

	A	B	C	D	E	F	G	H	I
1			Version 0.2.1	https://www.dbhd-hlw.de/ + http://www.ing-goebel.de					
2		Calculation 8x DBHD 1.4 nuclear repository International							
3		Last edit: 19. February 2019 / Dipl.-Ing. Volker Goebel DE / Nuclear Repository Planner ww							
4		Capacity : 2.047 HLW Containers Germany / plus 577 HLW Containers from Switzerland							
5		Repository-Storage-Depth : from -1.350 Meters down to -2.100 Meters							
6		Based on : Draft-Planning from 2014 - 2019 actually in Version 1.4 with Time Table							
7									
8									
9		Type of invest	Amount	Offer / Quote	Factor	Total	Comment	dwg	
10				or hint from :					
11		Repository Plans	2014-2018 (4 yrs)	Ing. V. Goebel+T.	375'000 €	1'875'000 €	Draft-Plans, B-Plans	yes	
12		Probe-Drillings	16 x	Prof. Dr. M. Reich	8'500'000 €	136'000'000 €	Cores > -3.800 m		
13		8x Land Purchase	7,7 km2	from local owners		88'000'000 €	8 x 110.000 m2	yes	
14		Shaft-Boring-Ma.	2 x SBM	Herrenknecht AG	60'000'000 €	120'000'000 €	2 yrs. delivery time	yes	
15		External streets	54 km	make-over		16'000'000 €	new / enhance		
16		DB Rail Connection	4 x	only last meters		24'000'000 €	4 of 8 locations		
17		E-powerconnection	8 x	local Vattenfall		20'000'000 €	10 kV med. voltage		
18		Water-connection	8 x	incl. water		24'000'000 €	10 bar with DN 200		
19		Internal Logistics		anticipation		40'000'000 €	8 building sites	yes	
20		Drill platform core	8 x	43.000 m3	1'000 €	344'000'000 €	floors and walls	yes	
21		Mat. storage ring	7 x	70.000 m3	900 €	504'000'000 €	floors and walls	yes	
22		Conveyor Belts	4 x			80'000'000 €	diverse types		
23		Heavy load trucks				12'000'000 €	MB Dump trucks		
24		Compensationes	20.000 Shares DE	direct local people	30'000 €	600'000'000 €	payment not bribe	yes	
25		Compensationes	5.667 Shares CH	direct local people	30'000 €	170'000'000 €	payment not bribe	yes	
26		Planning Offices	Scientific expertise	many disciplines		164'000'000 €	over 14 years		
27		Approval Fees		many agencies		66'000'000 €	to Gov. Agencies		
28		Startfound. SBM	8 x	Thyssen Schachtbau	3'000'000 €	24'000'000 €	temp. Structures		
29		Shaft Drills D=12 m	8 x	Thyssen Schachtbau	35'000'000 €	280'000'000 €	autom. Maschine		
30		Spray-concr.-wall	9,3 m2 x 2.100 m	19.530 m3 x 8	600 €/m3	94'000'000 €	steel-fibre-amored	yes	
31		Shaft completion	4 sets	Siemag Tecberg	30'000'000 €	120'000'000 €	Vent., Transport		
32		Air-Conditioning	8 x	Siemag Tecberg	7'000'000 €	56'000'000 €	cold dry air IN		
33		Flow-Ice Piping	8 x	Siemag Tecberg	7'000'000 €	56'000'000 €	69 Liters / Sec.		
34		Cable-Drum-Houses	8 x	140.000 m3 S.T.	1'000 €	1'120'000'000 €	Drum-Diam.=14 m		
35		Work-Over Rigs	3 x	Steelbuilders	3'200'000 €	9'600'000 €	with return pulley		
36		Dyneema Ropes	13 x	Gleistein DE	3.900.000	50'000'000 €	D=80 mm 2.100 m		
37		Transition Cone	8 x	concrete constr.	1'000'000 €	8'000'000 €	12 m. to 21 m.		
38		Hole-opening	8 x	to Diam. = 21 m.	5'600'000 €	44'800'000 €	with chain-saws		
39		Staff 80 years	50 Man&Woman	4 h. shifts down t.		457'000'000 €	Work & Safety		
40		Rocksalt-Salt-Sale	8 x 350.000 m3	rough quality	50 €/m3	-140'000'000 €	Asse/M./Gorleben	K+S	
41		Concrete-Pellets	328 Pellets	5.280 m2 x 328	600 €/m3	1'040'000'000 €	Quality-Concrete	yes	
42		Sand/fine gravel	328 Layers 2m	692 m3 x 328	70 €/m3	159'000'000 €	D = max. 3 mm		
43		Magnetit powder	328 Portions	264 m3 x 328	680 €/m3	59'000'000 €	Rio Tinto, Billiton		
44		Closure works	8 x	own Salt grain		80'000'000 €	Salt + M. Pressure		
45		building back	8 x			16'000'000 €	farmland again		
46		Unforseeables	4%			237'731'000 €	not BER airport		
47		Total	February 2019	Version 21		6'181'006'000 €			
48									
49									
50		plus HLW containers, plus rail-transport, plus law-cases				6,2 Mrd. EUR			
51									
52									
53									