

Announcement for Applying for Pre-Qualification for Taipower's Term Coal Tenders

1. Purpose of Pre-Qualification

Taiwan Power Company (“Taipower”) is inviting all interested suppliers (“Applicant(s)”) to submit their qualification documents for pre-qualification evaluation. Based on this evaluation, Taipower will revise the current Qualified Suppliers Lists of Term Coal Tenders (hereinafter referred to as “Qualified Suppliers Lists”) for Quality Specifications including A1, A2, A3, A4, **A6, A7, A8**, B, C1, C2, C3, D1, **D5**, G1, G2, **G3** and **G4** as shown in Attachments **A1, A2, A3, A4, A6, A7, A8**, B, C1, C2, C3, D1, **D5**, G1, G2, **G3** and **G4** of the Instructions for Applying for Pre-Qualification for Taipower's Term Coal Tenders (“Instructions”), respectively.

In accordance with the Government Procurement Act (hereinafter referred to as “Act”), Taipower is entitled to, dependent on coal demand and its sole determination of the tenders, invite the qualified suppliers on the Qualified Suppliers Lists whose coal quality meets specifications and Taipower's requirements to participate in future term coal tenders unless the Applicant is prohibited from participating in tendering or being awarded by Act. Furthermore, the tendering periods of term coal tenders will be between ten (10) days and fourteen (14) days, depending on Taipower's requirements. The aforementioned tendering periods may be extended for tendering if required.

Taipower will use selective tendering procedures, as described in Articles 18, 20 and 21 of the Act, to proceed with such term coal tenders.

An Applicant who has been previously qualified and listed on the current Qualified Suppliers Lists is required to provide updated supplier and mine qualification information for Taipower's review in order to remain on the lists. **If the above-mentioned updated information does not meet Taipower's criteria or the Applicant does not provide the updated supplier and mine qualification information, the said Applicant shall be removed from the Qualified Suppliers Lists.**

2. Deadline for Submission of Qualification Documents

The qualification documents should be received by Taipower no later than **17:00 6/1 (Taipei time)**. Qualification documents submitted after the deadline will be evaluated only if time permits.

3. Basic Qualification Requirements for Applicant and Its Proposed Mine

(1) Basic Qualifications for an Applicant :

- A. An Applicant proposing to supply coal produced from a mine located in a country or an area other than China must have the right to sell the coal

produced from the proposed mine and must meet one of the following qualifications:

(a) Owner who

- (i) has been granted the mining permit (such as coal mining license, coal mining lease or equivalent documents) by competent governmental authority and whose name appears on the mining permit for the proposed mine; or
- (ii) is one of two or more companies holding the competent mining permit, its prorated share of the quantity of exported coal from the proposed mine satisfies the criteria set forth in section 3.(2)C of the Announcement, and its name is one of the names on the document of mining permit.

(b) Producer who

has signed a valid contract with a mining permit holder, which authorizes the Applicant to mine and sell the coal produced from the proposed mine. The duration of foregoing contract should not be less than the term of Taipower's term coal contract in tendering.

(c) Sales Company who

- (i) is **wholly owned** by Owner or Producer of the proposed mine; or
- (ii) is a **wholly-owned** sales company of a joint venture of the proposed mine. In addition, the said joint venture has already established another **wholly-owned** company to hold the relevant mining permit for the proposed mine and whose name shall appear on the document of mining permit.
- (iii) is an **exclusively duly authorized international** sales company of the proposed mine. The sales company has the exclusive right to sell the coal produced from the proposed mine to the international market, which means all coal produced from the proposed mine can **ONLY** been sold to customers through the sales company. Under such circumstance, Owner or Producer of the proposed mine is not allowed to participate in this PQ process.

B. An Applicant proposing to supply coal from China must be:

- (a) incorporated under the law of China which has received the competent China authority's approval to export coal to Taiwan; or
- (b) incorporated under the law of third country or area other than Taiwan and China and must be appointed and authorized by a company in China which has received the competent China authority's approval to export coal to Taiwan.

C. In pursuant to the Public Construction Commission Order No. 1090100288,

no matter in the process of the pre-qualification evaluation or the coal procurement of Taipower, Applicant(s) who has already been notified from Taipower under the article 101 of Act is deemed as the disqualification of the basic qualifications to the ability of performing the contract, if the said notification has not yet been revoked. However, Taipower shall always allow suppliers to request of qualification review and periodically review and update the Qualified Suppliers Lists.

(2) Basic Qualification Requirements for Applicant's proposed Mine:

- A. The proposed mine must be in operation.
- B. The proposed mine must hold a valid mining permit issued by competent governmental authority and the Applicant must provide a photocopy of such permit.
- C. The quantity of exported coal produced from a proposed mine, with coal quality meeting Taipower's quality specifications as shown in Attachment A1, A2, A3, A4, **A6, A7, A8**, B, C1, C2, C3, D1, **D5**, G1, G2, **G3** and **G4** shall meet at least one of the following criteria:
 - (a) The accumulated exported quantity within the last 5 years (**2021 to 2025**, hereinafter referred to as "Last 5 Years") is not less than the total nominal contractual quantity of Taipower's term tenders. For example, for a one-year term tender, The accumulated exported quantity within the Last 5 Years is not less than 500,000 metric tons (= 500,000 metric tons X 1); for a 10-year term tender, The accumulated exported quantity within the Last 5 Years is not less than 5,000,000 metric tons (= 500,000 metric tons X 10);
 - (b) The accumulated exported coal quantity within the Last 5 Years under a single contract signed by the Applicant with its contracting party is not less than two fifths of the total nominal contractual quantity of Taipower's term tenders. For example, for a one-year term tender, the accumulated exported quantity within the Last 5 Years under a single contract signed by the Applicant with its contracting party is not less than 200,000 metric tons (= 500,000 metric tons X 1 X 40%); for a 10-year term tender, the accumulated exported quantity within the Last 5 Years under a single contract signed by the applicant with its contracting party is not less than 2,000,000 metric tons (= 500,000 metric tons X 10 X 40%);
 - (c) The accumulated exported coal quantity within any 12 consecutive months of the Last 5 Years is not less than 600,000 metric tons.

Note:

The quality certificated of export shipments as evidences for Section 3.(2).C shall be issued by the inspection companies of international standing. For future Taipower's term coal tenders, only qualified suppliers

whose accumulated exported coal quantities produced from qualified mines meet at least one of the criteria specified in Section 3.(2).C will be invited to participate in the corresponding term coal tenders.

- D. The remaining mine life of the proposed mine must not be less than the term of term coal contract in tendering. The calculation of remaining mine life is set forth in the relevant Application Form.
- E. The facilities of the loading port for the proposed mine must be adequate for accommodating vessels to be nominated by Taipower. The loading port and berth shall at least be able to accommodate Panamax size vessel with minimum draft of channel and berth no less than **14.5** meters.
- F. The proposed mine must be evaluated and determined by Taipower as a qualified mine for supplying the coal under term coal tenders.

4. Request for Application document of Pre-Qualification

- (1) For an Applicant who is **NOT** on current Taipower's Qualified Suppliers Lists, please contact Taipower by email or fax to receive Instructions for Applying for Pre-Qualification.
- (2) For an Applicant who **IS** on current Taipower's Qualified Suppliers Lists but plans to propose a mine which has **NOT** been qualified and listed on Taipower's Qualified Suppliers Lists, please contact Taipower by email or fax to receive Instructions for Applying for Pre-Qualification.
- (3) For an Applicant with its proposed mine **IS** on current Taipower's Qualified Suppliers Lists, Taipower will furnish Instruction for applying for Pre-Qualification directly. The supplier is required to provide updated information for the supplier and mine.

Please submit your request to:

Thermal Coal Section

Department of Fuels

Taiwan Power Company

9Fl., No. 242, Roosevelt Road, Section 3, Taipei City 100208, Taiwan, R.O.C.

Tel. No.: 886-2-2366-6755

Fax No.: 886-2-2367-0597

Email Address: u775888@taipower.com.tw or u120749@taipower.com.tw. You are requested to give us your email address so that we may send Application Form and the Instructions by email.

Attachment A1**Quality Specifications for Taipower's Term Tender of General Bituminous Coal – Quality A1****October, 2016**

Item	Minimum / Maximum		
1. Gross Calorific Value (kcal/kg) A.R.	5,900		Min. (Remark 1)
2. Total Moisture (%) A.R.	15		Max. (Remark 2)
3. Ash Content (%) A.D.	15		Max.
4. Sulphur Content (%) A.D.	0.9		Max.
5. Volatile Matter (%) A.D.	26		Min.
6. Fixed Carbon (%) A.D.	60		Max.
7. Mercury Content (mg/kg)	0.12		Max.
8. Grindability (H.G.I.)	45		Min.
9. Ash Fusion Temperature (reducing, H=W) (°C)	1,150		Min.
10. Size (mm)	>50mm	5 %	Max.
	<2mm	35 %	Max.
11. Na₂O in Ash (%)	Remark 3		

Remarks:

- 1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.**
- 2. Total Moisture can be raised to 18% max if Ash Content is less than 10%.**
- 3. Na₂O in Ash**
 - (1) If the actual Ash Content is greater than 7%,
Na₂O in Ash is 2% Max; if both actual (a) CaO+MgO > Fe₂O₃, and actual (b) CaO+MgO+Fe₂O₃ > 20% are met, then Na₂O in Ash can be raised to 5.0% Max.**
 - (2) If the actual Ash Content is equal to or less than 7%,
Na₂O in Ash is 3% Max; if CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 6.0% Max.**
- 4. A.R. means As Received Basis; A.D. means Air Dried Basis.**

Attachment A2**Quality Specifications for Taipower's Term Tender of General Bituminous Coal – Quality A2****October, 2016**

Item			Minimum / Maximum		
1. Gross Calorific Value			6,200		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	15		Max.
				(Remark 2)	
3. Ash Content	(%)	A.D.	14		Max.
4. Sulphur Content	(%)	A.D.	0.7		Max.
5. Volatile Matter	(%)	A.D.	26		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		45		Min.
9. Ash Fusion Temperature			1,200		Min.
	(reducing, H=W)	(°C)			
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 3

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.

2. Total Moisture can be raised to 18% max if Ash Content is less than 10% .

3. Na₂O in Ash

(1) If the actual Ash Content is greater than 7%,

Na₂O in Ash is 2% Max; if both actual (a) CaO+MgO > Fe₂O₃, and actual (b) CaO+MgO+Fe₂O₃ > 20% are met, then Na₂O in Ash can be raised to 5.0% Max.

(2) If the actual Ash Content is equal to or less than 7%,

Na₂O in Ash is 3% Max; if CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 6.0% Max.

4. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment A3**Quality Specifications for Taipower's Term Tender of Low Ash General Bituminous Coal – Quality A3****January, 2020**

Item			Minimum / Maximum		
1. Gross Calorific Value			6,200		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	15		Max.
				(Remark 2)	
3. Ash Content	(%)	A.D.	10		Max.
4. Sulphur Content	(%)	A.D.	0.7		Max.
5. Volatile Matter	(%)	A.D.	26		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		45		Min.
9. Ash Fusion Temperature			1,200		Min.
	(reducing, H=W)	(°C)			
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 3

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.

2. Total Moisture can be raised to 18% max if Ash Content is less than 10% .

3. Na₂O in Ash

(1) If the actual Ash Content is greater than 7%,

Na₂O in Ash is 2% Max; if both actual (a) CaO+MgO > Fe₂O₃, and actual (b) CaO+MgO+Fe₂O₃ > 20% are met, then Na₂O in Ash can be raised to 5.0% Max.

(2) If the actual Ash Content is equal to or less than 7%,

Na₂O in Ash is 3% Max; if CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 6.0% Max.

4. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment A4**Quality Specifications for Taipower's Term Tender of General Bituminous Coal – Quality A4****December, 2022**

Item			Minimum / Maximum		
1. Gross Calorific Value			6,200		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	15		Max.
				(Remark 2)	
3. Ash Content	(%)	A.D.	14		Max.
4. Sulphur Content	(%)	A.D.	0.7		Max.
5. Volatile Matter	(%)	A.D.	26		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		42		Min.
9. Ash Fusion Temperature			1,200		Min.
	(reducing, H=W)	(°C)			
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 3

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.

2. Total Moisture can be raised to 18% max if Ash Content is less than 10% .

3. Na₂O in Ash

(1) If the actual Ash Content is greater than 7%,

Na₂O in Ash is 2% Max; if both actual (a) CaO+MgO > Fe₂O₃, and actual (b) CaO+MgO+Fe₂O₃ > 20% are met, then Na₂O in Ash can be raised to 5.0% Max.

(2) If the actual Ash Content is equal to or less than 7%,

Na₂O in Ash is 3% Max; if CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 6.0% Max.

4. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment A6**Quality Specifications for Taipower's Term Tender of General Bituminous Coal – Quality A6****April, 2025**

Item			Minimum / Maximum		
1. Gross Calorific Value			5,900		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	15		Max.
				(Remark 2)	
3. Ash Content	(%)	A.D.	15		Max.
4. Sulphur Content	(%)	A.D.	0.7		Max.
5. Volatile Matter	(%)	A.D.	26		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		45		Min.
9. Ash Fusion Temperature			1,300		Min.
	(reducing, H=W)	(°C)			
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 3

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.

2. Total Moisture can be raised to 18% max if Ash Content is less than 10% .

3. Na₂O in Ash

(1)If the actual Ash Content is greater than 7%,

Na₂O in Ash is 2% Max; if both actual (a) CaO+MgO > Fe₂O₃, and actual (b) CaO+MgO+Fe₂O₃ > 20% are met, then Na₂O in Ash can be raised to 5.0% Max.

(2)If the actual Ash Content is equal to or less than 7%,

Na₂O in Ash is 3% Max; if CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 6.0% Max.

4. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment A7**Quality Specifications for Taipower's Term Tender of General Bituminous Coal – Quality A7****April, 2025**

Item			Minimum / Maximum		
1. Gross Calorific Value			6,200		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	15		Max.
				(Remark 2)	
3. Ash Content	(%)	A.D.	14		Max.
4. Sulphur Content	(%)	A.D.	0.7		Max.
5. Volatile Matter	(%)	A.D.	26		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		45		Min.
9. Ash Fusion Temperature			1,300		Min.
	(reducing, H=W)	(°C)			
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na ₂ O in Ash	(%)				Remark 3

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.

2. Total Moisture can be raised to 18% max if Ash Content is less than 10% .

3. Na₂O in Ash

(1) If the actual Ash Content is greater than 7%,

Na₂O in Ash is 2% Max; if both actual (a) CaO+MgO > Fe₂O₃, and actual (b) CaO+MgO+Fe₂O₃ > 20% are met, then Na₂O in Ash can be raised to 5.0% Max.

(2) If the actual Ash Content is equal to or less than 7%,

Na₂O in Ash is 3% Max; if CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 6.0% Max.

4. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment A8**Quality Specifications for Taipower's Term Tender of General Bituminous Coal – Quality A8****April, 2025**

Item			Minimum / Maximum		
1. Gross Calorific Value			5,900		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	15		Max.
				(Remark 2)	
3. Ash Content	(%)	A.D.	15		Max.
4. Sulphur Content	(%)	A.D.	0.7		Max.
5. Volatile Matter	(%)	A.D.	26		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		45		Min.
9. Ash Fusion Temperature			1,150		Min.
	(reducing, H=W)	(°C)			
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 3

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.

2. Total Moisture can be raised to 18% max if Ash Content is less than 10% .

3. Na₂O in Ash

(1) If the actual Ash Content is greater than 7%,

Na₂O in Ash is 2% Max; if both actual (a) CaO+MgO > Fe₂O₃, and actual (b) CaO+MgO+Fe₂O₃ > 20% are met, then Na₂O in Ash can be raised to 5.0% Max.

(2) If the actual Ash Content is equal to or less than 7%,

Na₂O in Ash is 3% Max; if CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 6.0% Max.

4. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment B**Quality Specifications for Taipower's Term Tender of General Bituminous Coal – Quality B****June, 2018**

Item			Minimum / Maximum		
1. Gross Calorific Value			5,500		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	20		Max.
				(Remark 2)	
3. Ash Content	(%)	A.D.	8		Max.
4. Sulphur Content	(%)	A.D.	0.7		Max.
5. Volatile Matter	(%)	A.D.	26		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		42		Min.
9. Ash Fusion Temperature			1,150		Min.
	(reducing, H=W)	(°C)			
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 3

Remarks:

- 1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.**
- 2. Total Moisture can be raised to 22% max if Ash Content is less than 10% .**
- 3. Na₂O in Ash is 3.0% Max; if actual CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 6.0% Max.**
- 4. A.R. means As Received Basis; A.D. means Air Dried Basis.**

Attachment C1**Quality Specifications for Taipower's Term Tender of Low-Ash & Extra Low-Sulphur Subbituminous Coal – Quality C1****October, 2016**

Item			Minimum / Maximum		
1. Gross Calorific Value			4,800		Min.
(kcal/kg)	A.R.		(Remark 1)		
2. Total Moisture	(%)	A.R.	30		Max.
3. Ash Content	(%)	A.D.	4		Max.
4. Sulphur Content	(%)	A.D.	0.12		Max.
5. Volatile Matter	(%)	A.D.	26		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		42		Min.
9. Ash Fusion Temperature			1,150		Min.
(reducing, H=W)	(°C)				
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)		Remark 2		

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.

2. Na₂O in Ash

(1) If the actual Ash Content is greater than 7%,

Na₂O in Ash is 2% Max; if both actual (a) CaO+MgO > Fe₂O₃, and actual (b) CaO+MgO+Fe₂O₃ > 20% are met, then Na₂O in Ash can be raised to 5.0% Max.

(2) If the actual Ash Content is equal to or less than 7%,

Na₂O in Ash is 3% Max; if CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 6.0% Max.

3. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment C2
Quality Specifications for Taipower's Term Tender of Low-Ash & Extra Low-Sulphur Subbituminous Coal – Quality C2

October, 2016

Item			Minimum / Maximum		
1. Gross Calorific Value			4,800		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	30		Max.
3. Ash Content	(%)	A.D.	6		Max.
4. Sulphur Content	(%)	A.D.	0.2		Max.
5. Volatile Matter	(%)	A.D.	26		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		42		Min.
9. Ash Fusion Temperature			1,150		Min.
	(reducing, H=W) (°C)				
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na ₂ O in Ash	(%)				Remark 2

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.

2. Na₂O in Ash

(1) If the actual Ash Content is greater than 7%,

Na₂O in Ash is 2% Max; if both actual (a) CaO+MgO > Fe₂O₃, and actual (b) CaO+MgO+Fe₂O₃ > 20% are met, then Na₂O in Ash can be raised to 5.0% Max.

(2) If the actual Ash Content is equal to or less than 7%,

Na₂O in Ash is 3% Max; if CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 6.0% Max.

3. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment C3**Quality Specifications for Taipower's Term Tender of Low-Ash & Extra Low-Sulphur Subbituminous Coal – Quality C3****January, 2018**

Item			Minimum / Maximum		
1. Gross Calorific Value			4,500		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	32		Max.
3. Ash Content	(%)	A.D.	6		Max.
4. Sulphur Content	(%)	A.D.	0.2		Max.
5. Volatile Matter	(%)	A.D.	26		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		42		Min.
9. Ash Fusion Temperature			1,150		Min.
	(reducing, H=W)	(°C)			
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 2

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.
2. Na₂O in Ash
 - (1) If the actual Ash Content is greater than 7%,
Na₂O in Ash is 2% Max; if both actual (a) CaO+MgO > Fe₂O₃, and actual (b) CaO+MgO+Fe₂O₃ > 20% are met, then Na₂O in Ash can be raised to 5.0% Max.
 - (2) If the actual Ash Content is equal to or less than 7%,
Na₂O in Ash is 3% Max; if CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 6.0% Max.
3. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment D1**Quality Specifications for Taipower's Term Tender of General Subbituminous Coal – Quality D1****October, 2016**

Item			Minimum / Maximum		
1. Gross Calorific Value			5,000		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	28		Max.
3. Ash Content	(%)	A.D.	8		Max.
4. Sulphur Content	(%)	A.D.	0.9		Max.
5. Volatile Matter	(%)	A.D.	28		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		42		Min.
9. Ash Fusion Temperature			1,150		Min.
	(reducing, H=W)	(°C)			
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 2

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.

2. Na₂O in Ash

(1) If the actual Ash Content is greater than 7%,

Na₂O in Ash is 2% Max; if both actual (a) CaO+MgO > Fe₂O₃, and actual (b) CaO+MgO+Fe₂O₃ > 20% are met, then Na₂O in Ash can be raised to 5.0% Max.

(2) If the actual Ash Content is equal to or less than 7%,

Na₂O in Ash is 3% Max; if CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 6.0% Max.

3. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment D5**Quality Specifications for Taipower's Term Tender of General Subbituminous Coal – Quality D5****April, 2025**

Item			Minimum / Maximum		
1. Gross Calorific Value			5,000		Min.
(kcal/kg)	A.R.			(Remark 1)	
2. Total Moisture	(%)	A.R.	28		Max.
3. Ash Content	(%)	A.D.	8		Max.
4. Sulphur Content	(%)	A.D.	0.9		Max.
5. Volatile Matter	(%)	A.D.	28		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		42		Min.
9. Ash Fusion Temperature			1,150		Min.
(reducing, H=W)	(°C)				
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 2

Remarks:

- 1. Gross Calorific Value** greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.
- 2. Na₂O in Ash** is 2% Max; if actual CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 4.0% Max
- 3. A.R.** means As Received Basis; **A.D.** means Air Dried Basis.

Attachment G1**Quality Specifications for Taipower's Term Tender of Low-Ash & Low-Sulfur Subbituminous Coal – Quality G1****November, 2021**

Item			Minimum / Maximum		
1. Gross Calorific Value			5,000		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	30		Max.
3. Ash Content	(%)	A.D.	8		Max.
4. Sulphur Content	(%)	A.D.	0.5		Max.
5. Volatile Matter	(%)	A.D.	28		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		42		Min.
9. Ash Fusion Temperature			1,150		Min.
	(reducing, H=W)	(°C)			
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 2

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.
2. Na₂O in Ash is 3% Max; if actual CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 9.0% Max
3. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment G2**Quality Specifications for Taipower's Term Tender of Low-Ash Subbituminous Coal – Quality G2****November, 2021**

Item			Minimum / Maximum		
1. Gross Calorific Value			5,000		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	30		Max.
3. Ash Content	(%)	A.D.	8		Max.
4. Sulphur Content	(%)	A.D.	0.7		Max.
5. Volatile Matter	(%)	A.D.	28		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		42		Min.
9. Ash Fusion Temperature			1,150		Min.
	(reducing, H=W)	(°C)			
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 2

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.
2. Na₂O in Ash is 3% Max; if actual CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 9.0% Max
3. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment G3**Quality Specifications for Taipower's Term Tender of Low-Ash
& Low-Sulfur Subbituminous Coal – Quality G3****April, 2025**

Item			Minimum / Maximum		
1. Gross Calorific Value			5,000		Min.
	(kcal/kg)	A.R.		(Remark 1)	
2. Total Moisture	(%)	A.R.	30		Max.
3. Ash Content	(%)	A.D.	8		Max.
4. Sulphur Content	(%)	A.D.	0.5		Max.
5. Volatile Matter	(%)	A.D.	28		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		42		Min.
9. Ash Fusion Temperature			1,150		Min.
	(reducing, H=W)	(°C)			
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 2

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.
2. Na₂O in Ash is 2% Max; if actual CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 4.0% Max
3. A.R. means As Received Basis; A.D. means Air Dried Basis.

Attachment G4**Quality Specifications for Taipower's Term Tender of Low-Ash Subbituminous Coal – Quality G4****April, 2025**

Item			Minimum / Maximum		
1. Gross Calorific Value			5,000		Min.
(kcal/kg)	A.R.			(Remark 1)	
2. Total Moisture	(%)	A.R.	30		Max.
3. Ash Content	(%)	A.D.	8		Max.
4. Sulphur Content	(%)	A.D.	0.7		Max.
5. Volatile Matter	(%)	A.D.	28		Min.
6. Fixed Carbon	(%)	A.D.	60		Max.
7. Mercury Content	(mg/kg)		0.12		Max.
8. Grindability	(H.G.I.)		42		Min.
9. Ash Fusion Temperature			1,150		Min.
(reducing, H=W)	(°C)				
10. Size (mm)			>50mm	5 %	Max.
			<2mm	35 %	Max.
11. Na₂O in Ash	(%)				Remark 2

Remarks:

1. Gross Calorific Value greater than 6,900 kcal/kg will be treated as 6,900 kcal/kg.
2. Na₂O in Ash is 2% Max; if actual CaO+MgO+Fe₂O₃ > 20% is met, then Na₂O in Ash can be raised to 4.0% Max
3. A.R. means As Received Basis; A.D. means Air Dried Basis.