Detailed Project Report (DPR)
Model Template for NHB Scheme No. 2

Scheme No. 2	Capital Investment Subsidy Scheme for Construction/ Expansion/ Modernization of Cold Storage and Storages for Horticulture Products.

Nature of Project	Tick mark
1. Construction (New)	
2. Expansion	
3. Add on Stand-alone component	

	Tick mark
1. Type-1 basic with single temperature zone	
2. CA Tents	
3. Programmed Logic Controller(PLC) Equipment	
4. Dock Leveller	
5. Warehouse Development & Regulatory Authority (WDRA)/ Negotiable Warehouse Receipt (NWR) system, equipment.	
6. Specialized Packging	
7. Reefer Container (Multi-modal)	
8. Advanced Grader	
9. Stacking system	
10. Retail Shelf	
11. Alternate Technology	

Submitted by

…….. (Applicant) with full correspondence Address

Detailed Project Report (DPR) will have to be signed by the applicant (s) / authorised person (in case of legal entity) on each page with date along with Horticulture and Project Finance Expert wherever applicable.

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7.	Food Safety	
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Annexure

1	Checklist	
2	List of documents to be submitted:	
3	Proposed stages in NHB Scheme implementation	

Project at a Glance

1.	Applicant (s) / Legal entity Name		
2.	Constitution / Applicant nature / beneficiary		
3.	NHB Scheme for which DPR is made: 2.1/2.2/2.3/2.4/2.5.		
4.	Project Activity proposed		
5.	Project Site Address with Postal Code and Police Station Name		
6.	Land ownership: Owned or on registered lease for minimum of 10 effective years from the date of IPA. In other words ideally one should have 11 Years of lease including a processing period of 1 Year from the time of application for Technical feasibility.		
7.	Market viability		Yes/No
	1. Whether the project is located in the crop cluster/ hub/ belt		Yes/No
	2. Availability of raw material assured		
	3. Market Analysis is undertaken		
	4. Business model		
	5. Name of commodity proposed to be stored		
	6. Number of persons serviced	Growers	
		Traders	
		Exporters	
		Processors	
		Others	
8.	Financial viability		Yes/No
	1. Project economic period/ economic life		
	2. Total Project Cost of the proposal		
	3. Project completion period (in months)		
	4. Expected Implementation timeline	Commencement	
		Completion	
	5. Total Eligible Project cost as assessed by the Applicant as per NHB guidelines		
	6. Bank/ Financial Institution identified for Term loan		
	7. Proposed Means of Finance	Promoters contribution (in Lakh Rs.) & %	
		Bank Term loan (in Lakh Rs.) & %	
		Un secured loan (in Lakh Rs.) & %	
		Total	
	8. Likely Employment generation (man days)		
	9. Gestation/Moratorium period		
	10. Projected Key Financial Parameters	Current Ratio other than export units	
		CR-Export units	
		IRR /BCR	

		DSCR*	
		Average DSCR	
		Debt to Equity Ratio i.e DER	
		TOL/TNW	
		Promoters Contribution	
		Break Even Point	
		Security Coverage Ratio	
		Repayment period	
9.	Technical viability		Yes/No
	1. Annual through put Capacity		
	2. Number of Chambers		
	3. Technology and Technical Standards and their Compliance		Yes/No
	4. Food Safety		
	5. Traceability		
10.	Employment generation	Direct- regular per annum	
		In-direct – Man days per annum	

1.About the Applicant / Promoter and his/her entrepreneurship

A. About Applicant / Promoter

1.1.In case of Individuals or Group of farmers (if applicable)		
Individual		
1. Name of Farmer / Entrepreneur/Individual/ Proprietor		
2. Parents or spouse name of Individual		
Group of Farmer growers / SHG- Promoters		
1. Name of Group		
2. Names of all members of group with their father, mother/husband/ wife name		
1.2.In case of Legal entity (if applicable)		
Name / Title		
1. Incorporation / Registration number / CIN & date of registration		
2. Act under which Registered		
3. Registering authority		
4. Name of CEO/CMD/MD/		
5. If it is FPO/ FPC/ Producers Co-op society / Growers Co-operative Marketing federation- Please specify		
6. If it is Reg. Society/ Company/ Corporation / Partnership firm / Proprietary firm- Please specify		
7. Name of Promoter (s)		
8. Status of the promoter / applicant in the legal entity-please specify		
9. Whether the promoter / applicant is authorised by the Legal entity- Yes/No		
10. In case of Company/partnership firms / legal person a. Certified copy of Company/Partnership incorporation/ registration certificate issued by Competent Authority, as applicable b. Certified copy of MoA/Bye Laws c. Certified copy of Board of Directors Resolution duly passed and authorizing signatory of application to apply for IPA d. Certified copy of latest Audit Report, if applicable i. (are to be made available in case the project and the application is considered for processing.- State Yes/No		
11. NGO- Specify details including registration No.		

1.3.Government Institutions / Organisations—Please specify (if applicable)		
(i) Marketing Board / Agricultural Produce Marketing Committee APMC		
(ii) Municipal Corporation		
(iii)PSU/ Agro-Industries Corporation		
(iv)ICAR/CAU/SAU/ Government R&D Institution		
1.4.Statutary registration	(for both promoter and legal entity based on applicability)	
a. PAN No		
b. Aadhaar No.	Yes/No	
c. Udyog Adhaar No.		
d. GST		
e. Passport No.		
f. Any other		
1.5.Correspondence Address	Postal Address with PIN code	
	Telephone	
	Mobile	
	Email id	
	Fax if any:	
1.6.Project / Site Address		
1.7.Social Category (In case of legal entity the CEO and Board of Directors social category is to be mentioned)	General / SC/ST	
	OBC	
	Minority (Muslim/Christians/Sikhs/Buddhists/Parsis/Jains)	
	In case of SC/ST applicants a Certified copy of Caste Certificate issued by Competent Authority is to be enclosed. In case of others a self-declaration is to be enclosed.	
1.8.Location: TSP / NE Region / Hilly States	In case of TSP a self-attested copy of notification is to be enclosed.	
1.9.Gender	Male / Female/Transgender	
1.10	Details of Contact Person (i) Name (ii) Designation (iii) Mobile (iv) Email	

B. Applicant/ Promoters' Entrepreneurship:

1.11.CV / Biodata of Applicant (s) / Promoter (s) (Authorised by legal entity) in brief: (If applicants are more than one, all are to provide their CV / Biodata)

a. Name of Applicant/ Promoter:
b. Fathers & Mothers name:
c. Spouse Name
d. Date of Birth
e. Place of Birth (village/town/city, District and State)
f. Permanent Address:
g. Educational qualification (Higher Secondary, Under graduation Degree and above)

Education Metric/ U	Name of education / specialisation	Board / College / University/ Institute	Year of Pass	Remarks

h. Horticulture and project proposal specific Trainings if any undergone

Training	Duration and Period	Institute with address	Purpose for undergoing training

i. Current profession with details of Turn over, Accomplishments if any.

j. Previous profession during the last 5 Years with details of Turn over, Accomplishments if any

k. Experience- General and Horticulture & Cold storage

   a. General (Other than Horticulture) specify the activity, establishment/ Office, location etc.
   b. Horticulture-General: State specific activity- crop production, PHM etc. including project site, area, number of years, accomplishments etc.
   c. Horticulture-Experience in proposed activity/ Cold Storage: provide the name of establishment/office, location, number of years, specialisation etc.

l. Any information that establishes the applicants' entrepreneurship (Should be able to enclose evidence during Market & Financial Viability stage and during JIT):

1.12. Registrations with any Government Agency if any

Government Agency	Provide registration No. details with date and location of registration
a. Warehouse Development & Regulatory Authority (WDRA	
b. MSME	
c. MSME/SSI	
d. Any other	

1.13.Commitment by the applicant: In case the project is approved for pre-IPA technical feasibility, the promoter / CEO/CMD and technical personnel (minimum two persons) should undergo a 2 Weeks (min.10 working days) project specific training programme as found appropriate / approved by NHB.

1.14.In case of a Partnership firm/ Company / Legal person

a. Whether the proposed activity is covered under the objectives as per Memorandum of Association (MoA) & Rules explicitly: If so please provide the Article and Rule in verbatim.

b. Professional history of Legal entities Farmers Producer Organisations (FPOs), Self Help Groups, Partnership/ Proprietary Firms, NGOs, Companies (as a Board of Director), Corporations, Cooperatives, Co-operative Marketing federations/ Government Institutions.

c. Management structure if it is a company/ firm etc depicting the position of the applicant.

2.Details of benefits availed / proposed to be availed by the applicant- either individually or as a member of Association of growers, Group of Farmer Growers/consumers, Farmers Producer Organisations (FPOs), Self Help Groups, Partnership/ Proprietary Firms, NGOs, Companies (as a Board of Director), Corporations, Cooperatives, Co-operative Marketing federations from (i) NHB and (ii) other Ministries/ organisations of Central Government and (iii) State Governments including NHM for Horticulture related projects.

Note: The beneficiary should be truthful. In case any information is received later on at any stage about his/her availing of benefit which is not disclosed hereunder will entitle NHB to reject the current proposal and recover the funds if already released.

2.1.In this / proposed project and location:

1. Whether the proposed project proposal has been submitted for consideration under any State Government or Central Government Scheme for financial grant? If yes give details.

2. Whether any subsidy has been availed from the Board, other Central Govt. organisation or State Government for the same activity on the same piece of land, khasra/ Gat/Dag/ etc either in his / her own name individually or in the name of his/her family members or through any legal entity in which he/she is the beneficiary either in the same location, project. - Yes/ No. If Yes, Please provide details

Constitution – Individually or in any form	Ministry/ Organisation	Scheme Name	Project code & Activity	Project Location	Land Survey No	Eligible Project cost (Rs.in lakhs)	Total subsidy/ grant (Rs.in lakhs)	Current status of project- Operational / underutilised / closed

2.2.In earlier / any other Project (s) : Either in his / her own name individually or in the name of his / her family members or through any legal entity or in any form or constitution, in which he / she is the beneficiary either in the current proposed project location or any other location.

2.2.1.From NHB : Whether any assistance in the form of soft loan and subsidy has been availed earlier from the National Horticulture Board? If yes, give details thereof

Year	Scheme Name	Project code & Activity	Project Location	Land Survey No	Eligible Project cost	Total subsidy /grant availed	Current status of project- Operational / underutilised / closed

2.2.2.From Central Government- Ministries / Organisations:

Year	Scheme Name	Project code & Activity	Project Location	Land Survey No	Eligible Project cost	Total subsidy / grant availed	Current status of project- Operational / underutilised / closed

2.2.3.From State Governments:

Year	Scheme Name	Project code & Activity	Project Location	Land Survey No	Eligible Project cost	Total subsidy /grant availed	Current status of project- Operational / underutilised / closed

2.3. Operational status of earlier projects under NHB scheme and other Central Ministries and State Government.

Year	Organisation / Ministry which released assistance	Activity for which assistance is availed & code	Dates			As on date Project Operational status (Running or Closed)	Annual Turnover (of previous Year)	Exports if any	Profitable or loss making	Remarks / Reasons
			Subsidy received	Project completed	Commenced production					

* in case of completed projects and where proposals envisioning expansion/ modernisation are proposed, Annual Reports and Audited Statement of Accounts of the last 3 years are to be made available along with Bank appraisal during Market and Financial Viability stage both online and offline.

2.4.Please provide map of earlier / other subjects and this project- Key map of project land showing project details and land boundary details

2.5.Provide the following details:

a. Have you ever been refused / denied subsidy claim from NHB, NHM, APEDA, NCDC, MoFPI? If Yes please provide details of (i) Project code, (ii) Name of Applicant, (iii) Address (iv) Project activity etc. and the reason for such refusal / denial:

b. If you were a recipient of Government subsidy, have you / your Bank/FI ever been asked to refund the subsidy / call back ? If Yes please provide details of (i) Project code, (ii) Name of Applicant, (iii) Address (iv) Project activity etc. and the reason for such refusal / denial:

Attention:

1. In case the project application is considered for Pre-IPA, the applicant shall have to enclose No Objection Certificate from State Government / State Horticulture Mission that there is no duplication of funding for the project and the applicant shall also submit self-declaration that he/she is not availing government subsidy / grant / assistance from any other ministry.

3.About the Project, Rationale, Management and Description:

3.1. About the Project (Please describe covering the following points)

1. Name of the Project	
2. Correspondence Address:	
3. Address of Project Site :	
4. Nature of Project	
1. Construction (New)/ Expansion	
2. Add on Standalone component as per Scheme	
5. Project Activity and Scheme components (Should be as per NHB scheme latest scheme guidelines- please verify):	

	Other Add on components	Tick market	No.of units	Capacity
1. Type-1: Basic type with single temperature zone				
2. Other Add on Components and other add on	12. CA Tents			
	13. Programmed Logic Controller(PLC) Equipment			
	14. Dock Leveller			
	15. Warehouse Development & Regulatory Authority (WDRA)/ Negotiable Warehouse Receipt (NWR) system, equipment.			
	16. Specialized Packging			
	17. Reefer Container (Multi-modal)			
	18. Advanced Grader			
	19. Stacking system			
	20. Retail Shelf			
	21. Alternate Technology			

6. Produce /commodity to be handled / stored
7. Objectives of the project
8. Expected outcomes of the project
9. Socio-economic benefit to the Rregion /District / State

3.2 Rationale / Justification for the project:

(should also include availability of raw material, its area, production and its volume, quality, existence of similar projects, linkage with markets, consumption areas, technology etc.)

4.5 Project Site/ Land details:

4.5.1 Proposed Project Area (Sq.mt)

A	Name of Owner of land proposed for the project as per Land Revenue Records				
	Whether title of the land is clear in the name of applicant and is free from any litigation				
	How Title is derived	Ancestral			
		Purchased (with details of date)			
	Encumbrances if any				
B	Name of the Owner in case of joint ownership		Survey/ Gat /khasra No etc.	Area in Sq.mt / Ha	Share
	Whether land boundaries are demarcated for the applicant clearly.		Yes/No		
	Whether land is in possession of the Applicant				
C	In case of Partnership				
	1. Whether land is owned by Partnership firm or jointly by its partners		Yes/No		
	2. NOC: If land is owned by one of the partner, an undertaking by land owner is required stating that he/she will not withdraw, sale or transfer his/her land during currency period of the project				
	Whether land is in possession of the Applicant				
D	In case of Lease				
	1. In case the land is that of leased, Registration details of the said leased land in the office of Sub-Registrar				
	2. No.of Years of lease				
	3. Whether lease is entered in RoR		Yes/No		
	Whether land is in possession of the Applicant				
E	Whether land is mortgaged? If yes provide details of mortgagor and mortgagee				

3.4.Location of the Project- Identification (Longitude, Latitude, Altitude, Village, GP, Block, District, State), Area, Number of growers.

1.	Location Address	
2.	a. Survey/Khasra/ Dag/ Other No	
3.	b. Habitation/ Village	
4.	c. Gram Panchayat / Urban body	
5.	d. Block / Urban body	
6.	e. Sub-Division	
7.	f. District	
8.	g. State /UT	
9.	Location Longitude, Latitude & Altitude	
10.	Total Area of land owned (ha)	
11.	Total Area proposed for project (ha)	

Google map with coordinates:

3.5.Current usage of land of proposed Project Area

Proposed Project			**Current usage**		
Survey / Dag etc.No	Nature of land Dry/ Irrigated/ Waste land	Area (ha)	Activity / Crop	Area (ha)	Mortgage Yes/No If Yes with whom

3.6.Current infrastructure and assets possessed by the Applicant:

Category	Asset Name	Year of Purchase	Make	Capacity	Cost
Fixed Assets					
Operating Assets					

3.7.Lay out plan of the project/ Map of Farm / production/ Operations unit / project land showing project details and land boundary details including with fire, effluent treatment and traffic movement within the campus.

3.8.Conversion of Land Use (CLU) if applicable

Whether Land in possession of the applicant is with/ without approval for industrial use/Whether CLU permission for the project has been received from competent authority: If Yes- Please provide details of the authority approved with full designation, address contact numbers and email id, approval No. and date

3.9.Whether project site is part of production belt / cluster / hub ? If yes, provide details of working relations with other farmers

3.10 Rationale for project site selection / Location advantages and disadvantages

Connectivity:

Road connectivity- Distance from	National High way	
	State Highway	
	Fright Corridor	
	Golden Quadrilateral	
Rail connectivity		
Air connectivity		
Water ways		
Market connectivity		

Supply side suitability: Raw material Catchment area

Whether project site is part of production belt / cluster / hub ? If yes, provide details of working relations with other farmers

Road connectivity- Distance from (Range)	National High way	
	State Highway	
	Fright Corridor	
	Golden Quadrilateral	
Rail connectivity		
Air connectivity		
Water ways		
Market connectivity		

Map of Catchment Area:

Demand side suitability:

Proximity and connectivity of project site to major consumption centres /Mandies

Demand centres	Names	Distance from the proposed site
Agriculture Produce Market Committees - APMCs / Mandies		
Tier-1, 2 and 3 cities		

Map of consumption Centres

Other Merits/ Advantages:

3.11. Component wise Justification: (Use the applicable information)

	Other Add on components	Tick market	No.of units	Capacity
3. Type-1: Basic type with single temperature zone				
4. Other Add on Components and other add on	1. CA Tents			
	2. Programmed Logic Controller(PLC) Equipment			
	3. Dock Leveller			
	4. Warehouse Development & Regulatory Authority (WDRA)/ Negotiable Warehouse Receipt (NWR) system, equipment.			
	5. Specialized Packging			
	6. Reefer Container (Multi-modal)			
	7. Advanced Grader			
	8. Stacking system			
	9. Retail Shelf			
	10. Alternate Technology			

3.12. Cost components / activities of the proposed Project

Project Component	Sub- items	Capacity/ Area/ spacing Etc.	Units/ Numbers	Proposed Total Expenditure	NHB norms for calculating EPC
1	2	3	4	5	6
Land					**Capacity based:** In case of Cold Storage/ CA and Technology induction and Modernisation - Eligible Project Cost (EPC) is based on capacity except for components which are part of CS / CA stores. **Capacity and Pro-rata basis:** In case of Refrigerated Transport Vehicles **Component based:** For Add on components
Land and site development					
Building & Civil Structures	PEB Structure Civil construction cost Cost of racking / mezzanine structures Insulation system				
Plant and Machinery	Refrigeration system Condensers Air handling system Ventilation system CO_2 , Ethylene scrubbing systems Humidity generation and control systems Piping				
Material Handling Equipment	Stacking system Bins Battery operated pallet trucks Crates, Pallets Reach Truck, Forklift etc etc.				
Sorting Grading Infrastructure					
Refrigerated Transport	Refer container				
Tools and Equipment	Floor Cleaning equipments, Vacuum Cleaners etc.				
Laboratory					
Process Control & Automation	Monitoring Gauges PLC etc				
Utilities	Water softener etc. HT power line Transformer and voltage stabilizers				
Backup system for power	DG sets Solar Power etc.				
Energy efficient and technology to reduce carbon foot print	Solar VFD HRW CFL FVD				
	Total				

Operational planning (optimal):

1.	Name of Manager (working directly under the applicant / CEO) if any.-optional. -Qualification and experience of the proposed personnel in managing cold chain projects.	
2.	Operations: (viz., loading, unloading, grading, sorting, cleaning, weighing, packing etc.)	
	i.	Own / custom hiring
	ii.	Own / outsourcing
	iii.	Own / outsourcing
	iv.	Own / outsourcing
	v.	Own / outsourcing
	vi.	Own / outsourcing
	vii.	Own / outsourcing
	viii.	Own / outsourcing
	ix.	Own / outsourcing
	x.	Own / outsourcing

Profile of Agency executing erection of Cold Storage / CA etc.

1.	Name of agency providing technical know-how and turn key basis with full address of its Hq and its local office	
2.	CIN / Company Incorporation No.	
3.	GST No.	
4.	CEO of the Agency	
5.	Contact person Name and contact numbers	
6.	Technical Manpower available	(Desirable)
7.	Number of years of experience	(Desirable)
8.	No of plants set up till date during the last 5 years in the State	(Desirable)
9.	Turnover of the Agency	(Desirable)
10.	Whether firm has been blacklisted ever by any government or corporate firm	(Desirable)

3.13. Quality of Services of Agency executing erection of Protected Structure/ Post Harvest Infrastructure (based on project / applicability etc.

1.	Hardware: Guarantee offered	Guarantee Period & conditions if any
	1.	
	2.	
	3.	
2.	Hardware: Warranty offered	Warranty period & conditions if any
	1.	
	2.	
	3.	
3.	Services: Supervision and After sales service	Free service Period
4.	Others	
5.		
6.		
7.		
8.		

3.14. Project Implementation period in case of approval:

(Commencement to Completion……. Months)

Activities	Months required	Approximate Date of Commencement	Expected Date of Completion
Acquisition of Land			
Development of Land			
Building & Civil Works			
Plant & Machinery			
Placement of order			
Delivery at site			
Erection of equipment			
Electrical & Instrumental Erection			
Trial runs & Commissioning			
Fixing of Insulation			
Arrangement of Power			
Arrangement of Water			
Commercial Operation			

Note: Time limit for completion of project is 18 months.

3.15. Month Wise Operational Chart: Number of days of operation

Product	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
Commodity-1												
Commdity-2												
Commodity-3												

Loading period	
Holding Period	
Sales Period	

Availability of Manpower (Skilled Labour, Expertise etc. Required, Already available, Gaps and the management in an Year.)

Managerial- Proposed

S.No	Designation	Education Qualification	Experience	Numbers	Purpose	Remarks
	CEO					
	Administration					
	Customer Development					
	Labour management and Welfare					
	Others					

Technical-Proposed

S.No	Designation	Education Qualification	Experience	Numbers	Purpose	Remarks
	Operations Head & Supervisor					
	Safety Officer					
	Inventory auditor					
	Rodent & Pest Management officer					
	MHE & HAVC maintenance head					

Skilled and Unskilled Labour

	Operations/ activity	Skilled Labour				Unskilled labour				Gap	
		Requirement		Availability		Requirement		Availability		S	US
		Number	No.of Days	Number	No.of Days	N	D	N	D		

Gap Management if any:

3.16. Employment Generation per annum

No. of man days / Annum	
Permanent man power -Permanent (on rolls)	
Casual / Temporary	

3.17.Facilities, External Infrastructure and Utilities

(Power, Fuel, Water, Plant and Machinery, Effluents treatment etc.)- Required, Already available, Gaps and the management.

Utility	Requirement	Remarks
Power	Likely Daily power requirement	
	Likely Annual Power requirement	
	Proposed Source of Power	
	Access to Power is assured or not	
	Alternative Source of Power in case of breakdowns	
	Whether renewable alternate energy to power is under consideration	
Water	Source – Ground Water /Surface Water	
	Existing or New source	
	Whether NOC has been taken from CGWB / State Government Ground water regulation authority-	Yes/No
	Water measurement systems is planned	
	Daily Water requirement	
	Whether water harvesting is planned	Yes/No
	Water productivity parameters proposed if any	
	Quantity of effluents likely	
	Water treatment plant if any proposed	Yes/No
Fuel	Access to fuel to power- Generators- Yes/No	
	Nearest fuel depot	
Effluent treatment	Facility and method adopted for effluent treatment.	

3.18 SWOT Analysis:

1	Strengths	
2	Weaknesses	
3	Opportunities	
4	Threats	

4. MARKET VIABILITY

4.1.Raw material commodities and their characteristics

S.No	Name of Commodity proposed to be stored	Characteristics		
		Physical	Biological	Chemical

Horticulture produce are special as they respire even after harvest.

For single commodity storage

1) Harvesting time (morning/evening hours when temperature is low) and pre cooling requirement of product
2) Minimize mechanical injury during harvest/handling prior to storage
3) Requirement of operations like desapping in case of mango
4) Climacteric or non-climacteric nature of produce
5) Requirement of blanching (to inactivate enzymes in case of frozen peas)
6) Temperature and humidity ranges for safe storage of produce
7) Chilling injury temperature ranges

For Multi commodity storage

In addition to above factors of single commodity, following considerations are needed

1) The commodities mix should be such that there is match of temperature and humidity, levels of ethylene production and sensitivity for all commodities

   Examples of ethylene producing and ethylene sensitive products:

   - Ethylene producing: e.g. apples, avocado, bananas, pears, peaches, plums, tomatoes
   - Ethylene sensitive produce: e.g. lettuce, cucumbers, carrots, potatoes, sweet potatoes

2) Odour transfer should be avoided by proper selection of compatible produce

   Examples of odor transfers which should be avoided:

   - apples/pears with celery, cabbage, carrots, potatoes or onions
   - celery with onions or carrots
   - citrus with strongly scented vegetables
   - pears/apples with potatoes à former acquire unpleasant taste
   - green pepper will taint pineapples
   - onions, nuts, citrus, potatoes should be stored separately

4.2.Raw Material Availability

4.5.2 Identification of Catchment Area/ Cluster: Radius : …….

(Not to exceed 100 Km radius in production areas)

State	District	Approximate Area	**Distance from Proposed Site**	**Major Crops Available**

*: Catchment area should be either Sub-Division/ Block/ Taluk etc.

In exceptional cases the radius can be beyond 100 Km to be satisfied upon physical verification.

4.5.3 Map of Catchment Area

4.2.3 Production of targeted horticulture crops in the state

	Crop.1		Crop.2		Crop.3		Crop.4			
Crops	Area (ha)	Production (MT)	Area (ha)	Production (MT)	Area (ha)	Production (MT)	Area (ha)	Production (MT)	Area (ha)	Production (MT)

Source: http://agricoop.nic.in/

4.2.4. Production of targeted horticulture crops in the District (s)

	Crop.1		Crop.2		Crop.3		Crop.4			
Crops	Area (ha)	Production (MT)	Area (ha)	Production (MT)	Area (ha)	Production (MT)	Area (ha)	Production (MT)	Area (ha)	Production (MT)

Source: Multiple sources: District Horticulture Office/ Marketing office etc.

4.2.5 Production of targeted horticulture crops in the in catchment areas

	Crop.1		Crop.2		Crop.3		Crop.4			
Crops	Area (ha)	Production (MT)	Area (ha)	Production (MT)	Area (ha)	Production (MT)	Area (ha)	Production (MT)	Area (ha)	Production (MT)

Source: Horticulture Dept.

Viability of Cold Storage / Infrastructure:

Catchment crop Area*	Total Production	Deduction of 30% # of production for fresh consumption	Total Storage able Quantity (col.3-4)	No.of Cold Storages	Existing Cold Storage Capacity	Gap between columns 4 and 6
1	2	3	4	5	6	7

*: Catchment area should be either Sub-Division/ Block/ Taluk etc.

#: % of fresh consumption is variable which may be specified by the applicant.

4.2.6 Seasonality matrix of the commodities

Horticulture commodities	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

Lean Season

Peak Season

Demand and Supply issues specific to project area:

4.2.7 Throughput Analysis

Product	**Planned Capacity**	**Annual raw material requirement**	**Surplus available in catchment area/ proposed radius =** Deduction of 30% # of production for fresh consumption

Note: please choose your targeted crop

4.3.0. Market Analysis:

General information: At State / UT level

4.3.1 Clusters/ Zones

Crop clusters in the State (Mandatory)

Name of Crop	District	No.of villages	No.of farmers	Total Area	Source*
1					
2					
3					
4					

Source: APEDA/ MoFPI/ State Government

4.3.2 Crop Agricultural Economic Zones in the State / UT, if any (Desirable)

Crop AEZ	District	No.of villages	No.of farmers	Total Area	Source*
1					
2					
3					
4					

Source: APEDA

Project specific information

Proposed usage of Cold Storage / CA

Purpose	Proportion (%)	No.of potential growers / traders in the catchment area
1. Rental for (Growers produce)		
2. Rental for Traders		
3. Storage by Owner of Cold Storage for own trading		
4. Contract Farming		
	100%	

Commodities proposed for Storage:

Commodity / Crop	Variety / Hybrid	Share of commodity	Availability of Protocols	Source of Protocol (R&D Institution/ Company)

4.3.2 Target Market- As per applicability

Domestic or International. In case of International market, the applicant has to refer APEDA export requirements and should specify compliance appropriately with in the document. In case of domestic market specify the intended market

1. Quality grades/ specifications/ kinds of products and their targeted Domestic/ International market.
2. Existing / Proposed Market linkages:
3. MOUs/ Contract documents / undertakings/ LoA if any
4. Target consumption centres/ key domestic markets
5. Export targets/ Plans if any
6. In case of export, details of volume to be exported / export destination / statutory norms of export destination should be provided in the DPR.

4.3.4. Market Competition

Major cold storages available in the cluster with respective capacities.

Availability of Storage facilities in the **Project area** (Please attach the list)- For the latest 3 years.

Year	Commodity	Low cost storage structures			Cold storage			CA Storage		
		No.	Capacity	Capacity utilisation	No.	Capacity	Capacity utilisation	No.	Capacity	Capacity utilisation

Multiple sources: https://nccd.gov.in/# ; http://nhb.gov.in/onlineclient/rptmiscrops_midh.aspx and District Horticulture Office/ ICAP/ Cold Storage Association.

Note: Capacity utilisation data may be provided if available.

Availability of Storage facilities in the project **District**.

Year	Commodity	Low cost storage structures			Cold storage			CA Storage		
		No.	Capacity	Capacity utilisation	No.	Capacity	Capacity utilisation	No.	Capacity	Capacity utilisation

Multiple sources: https://nccd.gov.in/# ; http://nhb.gov.in/onlineclient/rptmiscrops_midh.aspx and District Horticulture Office/ ICAP/ Cold Storage Association.

Availability of Storage facilities in the **State**

Year	Commodity	Low cost storage structures			Cold storage			CA Storage		
		No.	Capacity	Capacity utilisation	No.	Capacity	Capacity utilisation	No.	Capacity	Capacity utilisation

Multiple sources: https://nccd.gov.in/# ; http://nhb.gov.in/onlineclient/rptmiscrops_midh.aspx and District Horticulture Office/ ICAP/ Cold Storage Association.

Gap Analysis in Project Area:

	Surplus Commodity / produce	Storage capacity required in the area	Storage capacity available in the area	Gap	Remarks

Demand and Supply Analysis

Unit	Surplus of Horticultural crops*	Existing cold stores for the current year#		Gap	Remarks
		Nos.	capacity		
Catchment Area					
District where project is located					
Cluster					
State					

*: The last 3 years average #: as per the latest available data.

Remarks: (Market reach and specific utilization opportunity if any)

Source for data: State Directorate/ Horticulture/ Agriculture/Marketing office/ District & other local offices/ Any other reliable sources/ Cold Storage association etc.

4.3.5. Trade Potential (National & International)

Domestic Market Potential

S. No.	Name of major Products / commodities	Name of targeted Market (s) / consumption centres	Justification
1.			
2.			
3.			

*Comments on Demand and Supply gap if any

International trade Potential

(Collect from APEDA Agri-exchange website at http://agriexchange.apeda.gov.in/; including product profile, statistics and market intelligence sites esp. International trade and Global Analytical report in brief to the extent of relevance; may also refer DGCIS sitehttp://www.dgciskol.gov.in/for more information)

Name of major products	Major Exporting Countries	% share in global market	Major Importing Countries	% share in global market	CAGR rates / growth Indicator

4. 3.6 Price variation of Commodities at State / UT Capital or at a Major Fruit & Vegetables/ Flower Market

A.At local Market

	Local Market: 1 Unit=Rs. Per Qtl/MT/Kg											
Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

Source: Concerned APMC / Marketing Board website or http://agmarknet.gov.in/
If no reliable source is available, the above data may be collected from District Marketing / Horticulture Officer

B.At nearest / Major Terminal Market

	Major Terminal Market: 2 Unit=Rs. Per Qtl/MT/Kg											
Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

Source: Concerned APMC / Marketing Board website or http://agmarknet.gov.in/
If no reliable source is available, the above data may be collected from District Marketing / Horticulture Officer

C.Projected prices of project produce (if Possible)

	Market: …… Unit=Rs. Per Qtl/MT/Kg											
Year	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

Source: Could be applicants' own assumption / horticulture expert etc.by giving justification

4.**3.7.Balance sheet of commodity in the Catchment Area / District/ State** (Desirable Data/ Voluntary)

	Year:								Qty: 000Tons			
	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec
Stored/ Carry in												
Fresh Production/ Arrivals												
Imports												
Availability												
In LT Storage												
Consumption												
Exports												
Post Production losses												
Total Usage												
Carry out												

Source:

Note:

Whether transportation infrastructure is available.

1. Mode of transportation / arrangement:
2. Whether cold chain facility available locally if so details of service providers and contact person name.

Value chain Analysis

Value Addition scope/ potential

Existing Trade Policies

4.3.8 State Policies

4.3.9 National Policies

4.3.10 International Policies (tariff and non-tariff barriers, Sanitary and Phyto-sanitary requirements and APEDA /Spices Board regulations in case applicants market include exports)

4.4.0.**Business Model:**

(Should include commodities, rental/trading/mix, procurement plan, market, finances, unit cost, profitability, SWOT, uniqueness, vision, etc.)

5. Financial Viability:

5.1 Financial Viability of the Project

(To be prepared and certified by Project Finance Expert on each page)

Due Deligence Status:

S.No.	Date of Due Deligience	Please tick	Remarks
1	Examination of CIBIL report	Yes/No	
2	Credit rating / scoring is done	Yes/No	
3	Whether name of promoters/company appearing in the list of- a)RBI defaulter list b)RBI willfull defaulter list c)ECGC SA list	 Yes/No Yes/No Yes/No	
4	a)Verfication of CERSAI (Central Registry of Securitisation Asset Reconstruction and Security Interest)	Yes/No	
	b) In case of company whether financial data verfied with ROC .	Yes/No	

Detailed financial analysis of the investment has been carried out based on estimated costs (as per quotations and established cost norms) and projected revenues (based on industry norms).

5.2 Project cost Component Wise vs NHB Norms (Please refer NHB scheme guidelines)

S. No.	Name of the scheme component	Capacity/ Units	Proposed Cost	Total Cost as per NHB Norm	
1.	Type-1: Basic type with single temperature zone	MT			
2.	Other Add on components (Refer appendix 1-D of Cost Norms and pattern of assistance)				
	i. CA Tents ii. Programmed Logic Controller(PLC) Equipment iii. Dock Leveller iv. Warehouse Development & Regulatory Authority (WDRA)/ Negotiable Warehouse Receipt (NWR) system, equipment. v. Specialized Packging vi. Reefer Container (Multi-modal) vii. Advanced Grader viii. Stacking system ix. Retail Shelf x. Alternate Technology				

5.3 Component wise cost break up of project cost

5.3.1. Land and Site development & General Civil works- land, site development and non-technical building

Description	Area	Unit Rate	Total cost (in Rupees)
Land			
Land development			
Total			

5.3.2 Technical Building-

S.No	Description	Basis	Area	Unit Rate	Total cost (in Rupees)
A	Technical Building	As per quotation / LS / As per estimation			
	Civil work (foundation, plinth & flooring)				
	Pre-feb structure				
	Insulation				
	Plumbing & Internal Electrification				
	Fire fighting				
	Racking System				
	Plumbing & Internal Electrification				
	Others				

5.3.3 Non-Technical Building

S.No	Description	Basis	Area	Unit Rate	Total cost (in Rupees)

5.3.4 Plant & Machinery

S. No.	Description	Unit	Basis	Unit Cost	Amount (Rupees)	Taxes	Total
	Refrigeration system	No. / Capacity / length	As per quotation / LS				
	Condensers (KW)						
	Air handling system (CFM/CMH)						
	Ventilation system(PPM)						
	CO_2 and Ethylene scrubbing systems & control systems						
	Humidity generation(Kg/Hr)						
	Piping						
	PLC and Process control						
	Others						

Other Add on Components- for each a separate table

S. No.	Description	Qty	Unit Cost	Amount (Rupees)	Taxes	Total
	Sub Total					

5.3.5 Utilities

	Particulars	Unit	Basis	Qty	Unit Cost	Cost	Taxes	Total
1	**Electricals**							
2	**Water**							
3	**Steam**							
	Others							
	Sub-total							

5.3.6 Miscellaneous fixed assets

	Particulars	Basis	Qty	Unit Cost	Cost	Taxes	Total
1	Office Furniture & Fixture						
2	Firefighting equipment etc.						
3	Sub-Total						
	Sub-total						

Others

	Particulars	Unit	Basis	Qty	Unit Cost	Cost	Taxes	Total
1								
2								
3								
	Sub-total							

5.3.7 Pre-operative expenses

	Particulars	Basis	Unit	Unit cost	Total
1					
2					
3					
4					

Summary of Project Cost

	Item		Project Cost	Max. possible NHB support (self-appraisal)
1.	Land & Land development			
2.	Technical building			
3.	Non-Technical building			
4.	Plant & Machinery			
5.	Add-on components			
6.	A			
7.	B			
8.	C			
9.	Other components			
10.	Utilities			
11.	Misc.Fixed Assets			
12.	Pre-operative expenses			
	Total			

5.3.8 Means of Finance (Rs.in Lakhs)

S.No	Item	Components			
1	Promoters share				
2	Bank/FI Term loan				
3	Un secured loan/VCA				
	Total				

5.3.9 Information on subsidy available under different schemes:- (For information)

1.	Subsidy from NHB				
2.	Subsidy from State	*			
3.	Subsidy from Centre	*			
4.	Subsidy from other sources	*			
	Total				

Hypothecation Security Details:

5.3.10.About Bank/ FI: Name of the Bank/FI, branch and its code identified for Term loan and Rationale

Name of Bank/ FI	
Bank/FI Branch Address	
Bank/FI Branch contact Number	
IFSC code	

5.3.11 Projected / existing operational profitability of the Project : (Rs. In Lakhs)

	Estimated projections							
	Y1	Y2	Y3	Y4	Y5	Y6	Y7	Y8
Capital								
Reserves								
Intangibles								
Tangible Net Worth								
Net Working Capital								
Current Ratio								
Net Sales								
Op. Profit								
Net Profit Before Tax								
Net Profit After Tax								
TOL/ TNW								
Debt-equity ratio								
Depreciation								
Dividend								
Retained Profit								

Justification for the above (wherever figures are on higher side)

NOTE:- In case of existing business / project, the promoter has to provide the audited data for the last three years apart from estimated and projected data for covering the entire repayment period.

5.3.12 Project Financing:

1) Per Kg cost of storage of commodity for one season (to be calculated by showing unit cost towards – loading & unloading, Electricity and fuel charges, Administrative charges, Selling charges, Repair and Maintenance, Insurance charges, Weight loss etc)

2) Rate of Interest :

3) Percentage of Term loan against total project cost

4) Internal Rate of Return (IRR):

5) Cost of Production and Profitability (Annexure)

6) Yield and Sales Chart (Annexure)

7) Proposed Balance Sheet: (Annexure)

8) Proposed Cash flow Statement for repayment period (Annexure)

9) Proposed Profit & Loss Account: (Annexure)

10) Proposed Repayment of Term loan and Schedule (Annexure)

11) Break even Analysis (Annexure)

12) NPV (Net Present Value)

13) Economic Rate of Return

14) Depreciation

5.3.13 Sensitivity analysis of the project.

Base Case	2018-19 (First Full Year of Operation)				
Case I	Decrease in capacity utilization by 10%.				
Case II	Decrease in Sales by 10%.				
Case III	Increase in Raw Material Cost by 10%				
	Base Case	Case I	Case II	Case III	
PBIDT					
PBT					
PAT					
Min DSCR					
Max DSCR					
Overall DSCR					

5.3.14 Key Financial Parameters for the proposal:

Sl. No.	Ratio	Benchmark	As calculated by Project Finance Expert				
			1st yr	2nd yr	3rd yr	4th yr	5th Yr
1.	Current Ratio other than export units	1.25:1					
2.	CR-Export units	1.10:1					
3	IRR /BCR						
4	DSCR*	1.50:1					
5	Average DSCR						
6	Debt to Equity Ratio i.e DER	3:1					
7	TOL/TNW	4:1					
8	Promoters Contribution	25% minimum					
9	Break Even Point	Lower the % is better					
10	Security Coverage Ratio	More than 100% of Loan Amount					
11	Repayment period	Up to 7 Years excluding moratorium, but not to exceed an overall tenor of 10 years					

*: is indicative and is variable subject to Bank

5.3.15 Statement of Assets & liability as on……..

1. Immovable Assets

(Rs. In lakh)

Sl.No	Description	Extent	Location	Face value	Market value
1	Land				
2	Building				
3	Plant & machinery				
4	Commercial plots				

2. Movable Assets

Sl.No	Description	Modle	Face value	Market value
1	Car/Scooter/Truck/Bus/Mobile phone			

3. Bank/FI balances and cash

Sl.No.	Name of the institutions	Date of opening	Face value	Market value/Present value

4. Shares & debentures

Sl No	Name of the Company/Institutions	Date of purchase	Face value	Market value

5. Investment in business & other associates concern

Sl No	Name of the Company/Institutions	Date of Investment	Face value	Market value

Total assets…….....

1. Liabilities

Sl.No.	Nature of the loan	Name of the institution	Date of loan	Face value	Market value/ Present value

Total liabilities…….....

Net of assets & liabilities……...

Date: Signature of the Promoter/Guarantors/Directors /partner

5.3.16.Risk Analysis & Management

A. Promoters & Management Risks:
B. Project Completion and Operational Risk:
C. Other Risks:

	Risk	**Management**
	Excess production / Glut situation in Market	
	Crop failure	
	Price volatility-low prices	
	Pests and Diseases in Cold Storage	
	Technical failure	
	Power failure	
	Natural calamities- fire, cyclone, Floods etc.	

5.3.17.Record keeping/ Maintenance proposed

6. Technical Viability

6.1 Design and Technical standards of Cold Storage, Technology and Add-on Components and their compliance

Component : Cold Storage Type-1

Sr. No.	Contents	Page no.
1.	Basic Data Sheets for Cold Storage and Add on Component	
	a. Identification of the Applicant	
	b. Project Milestone	
	c. Project Identification	
2.	Data Sheet for **Cold Storage Type-I**	
	i) Cold Store Chamber Sizing and Capacity	
	ii) Handling Area	
	iii) Facility covered Areas	
	iv) Building and Construction	
	v) Insulation and Vapour Barrier	
	vi) Cold Store Doors and Air Strip barriers or curtains	
	vii) Heat Load Estimation Inputs	
	viii) Heat Load calculation of cooling System – Summary	
	ix) Cooling System Configuration : Mechanical Refrigeration	
	x) Compressor/ Rack Detail	
	xi) Condenser Details	
	xii) Cooling Tower Details (if applicable)	
	xiii) Pressure Vessel	
	xiv) Evaporators/ Air cooling units (ACU)	
	xv) Electrical Installation	
	xvi) Material Handling procedures	
	xvii) Safety provisions	
	xviii) Energy Saving Equipments and Measures	
	xix) Estimated performance Parameters of Proposed Cold Store	
	xx) Brief description of any other technologies or infrastructure	

Note: The above design, infrastructure and facilities should meet and comply with the Minimum System standards notified by the Government of India- Ministry of Agriculture and Farmers Welfare, DAC&FW vide No.F.No.45-64/2010-Hort Dated 15th May 2015.

The weblink :https://nccd.gov.in/PDF/NCCDGuidelines2014-15.pdf

I

FORM 1: IDENTIFICATION OF THE APPLICANT

A: Identification of the Applicant

Name of Promoter(s)			
Name of Commercial Entity/Enterprise			
Type of Commercial Entity (Proprietorship/Partnership/ Pvt. Ltd. I Ltd. I PSU I State Undertaking)			
Postal Address of Entity :			
	Tel/Fax	Mob No.	E-mail:
Presently activity in brief			
Name of Contact Person		Phone: Mobile No. Email:	

B. Project Milestone:

Date for application for subsidy		
Date of Project Start		
Amount of Bank Loan Sanction		
Date of Bank Loan Sanction Last Approval/Inspection Status		
Name of Approving Body		
PAN Number registered with Bank		
If Project Commissioned	Date of Completion Certificate	Issuing Authority

C: Project Identification: Pre - Cooler / Cold storage / Pack - House / Reefer Vehicles / Retail Shops

Name of Project			
Type of Project (Please tick)	New Project	Expansion	Modernization
Location of Project (Complete Address)	Address:		Village/Town
	DISTRICT:		STATE:
Manpower Employed (on rolls / on contract)			
What Business model is used (rental, captive, part of supply chain service, mixed)			
Years in Business	New		
Components of Project submitted (please tick)	Integrated pack house		
	Cold Storage Unit Type 1		
	CA Tent		
Checklist for individual Data Sheets Submitted	Programmed Logic Control Systems		
	Doc Leveler System		
	WDRA-NWR Equipment		
	Specialized Packaging		
	Reefer Container (Multi modal)		
	Advanced Grader		
	Stacking System		
	Retail Shelf		
	Alternate Energy		
Type of Products to be Handled (Frozen, Chill, Mild-Chill)	**Temperature Zones**		
	<-18 ^{o}C	0-10 ^{o}C	10-20 ^{o}C

Data Sheet for Cold Storage Type 1:(Storage Capacity >250 MT)

i. Product specific details

Details	Standard Parameters	Proposed by Promoters	Deviation if Any
Name of Produce	**Potato**		
Temp. Zone	0 to 3±1 ^{o}C;		
Relative Humidity	90-95%		
CO_2 Concentration Control (PPM)	2000-4000		
Freezing Point Temperature (^{0} C)	(-) 0.6		
Specific Heat in KJ/Kg	3.433		
Respiration Rate during Loading / Pull down at 15^{0}C in mW/ kg	27		
Respiration Rate during Holding/ Storage at 3^{0}C mW/ kg	18		
Air Circulation Rate (CMH)	a) 85 CMH / MT storage capacity of Chamber during loading and pull down. b) 50 CMH/ MT min. during holding		
Standard Parameters (For produce other than Potato)	Consider thermalproperties of foods as given in Table- 3 & Table-9 of Chapter -9- Ashrae .Handbook-Refrigeration (SI) -2006 and or WFLO hand book.		

ii. Cold Store Chamber sizing and capacity:

Details	**Standard Parameters**	**Proposed by Promoters**	**Chamber-3**	**Chamber-4**
Number of Mezzanine floor per chamber	≥ 4			
Type of platform used	Wooden or Steel grated platform			
Dimension of CS chambers in each group (L X W X H) m	Chamber height shall be ≤ 15 m			
Chamber Volume in m^3	Multiply (L X W X H) m			
Storage Capacity of each chamber in MT	Chamber Volume ($m^{3)}$ / 3.4			
Storage Unit used (Bags, Crates, Carton, bulk heap etc.)	Bags			

Total number of storage unit	Capacity in (MT) x20			
Weight per storage unit	50 kg			
Heat load per chamber (kW)				
During Loading/Pull down				
During Holding				
Any other information	Describe other information like bulk heap storage and number of cooling tunnels , total cooling load per chamber			

iii. Handling Area

Details	Standard Parameters	Proposed by Promoters		Deviation if any
		Dimensions	Temp ^{O}C	
Describe Handing, receiving area (L X W X H) (covered, open shed)	H ≥ 4 .6 m and area and expected temperature in handling area ≤ ambient temperature			
Describe Loading / Unloading Platform				

iv. Facility Covered Area

Particulars	Standard Parameters	Proposed by Promoters		Deviation if any
Cold Storage Area and Height	Height ≤ 15 m	Area (m^2)		
		Height (m)		
Ante Room (L x W) – m and Area m^2	Height ≥ 4.6 m	Area (m^2)		
		Height (m)		
Machine Room area/height	Height ≥ 4.6 m	Area (m^2)		
		Height (m)		
Generator room area/height	Height ≥ 4.6 m	Area (m^2)		
		Height (m)		
Admin Block area/height	Height ≥ 3.6 m	Area (m^2)		
		Height (m)		

v. Building and construction details

Details	Standard Parameters	Proposed by promoters	Deviation if any
Type of Building Construction	PEB/ RCC with brick construction with plaster 1:6 (cement: Sand		
External walls of Cold Store	230 mm brick wall with plaster 1:6 (cement: Sand)) with insulation fixed on walls with cladding OR with PUF insulated composite panels		
Internal walls/Partition walls of Cold Chambers	230 mm brick wall with plaster 1:6 (cement: Sand) OR with insulation fixed on walls with cladding OR with PUF insulated composite panels		
Specification of Roof / Ceiling of Cold Store Chamber	RCC or CGI / PCGI Sheet roofing with trusses and with insulation fixed on walls with cladding OR with PUF insulated composite panels		
Lighting Fixtures in cold chambers	Fluorescent /CFL / LED lights with IP-65 fixtures		
Specification in process/External/Compound Area	RCC with 230 mm thick brick construction with plaster 1:6 (cement: Sand)		
Others			

vi. Insulation and Vapor Barrier

Option-1: Expanded Polystyrene Sheet (EPS)

Type of Insulation		Standard Parameters	Proposed by Promoters	Deviation if any
External Wall	Thickness	150 mm		
	No of layers	two layers each layer 75 mm thick with staggered		
Partition wall	Thickness	75 mm both sides of partition wall		
	No of layers	Single layer		

Ceiling	Thickness	150 mm		
	No of layers	two layers each layer 75 mm thick with staggered		
Floor	Thickness	125 mm		
	No of layers	two layers (75 mm+50mm) with staggered		
Density		16± 2 kg/ m ³		
Thermal Conductivity (k-value) at + 10 ^{o}C (mean temperature) in W/m^{0}K		0.036 W/m^{0}K		
U value (W/m^{2o}k)		= Thermal conductivity (W/m^{0}K) / panel thickness in mm/ 1000		
Thermal diffusivity (m²/h)		1.5- 1.70 x 10^{-6}		
Relevant IS Code		IS:4671		
Vapor Barrier Specification				
a) External Wall/ Internal Wall / Ceiling		Aluminum foil (50 micron)		
b) Floor		250 Micron thick Polythene sheet		
Specification on Cladding				
a) External Wall/ Internal Wall / Ceiling		0.5 mm thick (tct) Micro Ribbed pre painted GI sheet in off white colour (RAL-9002) conforming to IS:14246:95		
b) Floor		a) Tar-felt of thickness ≥ 2 mm thick (ISCode: 1322-1993) 1ith 10% overlap on top insulation with hot blown bitumen. b) ≥ 100 mm thick Tremix flooring above Tar-felt with M-25 grade RCC.		
Relevant Is Codes:				
Expanded Polystyrene for thermal Insulation		IS: 4671		
Code of practice for application of thermal insulation in CS		IS:661		

Option-2: Composite PUF Panels/ Rigid RPUF

Type of Insulation	Standard Parameters	Proposed by Promoters	Deviation if any
External Wall panel Thickness	100 mm		
Partition wall panel Thickness	50mm		
Ceiling panel Thickness	100 mm		

Floor	Thickness	100 mm thick		
	No of layers	Two (50 mm + 50 mm) with staggered joints		
Density		40 ± 2 kg/ m ³		
Thermal Conductivity (k-value) at + 10 ^{o}C (mean temperature) in W/m^{0}K		0.023W/m^{0}K		
U value (W/m^{2o}k)		Thermal conductivity (W/m^{0}K) / panel thickness in mm/ 1000		
Thermal diffusivity (m²/h)		0.38 – 0.41 x 10^{-6}		
Relevant IS Code		IS:12436		
Vapor Barrier Specification				
a) Floor		250 Micron thick Polythene sheet		
Specification Composite Panel				
a) External Wall/ Internal Wall / Ceiling		Composite PUF Panel cladded with 0.5 mm thick (tct) Micro Ribbed pre painted GI sheet in off white color (RAL-9002) conforming to IS:14246:95 and with tongue and groove joints with or without cam-locks .		
Specification of Cladding				
Floor		a) Tar-felt of thickness ≥ 2 mm thick (IS Code: 1322-1993) 1ith 10% overlap on top insulation with hot blown bitumen. b) ≥ 100 mm thick Tremix flooring above Tar-felt with M-25 grade RCC.		
Relevant Is Codes:				
Pre-formed rigid polyurethane foam for thermal insulation		IS: 12436		
Code of practice for application of thermal insulation in CS		IS:661		
Others				

vii. Cold Store Doors & Air/Strip Barriers or Curtains

Description	Standard Parameters	Proposed by Promoters	Deviation if any
No. of Doors per chamber	a) 01 No. for each		

	chamber OR01 No. for each chamber / floor If Ante Room is also with equal numbers of platform		
Type hinged/sliding/Rolling	Hinged OR Sliding type		
Size of door opening [W x H]	≥ 1 m (W) X 2 m (H)		
Insulation Material-Type and U value {W/ [$m^{20}K$]}	PUF & 0.23 W/ [$m^{20}K$		
Thickness of Insulation (mm)	100 mm		
Type of Skin	0.5 mm thick (tct) plain pre painted GI sheet in off white colour (RAL-9002) conforming to IS:14246:95		
Provision of strip curtains/Air curtains –nos. and dimensions (WXH) m.	Strip curtains one no. at each door with 25% overlap		
Internal Emergency Door release	Emergency door release should open the door even it is pad-locked.		

viii. Heat Load Estimation Inputs

Description	Standard Parameters	Proposed by Promoters	Deviation if any
Commodity	**Potato**		
Produce Storage Conditions	0 to 3±1 ^{o}C		
Relative Humidity in %:	90-95 %		
Loading Period	20-25 days		
Maximum storage period	8-9 Months		
Product loading temperature	≤ 25 ^{o}C		
Loading rate per day	@ 4 -5 % of storage capacity per chamber		
Pull down period	Up to 15 ^{o}C in first 24 hrs. &@ 2-3^{o}C / week OR @0.5^{o}C per day during pull-down period.		
Estimated Daily unloading rate from each cold chamber	=Total storage capacity (MT)/ 60 days (Max. unloading period)/ No. of chambers		
Ante Room cum staging area Conditions (^{o} C)	To be maintained approx... at 20^{0} C		

CO_2 Concentration control (PPM)	2000-4000		
Fresh air changes	6 changes /day during Loading, 4 changes /day during Pull down, 2 changes /day during Holding		
Brief Description of Fresh Air Ventilation System	Mechanical CO_2 extractor with energy recovery system with atleast 70% efficiency		
Explain heat recovery system, if used	Heat recovery wheel (HRW) preferably desiccant based rotary heat exchanger offering both sensible and latent efficiencies equally.		

ix. Heat Load calculation of Cooling System-Summary.

Description	Standard Parameters	Proposed by Promoters		Deviation if any
Ambient Conditions Dry Bulb Temperature (Summer)	Peak conditions based on Summer. The temperatures are location specific , use details provided in ISHRAE/ASHRAE Hand Book	Dry Bulb Temperature Summer in (^{0}C)		

Description	Standard Parameters	Proposed by Promoters		Deviation if any
Building Dimensions	Provide external Cold store building including handling area (L x W) in meters	Length (m)		
		Width (m)		
Total Capacity of the Storage	Specify total storage capacity in MT (Add storage capacity of all chambers) in MT			
Number of Chambers	Specify total numbers of all chambers			

Refrigeration Load	During Loading (kW)	During Holding(kW)	Deviation if any
Transmission Load (kW)			
Product Load including respiration load (kW)			

Internal Load (kW)	Lighting Load			
	Occupancy Load			
Infiltration load (KW)				
Ventilation / Fresh Air refurbishment load (KW)				
Equipment load – Evap. Fan Motor , MHE etc. (KW)				

Compressor Operation Hrs. / day	**Details**	**Standard Parameters**	**Proposed by Promoters**	**Deviation if any**
	Pull Down period	≤ 20 Hrs. / day		
	Holding Period	≤ 20 Hrs. / day		
	Defrosting Period	≤ 2 Hrs. / day		

Total Refrigeration Description (kW)	**Peak Period (kW)**	**Holding Period (KW)**

Cooling System Design Detail

x. Cooling system Configuration: Mechanical Refrigeration

Description	**Standard Parameters**	**Proposed by Promoters**	**Deviation if any**
Type of Refrigerant	Ammonia		
Total Refrigeration system Capacity (kW)			
Type of System	Gravity Feed or Liquid Overfeed System		
Type of Compressor	Reciprocating / Screw Compressors		
Type of Capacity Control	Automatic in Step		
Specify unloading steps in %	Based on Compressor size		
a. For 2 cylinder compressor	50% and 100%		
b. For 3 cylinder compressor	33%, 67% and 100%		
c. For 4 cylinder compressor	50%, 75% and 100%		
d. For 6 cylinder compressor	33%, 67% and 100%		
e. Screw Compressor	10% to 100%		
Type of Condenser	Atmospheric/ Evaporative/ Water		

	Cooled/ Air Cooled		
Cooling Towers (if applicable)	Natural draft / Induce draft		
Type of Evaporators/ Air Cooler	a) Ceiling or floor mounted with SS-304 Coil & aluminum fin with fin spacing 6.25 - 8.5 mm and axial fan preferably blowing fans with air throw as per chamber size, unit casing- GS sheet b) VFD Drive shall be provide to control fan speed for optimizing air flow requirement.		
Type of Defrosting	Air/Water/ Electric/ Hot Gas		
Humidification System & Control	Preferably With Coil only. However, in case humidifier is used, provide details and operational parameters.		

Refrigeration Equipment Details

xi. Compressor /Rack Detail

Compressor/Racks	Standard Parameters	Proposed by Promoters	Deviation if any
Quantity	3 No. each of 50% capacity (2 Working during Loading/ Pull down and one preferred as standby) in case of ammonia.		
Make & Model			
RPM			
Operating Parameters	2˚C SST & 38/ 40˚C DST (during loading / pull down and - 2˚C SST & 38/ 40˚C DST during holding		
Refrigeration Capacity at 2˚C SST & 38/ 40˚C DST (during loading / pull down			
Power consumption in BkW at 2˚C SST & 38/ 40˚C DST (during loading / pull down			
Refrigeration Capacity at -2˚C SST & 38/ 40˚C DST (during Holding)			
Power			

consumption in BkW at -2˚C SST & 38/ 40˚C DST (during Holding)			
Total Connected Motor Power (KW)			
Remarks/Standby			

xii. Condenser Details : Air / Water cooled condenser :

(Recommended parameters for Atmospheric Condenser)

a) Consider 20 -21 KW heat rejections / stand of 6 m Long and 12 nos. 50 NB pipe i.e. 72 m long pipe / stand ,

b) Consider water circulation @ 6 LPS / 100 KW of heat rejection

Condenser Type, Make & Model	Qty.	Operating Parameters Condensing Temp. (CT) WBT, water in/out Temp (°C)	Condenser Heat Rejection Capacity (kW)	Electric Fan/Pump Motor Rating (kW)	Total Electric Power (kW)	Remarks Working/Standby

xiii. Cooling Tower Details (if applicable) – NA –

(Recommended FRP Type)

Cooling Tower-Type, Make & Model	Qty.	Operating Parameters Condensing Temp. (CT) WBT, water in/out Temp (°C)	Cooling Tower Capacity (kW)	Fan &Pump capacity (CMH/LPS) & Motor (kW)	Total Electric Power (kW)	Remarks Working/Standby

xiv. Pressure Vessel

a) Recommended storage volume of HP Liquid Ammonia Receiver = 7.85 L/ KW of refrigeration load, Refrigerant Circulation for overfeed / pump circulation 1:4.

b) The design and testing of the pressure vessel should comply with ASME Sec VIII Div1

Description	Type- Horizontal / Vertical	Refrigerant	Operating Temp. & Pressure	Description Shell, Dish Ends & Nozzles	Total Refrigeration load	Holding Volume
Lowpressure						
High pressure						

xv. Evaporators/AirCooling Units (ACU)

ACU Type Make & Model	Nos.	Operating Parameters Evap. (SST) & TD * (°C)	Cooling Capacity (kW)	Air Flow (CMH) & Face Velocity (m/s)	Material of Coil Tubes & Fins	Fin Pitch (mm)	Total Fan Electric Power (kW)

Note: TD is the temperature difference between Evap. (SST) ^{0}**C** & Return Air temp. ^{0}C at coil inlet.

xvi. Electrical Installation

Description	Details
Total Connected load (kW)	
Estimated power requirement at peak load period (kW)	
Estimated power requirement at Holding Load period (kW)	
Capacity of Transformer (KVA)	
Size of Capacitor	
Make & Capacity of standby D.G. Sets (nos. and kVA)	
• Main electric power distribution panel equipped with change over facility shall be provided • Control panel for refrigeration system, lighting & fan, APFC, Water supply & firefighting shall be provided • Electrical earthing shall be provided	

xvii. Material Handling procedure

Procedure	Details	Proposed by Promoters	Deviation if any
Material Handling Procedures & equipment	Manual/Conveyor		
Capacity of Mechanized belt conveyor (kW) if any-Rating of motor			
Any Other Device please specify			

xviii. Safety provisions:

Descriptions	Standard Parameters	Proposed by Promoters	Deviation if any
Fire Fighting equipment installed as per Fire safety	Attach fire safety standards of State fire		

standards of State Fire Department	department		
Handling measures for Refrigerants and Leaks installed	1. Ammonia sensors in cold chambers near ACUs & machine room; 2. Emergency ventilation for machine room; 3. Safety release of refrigerant to water sump; 4. Ammonia masks; First aid kit; Instructions for handling emergencies. **5.** Handling measures As per code of safety IS 4544		
Safety devices - LP! HP cut outs, safety valves, shut off valves etc. installed	Solenoid based cutouts, Ammonia valves as per IS 11132, Switches near all cold store doors and alarms located in common public areas, as per NHB norms		
HP Pressure Vessel	Water Sprinkler pipe		
Emergency lighting in Cold Chambers & others areas installed	Solar PV cells with batteries & controller		
Lightening arrestors installed	As per regulations		
Machine room ventilation system for self containing	Exhaust		
Any other safety provisions (describe)	N/A		

xix. Energy Saving Equipment & Measures

Details of Energy Saving Devices	Standard Parameters	Proposed by Promoters
Light Fixtures	Lighting Fixtures Fluorescent /CFL/LED with IP-65 protected fixtures	
Natural Lighting for general areas	With glass windows on walls	
VFD/ Electronic Technology for fans/Compressors	Capacity control using compressor cylinder unloading	
Refrigerant Controls and Automation	PLC panel with data logger as per NHB norms	
Air Purger'	Manual purger valves at receiver and	

	condenser	
Power Factor Controller	Automatic Power Factor Controller (APFC)	
Energy recovery	Energy wheel with 70 % recovery ,	
PLC Control & Data Acquisition	Yes	
Any other Components	N/A	

xx. Summary of estimated Electrical operating Load

Equipment	(Peak Period) - BkW	Holding Period - BkW
Compressors		
Condenser Pumps		
Air Cooling Units		
Internal Lighting		
Liquid Pump		
Total Operating Load (BkW)		

xxi. Estimated Performance Parameters of Proposed Cold Store

Parameters	Standard Parameters		Proposed by Promoters		Deviation if any
	Peak Period	Holding Period	Peak Period	Holding Period	
Coefficient of Performance (COP) of the cold store unit	>3.5	>3.2			
Power Consumption (kWh/day) considering diversity factor 0.8					
Prevailing Electricity Cost (Rs/ Kwh)					

xxii. Brief Description of any other technologies or Infrastructure used

Details	Proposed by Promoters
Refer Trucks operated (if any)	
Specialized Packaging Lines (if any)	
PLC Automation (if any)	

Dock levelers systems (if any)	
Alternate energy options (if any)	
Modern Pack –house (if any)	
Others	

xxiii. Drawings, Heat Load calculations and Technical details of Equipments

Details	Provided by Promoters (Yes/No)	Deviation if any
Plan & layout of the proposed cold store unit approved by registered Architect		
Detailed heat load calculation sheets of the proposed cold store in SI in accordance to be prescribed technical standards and guidelines duly approved by a qualified engineer		
Detailed manufacturers Technical Data sheet of following equipment		
a. Refrigeration compressor		
b. Evaporating Coil		

CA TENT

Sl.No	Component:: CA Tents	Description (refer sample sheet)
1	Name of Manufacturer	
2	Material Used (describe)	
3	Number of layers / thickness	
4	Dimensions	

5	Capacity of Gas cylinder / CA	
6	Air sealing mechanism (desribe)	
7	Atomphere control & analysis	
8	Pressure relief value	
9	Piping connections	
10	Number of Air Sampling lines	
11	Internal fan/Blower rating	

Component: PLC Control System for Refrigeration Plant:

#	Component: Programmed LogicControls	Description
A	**Design & Construction**	
1.	Name of Provider	
2.	Processor system	
3.	Number of Input (IU)/ Number ofOutput (OU)	
4.	Type of Report generation	

B	Refrigeration Plant Controls	Refrigeration Control included: Yes/No
5.	Compressor	
6.	Compressor rack control	
7.	Condenser fans	
8.	Evaporator fans	
9.	Water Circulation pump	
10.	Liquid ammonia circulation pump	
11.	Glycol PHE and Circulation Pumps	
12.	Defrost control	
13.	Liquid Level Controls	
14.	Describe Controls of levels switches , valves , relays, breaks	
15.	Other if any	
C.	**Room parameters Controls**	
16.	Temperature	
17.	Relative Humidity	
18.	CO_2 , O_2 and Ethylene levels	
19.	Any Others	
D	Plant Safety Operation	
20.	Compressor Protection	
21.	Evaporator Fan Control	
22.	High Condensing Pressure Alerts	
23.	Maximum and minimum temperature alarm	
24.	Back up pressure probe	
25.	Discharge temperature Monitoring	
26.	Protection against low suction super heat	
27.	Any Other	

Component : Dock Leveler System

S.Nos.	Component: Dock Leveler System	Recommended Parameters	Offered by promoter	Deviation if any
A	**DOCK LEVELERS**			
1.	Name of Manufacturer			
2.	Type of operation	Hydraulic / Mechanical		
3.	Ramp- Platform			
4.	Number of cylinders			
5.	Platform size (W x L) meters.			
6.	Max vertical Lift up & down in mm			
7.	Load capacity (tons)			
8.	Plinth height of facility (meters)			
9.	Control Panel			
10.	Standard safety provisions			
11.	Emergency stop switch			
12.	Dock pit dimensions (meters)			
13.	Power Consumption			

B	**DOCK DOORS**			
14.	Manufacturer and model			
15.	Dimension of Door opening			
16.	Loading area temperature (^{o}C)			
17.	Insulation-material, thickness and U value.			
18.	Safety Provision			
C.	**DOCK SHELTER**			
19.	Name of Manufacturer and model			
20.	Dimensions			
21.	Sealing Material & type			
22.	Bumper			
23.	Safety Provision			

i. WDRA – NWR EQUIPMENT

S. Nos.	Component: WDRA-NWR Equipment	Recommended Parameters	Offered by promoter	Deviation if any
1	Computer Type / Quantity	Manufacturer & Model and hardware / software configuration for each to specified		
2	Printer type	Manufacturer & Model to specified		
3	Type of produce	Specify here type of cargo that shall be handled and annual quantity that will be issued NWR		
4	AMC	Promoter to specify AMC details		
5	WDRA accreditation	Promoter to specify application number, date of applying and the date on which accreditation was granted		
6	Storage capacity (m3)	Specify here volumetric storage		

		capacity available.		

SPECIALISED PACKAGING

Sl.No	Component:: Specialised Packing	Details (refer sample sheet)
1	Name of Manufacturer	
2	Feeding line	
3	Strong Grading unit	
4	Weighing Machine	
5	Final Packing	
6	Traceability system	

7	Labelling System, Printing	
8	Throughput capacity	
9	Total Power consumption (KW)	

REEFER CONTAINER

Sl.No	Component:: Reefer Contanier	Description (refer sample sheet)
1	Container dimensions	
2	Insulation details- thermal conductivity and thickness	
3	Tare weight (Kgs)	
4	Gross weight (Kgs)	
5	Temperature recording type	

6	GPS System	
7	Refrigeration capacity (Kw)	
8	Refrigernat used	
9	Fresh air exchange	
10	Diesel / elecric auto-switching	
11	Air flow cum / hr(CFM)	
12	Temperature control precision +/-^{0}C	
13	Name of Manufacturer	
14	Year of manufacture	
15	Any design	

	enhancement	

Component : Advanced Grader

S. Nos.	Component: Advanced Grader	Description
1	Produce	
2	Weight Sorting / Grading	
3	Colour Sorting / Grading	
4	Optical/Acoustic DiameterGrading	
5	IQS (Intelligent qualitySorting/Grading)	
6	Safety Precautions	
7	Output capacity (units/hr. ortons/hr.)	
8	Power consumption (kW)	
9	Name of manufacturer	
10	Year of manufacture	

Component: Stacking System

S. Nos.	Component: Stacking System	Description (*Refer sample datasheet)*
A	**Bins**	
1	Name of Manufacturer	
2	Material of construction	
3	Load capacity (kg)	
4	Storage volume (L x B x H)	
5	Stacking Height (meters)	
B	**Pallets**	
1	Material & working load(kg/tons)	
2	Dimensions (L x B x H) m	
3	No of cartons per pallet	
4	Type of access	
C	**Racking System**	
1	Name of Manufacturer	
2	Type of racking system	
3	Design over view Rack	
4	Material Construction	
5	Number of tiers	
6	Net Storage capacity	
7	Load bearing weight per position	

RETAIL SHELF

Sl.No	Component:: Retail Shelf	Description (refer sample sheet)
1	Name of Manufacturer	

2	Type	
3	Produce to be handled	
4	Capacity (m^3)	
5	Dimension-floor area and height	
6	Electronic used (describe)	
7	Temperature Range	
8	RH Control	
9	Lighting system (KW)	
10	Total Refrigeration capacity(kw)	
11	Refrigerant used	

12	Energy consumption (KW)	
13	Years in business in food retail	

ii. ALTERNATE TECHNOLOGY

S. Nos.	Component: Solar Photo Voltaic (SPV)	Recommended Parameters	Offered by promoter	Deviations if any
1	Name of Manufacturer	Specify manufacturer's name		
2	Make and model no.	Specify make & model		
3	Total shadow free area (m^2), total area occupied by PV panels (m^2)	Provide details of shadow free south facing area and total area occupied by PV Panels in **(m^2)**		
4	Total Load to be energized (kW and describe)	Provide details of loads to be energized if any – not necessary when connected to grid.		
5	Storage battery capacity (Ah)	Provide total battery capacity that shall be used to store the energy generated in Amp- Hours , if applicable		
6	Battery Backup (hours)	Provide details of battery back up in hours		
7	Grid interactive	Provide Grid metering rate for facility		
8	Energy generation (kWh)	Provide expected annual / monthly energy generation in KWh.		
9	Grid Electricity Availability (hours)	Provide details of number of hours electricity is available at		

		the facility.		
10	Total SPV Capacity (kW)	Provide total SPV (Solar Photo Voltaic) capacity in KW.		
11	Power of single PV panel (Watt) and total number of panels installed.	Specify power in Watts of single PV Panel and total number of panels installed.		
12	Total array size (kW)	Specify number of panels in a single array.		

Solar Thermal

Sl.No	Component:: Solar Thermal	Description (refer sample sheet)
1	Name of Manufacturer	
2	Make and Model No.	
3	Type of System	
4	Capacity (litres/day)	
5	Type of Tank Material and thickness	
6	Insulation material and thickness (mm)	

7	Heat Exchanger Available	
8	Total number of collector panel	
9	Dimension per collector panel (l x w)	
10	Total Area Covered (m^2) by collectors	
11	Open Loop / Closed Loop System	

Thermal Banks

Sl.No	Component:: Thermal Banks	Description (refer sample sheet)
1	Name of System provider	
2	Describe system design	
3	PCM material	
4	Phase change temperature (^{0}C) and latent energy (KW)	
5	Application – describe use planned.	
6	Backup period (hours)	
7	Mass of PCM (kgs or tons)	
8	Total Thermal Energy Bank (KW)	
9	PCM encapsulation	

10	Time to fully Charge the PCM	
11	External energy input (describe and specifications)	

VAPOUR ABSORPTION

Sl.No	Component:: Vapour Absorption	Description (refer sample sheet)
1	Name of Manufacturer	
2	Make and Model No.	
3	Capacity (KW)	
4	Refrigerant used	
5	Absorbent used	
6	Temperature of Chilled water (^{0}C)	
7	Temperature of hot water (^{0}C)	
8	Temperature of condensate (^{0}C)	
9	Describe Heat Source & heat engrgy (KW)	

10	Inlet / outlet Pressure drop (kPa)	
11	Elecrical Consumption	
12	Type of vapor Absorption machine	
13	System use (describe total load required and application of this system)	

i. Codes & Standards Followed

Sl No	Details	Relevant Codes	Complianceby Promoters (Yes/No)
1	**Building Design & Structures (Pre Engineered Building)**		
a.	Building Code	IBC 2006	
b.	Design code	AISC 2005	
c.	Tolerance Code	MBMA 2002	
d.	Purlin code	AISI 2001	
e.	Welding code	ANS 2006	
f.	Wind Load & Seismic load	IS 875 & IS A893-2002 & Relevant Codes	
2	Construction Materials	Relevant IS Codes for various construction materials	
3	Thermal Insulation & Application	IS 661, IS 12436 & IS 4671	
4	Refrigeration Equipment & System	Relevant IS code for	

		different equipment	
5	**Electrical & Mechanical System**		
a)	PVC insulated cables (light duty) for - working voltage up to & including 1100 volts	694-1990, Part-I & II	
b)	PVC insulated cables (heavy duty) for Voltage up to 1100 volts	1554-1988 Part- I	
c)	Guide for marking of insulated conductors	5578-1984	
d)	Code of practice for earthing	3043-1987	
e)	Recommendations on Safety Procedures and Practices in Electrical Work - Part I: General	5216-1982 Part - I	
f)	Recommendation on Safety Procedures and Practices in Electrical Work - Part II : Life Saving Techniques	5216-1982 Part II	
g)	Code of practice for selection, installation and maintenance of Switchgear and Control gear	10118-1982 Part I,II,III,IV	
h)	Code of Practice for Electrical Wiring Installations	732-1989	
i)	XLPE Cables for working voltage up to and including 1100 Volts	7098- 1988 Part -I	
j)	Specification for Electric Power Connectors	5561- 1970	
k)	Methods of Test for Cables	10810 - 1984	
l)	National Electrical Code	SP-30	
m)	Others	Equipment specific codes for all items as per list given in NHB – CS-Type-01-2010 Standards	

Project declares compliance with all mandatory codes and regulations are complied with

(Signed by applicant)

6.2.Automation Services if any

1) **Measurement Systems**

	Parameter	Instrument	Frequency of reporting	Remarks
1.	Air Temperature			
2.	Relative Humidity			
3.	Co2			
4.	Ammonia			
5.	Freon			
6.	Ethylene			
7.	Oxygen			
8.	Pathogens			
9.	Fire & Smoke detection System			

2) **SMS & Email Alerts:** The Authorized person of company will receive on instant SMS and Email alert whenever there is movement of stock in our cold storage.

3) **Online Stock details**

4) **Air monitoring SMS:** The authorized person in your company will receive a daily SMS on temperature and relative humidity at regular intervals.

5) **Online Air Monitoring System:** The authorized person in the company can view online temperature and relative humidity of each chamber.

6) **Monthly Inventory report:** The authorized person in the company shall receive product wise monthly inventory report.

7) **Monthly Air monitoring Data logger sheet:** The authorized person in the company shall get temperature recording info of every hour 24X7 for that month.

8) **Phone aap-** Growers & clients have the privilege to check the temperature and Rh in the storage of their stock at the press of a button in their phone.

9) **Inventory Day report:-** System generated day report across all location in one mail is sent to the clients.

10) **Weekly Inventory report:** The authorized person in the company shall receive weekly inventory report.

11) **Weekly Space monitoring report:** The authorized person in the company will get space utilization report in which client get an idea about total allotted space, utilized space & how much is vacant space.

6.3. COLD STORAGE PROTOCOLS- COMMODITY WISE

Commodity.1	
Protocol developed by	(R&D Institution/ Company)
Protocol details	
Proposal by the applicant	
Deviation if any with justification	

Commodity.2	
Protocol developed by	(R&D Institution/ Company)
Protocol details	
Proposal by the applicant	
Deviation if any with justification	

Commodity.3	
Protocol developed by	(R&D Institution/ Company)
Protocol details	
Proposal by the applicant	
Deviation if any with justification	

Commodity.4	
Protocol developed by	(R&D Institution/ Company)
Protocol details	
Proposal by the applicant	
Deviation if any with justification	

7.Food Safety

(Includes GMP, HACCP, Allergen, Sanitation, Product Tracking and Recall Preparedness Programs etc.)

7.1. Quality Assurance Plan

- Quality factors for fresh fruit and vegetables are defined by hygiene and quarantine factors(e.g. parasites larvae, pupae, natural toxicants, contaminants, spray residues, heavy metals etc.), Cosmetic appearance: size, weight, volume, dimensions, shape, regularity, surface texture, smoothness, waxiness, gloss, colour, uniformity, intensity, spectral, physical defects, (splits, cuts, dents, bruises), texture (firmness, hardness/softness, crispness, mealiness-grittiness, fibrousness toughness), flavour factors (sweetness, sourness, astringency, bitterness, aroma, off-flavours, off-odours) and nutritional (dietary fibre, ~~cancer inhibitors,~~ carbohydrates, proteins, lipids, vitamins, minerals).
- Pre-storage treatments
- Sorting/ grading
- Washing/ Disinfection
- Fungicide or other treatments (physical or chemical)
- For fruits and vegetables quality two parameters should be monitored carefully (i) Chemical (pesticides, toxins and contaminants such as lead, cadmium, nitrate, etc.) residue and (ii) Micro biological infection .

S. No.	Name of Fruits/Vegetable	Chemical residue test		Micro biological test FOR FOODBORNE PATHOGENS (*E. coli, Listeria, Salmonella, Shigella, Vibrio*, etc.)	
		Observe value (µg/kg)	Safe limit (MRL or ML for different pesticides/ toxins/ contaminants) (µg/kg)	Observe value (No.)	Safe limit (No.)- Nil for pathogens
1					
2					

- **Quality of produce:** It is good to know the history of produce such as product maturity, prior goods preparation, previous quality inspections like colour, firmness and taste and produce grading. Produce must be tested for chemical residues, nutritional factors and microbial load before storing. Before storing and when rotating stock, it is important to remove rotting fruit from cases as one piece can affect others. The chain reaction can quickly destroy the quality of a whole case of fruit.

- **Stock control:** All the produce must be checked for proper packaging on delivery. Tightly packed pallets should also be avoided as crushing can occur, leading to the development of bacterial growth. Packing should be such that there is enough room for the internal fan to distribute cool air freely inside the produce Other parameters like microbially spoiled and physically damaged produce must be segregated from the

disease free and sound produce for proper shelf life extension of produce in cold stores.

- Audits and procedures: **C**lear procedures i.e Standard operating procedures (SOP's) must be prepared and kept in place to protect temperature sensitive products. All the factors like required temperature for each produce, pre-cooling before loading, and following food-grade inspection processes must be taken into account. All the SOP's must be precise and clearly understandable to all.
- Storage: Certification of cold storage facilities and equipment must be ensured. An independent third-party firm should regularly certify any facilities storing temperature-sensitive products to verify that they are clean and that their daily operations comply with the appropriate food safety requirements. Continuous temperature monitoring systems are available that can keep track of changes in refrigerated storage temperatures, providing alerts to employees whenever something is wrong. Advance warning is a good option to fix the things before problems occur. Thermometers should be properly calibrated for cross-checking the cold store temperature and produce temperature.
- Self-audits : Self-audits must be conducted monthly to verify employee training and practices, to ensure compliance of food industry requirement for pest control, warehouse sanitation, temperature control monitoring etc.

Details of Laboratory	Name of Fruits/Vegetable	Tested Parameters and results		Protocol/ Technology /Equipments used
		Chemical residue test	Micro biological test	

- Quality Assurance Plan components:

1. Quality Objective
2. Management reviews
3. Standards and Guidelines being followed
4. Risk Managements
5. Supplier control
6. Audits and Corrective Action
7. Quality Records
8. Training

7.2. Quality Certification

- HACCP
- ISO 22000
- ISO 9001

7.3. SPS (Sanitary & Phyto Sanitary) Protocol

- Site history and site management
- Propagation material

- Soil management
- Irrigation and fertigation
- Harvesting
- Produce handling
- Workers health and safety
  Waste and pollution management
- Record keeping and internal self assessment/inspection
- Product Criteria
- Quarantine System
- Sampling & Methods of risk assessment
- Packaging & Labelling requirement

7.4. Sanitation, Hygiene and Safety

- **Safe cleaning and maintenance:** All the shelves and walls of cold stores must be properly clean and in good condition. The cleaning chemicals must be documented, used and stored properly. All the lightning and ventilation aspects must be covered properly. At leat once in a year the entire cold stores should be fumigated with safe chemicals for avoiding any risk of microbiological contamination. Surrounding areas should also be checked regularly for cleanliness. Cleaning schedule and methods for cold stores be properly documented. Any signs of pests like mice and flies should be checked and taken care of.
- Personnel Hygiene: All the personnel staff dealing with cold stores should be properly trained for personal hygiene like proper hand washing. Hot water, soap, paper towels and pedal bins should be present at every wash basin.
- Use of Approved Cleaning & Sanitizing Agents
- Use of Protective Personnel Equipment's
- Separate & Segregated storage of Chemicals

7.5 Cold Storage Sanitation

- Cleaning Procedure
- Cleaning Schedule
- Monitoring & Measuring Effectiveness
- Record Keeping

7.6 Waste Management System

- Segregation of Waste as Hazardous & Non-Hazardous
- Separate Bins
- Waste Removal

7.7. Safety of Personnel

- Use of Personal Protective Equipment

- Safe Handling of Products

7.8 Training of Cold Storage Operators

- FoSTaC Training
- HACCP/GMP/GHP/GWP Training & Evaluation

7.9 Statutory requirements

Required	Statute	Approving Government Agency
FSSAI license		Food Safety and Standards Authority of India
License	Factory Act	
	Broiler Act	
	Air Pollution Act	
	Water Pollution Act	
	Environment Act	
	Provident Fund Act	
		Horticulture Department

8.**Traceability**

All traceable items must be uniquely identified and this information is shared between all affected supply chain partners. A traceable item can be: a product or traded item (e.g. case/carton, consumer item), a logistics unit (e.g. bin, container) and a shipment or movement of a product or trade item. , the identification of products for the purpose of traceability requires: i) The assignment of a unique GS1 Global Trade Item Number (GTIN) ii) The assignment of a batch/lot number. When a product is reconfigured and/or re-packed, the new product must be assigned a new unique product identifier (i.e. GTIN). A linkage must be maintained between the new product and its original inputs. Following traceability information must be supplied:

- Logistic unit identifier
- Commodity name and, where applicable, variety name
- Trading partner/buying party
- Ship from location identification
- Ship to location identification
- Date of despatch/shipment
- Grower records details related to growing/production (e.g. field, seeds, details of production inputs)

- Backward & Forward Traceability of Product

Name of Fruits/Vegetable to be store in the cold storage	Whether pesticide are used during farming or not	If used the name of pesticide	Enclose Test report for chemical residue and micro biological test

9. Innovation (If Any)

9.1 List of documents to be submitted:

9.2.Declaration by Cold Storage Expert/ Mechanical Engineer

I have read and understood the latest NHB Schemes operational guidelines and made the applicant understand the same.

In case IPA is issued for the project, I am willing to guide the growers of catchment area for scientific crop husbandry and pre-and post-harvest practices for food safety. In such instance I will render my services.

The project is technically feasible and economically viable and is bankable.

Certified that the information/contents as above furnished by me/us in the application are true to the best of my/our knowledge & belief and nothing material has been concealed.

My details are as follows:

Name of Horticulturist		(Could be any working or retired faculty / scientist in ICAR/ CAU/SAU/SHU/Central/State Horticulture Dept. or ICAR Agri/Horti-business incubators)
Current/ previous profession:		
Educational qualification and University passed out		
Registration number if any		
Permanent address:		
Contact Number:	Tel	
	Mobile	
	Email	

Place	Signature
Date	Designation and Seal

9.3.Declaration by Horticulturist

I have read and understood the latest NHB Schemes operational guidelines and made the applicant understand the same.

In case IPA is issued for the project, I am willing to guide the growers of catchment area for scientific crop husbandry and pre-and post-harvest practices for food safety. In such instance I will render my services.

The project is technically feasible and economically viable and is bankable.

Certified that the information/contents as above furnished by me/us in the application are true to the best of my/our knowledge & belief and nothing material has been concealed.

My details are as follows:

Name of Horticulturist		(Could be any working or retired faculty / scientist in ICAR/ CAU/SAU/SHU/Central/State Horticulture Dept. or ICAR Agri/Horti-business incubators)
Current/ previous profession:		
Educational qualification and University passed out		
Registration number if any		
Permanent address:		
Contact Number:	Tel	
	Mobile	
	Email	

Place	Signature
Date	Designation and Seal

9.4.Declaration by Post-Harvest Technologist

I have read and understood the latest NHB Schemes operational guidelines and made the applicant understand the same.

In case IPA is issued for the project and after the completion of the project, I am willing to guide the Applicant in post-harvest practices for food safety. In such instance I will render my services.

Certified that the information/contents as above furnished by me/us in the application are true to the best of my/our knowledge & belief and nothing material has been concealed.

My details are as follows:

Name of Horticulturist		(Could be any working or retired faculty / scientist in ICAR/ CAU/SAU/SHU/Central/State Horticulture Dept. or ICAR Agri/Horti-business incubators)
Current/ previous profession:		
Educational qualification and University passed out		
Registration number if any		
Permanent address:		
Contact Number:	Tel	
	Mobile	
	Email	

Place	Signature
Date	Designation and Seal

Chartered Engineer /Civil Engineer Certificate Format in case of any Civil Work

(In his / her letter head)

(Applicable in case of Projects / Post harvest components involving Civil Works)
(It should be taken at the time of preparation of DPR (one month before the DPR submission but should be enclosed during Market viability and Financial viability stage both in soft copy and hard copy)

S.No	Name of the project	
1	Location with address	
2	Date of site visit by the Chartered Engineer	

Civil Work if any

S.No	Name of component	Proposed Area (Sq.m)	Proposed cost (Lakh Rs.)	Rate / Unit (Rs/Sq.m)
	Total			

Name of Chartered Civil Engineer	
Current profession:	
Educational qualification and University passed out	
Membership number	
Firm Registration Number	
Permanent address:	
Contact Number:	Tel
	Mobile
	Email

Place	Signature
Date	Designation and Seal

Counter signature (with name) of Promoter / Authorised Signatory of Company with seal with date.

Chartered Engineer /Mechanical Engineer Certificate Format
Only in case of any Project with components involving –
Protected Cover, Plant & Machinery

(In his / her letter head)

(Applicable in case of Projects involving Protected Structure/ Micro-Irrigation/ Post harvest components involving Plant and Machinery)

(It should be taken at the time of preparation of DPR (one month before the DPR submission but should be enclosed during Market viability and Financial viability stage both in soft copy and hard copy)

S.No	Name of the project	
1	Location with address	
2	Date of site visit by the Chartered Engineer	
3.	Date of documents including land ownership / registered lease etc. verification and due diligence strictly as per NHB scheme guidelines.	

Plant and Machinery if any

S.No	Name of component	Proposed Quantity or units	Proposed Cost (Rs Lakhs)		Supplier / Manufacturer (Supported by Quotation)
			Basic cost	Taxes, Freight Installation, insurance etc.	

In case IPA is issued for the project, I am willing to guide the growers of catchment area for scientific crop husbandry and pre-and post-harvest practices for food safety. In such instance I will render my services

Name of Chartered / Mech. Engineer	
Current profession:	
Educational qualification and University passed out	
Membership number	
Firm Registration Number	
Permanent address:	
Contact Number:	Tel
	Mobile
	Email
Place & Date	Signature & Designation and Seal

Counter signature (with name) of Promoter / Authorised Signatory of Company with seal with date.

9.5.Declaration by Project Finance Expert (Chartered accountant)

(It should be taken at the time of preparation of DPR (one month before the DPR submission but should be enclosed during Market viability and Financial viability stage both in soft copy and hard copy) (if the Market viability and Financial Viability chapters are prepared by the Project Finance Expert and not done by the applicant on his/her own)

S.No	Name of the project	
1	Project Location with address	
2	Date (s) of detailed discussion / interaction with Applicant on the project	
3	Date of site visit by the Chartered Accountant	
4	Date (s) of due diligence and document including land ownership/ registered lease, financial position and market viability verification	
5	Other remarks	

6.Project Cost: As per the format provided in the chapter: Financial Viability

7.Means of Finance: As per the format provided in the chapter: Financial Viability

I have read and understood the latest NHB Schemes operational guidelines and made the applicant understand the same.

The project is technically feasible and economically viable and is bankable. The Financial and Market viability as provided in the Detail Project Report is true to the best of my knowledge.

Certified that the information/contents as above furnished by me/us in the application are true to the best of my/our knowledge & belief and nothing material has been concealed.

Name of Chartered Accountant	
Current profession:	
Educational qualification and University passed out	
Membership number	
Firm Registration Number	
Permanent address:	
Contact Number:	Tel
	Mobile
	Email
Place	Signature
Date	Designation and Seal

Note: Certification should be based on verification of books of accounts, bills, invoices, work orders, bank statements etc. of applicant and that of current profession/ business.

Counter signature (with name) of Promoter / Authorised Signatory of Company with seal with date.

Self-Declaration by applicant

1. I have read, understood and abide by the latest NHB Schemes operational guidelines including conditions, norms and pattern of assistance.
2. The information provided in the Detail Project Report is true to my knowledge.
3. In case the details provided by me viz., (i) my personal details, land, previous benefits availed by me from either Central and State Government if proved false at any stage NHB is entitled to recover any subsidy if any released by it from me.
4. I have availed the services of a competent Mechanical Engineer, Horticulturist and Post-harvest technologist and for technical details and viability. Accordingly declaration is provided herewith.
5. I have availed the services of a competent Project Finance expert for the requisite project finance details and project viability. Accordingly declaration is provided herewith.
6. In case the project is approved for pre-IPA: technical feasibility, I shall undergo a 2 Weeks (min.10 working days) training programme at my own expenses in one of the relevant institution as found appropriate / approved by NHB.
7. I shall adopt scientific storage practices, technology standards and maintain proper accounts and records.
8. The project is technically feasible and economically viable and is bankable.
9. In case the project application is considered for Pre-IPA: Technical feasibility, I am bound to submit all required / requisite mandatory documents to establish veracity of my DPR and eligibility to claim subsidy under NHB Schemes in the form prescribed within 6 months of any such intimation from NHB for according In principle approval (IPA). Else I acknowledge that my application stands vacated and rejected by default of my omission.
10. I understand that incomplete, delayed and /or NPA projects and default cases shall not be eligible for subsidy.
11. In case IPA is issued and subsidy is released subsequently, the project location, plant & machinery will be **geotagged** permanently and shall not sell the any of items / plant & machinery/ components procured under the project. In case of any violation I am obliged to return the subsidy received within 30 days of notice from NHB.
12. I solemnly affirm/ undertake that the proposed project components in the application are a completely new activity and not a pre-existing activity or any component thereof.
13. In case of Plant & Machinery- only new are proposed. Reconditioned / refurbished equipment/ Plant & Machinery shall not be procured under the project.
14. In case of concealment of any facts in this regard, the NHB would have right to reject/ cancel my application / project out right at any stage.
15. In case the project is approved for subsidy claim I shall undertake a MOU with NHB to comply with all the terms and conditions of the scheme guidelines as effective on the date of subsidy claim approval and any other condition/ advisory in the interest of projects success and sustainability.

Applicant (Name and signature) and Seal if any

Date

Location:

Appendix-VI

UNDERTAKING
[Refer Para 12.1 (m)]

I ..... (Name of the Lead Promoter/Director/ Partner/ Proprietor etc.) Son of Mr..... (Father's name) resident of ..... (Residential address) do hereby solemnly affirm and declare/undertake as under:

1. That I am promoter/ director/ partner/ proprietor of M/s..... (name of applicant) having its Registration no. .....and Registered Office at ..... (office address of applicant).

2. I hereby make application and I am duly authorized in my own right/by management vide its resolution no. .....dated.....to apply and sign all required documents including this undertaking on behalf of company/partnership firm/cooperative society etc. named as .....; and am fully aware of the facts relating to the setting up of project at Survey/ Plot No....., Village.....,Tehsil.....,District.....,State....., PIN code .....(location of the main facility) for.....(activities to be undertaken by project) and application is being made to the Ministry of Food Processing Industries (MoFPI) under the Central Sector Scheme for Creation of Backward and Forward Linkages.

3. That the term and conditions of the above scheme of the MoFPI under which an application is made by the applicant have been properly read and understood by me and I affirm that the project/ proposal comply with all the terms and conditions of the approval letter and provisions enshrined in the scheme guidelines.

4. That the proposed activities to be undertaken by the project/proposal are covered under the above scheme of MoFPI and no part of the scheme/infrastructure of the project is designed or assigned to be used for any activity other than the activities specified in the application at present or in the near future.

5. It is certified that ..... (name of applicant) has not obtained or applied for grants for the same project, component, purpose or activity from any other Ministry or Department of the Government of India or State Government or their agencies.

6. It is certified that applicant's sister concern (s)/ related company / group company/firms as well as the applicant itself has not availed any financial assistance for a food processing project in the past from MFPI [if availed, the details shall be furnished separately].

7. I also solemnly affirm/undertake that the proposed project components in the application are a completely new activity and not a pre-existing activity or any component thereof.

8. In case of concealment of any facts in this regard, the MoFPI would have right to reject/ cancel my application/project out right at any stage.

9. I will meet any shortfall in means of finance due to less admissibility of grant or any future reduction in grant-in-aid or any escalation caused in the cost of the project.

10. I shall not dispose-off or encumber or utilize the assets created wholly or substantially out of government grant for purpose other than those for which they have been sanctioned, without obtaining the prior approval of the sanctioning authority of grant-in- aid.

11. In case of non-implementation/ delayed implementation of the project the Ministry will have absolute right in cancelling the approval granted and also recall the grant released, if any, along with interest as per the scheme guidelines.

12. In case of failure to operate the project for at least three years after commencement of commercial operation, I shall return the entire grant-in-aid with interest @ 10% per annum.

13. User charges/hiring rates of the facilities created under the project will be disseminated to the public including uploading of the same on the website of the project/ organization. A copy of the same will also be made available to the Ministry.

14. I undertake that all the information furnished in the application and the DPR with respect to the eligibility conditions, etc. are true and correct to the best of my knowledge and belief and nothing material has been concealed therefrom.

15. I also undertake that in the event of any information or facts furnished by me are found to be incorrect or material information concealed, during the course of implementation of the project or subsequent to implementation, the Ministry of Food Processing Industries may take action as per the provisions of scheme guidelines and/or as per the law of the land, as deemed fit and appropriate in the circumstances.

Date: _____ Signature of the Lead Promoter

Place: _____

List of documents to be submitted:

‘’Proposed stages in NHB SCHEME IMPLEMENTATION for new IPA Applications of Schemes No.1 &2 during 2018-19

(finalised based on the feedback from the stakeholders)

Stage	Player	Step	Mode	Timeline	Remarks / Enclosures
1	Applicant	Submission of Prescribed Application -specific to the scheme along with DPR on the suggestive lines of model template (will be hosted in NHB website) and cost of Application	Online	Open throughout year, as per Scheme design	No document is required to be enclosed at this stage.
2	NHB	Examines the Application and DPR and gets scrutiny of Technical feasibility duly considering the design of scheme offer.	-	Target 1 Month	
3 Technical feasibility		In case anapplication/ project is rejected NHB will provide reasons for the decision. Further the applicant is provided with an opportunity to make his case by way of presentation of his project on an appointed day in the presence of competent authority. (Optional) The objective is to help the applicant to know the weaknesses of the current project and enable him/ her to review / revise his/ her project to suit NHB Scheme requirements. The applicant is open to submit application afresh enclosing revised DPR and Cost of Application.	online		
4	Applicant + Bank	NHB informs the approval of Technical feasibility based on the DPR submitted, to the applicant with a request to submit all the prescribed	online	Max. 1 month	Prescribed Self – attested document

		/ requisite documents along with • Bank Appraisal of Market viability and Financial viability of the proposal and DPR which NHB found technically feasible (should be after NHB Technical feasibility) ; • and Sanction (after Appraisal) within 6 months of NHB's technical feasibility approval. Any lapse in time line, change of applicant (s), crop / component, location, technical aspects etc. as per the DPR scrutinised for the technical feasibility approval stands vacated / rejected. However he is eligible for fresh submission.		(Allowed max.6 months strictly)	s including those specified in DPR checklist are to be submitted by the applicant. In case of Bank appraisal and sanction- Bank is to certify each page with signature, Name, Designation date, seal and upload online.
5	Applicant Training	Undergoes 2 Weeks training programme (10 Working days) on the project activity at his/ herown expenses in an institute recommended / approved by NHB. In case of expansion projects the period could be 1 Week (5 days). Any 10 days training underwent by the applicant with in the last 6 months (of the date of application) can also be considered by NHB subject to its relevance to the project.	-	2 or 1 Week	Training is mandatory before issuing IPA.

6	NHB	NHB examines the application, DPR, documentary evidence and Bank Appraisal of Market viability and financial viability, keeping in view the availability of the budget, priority (SabkaSaathSabka Vikas) and design of implementation of the offer / Year.	-	2 months Target 1 Month	
7 Market & Financial Viability- IPA-		NHB takes decision on In-Principle Approval (IPA) and informs decision to the applicant with reasons/ grounds. IPA is issued only upon production of prescribed training completion certificate.	online		
8	Applicant	Where ever IPA is issued- Applicant has to complete the project within the prescribed time limit. Else the IPA stands vacated / cancelled.		18 months from the date of release of first instalment of Term loan	
9	Applicant +NHB+ Expert Institution	Participation of entrepreneurs in Knowledge sharing Workshops / Seminars etc.and interaction with MD NHB, Crop/ Expert institutions etc. Participation of applicants to the meeting will be at their own costand is optional and voluntary.			

10	Bank	Applicant submits subsidy claim within 3 months of completion of the project.Else the IPA stands vacated and rejected	Online + Hard copy	3 months	Self and Bank attested/ certified Prescribed documents
11	NHB + Bank/ FI+ State Govt+ Expert	NHB undertakes Joint Inspection of the field/ activity availing the services of NHB hired Photo cum Videographer in the presence of applicant. Also verify the all documentary evidences including Land RoR/Lease agreement, Legal search report, CA Certificate, Bank Sanctionetc. with concerned authority- Bank and Revenue / Industries etc.	Physical ins-pection	Target: Max. within 30 days of request by online.	
12		NHB Official hosts photographs and Video online preferably on the same day but not later than 48 hrs. The entrepreneur is free to hire his own photo/video grapher for his purpose.	online	48 hrs from the conduct of Inspection	
13	NHB	NHB JIT submits JIT report	Online with Hard copy	15 days	
14	NHB	NHB examines the JIT report and takes decision on release of subsidy subject to Scheme conditions and publish decision / minutes of competent authority with reasons in NHB website.	online	2 months	

15	NHB	In case NHB approves release of subsidy, releases funds within 15 working days of minutes of competent authority to SRF account subject to availability of funds.	Online	Target: 15 days	
16	Bank/ FI	1. Deposit the subsidy into SRF account against the Term loan account of Borrower. 2. Shall not charge interest on Term Loan equivalent to subsidy from the date of receipt of subsidy. 3. Confirms the receipt of subsidy online. 4. Informs the receipt of subsidy to the applicant. 5. Shall inform if the Term loan account turns into NPA. 6. Closely monitor the project health minimum for 3 years or till the payment of term loan whichever is later. 7. Takes into consideration the NHB advisories.		On receipt of subsidy	
17	Applicant	1. Confirms the receipt of subsidy online. 2. Implement project strictly as per scheme guidelines. 3. Maintain records and accounts. 4. Adopts technology / scientific package of practices and innovate marketing / business strategies. 5. Takes into consideration the NHB advisories. 6. Regularly reports the performance of		On receipt of subsidy	

		project health 7. Share best practices if any to NHB.			

Salient features:

1. Scheme is open on all days during 2018-19 as per scheme design.
2. There will be a helpline email : helpdesk.nhb@gov.in to address queries from anybody.
3. There will be a provision to create an account for each applicant. Any change in status of application will be informed by an SMS and in account. All the correspondence from both sides – Applicant, NHB and also of the Bank will be shown in the account.
4. For the best preparation: The applicant is advised to submit the application, DPR and cost of application, well in advance (6 months) from the proposed date of project start.
5. Applicants whose projects are rejected at Technical feasibility stage are welcome to resubmit the proposal for fresh examination with improved and corrected proposal.
6. The participating banks will adhere to the standard norms of appraising the project regarding Market viability and Financial viability before the release of term loan to ensure that the project is new, meets the guidelines of NHB, and the applicant has clear land title or lease hold right over the land.
7. The name of applicant (including entity) should be same in IPA Application, IPA, Bank Sanction and Land ownership / lease deed. Any deviation invites rejection.
8. Target / proposed timelines subject to Budget availability as per scheme design are:

Before IPA Approval	Technical feasibility	1 Month
	Upon submission of Bank Appraisal: Market and Financial feasibility	2 Months
Post - project	Competent committee meeting for a decision on subsidy claim after JIT report	2 Months
	Fund release in case competent authority approves subsidy claim	1 months