



**CENTRAL WAREHOUSING CORPORATION**  
**(A GOVT. OF INDIA UNDERTAKING)**



No. CWC CO-CDOWO/179/2020-COMM

Date: 18.08.2021

Regional Manager  
Central Warehousing Corporation  
Regional Office  
Ahmadabad/Bangalore/Bhopal/Chandigarh/  
Chennai/Delhi/Guwahati/Hyderabad/Jaipur/  
Kolkata/Lucknow/Mumbai/Patna

**Sub: Format of IRR calculation...reg.**

**Ref: CWC CO-CDOWO/179/2020-COMM dated 09.08.2021.**

Sir,

This is in continuation to the procedure/methodology for evaluation of projects on working out of IRR issued vide circular dated 09.08.2021 cited above. The format of IRR calculation is enclosed as Annexure-I. Further, it is noticed that Other Misc. Expenditures (i.e. Rs.76.87 per MT) is wrongly mentioned as per month instead of 'per annum' at Clause 3(a)(ix) of the IRR circular. Hence while calculating the IRR of a project, Other Misc. expenditures may be considered as Rs.76.87 per MT **per annum** only.

The calculation sheet of IRR in excel file is also being sent through email. Regional Offices may kindly note that only the excel cells highlighted in yellow are to be filled manually while rest of the cells are not to be edited/alterd.

Cost of insurance of stock i.e. Rs.35.80 per MT as mentioned at Sl.no.C (3) of worksheet-2 should not be considered for industrial warehouses where it is clear that the insurance charges to be separately collected from the depositors.

It is noticed that so many proposals related to new/additional constructions are pending at corporate office for approval; also there may be some PRs under process in finalization stage at RO level. It will be a cumbersome process to revise those project reports in order to align them as per the latest IRR circular.

Therefore, it has been decided that all the project reports received on or before 31.08.2021 shall be considered for approval irrespective of whether it is prepared as per DSR 2016 or latest schedule. However, Engineering Division must ensure that the PRs received w.e.f. 01.09.2021 should be strictly in accordance with the latest DSR and other CPWD guidelines as mentioned in IRR circular dated 09.08.2021.

(Samuel Praveen Kumar)  
General Manager (Comm.)

Copy to:

- 1) All HoDs, CWC, CO, New Delhi for information.
- 2) PS to MD, CWC, CO, New Delhi for information.
- 3) PS to Director (M & CP), CWC, CO, New Delhi for information.



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### Annexure-I

#### Worksheet-I

<b>Calculation of Internal Rate of Return (IRR)</b>			
<b>CENTRE NAME</b>		<b>Sample</b>	
<b>CAPACITY in MT (excluding Mezzanine)</b>		<b>5000</b>	
<b>CAPACITY in SQM (Mezzanine Floor)</b>			
Sl. No.	Particulars	Details /Area	Amount
<b>1</b>	<b>Capital Cost</b>		Fig In Rs Lakh
	Cost of Land including registration charges, if any (as per norms)	In lakh Rs	0.00
	Cost of Construction (including cost of Mezzanine)	In lakh Rs	375.00
	Cost of Equipments (LWB etc)	In lakh Rs	0.00
	<b>Total Capital Cost</b>	In lakh Rs	<b>375.00</b>
<b>2</b>	<b>Occupancy level (%) (first Year)</b>	%	85.00%
<b>3</b>	<b>Capacity in MT</b>		
	(a) Existing capacity	MT	5000.00
	(b) Capacity to be added	MT	5000.00
	(c) Total Capacity after Addition.	MT	10000.00
	(d) Capacity utilization in MT.	MT	4250.00
<b>4</b>	<u>Cost/ Revenue escalation per annum</u>		
	Storage Income	%	6.00%
	MF Charges	%	6.00%
	Any other Income (dessa etc)	%	6.00%
	Escalation in Pay & allowances PA	%	6.00%
	Escalation in Other Expenditure PA	%	4.12%
<b>5</b>	Expected No of years for commencement after 2020-21 (pre commencement escalation)	Years	3
<b>6</b>	<b>Establishment Cost</b>	<b>CTC in lacs</b>	<b>No of Employee</b>
	No of additional Employees (Grade A & B)	18.40	0
	Additional Employees (Grade C)	13.20	1
	Total (Avg weighted Employee Cost)	13.20	1
<b>7</b>	Salvage Value of construction cost after 30 years	%	5.00%
<b>8</b>	Depreciation Rate on SLM basis	%	3.17%
<b>9</b>	Income Tax Rate	%	25.17%
<b>10</b>	<b>Effective IRR of the Project</b>	%	<b>12.05%</b>

**Note** Inputs are to be made in Yellow cells only



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## Worksheet-2

CENTRE NAME		Sample	CAPACITY IN MT			5000
SL No	Particulars	Details	Space Utilized	Tariff in RS MT /PM	Amt PM (Lacs Rs)	Amt PA (LACS)
<b>A</b>	<b>CAPACITY IN MT</b>	-				
	Total available Storage Area (Excl. Mezzanine Floor)	MT	5000			
	Total available Storage Area (Mezzanine Floor)	MT	0			
	Capacity Utilization (taken)	%	85%			
	Total Utilized capacity in MT	MT	4250			
<b>B</b>	<b>SOURCES OF REVENUE (first Year)</b>					
1	<u>Storage Revenue</u>					
	a) Food Grains		4250	128.39	5.46	65.48
	b) Industrial					
	c) Others		0	0.00	0.00	0.00
	<b>Sub total</b>		<b>4250</b>	<b>128.39</b>	<b>5.46</b>	<b>65.48</b>
2	Gross M.F. Charges			0	0.00	0.00
	MF Expenses	92.47%		0	0.00	0.00
	Net M F Margin	7.53%		0	0.00	1
3	Income of other services, if any.	Lump Sum			0.00	0.00
	<b>Total revenue at 85% Capacity</b>				<b>5.46</b>	<b>66.48</b>
<b>C</b>	<b>EXPENDITURE</b>	(in Lakh)	Cost 2020-21 per MT of available Capacity (in Rs.)	Cost on Commencement	Amt PM (Lacs Rs)	Amt PA (Lacs)
1	Pay & Allowances	13.20	264.00	314.43	1.31	15.72
2	Repairs & Maintainces		28.92	32.64	0.14	1.63
3	Insurance-Stocks		35.80	40.41	0.17	2.02
4	Insurance-Building		9.83	11.09	0.05	0.55
5	Chemical/ Covers /Dunnages		20.76	23.43	0.10	1.17
6	Travelling expenses		5.62	6.34	0.03	0.32
7	wages		16.55	18.68	0.08	0.93
8	Rates & Taxes		43.60	49.21	0.21	2.46
9	Estt. Others		96.32	108.72	0.45	5.44



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10	Other Expenditures		76.87	86.77	0.36	4.34
11	Project specific expenses (Lease Rent)		0.00	0.00	0.00	0.00
<b>TOTAL Expenditure (First Year)</b>			<b>598.27</b>	<b>691.73</b>	<b>2.88</b>	<b>34.59</b>
<b>Cash Surplus in First Year at 85% utilization</b>					2.57	31.89

### Worksheet-3

CENTRE NAME		Sample					CAPACITY IN MT				5000						
		6.00%	6.00%	6.00%			6.00%	4.12%	3.17%		25.17%					1.1205	
Year	Capital Outflows	Inflows					Outflows				Surplus or PBT	Tax Outflows	Depreciation added	Net Cash flows after Tax	P V Factor	NPV	
		Storage income	MF income	Others Incomes	Occupancy Level in %	Total	Establishment	Other Expenditure	Depreciation	Total Operational expenditure							
0	375										-375.00				-375.00	1.00	-375.00
1		65.48	1.00	0.00	85%	66.48	15.72	18.87	11.89	46.47	20.01	5.04	11.89	26.86	0.89	23.97	
2		69.41	1.06	0.00	85%	70.47	16.66	19.64	11.89	48.19	22.27	5.61	11.89	28.55	0.80	22.74	
3		73.57	1.12	0.00	85%	74.70	17.66	20.45	11.89	50.00	24.69	6.22	11.89	30.37	0.71	21.58	
4		77.99	1.19	0.00	85%	79.18	18.72	21.29	11.89	51.91	27.27	6.86	11.89	32.30	0.63	20.48	
5		82.67	1.26	0.00	85%	83.93	19.85	22.17	11.89	53.91	30.02	7.56	11.89	34.35	0.57	19.44	
6		87.63	1.34	0.00	85%	88.96	21.04	23.09	11.89	56.01	32.95	8.29	11.89	36.55	0.51	18.46	
7		92.88	1.42	0.00	85%	94.30	22.30	24.04	11.89	58.22	36.08	9.08	11.89	38.88	0.45	17.53	
8		98.46	1.50	0.00	85%	99.96	23.64	25.03	11.89	60.55	39.41	9.92	11.89	41.38	0.40	16.65	
9		104.36	1.59	0.00	85%	105.96	25.06	26.06	11.89	63.00	42.96	10.81	11.89	44.03	0.36	15.81	
10		110.63	1.69	0.00	85%	112.32	26.56	27.13	11.89	65.58	46.74	11.76	11.89	46.86	0.32	15.01	
11		117.26	1.79	0.00	85%	119.05	28.15	28.25	11.89	68.29	50.76	12.78	11.89	49.87	0.29	14.26	
12		124.30	1.90	0.00	85%	126.20	29.84	29.41	11.89	71.14	55.05	13.86	11.89	53.08	0.26	13.55	
13		131.76	2.01	0.00	85%	133.77	31.63	30.62	11.89	74.15	59.62	15.01	11.89	56.50	0.23	12.87	
14		139.66	2.13	0.00	85%	141.80	33.53	31.89	11.89	77.31	64.49	16.23	11.89	60.15	0.20	12.22	
15		148.04	2.26	0.00	85%	150.30	35.54	33.20	11.89	80.63	69.67	17.54	11.89	64.02	0.18	11.61	
16		156.93	2.40	0.00	85%	159.32	37.68	34.57	11.89	84.13	75.19	18.93	11.89	68.15	0.16	11.03	
17		166.34	2.54	0.00	85%	168.88	39.94	35.99	11.89	87.82	81.06	20.40	11.89	72.55	0.14	10.48	
18		176.32	2.69	0.00	85%	179.01	42.33	37.48	11.89	91.70	87.32	21.98	11.89	77.23	0.13	9.95	
19		186.90	2.85	0.00	85%	189.76	44.87	39.02	11.89	95.78	93.97	23.65	11.89	82.21	0.12	9.46	
20		198.12	3.03	0.00	85%	201.14	47.57	40.63	11.89	100.08	101.06	25.44	11.89	87.51	0.10	8.98	
21		210.00	3.21	0.00	85%	213.21	50.42	42.30	11.89	104.61	108.60	27.33	11.89	93.15	0.09	8.53	



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22		222.60	3.40	0.00	85%	226.00	53.45	44.04	11.89	109.38	116.63	29.35	11.89	99.16	0.08	8.11
23		235.96	3.60	0.00	85%	239.56	56.65	45.86	11.89	114.40	125.16	31.50	11.89	105.55	0.07	7.70
24		250.12	3.82	0.00	85%	253.94	60.05	47.75	11.89	119.69	134.25	33.79	11.89	112.35	0.07	7.31
25		265.12	4.05	0.00	85%	269.17	63.65	49.71	11.89	125.26	143.91	36.22	11.89	119.58	0.06	6.95
26		281.03	4.29	0.00	85%	285.32	67.47	51.76	11.89	131.12	154.20	38.81	11.89	127.27	0.05	6.60
27		297.89	4.55	0.00	85%	302.44	71.52	53.90	11.89	137.31	165.14	41.56	11.89	135.46	0.05	6.27
28		315.77	4.82	0.00	85%	320.59	75.81	56.12	11.89	143.82	176.77	44.49	11.89	144.16	0.04	5.95
29		334.71	5.11	0.00	85%	339.82	80.36	58.43	11.89	150.68	189.15	47.61	11.89	153.42	0.04	5.65
30		354.79	5.42	18.75	85%	378.96	85.18	60.84	11.89	157.91	221.06	55.64	11.89	177.30	0.03	5.83
<b>Total</b>	<b>375.00</b>	<b>5177</b>	<b>79</b>	<b>19</b>		<b>5275</b>	<b>1243</b>	<b>1080</b>	<b>357</b>	<b>2679</b>	<b>2220</b>	<b>653</b>	<b>357</b>	<b>1924</b>		<b>0.00</b>

IRR  
30  
Year  
s

**12.05**  
%