

**The Business Plan of  
the Construction of Nickel Smeltery in  
Kibaha District, Coast Region, Tanzania**

Drafter: Coast Nickel Industry Limited

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## 1. Introduction

Coast Nickel Industry Limited was registered in Dar es Salaam, Tanzania in May 2023. The business of the company includes mineral washing and processing; non-ferrous metal smelting; sales of non-ferrous metal alloy; manufacturing of non-metallic mineral products; manufacturing and sales of building materials, etc. The company aims to build a modern and efficient nickel ore smelter in Tanzania, promoting the value in the mining sector and realizing the wealth.

## 2. Project background

Tanzania is a country which has a rich deposit in Nickel and some other metal minerals. All these minerals are the precious resources which are demanded by all the world. The high grade nickel ore is exported from Tanzania to overseas currently, but the low grade nickel ore is totally wasted and abandoned aside in the mine. How to use this part of mineral is the key point to add the value of mining and save the precious resource in Tanzania.

After investigation of the nickel market in Tanzania and China, we decided to set up the smeltery in Tanzania to produce the nickel matte by using the low grade nickel ore, at the same time satisfying the demand from overseas. This smeltery can adequately use the rich low grade ore to produce the high grade matte, then achieving the purpose: adding the value of mining locally and realizing the profit stably.

## 3. Market analysis

Tanzania has a rich deposit in nickel resources. This gives Tanzania the unique advantage on the world. Because nickel has high purity, high density, high conductivity characteristics, it is widely used in batteries, aerospace, electronics and other fields.

At present, the global nickel market continues to grow, which provides a good market opportunity for Tanzania. With the continuous development of science and technology, the use of nickel is also expanding, and the demand is increasing year by year. Tanzania, with its rich nickel resources, has the opportunity to become an important global supplier of nickel.

At the same time, due to the relatively low production cost, we believe that the construction of a nickel smeltery in Tanzania will have a clear competitive advantage. The country's labor prices are relatively low, and the natural resources are abundant, which makes the production costs significantly low. In addition, the Tanzanian government has also actively promoted mining development, providing a favorable policy environment and investment opportunities.

To sum up, Tanzania is rich in nickel resources, with a broad market prospect, low production cost and good policy environment. Therefore, the construction of nickel smeltery has obvious competitive advantage and good development prospect.

## 4. Economic benefits

It is expected that the construction of a nickel smeltery in Tanzania will bring significant economic benefits. By increasing the utilization rate of local nickel resources from the export of mineral products to industrial products, the added value of products is increased, boosting the economic development. And this project will increase the local employment as well. In addition,

the smeltery will generate considerable tax revenue, bringing tangible benefits to the local government.

At the same time, the completion of the ice nickel smeltery will also stimulate the development of related industries and further promote the industrialization process of Tanzania. This project will also promote local technological progress and innovation in Tanzania. As nickel smeltery adopt advanced technology in production, this will bring Tanzania to the world advanced level in nickel mining and smelting.

In terms of environment, the construction of the nickel smeltery will reduce environmental pollution. The plant will adopt an environmentally friendly production process to minimize the impact on the local environment. In addition, the smeltery will also establish a strict environmental management system to ensure that the environmental protection measures in the production process are effectively implemented.

## 5. Budget and financing

**Fixed assets investment table**

No.	Investment content	Investment amount(USD)	remarks
1	Purchase of land	250,000	
2	Equipment	2,000,000	
3	Construction and equipment installation	550,000	
4	other expenses	200,000	
	Total estimated investment	3,000,000	

**MajorEquipment List**

No.	Equipment	Model	Unit	unit-price	Sub-total
1	Oxygen-rich side blowing furnace and supporting system equipment	S=3.0m 2	2	16.90	33.80
		S=5.8m 2			
2	Bag collector for feeding post	PPCS64-4, processing air volume: 20,000 m3/h	1	4.51	4.51
3	Mandatory mixer	The JS 750 model power: 22 Kw	1	2.51	2.51
4	Brick making machine	Nominal pressure: 5000 KN, including control cabinet, delivery board elevator, hydraulic station and brick connecting machine.	1	16.90	16.90
5	Brick tray	96 / piece of material: Q235	100	0.00	0.00
6	Batching and feeding system	2 silos, one belt conveyor	1	11.41	11.41
7	Dust down room	Wall thickness =10mm disposal: Q235 DN2200mm H: 5m	1	5.92	5.92
8	Quench tower	Φ2500mm H=10.5m	1	5.63	5.63
9	Activated carbon injection device	Volume: 1.5m3 with DN150 unloader (variable frequency speed regulation) including an activated	1	1.13	1.13

		carbon feeding device 2T electric hoist			
10	Bag-type dust collector	Model: CDMP112-4 Treatment flow: 30000m <sup>3</sup> / h	1	26.06	26.06
11	System main fan and motor	Y5-51No.11D 75Kw	1	11.55	11.55
12	Desulphurization system	(Two-stage desulfurization tower) 2-Φ2.2*13.5m Material: polymer PP thickness: 20mm	1	35.21	35.21
13	Sout preparation system equipment	See the list of equipment for details	1	2.96	2.96
14	Wet electric defogging device	WESP-100	1	18.31	18.31
15	Non-standard flue gas pipeline, support system	DN850mm Liner ZS1042 high temperature due to powder paint anticorrosion	1	2.54	2.54
16	Table cooling system	Group welding parts	1	3.10	3.10
17	Compressed-air system	DN15-DN80 galvanized pipe containing valves, pipes, support frame, etc	1	8.17	8.17
18	Cooling circulation waterway and process waterway system of each equipment	PVC-U, galvanized pipes, pipes, valves, pipe hoop, supports, etc. (including installation and construction cost)	1	3.38	3.38
19	Filter pressing system	20m <sup>2</sup> ceramic filter press vacuum pump 5.5 Kw, spindle 3 Kw, stirring 4 Kw	1	5.35	5.35
Total Amount		198.42			

## 6. Profit and cash flow calculation

### Estimated income statement

project	line No	2024	2025	2026	2027	2028
1. sales	1	10,376,400	12,451,700	13,835,200	15,564,600	17,294,000
Less: operating costs	2	8,990,400	10,675,800	11,893,300	13,344,800	14,866,600
Taxes and Additional	3	25,500	29,400	32,000	35,300	38,500
selling expenses	5	84,500	88,700	98,600	105,600	112,700
general expenses	6	845,100	887,300	915,500	985,900	1,126,800
cost of financing	7	42,300	42,300	42,300	42,300	42,300
3. operating	8	388,600	728,200	853,600	1,050,800	1,107,200

profit						
4. total profit	9	388,600	728,200	853,600	1,050,800	1,107,200
Reduced: income tax	10	116,600	218,400	256,100	315,200	332,200
5. net margin	11	272,100	509,700	597,500	735,600	775,000

**Statement of Estimated cash flow**

<b>Year</b>	<b>2024</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>
Beginning balances	0	911,300	2,475,100	5,173,600	8,071,600
funds provided	14,244,200	14,693,000	16,325,600	18,366,300	20,407,000
Sales collection	12,244,200	14,693,000	16,325,600	18,366,300	20,407,000
Borrow money	1,000,000				
Equity financing	1,000,000				
Capital expenditure	13,332,900	13,129,200	13,627,100	15,468,200	17,221,900
Procurement expenditure	700,000	1,500,000	2,500,000	3,500,000	4,500,000
Charge against revenue	771,800	818,300	1,056,300	1,500,000	2,000,000
Human expenditure	9,000,000	9,300,000	9,500,000	9,800,000	10,000,000
Investment expenditure	2,500,000				
Tax expenses	361,000	510,900	570,700	668,200	721,900
Repayment expenses		1,000,000			
Ending balance	911,300	2,475,100	5,173,600	8,071,600	11,256,700

## 7. Risk analysis

Although we are very confident about the business prospects of this project, we must admit that there are some risk factors for any project. These risk factors may come from policy changes, market volatility and technical difficulties. Therefore, in order to ensure the smooth implementation of the project, we will adopt a series of effective risk response strategies.

First of all, in view of the risks brought about by the policy changes, we will actively pay attention to the dynamics of the relevant policies and adjust the project strategies in time to ensure that the project always meets the policy requirements. At the same time, we will also strengthen the communication with the government departments to understand the direction of the policy, so as to make countermeasures in advance.

Secondly, in view of the risks brought by market fluctuations, we will carry out in-depth market research and analysis, so as to grasp the market dynamics in time, and timely adjust the project strategy according to the market changes. In addition, we will establish a sound market risk warning mechanism so that we can respond quickly in case of market fluctuations.

Finally, in view of the risks brought about by technical problems, we will strengthen technological research and development and innovation, and improve the technical level and innovation ability. At the same time, we will also strengthen the cooperation with universities and scientific research institutions, jointly solve technical problems, to ensure that the technical level of the project is always in the forefront of the industry.

In short, we will adopt a series of effective risk response strategies to ensure the smooth implementation of the project. We believe that with our joint efforts, this project will surely be a success.

8. Human resources

No.	position	number of people	remarks
1	Managing director	1	
2	Chief engineer	1	
3	Administrative staff	2	
4	Assistant	1	
5	Senior accountant	2	
6	Cashier	2	
7	Engineer	5	
8	Engineer assistant	5	
9	Translator	5	
10	welder	2	
11	Driver	4	
12	Worker	80	
13	Security	10	
Total amount		120	

## 9. Summary

To sum up, the construction of ice nickel smelter in Tanzania has significant market prospect and commercial potential. We believe that by making full use of local resource advantages, technical feasibility and economic benefits, we will give investors persuasive reasons to invest. At the same time, we will also actively deal with the possible risk factors to ensure the smooth implementation of the project. We look forward to working with investors to create new business opportunities and contribute to the economic development of Tanzania.