

Project:
Location:
Contract:
Engineer:
Filename: BALANCE LAOD avareg

ETAP
12.6.0H

Study Case: LF

Page: 1
Date: 10-31-2017
SN:
Revision: Base
Config.: Normal

Branch Losses Summary Report

CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	kW	kvar	kW	kvar	kW	kvar	From	To	
R36	5686.2	1014.7	-5685.7	-1014.4	0.6	0.4	100.0	100.0	0.01
C61	1874.4	352.5	-1874.3	-352.4	0.1	0.0	100.0	100.0	0.00
C96	3811.3	661.9	-3810.9	-661.6	0.4	0.3	100.0	100.0	0.01
R106	1874.3	352.4	-1874.1	-352.3	0.2	0.1	100.0	100.0	0.01
R190	1787.1	322.7	-1786.8	-322.5	0.3	0.2	100.0	100.0	0.02
T25 Rasmi wahab	87.0	29.7	-86.5	-28.3	0.6	1.4	100.0	98.9	1.05
R436	1786.8	322.5	-1786.1	-322.0	0.7	0.5	100.0	99.9	0.04
C59	1572.2	277.6	-1572.2	-277.6	0.0	0.0	99.9	99.9	0.00
T4 Bear mtawi'	213.8	44.4	-213.3	-41.1	0.5	3.3	99.9	99.4	0.53
C514	366.6	61.3	-366.6	-61.2	0.0	0.0	99.9	99.9	0.01
Co600	1205.6	216.3	-1205.4	-216.0	0.2	0.3	99.9	99.9	0.02
C463	40.9	4.4	-40.9	-4.4	0.0	0.0	99.9	99.9	0.00
C526	325.7	56.8	-325.7	-56.8	0.0	0.0	99.9	99.9	0.01
T47 Abu_njeem 1	40.9	4.4	-40.7	-4.0	0.2	0.4	99.9	99.2	0.70
C422	265.1	46.2	-265.1	-46.2	0.0	0.0	99.9	99.9	0.00
T42 Abu njeem 2	60.5	10.7	-60.3	-10.0	0.2	0.6	99.9	99.3	0.57
C193	71.9	11.1	-71.9	-11.1	0.0	0.0	99.9	99.9	0.00
T5 Wad algamary 1	193.2	35.1	-192.2	-31.0	1.0	4.1	99.9	99.0	0.87
R455	71.9	11.1	-71.9	-11.1	0.0	0.0	99.9	99.9	0.00
T6 Wad algamary 2	71.9	11.1	-71.6	-10.2	0.3	0.9	99.9	99.2	0.65
C473	3695.5	638.5	-3693.6	-637.1	2.0	1.3	100.0	99.9	0.06
T20 Aqabit al_tarsha	115.3	23.1	-114.4	-20.8	0.9	2.3	100.0	98.9	1.12
C246	3372.6	566.1	-3371.7	-565.5	0.8	0.6	99.9	99.9	0.03
C330	40.9	4.4	-40.9	-4.4	0.0	0.0	99.9	99.9	0.00
T2 Mothalath Al_borg	280.1	66.6	-279.1	-60.9	0.9	5.7	99.9	99.2	0.75
T54 Wad algamary 3	40.9	4.4	-40.7	-4.0	0.2	0.4	99.9	99.2	0.70
C128	3270.1	550.0	-3269.7	-549.7	0.4	0.3	99.9	99.9	0.01
T17 Al_baladiya	101.6	15.6	-101.4	-14.4	0.3	1.1	99.9	99.5	0.43
C80	320.7	56.2	-320.7	-56.2	0.0	0.0	99.9	99.9	0.00
C162	2949.0	493.4	-2948.6	-493.1	0.4	0.3	99.9	99.9	0.02
C622	93.1	18.3	-93.1	-18.3	0.0	0.0	99.9	99.9	0.00
T7 Al_deir 1	227.5	37.9	-226.1	-32.2	1.4	5.7	99.9	98.9	0.99
T24 Al-deire 2	93.1	18.3	-92.6	-16.9	0.6	1.5	99.9	99.0	0.90
C56	432.1	91.6	-432.1	-91.6	0.0	0.0	99.9	99.9	0.00
C191	2516.5	401.6	-2516.1	-401.3	0.4	0.2	99.9	99.8	0.02

Project:
Location:
Contract:
Engineer:
Filename: BALANCE LAOD avareg

ETAP
12.6.0H

Study Case: LF

Page: 2
Date: 10-31-2017
SN:
Revision: Base
Config.: Normal

CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	kW	kvar	kW	kvar	kW	kvar	From	To	
T1 Al-masjid Al_kaber	-279.1	-60.9	280.0	66.6	0.9	5.7	99.1	99.9	0.75
C727	152.1	24.9	-152.1	-24.9	0.0	0.0	99.9	99.9	0.00
R950	152.1	24.9	-152.1	-24.9	0.0	0.0	99.9	99.9	0.01
R410	35.2	5.3	-35.2	-5.3	0.0	0.0	99.9	99.8	0.00
T50 Al-baha	116.8	19.6	-114.8	-16.4	2.1	3.3	99.9	97.7	2.13
R1499	35.2	5.3	-35.2	-5.3	0.0	0.0	99.8	99.8	0.00
T49 Shweki	35.2	5.3	-35.0	-5.0	0.2	0.3	99.8	99.2	0.63
C160	2516.1	401.3	-2515.8	-401.1	0.3	0.2	99.8	99.8	0.01
C97	2474.9	396.7	-2474.7	-396.6	0.2	0.1	99.8	99.8	0.01
T52 Bank al_eskan	40.9	4.4	-40.7	-4.0	0.2	0.4	99.8	99.1	0.70
C120	2056.0	326.8	-2055.9	-326.7	0.2	0.1	99.8	99.8	0.01
C450	138.8	3.2	-138.8	-3.2	0.0	0.0	99.8	99.8	0.00
T3 Maskaneh	280.0	66.6	-279.0	-60.9	0.9	5.7	99.8	99.1	0.75
T29 Juret al_dama	138.8	3.2	-137.5	0.0	1.3	3.2	99.8	98.9	0.93
C216	2055.9	326.7	-2055.6	-326.5	0.3	0.2	99.8	99.8	0.01
C100	97.1	16.9	-97.1	-16.9	0.0	0.0	99.8	99.8	0.00
C361	1668.7	255.1	-1668.4	-254.8	0.3	0.2	99.8	99.8	0.02
T18 Al_sheehk	289.8	54.6	-287.5	-45.3	2.3	9.3	99.8	98.5	1.31
T14 Al_markaz	-96.8	-15.8	97.1	16.9	0.3	1.0	99.4	99.8	0.44
C163	1188.6	179.3	-1188.5	-179.3	0.1	0.0	99.8	99.8	0.01
C728	252.4	37.6	-252.4	-37.6	0.0	0.0	99.8	99.8	0.01
T9 Abu al_humas	227.4	37.9	-226.0	-32.2	1.4	5.7	99.8	98.8	0.99
C462	159.4	20.2	-159.4	-20.2	0.0	0.0	99.8	99.8	0.00
T13 Qata't al_jamal	93.0	17.4	-92.8	-16.4	0.2	1.0	99.8	99.3	0.43
C280	106.0	12.1	-105.9	-12.1	0.0	0.0	99.8	99.8	0.00
T55 Mana'	53.4	8.1	-53.2	-7.6	0.2	0.5	99.8	99.3	0.48
C419	105.9	12.1	-105.9	-12.1	0.0	0.0	99.8	99.8	0.00
T37 Eshreeteh	-105.2	-10.3	105.9	12.1	0.7	1.9	98.9	99.8	0.88
C365	1071.5	171.6	-1071.4	-171.6	0.1	0.1	99.8	99.8	0.01
C409	117.0	7.6	-117.0	-7.6	0.0	0.0	99.8	99.8	0.00
T39 Jammoq	-116.1	-5.4	117.0	7.6	0.9	2.3	98.9	99.8	0.87
C603	961.8	151.8	-961.6	-151.7	0.2	0.1	99.8	99.7	0.02
T45 Masafi	109.6	19.7	-108.8	-17.7	0.8	2.0	99.8	98.7	1.03
C203	286.8	-38.1	-286.8	38.1	0.0	0.0	99.7	99.7	0.00
C399	503.4	155.0	-503.3	-155.0	0.0	0.0	99.7	99.7	0.01
T10 Meqtaa' duma	171.4	34.8	-170.6	-31.5	0.8	3.3	99.7	98.9	0.82
C117	416.4	125.3	-416.4	-125.3	0.0	0.0	99.7	99.7	0.00

Project:
Location:
Contract:
Engineer:
Filename: BALANCE LAOD avareg

ETAP
12.6.0H

Study Case: LF

Page: 3
Date: 10-31-2017
SN:
Revision: Base
Config.: Normal

CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	kW	kvar	kW	kvar	kW	kvar	From	To	
T22 Da'na	86.9	29.6	-86.4	-28.2	0.6	1.4	99.7	98.7	1.05
C476	214.5	38.0	-214.5	-38.0	0.0	0.0	99.7	99.7	0.00
Co57	100.3	71.8	-100.3	-71.8	0.0	0.0	99.7	99.7	0.00
T16 Sa'ada	101.6	15.6	-101.3	-14.4	0.3	1.1	99.7	99.3	0.43
C319	100.3	71.8	-100.3	-71.8	0.0	0.0	99.7	99.7	0.00
T53 Al_tork	-100.1	-70.7	100.3	71.8	0.2	1.1	99.1	99.7	0.60
C587	121.4	19.6	-121.4	-19.6	0.0	0.0	99.7	99.7	0.00
T21 Al_mustashfah	93.1	18.3	-92.5	-16.9	0.6	1.5	99.7	98.8	0.90
T28 Domet al_wridat	121.4	19.6	-120.4	-17.2	1.0	2.5	99.7	98.6	1.10
C322	286.8	-38.1	-286.8	38.1	0.0	0.0	99.7	99.7	0.00
C461	56.7	9.5	-56.7	-9.5	0.0	0.0	99.7	99.7	0.00
C577	163.5	-59.3	-163.5	59.3	0.0	0.0	99.7	99.7	0.00
T43 Al_jame'a	66.6	11.8	-66.3	-11.1	0.3	0.8	99.7	99.1	0.62
T32 Khalet al_ayaseh	-56.5	-8.9	56.7	9.5	0.2	0.5	99.2	99.7	0.52
C107	169.9	30.5	-169.9	-30.5	0.0	0.0	99.7	99.7	0.00
C518	-6.4	-89.8	6.4	89.8	0.0	0.0	99.7	99.7	0.00
T12 Aqabit gharrarah	169.9	30.5	-168.7	-27.4	1.2	3.1	99.7	98.7	0.99
C517	-121.7	-112.9	121.7	112.9	0.0	0.0	99.7	99.7	0.00
R803	115.2	23.1	-115.2	-23.1	0.0	0.0	99.7	99.7	0.01
C815	-199.7	-116.4	199.8	116.4	0.0	0.0	99.7	99.8	0.01
T19 Kerbit alama	78.1	3.5	-77.7	-2.5	0.4	1.0	99.7	99.2	0.56
C.450	-263.0	-126.1	263.0	126.1	0.0	0.0	99.8	99.8	0.00
R560	0.0	0.0	0.0	0.0			99.8	99.8	0.00
T38 Al_muhtasib	63.2	9.6	-63.0	-9.0	0.3	0.7	99.8	99.2	0.57
C880	-263.0	-126.1	263.0	126.1	0.0	0.0	99.8	99.8	0.01
T46 Al_jebreni	110.7	48.4	-109.7	-46.0	1.0	2.4	99.8	98.3	1.51
T23 Kurza	115.2	23.1	-114.3	-20.8	0.9	2.3	99.7	98.6	1.12
Co130	1205.4	216.0	-1205.3	-216.0	0.0	0.1	99.9	99.9	0.00
Co58	210.9	31.5	-210.9	-31.5	0.0	0.0	99.9	99.9	0.00
R164	846.1	151.8	-846.0	-151.8	0.1	0.0	99.9	99.9	0.01
R844	40.9	4.3	-40.9	-4.3	0.0	0.0	99.9	99.9	0.00
T26 Baten alqar'	107.6	28.4	-106.8	-26.4	0.8	2.0	99.9	98.7	1.16
T34 Al_shadaqa	-40.7	-4.0	40.9	4.3	0.1	0.3	99.6	99.9	0.34
Co999	197.4	29.5	-197.4	-29.5	0.0	0.0	99.9	99.9	0.00
T40 Al_helal	13.5	1.9	-13.5	-1.9	0.0	0.0	99.9	99.8	0.12
Co294	156.5	25.2	-156.5	-25.2	0.0	0.0	99.9	99.9	0.00
T33 Al_mizrab	40.9	4.3	-40.7	-4.0	0.1	0.3	99.9	99.5	0.34

Project:
Location:
Contract:
Engineer:
Filename: BALANCE LAOD avareg

ETAP
12.6.0H

Study Case: LF

Page: 4
Date: 10-31-2017
SN:
Revision: Base
Config.: Normal

CKT / Branch ID	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	kW	kvar	kW	kvar	kW	kvar	From	To	
D711	156.5	25.2	-156.5	-25.2	0.0	0.0	99.9	99.9	0.00
D655	156.5	25.2	-156.5	-25.2	0.0	0.0	99.9	99.9	0.00
D634	95.7	16.0	-95.7	-16.0	0.0	0.0	99.9	99.9	0.00
T27 Al_muntazah	60.8	9.2	-60.5	-8.6	0.2	0.6	99.9	99.3	0.54
D718	35.2	5.3	-35.2	-5.3	0.0	0.0	99.9	99.9	0.00
T41 Al_muntazah 2	60.5	10.7	-60.3	-10.1	0.2	0.6	99.9	99.3	0.57
D240	35.2	5.3	-35.2	-5.3	0.0	0.0	99.9	99.9	0.00
D256	35.2	5.3	-35.2	-5.3	0.0	0.0	99.9	99.9	0.00
D276	35.2	5.3	-35.2	-5.3	0.0	0.0	99.9	99.9	0.00
T48 Inab al_kabeer	-35.0	-5.0	35.2	5.3	0.2	0.3	99.2	99.9	0.63
R734	846.0	151.8	-845.7	-151.6	0.3	0.2	99.9	99.8	0.03
C352	791.9	133.3	-791.8	-133.3	0.1	0.0	99.8	99.8	0.01
T51 Inab al_sagher	53.9	18.2	-53.4	-17.5	0.5	0.8	99.8	98.6	1.21
C558	86.0	13.9	-86.0	-13.9	0.0	0.0	99.8	99.8	0.00
C806	705.8	119.4	-705.7	-119.3	0.1	0.1	99.8	99.8	0.02
T35 Al_shuqfan	-84.9	-12.1	86.0	13.9	1.1	1.8	98.3	99.8	1.56
R150	417.6	83.5	-417.5	-83.5	0.0	0.0	99.8	99.8	0.00
R1435	167.7	17.1	-167.7	-17.1	0.0	0.0	99.8	99.8	0.01
T8 Karam al_ashqar	120.4	18.7	-120.1	-17.1	0.4	1.6	99.8	99.3	0.51
Co261	75.7	6.0	-75.7	-6.0	0.0	0.0	99.8	99.8	0.00
T30 Kafar joul	92.0	11.1	-91.5	-9.7	0.6	1.4	99.8	99.0	0.77
Co645	75.7	6.0	-75.7	-6.0	0.0	0.0	99.8	99.8	0.00
Co528	34.8	1.7	-34.8	-1.7	0.0	0.0	99.8	99.8	0.00
T36 Al_estad	40.8	4.3	-40.7	-4.0	0.1	0.3	99.8	99.5	0.34
Co14	0.0	0.0	0.0	0.0			99.8	99.8	
R10	34.8	1.7	-34.8	-1.7	0.0	0.0	99.8	99.8	0.00
T44 Alghwla	-34.7	-1.5	34.8	1.7	0.1	0.2	99.6	99.8	0.25
R380	417.5	83.5	-417.5	-83.5	0.0	0.0	99.8	99.8	0.01
C.20	417.5	83.5	-417.5	-83.5	0.0	0.0	99.8	99.8	0.00
R45	417.5	83.5	-417.5	-83.5	0.0	0.0	99.8	99.8	0.00
C368	207.4	50.2	-207.4	-50.2	0.0	0.0	99.8	99.8	0.00
C811	210.1	33.4	-210.1	-33.3	0.0	0.0	99.8	99.8	0.01
T15 Abu hashim	207.4	50.2	-206.2	-45.3	1.2	4.9	99.8	98.7	1.07
C60	0.0	0.0	0.0	0.0			99.8	99.8	0.00
C440	-35.2	-5.2	35.2	5.2	0.0	0.0	99.8	99.8	0.00
T31 Sam'a	35.2	5.2	-35.1	-5.0	0.1	0.2	99.8	99.5	0.31
Co260	0.0	0.0	0.0	0.0			99.8	99.8	

CKT / Branch	From-To Bus Flow		To-From Bus Flow		Losses		% Bus Voltage		Vd % Drop in Vmag
	kW	kvar	kW	kvar	kW	kvar	From	To	
Co.1032	0.0	0.0	0.0	0.0			99.8	99.8	
T11 Wad ali	174.9	28.1	-174.1	-24.8	0.8	3.4	99.8	99.0	0.75
T56 Al jebreny step up	380.0	184.0	-373.7	-174.5	6.3	9.5	99.6	99.8	0.12
					49.3	125.5			

Project:

ETAP

Page: 6

Location:

12.6.0H

Date: 10-31-2017

Contract:

SN:

Engineer:

Study Case: LF

Revision: Base

Filename: BALANCE LAOD avareg

Config.: Normal
