant Description, Design Conditions and Technical Data) to this Agreement, as most recently tested.

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<sup>9</sup> Bidder to insert

**FHR<sub>g</sub>** = Guaranteed hourly fuel heat demand under Back-up Fuel operation as agreed in Appendix A (Plant Description, Design Conditions and Technical Data) to this Agreement.

FOE will be paid by the Company to Offtaker for the period of Back-up Fuel operation, until such time that the performance for Back-up Fuel firing guaranteed in Appendix A (Plant Description, Design Conditions and Technical Data) to this Agreement is proven by the Company in accordance with the procedures set forth in Appendix 8 (Inspection, Start-up Testing, Commissioning and Net Dependable Capacity Testing) of this Agreement.

**ATTACHMENT E: ABBREVIATIONS**

<b>Abbrev.</b>	<b>Description</b>	<b>Unit</b>
<b>Capacity and Energy</b>		
AG <sub>p</sub>	Projected Available Net Energy Generation	(MWh/a)
CC	Contracted Capacity	(MW)
DC	Net Dependable Capacity	(MW)
E <sub>a</sub>	Actual Net Electrical Energy	(kWh)
LC <sub>p</sub>	Projected Loss of Net Energy Generation due to Unavailability and Derating	(MWh)
LC <sub>a</sub>	Actual Loss of Net Energy Generation due to Unavailability and Derating	(MWh)
OM	Outage Mode of the Plant	(-)
<b>Costs and Payments</b>		
A	Component A of the Capacity Payment	(SINGAPORE \$)
b	coefficient for DRA, DOM	(-)
B	Component B of the Capacity Payment	(SINGAPORE \$)
BUFC	Hourly O&M Costs required due to Back-up Fuel operation of one gas turbine	(SINGAPORE \$)
c	coefficient for DRA, DOM,	(-)
CCR	Capital Cost Recovery Charge Rate	(Hals/kWh)
C	Fuel Component C of the Electrical Energy Payment	(SINGAPORE \$)
CP	Capacity Payment	(SINGAPORE \$)
DF	Payment Deduction Factor	(-)
DOM	Deduction from FOMP for Reduced Availability	(SINGAPORE \$)

<b>Abbrev.</b>	<b>Description</b>	<b>Unit</b>
D	Variable Operation and Maintenance Component D of the Electrical Energy Payment	(SINGAPORE \$)
DRA	Deductions from FCP for Reduced Availability	(SINGAPORE \$)
EXR	Exchange Rate USD / SINGAPORE \$	(-)
FCP	Base Capital Payment	(SINGAPORE \$)
FOE	Payments to Offtaker for exceeding the Guaranteed Back-up Fuel Requirement	(SINGAPORE \$)
FOMP	Base Fixed Operation and Maintenance Payment	(SINGAPORE \$)
FOMR	Fixed Operation and Maintenance Cost Recovery Charge Rate	(Hals/kWh)
GP	Price for Fuel	(SINGAPORE \$/GJ)
KSACI	Consumer Price Index of the Kingdom of Singapore	(-)
SD	Start-up Deduction	(SINGAPORE \$)
SU	Start-up Payment	(SINGAPORE \$)
TP	Total Payments	(SINGAPORE \$)
USPI	US Producer Price Index (NAICS code 3336113336117 relating to parts and accessories for turbines, turbine generators and turbine generator sets)	(-)
VOMR	Variable Operation and Maintenance Cost Recovery Charge Rate	(Hals/kWh)
WF	Period Weighting Factor	(-)
Y <sub>CCR</sub>	foreign portion of CCR	(%)
Y <sub>FOMR</sub>	foreign portion of FOMR	(%)
Y <sub>VOMR</sub>	foreign portion of VOMR	(%)

**Fuel**

<b>Abbrev.</b>	<b>Description</b>	<b>Unit</b>
CFSHR <sub>i</sub>	Correction Factor of Specific Net Heat Rate applicable for each respective hour (i)	(-)
FD <sub>a</sub>	Actual Fuel Demand of the Plant	(GJ)
FD <sub>p</sub>	Projected Fuel Demand of the Plant	(GJ)
FHR	Hourly fuel heat demand under Back-up Fuel	
LHV	Lower Heating Value	(kJ)
MTFD	Measuring Tolerances for Fuel Demand	(%)
SHR <sub>CC</sub>	Contracted Specific Net Heat Rate	(kJ / kWh)

**Indices and Numbers**

a	Actual
i	hour (i) in Billing Period
j	each period of declared Unavailability or Derating (as per Availability Notice)
J	number of periods of declared Unavailability or Derating (as per Availability Notice)
m	Billing Period
n	Contract Year
N	Number of Groups
p	Projected
P	Planned
PH	Period Hours
r	Reference
S	Summer Period
U	Unplanned
w	Availability period
W	Winter Period

**Units**

<b>Abbrev.</b>	<b>Description</b>	<b>Unit</b>
A	per annum	
D	Days	
GJ	Giga joules	
g/l	Grams per litre	
Hals	Cents(100 Cents= 1 SINGAPORE \$)	
h/H	Hours	
kJ	Kilo joules	
kW	Kilowatt	
MJ	Mega joules	
MW	Megawatt	
SINGAPO RE \$	Saudi Riyals	
ST	Steam Turbine	
USD	United States Dollars	