

F. No. 5-12/2016-Infra (ICC)
Government of India
Ministry of Food Processing Industries
Panchsheel Bhawan, August Kranti Marg
New Delhi – 110049

Dated: 22.11.2016

OFFICE MEMORANDUM

Subject: Draft cost norms for financial assistance under Central Sector Scheme of Cold Chain and Value Addition Infrastructure – public consultation- reg.

Ministry of Food Processing Industries is operating a Central Sector Scheme of Cold Chain and Value Addition Infrastructure under which financial assistance is provided for setting up integrated cold chain and preservation infrastructure for horticulture and non-horticulture produce including apple. The objective of the scheme is to provide integrated cold chain and preservation infrastructure facilities without any break, from the farm gate to the consumer in order to reduce post-harvest losses of horticulture and non-horticulture produce.

The Ministry is considering determination of cost norms of the components/equipments used in setting up such cold chain infrastructure facilities. In this regard the Ministry has prepared draft cost norms for the facilities/components setup under cold chain infrastructure. Draft cost norms are attached herewith with the request that comments/observations, if any, may kindly be conveyed by E-mail at atyanand@nic.in by **9th December, 2016** to enable this Ministry to consider the same.

Encl: As above.


22/11/16

(Atya Nand)

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ANNEXURE-I

Proposed cost estimates of plant & machinery equipment for Fruits & Vegetables Processing Sector under the Scheme of Integrated Cold Chain and Value Addition Infrastructure

S.No.	Description			Cost (In Rs.)
1	IQF Tunnel [without refrigeration]			
		Associated Frozen Storage Capacity	Refrigeration cost of IQF & Associated Frozen Storage	Total
1.1	1 MT/hr.	85,00,000	1000 MT	1,40,00,000
1.2	2 MT/hr.	1,30,00,000	2000 MT	2,30,00,000
1.3	3 MT/hr.	2,20,00,000	3000 MT	2,90,00,000
1.4	4 MT/hr.	2,50,00,000	3000 MT	3,50,00,000
1.5	5 MT/hr.	2,80,00,000	3000 MT	4,00,00,000
				6,80,00,000
2	IQF Tunnel Only			
			Refrigeration	Total
2.1	1 MT/hr.	85,00,000	95,00,000	1,80,00,000
2.2	2 MT/hr.	1,30,00,000	1,50,00,000	2,80,00,000
2.3	3 MT/hr.	2,20,00,000	1,70,00,000	3,90,00,000
2.4	4 MT/hr.	2,50,00,000	2,00,00,000	4,50,00,000
2.5	5 MT/hr.	2,80,00,000	2,20,00,000	5,00,00,000
2.6	6 MT/hr.	3,18,00,000	2,50,00,000	5,68,00,000
3	Blast Freezer [without refrigeration]			
			Refrigeration	Total
3.1	1 MT/Batch	33,00,000	48,00,000	81,00,000
3.2	2 MT/Batch	45,00,000	58,00,000	1,03,00,000
3.3	3 MT/Batch	63,00,000	68,00,000	1,31,00,000
4	Spiral Freezer [without refrigeration]			
			Refrigeration	Total
4.1	250 Kg/hr	1,30,00,000	1,50,00,000	2,80,00,000
4.2	500 Kg/hr	1,70,00,000	1,80,00,000	3,50,00,000
4.3	1000 Kg/hr.	2,00,00,000	2,00,00,000	4,00,00,000

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S.No.	Description	Cost (In Rs.)
5	Pre Proc. Line associated with IQF for Peas (including Depodder, Blancher & Pre-chiller)	
5.1	1 MT/hr.	80,00,000
5.2	2 MT/hr.	1,30,00,000
5.3	3 MT/hr.	1,80,00,000
5.4	4 MT/hr.	2,00,00,000
5.5	5 MT/hr.	2,50,00,000
5.6	6 MT/hr.	3,00,00,000
6	Pre Proc. Line associated with IQF for other Vegetables (other than Peas)	
6.1	Add on to sl. No. 5	70,00,000
7	Sorting Grading Line for other fruits & vegetables [other than Apple]	
7.1	1 MT/hr.	15,00,000
7.2	2 MT/hr.	25,00,000
7.3	3 MT/hr.	30,00,000
7.4	4 MT/hr.	40,00,000
7.5	5 MT/hr.	50,00,000
8	Sorting, Grading & Packing Line for Apple	
8.1	5 MT/hr.	3,10,00,000
8.2	10 MT/hr.	4,00,00,000
8.3	15 MT/hr.	5,90,00,000
9	Weighing & Packing Machine - 1MT/hr.	65,00,000
10	Metal Detector	10,00,000

Notes:

- 1) The costs mentioned are basic cost of Plant & Machinery, exclusive of tax, freight, installation & commissioning charges
- 2) For the purpose of grant calculation basic cost of Plant & Machinery would be considered.
- 3) The cost of any other facilities/ components proposed to be created under the project and not covered under the cost norms may be considered by Technical Committee based on the quotations submitted along with the proposal and subject to approval by the Inter Ministerial Approval Committee.
- 4) If the capacity of components differs from those provided in cost norms, prorata cost may be considered by Technical Committee based on quotations submitted along with the proposal and subject to approval by the Inter Ministerial Approval Committee.
- 5) Programmable Logic Controller (PLC) and Supervisory Control and Data Acquisition (SCADA) shall be mandatory for all cold chain projects.
- 6) The cost of technical civil work (PEB structure other than frozen storage) will be Rs. 10,000 per square meter.
- 7) For stand-alone frozen storage, all inclusive cost would be Rs. 23,000 per MT including cost of technical civil work, plant & machinery and refrigeration.
- 8) The thickness of PUF panels for insulation in frozen storage should be minimum 100 mm for floor, 120 mm for partition walls and 150 mm for outer walls.
- 9) 2.04 cubic mt. will create a capacity of 1 MT. for frozen storage.
- 10) For capacities of two tonne and higher, either screw compressor technology or a combination of reciprocating and screw compressor technology ~~is mandatory~~ *would be advisable*

ANNEXURE-II

**Proposed cost estimates of plant & machinery equipment for Marine/ Fisheries Processing Sector under the
Scheme of Integrated Cold Chain and Value Addition Infrastructure**

S.No.	Description			Cost (In Rs.)
1	IQF (freezing/ glazing/ hardening of shrimp) [without refrigeration]			
	Capacity	Tunnel Only	Refrigeration	Total
1.1	500 Kg/hr.	2,75,00,000	1,20,00,000	3,95,00,000
1.2	750 Kg/hr.	3,00,00,000	1,45,00,000	4,45,00,000
1.3	1000 Kg/hr.	3,75,00,000	1,70,00,000	5,45,00,000
2	Plate Freezer [without refrigeration]			
			Refrigeration	Total
2.1	750 kg/hr.	25,00,000	45,00,000	70,00,000
3	Spiral Freezer [without refrigeration]			
			Refrigeration	Total
3.1	250 Kg/hr.	1,30,00,000	1,50,00,000	2,80,00,000
3.2	500 Kg/hr.	1,70,00,000	1,80,00,000	3,50,00,000
3.3	1000 Kg/hr.	2,00,00,000	2,00,00,000	4,00,00,000
4	Cooking Line			
4.1	500 Kg/hr.			1,50,00,000
4.2	750 kg/hr.			1,85,00,000
5	Washing & weighing line			
5.1	7.5 MT/hr.			45,00,000
6	Automatic Grading Line			
6.1	1 MT/hr.			40,00,000
6.2	2 MT/hr.			60,00,000
7	Ice Maker			
7.1	Tube Ice Maker - 50 MT/day			25,00,000
7.2	Flake Ice Maker			10,00,000
8	Weighing & Packing Machine - 1MT/hr.			65,00,000
9	Metal Detector			10,00,000

Notes:

- 1) The costs mentioned are basic cost of Plant & Machinery, exclusive of tax, freight, installation & commissioning charges
- 2) For the purpose of grant calculation basic cost of Plant & Machinery would be considered.
- 3) The cost of any other facilities/ components proposed to be created under the project and not covered under the cost norms may be considered by Technical Committee based on the quotations submitted along with the proposal and subject to approval by the Inter Ministerial Approval Committee.
- 4) If the capacity of components differs from those provided in cost norms, prorata cost may be considered by Technical Committee based on quotations submitted along with the proposal and subject to approval by the Inter Ministerial Approval Committee.
- 5) Programmable Logic Controller (PLC) and Supervisory Control and Data Acquisition (SCADA) shall be mandatory for all cold chain projects.
- 6) The cost of technical civil work (PEB structure other than frozen storage) will be Rs. 10,000 per square meter.
- 7) For frozen storage, all inclusive cost would be Rs. 23,000 per MT including cost of technical civil work, plant & machinery and refrigeration.
- 8) The thickness of PUF panels for insulation in frozen storage should be minimum 100 mm for floor, 120 mm for partition walls and 150 mm for outer walls.
- 9) 2.04 cubic mt. will create a capacity of 1 MT. for frozen storage.

ANNEXURE-III**Proposed cost estimates of plant & machinery equipment for Dairy Sector under the Scheme of Integrated Cold Chain and Value Addition Infrastructure**

S.No.	Description	Cost (In Rs.)
1	Automatic Milk Collection Unit	94,000
2	Milk Chilling Centre with utilities	
2.1	50 KLPD	
2.1.1	Can Milk Reception Section	4,46,71,000
2.1.2	CIP Kitchen (Single Circuit)	
2.1.3	SS Pipes and Fittings for the Plant	
2.1.4	Steam Generation and Distribution System	
2.1.5	Chilled Water Generation And Distribution System	
2.1.6	Water Distribution System	
2.1.7	Electrical System	
2.1.8	Laboratory and Accessories	
2.1.9	ETP	
2.2	100 KLPD	
2.2.1	Can Milk Reception Section	6,38,48,000
2.2.2	CIP Kitchen (3 Circuit)	
2.2.3	SS Pipes and Fittings for the Plant	
2.2.4	Steam Generation and Distribution System	
2.2.5	Chilled Water Generation And Distribution System	
2.2.6	Water Distribution System	
2.2.7	Electrical System	
2.2.8	Laboratory and Accessories	
2.2.9	ETP	

S.No.	Description	Cost (In Rs.)
3	Bulk Milk Cooler	
3.1	1 KL	6,97,000
3.2	2 KL	8,67,000
3.3	3 KL	11,06,000
3.4	5 KL	12,40,000
4	5KL Mobile Milk Cooler	38,00,000
5	Milk Processing Plant	
5.1	0.5 LLPD Milk Proc. Plant with White Butter & Paneer Manufacturing with utilities [Manual Plant]	14,29,90,000
5.1.1	Milk Reception Section	
5.1.2	Milk Processing Section	
5.1.3	Milk Reconstitution Section	
5.1.4	Cream Processing Section	
5.1.5	Milk Packing Section	
5.1.6	White Butter Manufacturing Section (400 kg/hr.)	
5.1.7	Paneer Manufacturing Section (1TPD)	
5.1.8	Rinse Milk Section	
5.1.9	Concentrated Chemical Section	
5.1.10	Process and Tanker CIP Kitchen (3 Circuit)	
5.1.11	SS Pipes and Fittings for the Plant	
5.1.12	Steam Generation and Distribution System	
5.1.13	Chilled Water Generation and Distribution System	
5.1.14	Compressed Air Generation and Distribution System	
5.1.15	Water Treatment and Distribution System	
5.1.16	Electrical	
5.1.17	Laboratory Accessories	
5.1.18	ETP	

S.No.	Description	Cost (In Rs.)
5.2	1 LLPD Milk Proc. Plant with White Butter, Paneer, Curd, Lassi & Ice Cream Manufacturing with utilities [Manual Plant]	25,28,36,000
5.2.1	Milk Reception Section	
5.2.2	Milk Processing Section	
5.2.3	Milk Reconstitution Section	
5.2.4	Cream Processing Section	
5.2.5	Milk Packing Section	
5.2.6	White Butter Manufacturing Section (400 kg/h.)	
5.2.7	Paneer Manufacturing Section (2 to 3 TPD)	
5.2.8	Curd Manufacturing Section (5 TLPD)	
5.2.9	Ice Cream Manufacturing Section (3 TLPD)	
5.2.10	Rinse Milk Section	
5.2.11	Concentrated Chemical Section	
5.2.12	Process and Tanker CIP Kitchen (3 Circuit)	
5.2.13	Fermented Products CIP Kitchen (Single Circuit)	
5.2.14	SS Pipes and Fittings for the Plant	
5.2.15	Steam Generation and Distribution System	
5.2.16	Chilled Water Generation and Distribution System	
5.2.17	Compressed Air Generation and Distribution System	
5.2.18	Water Treatment and Distribution System	
5.2.19	Electrical	
5.2.20	Laboratory Accessories	
5.2.21	ETP	
5.3	2.5 LLPD Milk Proc. Plant with White Butter, Paneer, Curd, Lassi & Ice Cream Manufacturing with utilities [Automatic Plant]	
5.3.1	Milk Reception Section	
5.3.2	Milk Processing Section	

S.No.	Description	Cost (In Rs.)
5.3.3	Milk Reconstitution Section	34,73,61,000
5.3.4	Cream Processing Section	
5.3.5	Milk Packing Section	
5.3.6	White Butter Manufacturing Section (800 kg/h.)	
5.3.7	Paneer Manufacturing Section (2 to 3 TPD)	
5.3.8	Curd Manufacturing Section (10TLPD)	
5.3.9	Ice Cream Manufacturing Section (6 TLPD with Ice Candy)	
5.3.10	Rinse Milk Section	
5.3.11	Concentrated Chemical Section	
5.3.12	Process and Tanker CIP Kitchen (3 Circuit)	
5.3.13	Fermented Products CIP Kitchen (1 Circuit)	
5.3.14	SS Pipes and Fittings for the Plant	
5.3.15	Steam Generation and Distribution System	
5.3.16	Chilled Water Generation and Distribution System	
5.3.17	Compressed Air Generation and Distribution System	
5.3.18	Water Treatment and Distribution System	
5.3.19	Electrical ,Automation & Instrumentation	
5.3.20	Laboratory Accessories	
5.3.21	ETP	
6	Complete Road Milk Tanker	
6.1	5 KL	
6.2	9 KL	18,63,000
6.3	15 KL	21,28,000
		30,04,000

Notes:

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- 2) For the purpose of grant calculation basic cost of Plant & Machinery would be considered.
- 3) The cost of any other facilities/ components proposed to be created under the project and not covered under the cost norms may be considered by Technical Committee based on the quotations submitted along with the proposal and subject to approval by the Inter Ministerial Approval Committee.
- 4) If the capacity and quantity of components differs from those provided in cost norms, prorata cost may be considered by Technical Committee based on quotations submitted along with the proposal and subject to approval by the Inter Ministerial Approval Committee.
- 5) The cost of technical civil work (RCC Structure) will be Rs. 15,000 per square meter.
- 6) For the projects creating milk and milk processing capacity of 30 KLPD, the cost of plant & machinery @ 65% of cost of 50 KLPD will be considered.
- 7) Flooring in milk and milk processing plants should be covered with alkali & acid resistant tiles and walls upto 5 feet should be covered with glazed tiles with proper drainage.
- 8) Programmable Logic Controller (PLC) and Supervisory Control and Data Acquisition (SCADA) shall be mandatory for all cold chain projects.