

The State Electricity Authority
The State Electric Power Works

KEFLAVIK TRANSMISSION SYSTEM
AND CONVERTER STATION
COST REPORT PR. 31.12.1960

Reykjavík, March 1961

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6.3.61

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	Invoices \$	Interest \$	Local cost kr.	Exchange adjustment kr.	Interest kr.	Taxes and duties kr.	Total kr.
Extension of the transformer station at Ellidaar	175.682,58	4.200	2.146.000	95.000	21.000	1.394.000	3.656.000
H.T. line Ellidaar- Keflavik Airport	96.940,50	2.300	5.132.000	1.930.000	279.000	773.000	8.114.000
Extension of the transformer station at Keflavik	68.282,05	1.600	1.176.000	366.000	57.000	580.000	2.179.000
Converter station at Keflavik Airport	243.461,33	5.800	7.227.000	2.669.000	386.000	2.088.000	12.370.000
Total	584.366,46	13.900	15.681.000	5.060.000	743.000	4.835.000	26.319.000
		Interest in \$ at kr. 38,10					<u>530.000</u>
					Sub total		26.849.000
		Invoices in \$ at kr. 38,10					<u>22.264.000</u>
					Sub total		49.113.000
		Sales tax and materials from Czechoslovakia, not included above					<u>301.000</u>
		Total cost in kr.					<u>49.414.000</u>

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	Materials		Construction and erection		Total
	Transporta- tion etc	Handling and adm	Direct local costs	Prepara- tion and planning adm	
A Extension of the transformer station at Ellidaár	212.000	134.000	1.700.000	...	2.146.000
B H.T. Line Ellidaár- Keflavik Airport	493.000	295.000	3.836.000	160.000	5.132.000
C Extension of the transformer station at Keflavik	91.000	104.000	830.000	72.000	1.176.000
D Converter station at Keflavik Airport	419.000	367.000	5.720.000	240.000	7.227.000
Total	1.215.000	900.000	12.086.000	472.000	15.681.000

Overhead charges

Handling and administration: A, 2% fob-price of materials, B 8%, C and D 4%.
Preparation and planning : B and C, 2% on cif-price of materials + direct
local cost; D, 2% on same less the amounts paid
to contractors.

Supervision and administra-
tion : B to D, 20% on labour wages + 5% on amounts paid
to contractors.

	Cost in \$	Cost in kr.	Cost in kr.
<u>Materials and equipment</u>			
Invoices, fob.	175.682,58		
Transportation etc		212.000	
Banking		100.000	
Handling and administration		134.000	446.000
<u>Construction and erection</u>			
Estimated by Sogsvirkjun			1.700.000
<u>Exchangement adjustment</u>			
50,6% of kr. 187.000			95.000
Sub total	175.682,58		2.241.000
<u>Interest</u>			
3% p.a. of \$ 175.682 for 9 1/2 months	4.200,00		
5% p.a. of kr. 541.000 for 9 1/2 months			21.000
Sub total			2.262.000
<u>Taxes and duties</u>			1.394.000
<u>Total</u>	<u>179.882,58</u>		3.656.000
Cost in \$ at kr. 38,10			<u>6.854.000</u>
<u>Total cost in kr.</u>			<u>10.510.000</u>

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	Cost in \$	Cost in kr.	Cost in kr.
<u>Materials</u>			
Invoices, fob	96.940,50		
Transportation etc		493.000	
Banking		34.000	
Handling and administration		<u>295.000</u>	
			822.000
<u>Erection</u>			
Direct local costs		3.836.000	
Preparation and planning		160.000	
Supervision and administration		<u>314.000</u>	
			4.310.000
<u>Exchange adjustment</u>			
50,6% of kr. 3.815.000			<u>1.930.000</u>
Sub total	96.940,50		7.062.000
<u>Interest of cost per sept. 30.</u>			
3% p.a. of \$ 96.940 for 9 1/2 months	2.300,00		
5% p.a. of kr. 7.062.000 for 9 1/2 months			<u>279.000</u>
Sub total			7.341.000
<u>Taxes and duties</u>			
			<u>773.000</u>
<u>Total</u>	<u>99.240,50</u>		8.114.000
Cost in \$ at kr. 38,10			<u>3.781.000</u>
<u>Total cost in kr.</u>			<u>11.895.000</u>

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	Cost in \$	Cost in kr.	Cost in kr.
<u>Materials and equipment</u>			
Invoices, fob	68.282,05		
Transportation etc		91.000	
Banking		36.000	
Handling and administration		<u>104.000</u>	
			231.000
<u>Construction and erection</u>			
Direct local cost		830.000	
Preparation and planning		72.000	
Supervision and administration		<u>43.000</u>	
			945.000
<u>Exchange adjustment</u>			
50,6% of kr. 723.000			366.000
Sub total	68.282,05		1.542.000
<u>Interest of cost per Sept. 30.</u>			
3% p.a. of \$ 68.282 for 9 1/2 months	1.600,00		
5% p.a. at kr. 1.441.000 for 9 1/2 months			<u>57.000</u>
Sub Total			1.599.000
<u>Taxes and duties</u>			
			<u>580.000</u>
Total	<u>69.882,05</u>		2.179.000
			<u>2.662,000</u>
Total cost in kr.			<u>4.841.000</u>

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	Cost in \$	Cost in kr.	Cost in kr.
<u>Materials and equipment</u>			
Invoices, fob.	241.078,47		
Transportation etc.		419.000	
Banking		120.000	
Handling and administration		<u>367.000</u>	
			906.000
<u>Construction and erection</u>			
Direct local cost		5.720.000	
Preparation and planning		240.000	
Supervision and administr.		361.000	
Equipment contractor	2.382,86	<u> </u>	
			6.321.000
<u>Exchange adjustment</u>			
50,6% of kr. 5.275.000			2.669.000
Sub total	243.461,33		9.896.000
<u>Interest of cost per Sept. 30.</u>			
3% p.a. of \$ 243.461 for 9 1/2 months	5.800,00		
5% p.a. of kr. 9.742.000 for 9 1/2 months			386.000
Sub total	249.261,33		10.282.000
<u>Taxes and duties</u>			
			2.088.000
Total	<u>249.261,33</u>		12.370.000
	Cost in \$ kr. 38,10		<u>9.497.000</u>
		Total cost in kr.	<u>21.867.000</u>

Cost per 30.9.60 in kr.	Constr. and erection Direct local cost	Materials and equipm. Transpor- tation etc.	Total	% of Grand total
Extension of the transformer station at Ellidaár	(1.700.000)	212.000	212.000	1.87
H.T. line Ellidaár- Keflavik Airport	3.835.000	493.000	4.328.000	38.15
Extension of the transformer station at Keflavik	730.000	90.000	820.000	7.23
Converter station at Keflavik Airport	5.566.000	419.000	5.985.000	52.75
	10.131.000	1.214.000	11.345.000	100.00

Explanation

Funds provided previous to the devaluation of the icel. kr. 1 Febr. 1960 amounted to 10 million kr. at 25.296 kr/\$, equivalent to \$ 395.319,42. At the new rate, 38.10 kr/\$, this amounts to kr. 15.061.669,90, an increase of 50.6% to be included in the local cost. This increase is divided in proportion to the above total cost amounts, i.e. the transformer station at Ellidaár is allotted 50.6% of kr. 187.000, the H.T. line 50.6% of kr. 3.815.000 etc.

The erection cost for the extension at Ellidaár is according to informal informations from Sogsvirkjun. No portion of the above 10 million kr. was paid to Sogsvirkjun for this cost, which accordingly is not adjusted here to the devaluation of the krona.

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Particulars	ORDERS RARIK NUMBER		
	863	869	Total
<u>Paid in \$</u>			
Invoices, see sep.list Total \$	171.254,00	4.428,58	175.682,58
<u>Cost paid in kr.</u>			
Transportation	kr. 184.598,60	11.316,40	195.915.00
Warehousing	" 609.00	-	609.00
Insurance	" 18.173.77	484.75	18.658.52
Testing	" 8.936.00	-	8.936.00
Insurance refund	" - 12.367.90	-	+ 12.367.90
<u>Total kr.</u>	<u>199.949.47</u>	<u>11.801.15</u>	<u>211.750.62</u>
<u>Banking</u>			
Provision and charges	Total kr. 96.191.40	3.699.20	99.890.60
<u>Taxes and duties</u>			
Import licence tax	kr. 28.000.00	918.00	28.918.00
Import duties	" 1.312.985.00	52.045.00	1.365.030.00
<u>Total kr.</u>	<u>1.340.985.00</u>	<u>52.963.00</u>	<u>1.393.948.00</u>
<u>GRAND TOTAL KR.</u>			
Paid in \$ at 38.10	kr.6.524.777,40	168.728.90	6.693.506.30
Paid in kr.	" 1.637.125.87	68.463.35	1.705.589.22
	<u>kr.8.161.903.27</u>	<u>237.192.25</u>	<u>8.399.095.52</u>

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ORDERS RARIK NUMBER

Particulars	860	865	970	976	TOTAL
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Paid in \$

Invoices, see separate list Total \$ 20,506.00 43,768.66 2,160.00 1,847.39 68,282.05

Cost paid in kr.

Transportation	kr. 29,081.30	35,603.90	667.30	558.90	65,911.40
Warehousing	" 439.00	1,160.00	-	-	1,599.00
Insurance	" 3,240.61	4,601.78	335.58	257.42	8,435.39
Interest to Strömberg	" 14,581.10	-	-	-	14,581.10

Total kr. 47,342.01 41,365.68 1,002.88 816.32 90,526.89

Banking

Total kr. 10,007.70 24,549.45 610.50 565.00 35,732.65

Taxes and duties

Currency licence tax	kr. 3,178.56	7,300.00	-	-	10,478.56
Import duties	" 163,722.50	338,686.50	36,105.00	30,555.00	569,069.00

Total kr. 166,901.06 345,986.50 36,105.00 30,555.00 579,547.56

GRAND TOTAL KR.

Paid in \$ at 38.10	kr. 781,278.60	1,667,585.95	82,296.00	70,385.54	2,601,546.09
Paid in kr.	" 224,250.77	411,901.63	37,718.38	31,936.32	705,807.10

Kr. 1,005,529.37 2,079,487.58 120,014.38 102,321.86 3,307,353.19

The State Electricity Authority
The State Electric Power Works

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INVOICES AND EXPENSES COVERING MATERIALS
AND EQUIPMENT FOR KEFLAVIK AIRPORT
CONVERTER STATION
GIB/sg

6.3.61

ORDERS RARIK NUMBER

Particulars	860	865	868	1238	1270	TOTAL
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Paid in \$

Invoices, see separate list	Total \$	179.459.00	39.904.47	10.750.00	10.260.00	705.00	241.078.47
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Cost paid in kr.

Invoice (\$21.00)	kr.	182.876.65	33.067.60	16.471.80	4.310.05	14.044.00	800.10
Transportation	"	2.900.00	1.000.00	-	-	-	250.770.10
Warehousing	"	27.600.00	4.200.00	1.126.60	1.611.57	168.44	3.900.00
Insurance	"	129.200.00	-	-	-	-	34.706.61
Interest to Strömberg	"	-	-	-	-	-	129.200.00

Total kr.	342.576.65	38.267.60	17.598.40	5.921.62	15.012.54	419.376.81
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Banking

Provision and charges

Total kr.	91.000.00	22.400.00	5.018.30	1.240.20	85.55	119.744.05
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Taxes and duties

Currency licence tax	kr.	27.900.00	6.700.00	1.757.00	1.800.00	-	38.157.00
Import duties	"	1.516.737.50	308.642.50	36.055.00	174.006.00	14.435.00	2.049.876.00
Total kr.	1.544.637.50	315.342.50	37.812.00	175.806.00	14.435.00	2.088.033.00	

GRAND TOTAL KR.

Paid in \$ at 38.10	kr.	6.837.387.90	1.520.360.30	409.575.00	390.906.00	26.860.50	9.185.089.70
Paid in kr.	"	1.978.214.15	376.010.10	60.428.70	182.967.82	29.533.19	2.627.153.86
Total	kr.	8.815.602.05	1.896.370.40	470.003.70	573.873.82	56.393.59	11.812.243.56

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13 ERECTION OF THE 66 kV H.T. LINE
ELLIDAÁR-KEFLAVIK AIRPORT
DIRECT LOCAL COSTS
Glb/sg

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Particulars/Year	1959	1960	Total
0 Consultants	-	-	-
1 Labour, wages	1.452.811.96	68.737.47	1.521.549.43
2 Boarding etc.	175.215.67	7.688.88	182.904.55
3 Materials from stock	191.824.09	3.230.07	195.054.16
4 Materials, other	286.568.69	14.516.81	301.085.50
5 Contractors etc.	80.407.53	341.615.57	422.023.10
6 Transportation etc.	1.123.768.78	81.558.50	1.205.327.28
9 Miscellaneous	3.271.05	4.903.33	8.174.38
<u>Total</u>	<u>3.313.867.77</u>	<u>522.250.63</u>	<u>3.836.118.40</u>

The State Electricity Authority
The State Electric Power Works
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COST OF EXTENSION OF THE TRANSFORMER
STATION AT KEFLAVIK DIRECT LOCAL COSTS
GIB/sg

Particulars/Year	Construction		Erection		Grand Total
	1959	1960	1959	1960	
0 Consultants		25.969.62	-	1.567.64	27.537.26
1 Labour, wages	-	94.973.04	-	66.155.84	161.128.88
2 Boarding etc.	-	13.963.72	525.10	13.764.86	28.253.68
3 Material from stocks	-	974.00	-	78.256.12 ¹⁾	79.230.12
4 Materials, other	-	23.419.32	-	41.068.04	64.487.36
5 Contractors etc.	-	242.990.08	600.00	136.253.05	379.843.13
6 Transportation etc.	3.933.25	73.052.80	2.277.95	7.584.78	86.848.78
9 Miscellaneous	-	2.150.50	-	585.80	2.736.30
	3.933.25	477.493.08	3.403.05	345.236.13	830.065.51

1) Materials from Czecho-Slovakia
for kr. 48.789.00 excluded

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Particulars	Construction of building		Erection of machines etc.		Grand Total
	1959	1960	1959	1960	
0 Consultants	230.922.10	21.305.43	252.227.53	-	252.227.53
1 Labour, wages	3.385.85	9.361.00	12.746.85	163.391.27	935.477.22
2 Boarding etc	405,50	22.336.10	22.741.60	53.068.41	275.854.34
3 Materials from stocks	9.062.85	50.797.16	59.860.01	37.410.40	140.570.23
4 Materials, other	8.767.18	120.925.15	129.692.33	105.521.98	402.852.84
5 Contractor etc	2.913.796.74	269.700.27 ¹⁾	3.183.497.01	102.536.55	3.371.963.39
6 Transportation etc.	12.520.80	36.266.21	48.787.01	80.408.36	334.127.65
7 Miscellaneous	137.00	2.818.80	2.955.80	88.00	6.829.54
Total	3.178.998.02	533.510.12	3.712.508.14	542.424.97	5.719.902.74

1) Sales tax, kr. 246.171,00 excluded

1) Materials from Czecho-Slovakia for kr. 6.149.00 excluded

The State Electricity Authority
The State Electric Power Works

INVOICES COVERING MATERIALS
AND EQUIPMENT FOR THE ELLIDAÄR
TRANSFORMER STATION EXTENSION
B0/aj

8.3.1961

Order RARIK 863	Date of invoice	Amount \$
Supplier: ASEA - Sweden		
Circuit breakers and insulators	1. 9.59	15,282:00
Foundation Bolts for 66 kV Switchgear	12. 9.59	223:00
Aluminium Pipes	3.11.59	546:00
Relays and Accessories	3.11.59	8,220:00
Steel Structures	4.11.59	4,996:00
Lightning arresters, terminals & breaker parts	4.11.59	66,461:00
Electrical Equipment	14.11.59	1,529:00
One RPG 16 relay st. w/accessories	4.12.59	855:00
One transformer 25000/8333 kVA	9.12.59	<u>73,142:00</u>
		171,254:00
Order RARIK 869		
Supplier: Rheydt - Germany		
400 m 66 kV Oil Filled Cable	22.12.59	<u>4,428:58</u>
Total Ellidaär Transformer Station Extension		175,682:58

The State Electricity Authority
The State Electric Power Works

INVOICES COVERING MATERIALS
AND EQUIPMENT FOR THE 66 kV
TRANSMISSION LINE TO KEFLAVIK
AIRPORT
B6/aj

8.3.1961

	Date of Invoice	Amount \$
Order RARIK 861		
Supplier: Impregno A/B, Helsinki, Finland		
750 Poles and 470 Crossarms (contr. #/2217)	25.11.58	5.323:30
	2.12.58	2.029:55
	17.12.58	8.933:20
	25. 2.59	3.944:30
	5. 6.59	981:67
	6. 6.59	<u>3.645:32</u>
		\$24.857:34
Order RARIK 862		
Supplier: WDM A/G - Germany		
140.000 m A.C.S.R.	18.12.58	39.368:08
Order RARIK 862A		
Supplier: W.T. Henley's - England		
250 compression joints and 3 compressors	20.10.59	2.025:00
Order RARIK 864		
Supplier: Kronprinz A/G - Germany		
Insulators and hardware 	30. 5.59	23.424:43
Order RARIK 866		
Supplier: Ladegaard & Co. A/S - Denmark		
Clevises, back-up channels, bolts etc.	7. 4.59	3.929:65
Order RARIK 867		
Supplier: Electromekano - Sweden		
1200 Vibration dampers	6. 1.59	<u>3.336:00</u>
Total 66 kV Transmission Line		\$ 96.940:50

The State Electricity Authority
The State Electric Power Works

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INVOICES COVERING MATERIALS
AND EQUIPMENT FOR THE TRANS-
FORMER STATION AT KEFLAVIK
BÖ/aj

	Date of Invoice	Amount \$
Order RARIK 860		
Supplier: Strömberg A/S Helsinki, Finland		
1 Scarpa & Magnano 120 kW Power Circuit breaker w/accessories	23. 4.59	8.795:00
Disconnecting switches, steel Structures, instrument Transformers etc. Share of Transformer Station by balance	29. 6.59 30. 6.59	
Insulator columns NTVH/K-10	9. 9.59 9. 3.60	10.983:00 <u>728:00</u>
		20.506:00
Order RARIK 865		
Supplier: AEG, Frankfurt/Main - Germany		
10 MVA Transformer	21. 8.59	33.300:00
Cable end-boxes, supports, brushes & terminals	"	848:50
Lightning arresters	"	2.080:00
10 kV NYCY Cable (800 m) 50 %	"	2.430:00
Addition for special equipment	"	661:65
Increase, sliding scale	"	876:84
Spare windings for 10 MVA transformer	21. 8.59	2.600:00
" bush 110 kV	"	400:00
Gasket material		47:00
" for transformer		57:50
Increase, sliding scale		67:37
Automatic volt control equipment	22. 2.60	<u>399:80</u>
		43.768:66
Order RARIK 970		
Supplier: General Electric		
Relays etc.	19. 4.60	2.160:00
Order RARIK 976		
Supplier: Westinghouse		
Switches, relays etc. # 50986	12. 8.60	894:00
# 52774	26. 8.60	815:24
#=57738	4.10.60	<u>138:15</u>
		68.282:05

8.3.1961

	Date of Invoice	Amount \$
Order RARIK 860		
Supplier: Strömberg A/S, Helsinki, Finland		
1 Scarpa & Magnani 120 kV Power Circuit Breaker w/accessories	23. 4.59	8.795:00
Disconnecting switches, steel structures instruments, trans- formers etc.	29. 6.59	
Share of converter station	30. 6.59	
By balance	1. 9.59	857:00
1 Synchronous motor, 5.800 kW, 6000 V, 50 cps		
1 Synchronous generator, 7000 kVA, 4160 V, 60 cps incl. accessories	1. 9.59	90.850:00
1 Delbag air filter w/accessories	29. 9.59	5.040:00
1 WEKA-64 ventilator w/accessories	14.11.59	932:00
1 12 field steel sheet enclosed switchboard w/accessories	21.12.59	72.605:00
Viscinal for Delbag air filter	3. 8.40	<u>380:00</u>
		179.459:00
Order RARIK 865		
Supplier: AEG, Frankfurt/Main		
1 3 phase O.I. power transformer with neutral point OLTC gear, 7500 kVA, 50 cps		29.700:00
10 kV NYCY cable (800 m). Lightning arresters, cable end boxes and accessories		6.020:15
+ 2.23 % sliding scale increase	21. 3.59	796:56
1 compl. spare winding for the 7.5 MVA transformer w/accessories, including 2.17 % sliding scale increase	21. 8.59	2.987:96
1 set automatic voltage control equipment with accessories	22. 2.60	<u>399:80</u>
		39.904:47
Order RARIK 868		
Supplier: Munck A/S, Bergen - Norway		
1 Overhead crane	5.12.59	10.750:00

INVOICES KEFLAVIK AIRPORT
 CONVERTER STATION

	Date of invoice	Amount \$						
Order RARIK 1238								
Supplier: Westinghouse, N.Y.C., U.S.A.								
1 set type 50-DH-150 Wh indoor metal clad switchgear, containing one 1200 H air circuit breaker for use with a 7000 kVA incoming line 3	30. 3.59	10.260:00						
Order RARIK 1270								
Supplier: General Electric, N.Y.C., U.S.A.								
1 Neutral Grounding reactor, indoor, dry type, 500 A continuous + paid as local cost	13. 2.60	705:00						
		<table border="0" style="margin-left: auto;"> <tr> <td style="text-align: right;">\$ 726</td> <td></td> </tr> <tr> <td style="text-align: right;">\$ 21</td> <td></td> </tr> <tr> <td style="border-top: 1px solid black; text-align: right;">705:00</td> <td></td> </tr> </table>	\$ 726		\$ 21		705:00	
\$ 726								
\$ 21								
705:00								
TOTAL, Converter station		241.078:47						