

Project:
Location:
Contract:
Engineer:
Filename: unbalance~

ETAP
12.6.0H

Study Case: ULF

Page: 1
Date: 11-04-2017
SN:
Revision: Base
Config.: Normal

Branch Loading Summary Report

| CKT / Branch | | | | Cable & Reactor | | | Transformer | | | | |
|--------------|---------|-------|-------|-------------------|----------------|---|---------------------|-----------------|---|------------------|---|
| ID | Conn. | Type | Phase | Ampacity (Amp) | Loading Amp | % | Capability (MVA) | Loading (input) | | Loading (output) | |
| | | | | | | | | MVA | % | MVA | % |
| C.20 | 3-Phase | Cable | A | | 4.21 | | | | | | |
| | | | B | | 4.21 | | | | | | |
| | | | C | | 4.21 | | | | | | |
| C56 | 3-Phase | Cable | A | | 2.87 | | | | | | |
| | | | B | | 2.87 | | | | | | |
| | | | C | | 2.87 | | | | | | |
| C59 | 3-Phase | Cable | A | | 15.72 | | | | | | |
| | | | B | | 15.72 | | | | | | |
| | | | C | | 15.72 | | | | | | |
| C60 | 3-Phase | Cable | A | | 0.00 | | | | | | |
| | | | B | | 0.00 | | | | | | |
| | | | C | | 0.00 | | | | | | |
| C61 | 3-Phase | Cable | A | | 17.31 | | | | | | |
| | | | B | | 17.31 | | | | | | |
| | | | C | | 17.31 | | | | | | |
| C80 | 3-Phase | Cable | A | | 2.63 | | | | | | |
| | | | B | | 2.63 | | | | | | |
| | | | C | | 2.63 | | | | | | |
| C96 | 3-Phase | Cable | A | | 29.37 | | | | | | |
| | | | B | | 29.37 | | | | | | |
| | | | C | | 29.37 | | | | | | |
| C97 | 3-Phase | Cable | A | | 19.28 | | | | | | |
| | | | B | | 19.28 | | | | | | |
| | | | C | | 19.28 | | | | | | |
| C100 | 3-Phase | Cable | A | | 1.29 | | | | | | |
| | | | B | | 1.29 | | | | | | |
| | | | C | | 1.29 | | | | | | |
| C107 | 3-Phase | Cable | A | | 1.58 | | | | | | |
| | | | B | | 1.58 | | | | | | |
| | | | C | | 1.58 | | | | | | |
| C117 | 3-Phase | Cable | A | | 4.88 | | | | | | |
| | | | B | | 4.88 | | | | | | |
| | | | C | | 4.88 | | | | | | |
| C120 | 3-Phase | Cable | A | | 16.26 | | | | | | |
| | | | B | | 16.26 | | | | | | |
| | | | C | | 16.26 | | | | | | |
| C128 | 3-Phase | Cable | A | | 25.09 | | | | | | |
| | | | B | | 25.09 | | | | | | |
| | | | C | | 25.09 | | | | | | |
| C160 | 3-Phase | Cable | A | | 19.59 | | | | | | |

Project:
Location:
Contract:
Engineer:
Filename: unbalance~

ETAP
12.6.0H

Study Case: ULF

Page: 2
Date: 11-04-2017
SN:
Revision: Base
Config.: Normal

| CKT / Branch | | | | Cable & Reactor | | | Transformer | | | | |
|--------------|---------|-------|-------|-------------------|----------------|---|---------------------|-----------------|---|------------------|---|
| ID | Conn. | Type | Phase | Ampacity (Amp) | Loading Amp | % | Capability (MVA) | Loading (input) | | Loading (output) | |
| | | | | | | | | MVA | % | MVA | % |
| C162 | 3-Phase | Cable | B | | 19.59 | | | | | | |
| | | | C | | 19.59 | | | | | | |
| | | | A | | 22.46 | | | | | | |
| C163 | 3-Phase | Cable | B | | 22.46 | | | | | | |
| | | | C | | 22.46 | | | | | | |
| | | | A | | 8.40 | | | | | | |
| C191 | 3-Phase | Cable | B | | 8.40 | | | | | | |
| | | | C | | 8.40 | | | | | | |
| | | | A | | 19.59 | | | | | | |
| C193 | 3-Phase | Cable | B | | 19.59 | | | | | | |
| | | | C | | 19.59 | | | | | | |
| | | | A | | 0.47 | | | | | | |
| C203 | 3-Phase | Cable | B | | 0.47 | | | | | | |
| | | | C | | 0.47 | | | | | | |
| | | | A | | 0.60 | | | | | | |
| C216 | 3-Phase | Cable | B | | 0.60 | | | | | | |
| | | | C | | 0.60 | | | | | | |
| | | | A | | 16.26 | | | | | | |
| C246 | 3-Phase | Cable | B | | 16.26 | | | | | | |
| | | | C | | 16.26 | | | | | | |
| | | | A | | 26.12 | | | | | | |
| C280 | 3-Phase | Cable | B | | 26.12 | | | | | | |
| | | | C | | 26.12 | | | | | | |
| | | | A | | 0.96 | | | | | | |
| C319 | 3-Phase | Cable | B | | 0.96 | | | | | | |
| | | | C | | 0.96 | | | | | | |
| | | | A | | 1.83 | | | | | | |
| C322 | 3-Phase | Cable | B | | 1.83 | | | | | | |
| | | | C | | 1.83 | | | | | | |
| | | | A | | 0.60 | | | | | | |
| C330 | 3-Phase | Cable | B | | 0.60 | | | | | | |
| | | | C | | 0.60 | | | | | | |
| | | | A | | 0.30 | | | | | | |
| C352 | 3-Phase | Cable | B | | 0.30 | | | | | | |
| | | | C | | 0.30 | | | | | | |
| | | | A | | 7.47 | | | | | | |
| C361 | 3-Phase | Cable | B | | 7.47 | | | | | | |
| | | | C | | 7.47 | | | | | | |
| | | | A | | 12.76 | | | | | | |
| C365 | 3-Phase | Cable | B | | 12.76 | | | | | | |
| | | | C | | 12.76 | | | | | | |
| | | | A | | 7.41 | | | | | | |

Project:
Location:
Contract:
Engineer:
Filename: unbalance~

ETAP
12.6.0H

Study Case: ULF

Page: 3
Date: 11-04-2017
SN:
Revision: Base
Config.: Normal

| CKT / Branch | | | | Cable & Reactor | | | Transformer | | | | |
|--------------|---------|-------|-------|-------------------|----------------|---|---------------------|-----------------|---|------------------|---|
| ID | Conn. | Type | Phase | Ampacity (Amp) | Loading Amp | % | Capability (MVA) | Loading (input) | | Loading (output) | |
| | | | | | | | | MVA | % | MVA | % |
| C368 | 3-Phase | Cable | B | | 7.41 | | | | | | |
| | | | C | | 7.41 | | | | | | |
| | | | A | | 2.21 | | | | | | |
| C399 | 3-Phase | Cable | B | | 2.21 | | | | | | |
| | | | C | | 2.21 | | | | | | |
| | | | A | | 5.36 | | | | | | |
| C409 | 3-Phase | Cable | B | | 5.36 | | | | | | |
| | | | C | | 5.36 | | | | | | |
| | | | A | | 1.00 | | | | | | |
| C419 | 3-Phase | Cable | B | | 1.00 | | | | | | |
| | | | C | | 1.00 | | | | | | |
| | | | A | | 0.96 | | | | | | |
| C422 | 3-Phase | Cable | B | | 0.96 | | | | | | |
| | | | C | | 0.96 | | | | | | |
| | | | A | | 2.35 | | | | | | |
| C440 | 3-Phase | Cable | B | | 2.35 | | | | | | |
| | | | C | | 2.35 | | | | | | |
| | | | A | | 0.28 | | | | | | |
| C450 | 3-Phase | Cable | B | | 0.28 | | | | | | |
| | | | C | | 0.28 | | | | | | |
| | | | A | | 1.42 | | | | | | |
| C.450 | 3-Phase | Cable | B | | 1.42 | | | | | | |
| | | | C | | 1.42 | | | | | | |
| | | | A | | 5.77 | | | | | | |
| C461 | 3-Phase | Cable | B | | 5.77 | | | | | | |
| | | | C | | 5.77 | | | | | | |
| | | | A | | 0.46 | | | | | | |
| C462 | 3-Phase | Cable | B | | 0.46 | | | | | | |
| | | | C | | 0.46 | | | | | | |
| | | | A | | 1.30 | | | | | | |
| C463 | 3-Phase | Cable | B | | 1.30 | | | | | | |
| | | | C | | 1.30 | | | | | | |
| | | | A | | 0.30 | | | | | | |
| C473 | 3-Phase | Cable | B | | 0.30 | | | | | | |
| | | | C | | 0.30 | | | | | | |
| | | | A | | 28.03 | | | | | | |
| C476 | 3-Phase | Cable | B | | 28.03 | | | | | | |
| | | | C | | 28.03 | | | | | | |
| | | | A | | 2.16 | | | | | | |
| C514 | 3-Phase | Cable | B | | 2.16 | | | | | | |
| | | | C | | 2.16 | | | | | | |
| | | | A | | 3.24 | | | | | | |

Project:
Location:
Contract:
Engineer:
Filename: unbalance~

ETAP
12.6.0H

Study Case: ULF

Page: 4
Date: 11-04-2017
SN:
Revision: Base
Config.: Normal

| CKT / Branch | | | | Cable & Reactor | | | Transformer | | | | |
|--------------|---------|-------|-------|-------------------|----------------|---|---------------------|-----------------|---|------------------|---|
| ID | Conn. | Type | Phase | Ampacity (Amp) | Loading Amp | % | Capability (MVA) | Loading (input) | | Loading (output) | |
| | | | | | | | | MVA | % | MVA | % |
| C517 | 3-Phase | Cable | B | | 3.24 | | | | | | |
| | | | C | | 3.24 | | | | | | |
| | | | A | | 4.42 | | | | | | |
| C518 | 3-Phase | Cable | B | | 4.42 | | | | | | |
| | | | C | | 4.42 | | | | | | |
| | | | A | | 3.09 | | | | | | |
| C526 | 3-Phase | Cable | B | | 3.09 | | | | | | |
| | | | C | | 3.09 | | | | | | |
| | | | A | | 2.94 | | | | | | |
| C558 | 3-Phase | Cable | B | | 2.94 | | | | | | |
| | | | C | | 2.94 | | | | | | |
| | | | A | | 0.76 | | | | | | |
| C577 | 3-Phase | Cable | B | | 0.76 | | | | | | |
| | | | C | | 0.76 | | | | | | |
| | | | A | | 1.55 | | | | | | |
| C587 | 3-Phase | Cable | B | | 1.55 | | | | | | |
| | | | C | | 1.55 | | | | | | |
| | | | A | | 1.26 | | | | | | |
| C603 | 3-Phase | Cable | B | | 1.26 | | | | | | |
| | | | C | | 1.26 | | | | | | |
| | | | A | | 6.53 | | | | | | |
| C622 | 3-Phase | Cable | B | | 6.53 | | | | | | |
| | | | C | | 6.53 | | | | | | |
| | | | A | | 0.48 | | | | | | |
| C727 | 3-Phase | Cable | B | | 0.48 | | | | | | |
| | | | C | | 0.48 | | | | | | |
| | | | A | | 1.28 | | | | | | |
| C728 | 3-Phase | Cable | B | | 1.28 | | | | | | |
| | | | C | | 1.28 | | | | | | |
| | | | A | | 2.21 | | | | | | |
| C806 | 3-Phase | Cable | B | | 2.21 | | | | | | |
| | | | C | | 2.21 | | | | | | |
| | | | A | | 6.71 | | | | | | |
| C811 | 3-Phase | Cable | B | | 6.71 | | | | | | |
| | | | C | | 6.71 | | | | | | |
| | | | A | | 2.00 | | | | | | |
| C815 | 3-Phase | Cable | B | | 2.00 | | | | | | |
| | | | C | | 2.00 | | | | | | |
| | | | A | | 5.05 | | | | | | |
| C880 | 3-Phase | Cable | B | | 5.05 | | | | | | |
| | | | C | | 5.05 | | | | | | |
| | | | A | | 5.77 | | | | | | |

Project:
Location:
Contract:
Engineer:
Filename: unbalance~

ETAP
12.6.0H

Study Case: ULF

Page: 5
Date: 11-04-2017
SN:
Revision: Base
Config.: Normal

| CKT / Branch | | | | Cable & Reactor | | | Transformer | | | | |
|-----------------------|---------|-------------|-------|-------------------|----------------|---|---------------------|-----------------|------|------------------|------|
| ID | Conn. | Type | Phase | Ampacity (Amp) | Loading Amp | % | Capability (MVA) | Loading (input) | | Loading (output) | |
| | | | | | | | | MVA | % | MVA | % |
| T1 Al-masjid Al_kaber | 3-Phase | Transformer | B | 5.77 | 5.77 | | 0.630 | 0.031 | 14.6 | 0.030 | 14.2 |
| | | | C | | 5.77 | | | 0.031 | 14.6 | 0.030 | 14.2 |
| | | | A | | | | | 0.031 | 14.6 | 0.030 | 14.2 |
| T2 Mothalath Al_borg | 3-Phase | Transformer | B | 0.630 | | | 0.630 | 0.031 | 14.6 | 0.030 | 14.2 |
| | | | C | | | | | 0.031 | 14.6 | 0.030 | 14.2 |
| | | | A | | | | | 0.031 | 14.6 | 0.030 | 14.2 |
| T3 Maskaneh | 3-Phase | Transformer | B | 0.630 | | | 0.630 | 0.031 | 14.6 | 0.030 | 14.2 |
| | | | C | | | | | 0.031 | 14.6 | 0.030 | 14.2 |
| | | | A | | | | | 0.031 | 14.6 | 0.030 | 14.2 |
| T4 Bear mtawi' | 3-Phase | Transformer | B | 0.630 | | | 0.630 | 0.021 | 10.2 | 0.021 | 9.9 |
| | | | C | | | | | 0.021 | 10.2 | 0.021 | 9.9 |
| | | | A | | | | | 0.021 | 10.2 | 0.021 | 9.9 |
| T5 Wad algamary 1 | 3-Phase | Transformer | B | 0.400 | | | 0.400 | 0.036 | 26.9 | 0.035 | 26.4 |
| | | | C | | | | | 0.036 | 26.9 | 0.035 | 26.4 |
| | | | A | | | | | 0.036 | 26.9 | 0.035 | 26.4 |
| T6 Wad algamary 2 | 3-Phase | Transformer | B | 0.250 | | | 0.250 | 0.009 | 10.8 | 0.009 | 10.4 |
| | | | C | | | | | 0.009 | 10.8 | 0.009 | 10.4 |
| | | | A | | | | | 0.009 | 10.8 | 0.009 | 10.4 |
| T7 Al_deir 1 | 3-Phase | Transformer | B | 0.630 | | | 0.630 | 0.041 | 19.6 | 0.041 | 19.3 |
| | | | C | | | | | 0.041 | 19.6 | 0.041 | 19.3 |
| | | | A | | | | | 0.041 | 19.6 | 0.041 | 19.3 |
| T8 Karam al_ashqar | 3-Phase | Transformer | B | 0.250 | | | 0.250 | 0.020 | 24.2 | 0.020 | 23.7 |
| | | | C | | | | | 0.020 | 24.2 | 0.020 | 23.7 |
| | | | A | | | | | 0.020 | 24.2 | 0.020 | 23.7 |
| T9 Abu al_humas | 3-Phase | Transformer | B | 0.630 | | | 0.630 | 0.041 | 19.6 | 0.041 | 19.3 |
| | | | C | | | | | 0.041 | 19.6 | 0.041 | 19.3 |
| | | | A | | | | | 0.041 | 19.6 | 0.041 | 19.3 |
| T10 Meqtaa' duma | 3-Phase | Transformer | B | 0.630 | | | 0.630 | 0.031 | 14.7 | 0.030 | 14.5 |
| | | | C | | | | | 0.031 | 14.7 | 0.030 | 14.5 |
| | | | A | | | | | 0.031 | 14.7 | 0.030 | 14.5 |
| T11 Wad ali | 3-Phase | Transformer | B | 0.250 | | | 0.250 | 0.033 | 39.3 | 0.032 | 38.7 |
| | | | C | | | | | 0.033 | 39.3 | 0.032 | 38.7 |
| | | | A | | | | | 0.033 | 39.3 | 0.032 | 38.7 |
| T12 Aqabit gharrarah | 3-Phase | Transformer | B | 0.630 | | | 0.630 | 0.030 | 14.4 | 0.030 | 14.1 |
| | | | C | | | | | 0.030 | 14.4 | 0.030 | 14.1 |
| | | | A | | | | | 0.030 | 14.4 | 0.030 | 14.1 |
| T13 Qata't al_jamal | 3-Phase | Transformer | B | 0.630 | | | 0.630 | 0.017 | 8.2 | 0.017 | 8.0 |
| | | | C | | | | | 0.017 | 8.2 | 0.017 | 8.0 |
| | | | A | | | | | 0.017 | 8.2 | 0.017 | 8.0 |
| T14 Al_markaz | 3-Phase | Transformer | A | 0.630 | | | 0.630 | 0.024 | 11.7 | 0.024 | 11.4 |

Project:
Location:
Contract:
Engineer:
Filename: unbalance~

ETAP
12.6.0H

Study Case: ULF

Page: 6
Date: 11-04-2017
SN:
Revision: Base
Config.: Normal

| CKT / Branch | | | | Cable & Reactor | | | Transformer | | | | |
|----------------------|---------|-------------|-------|-------------------|----------------|---|---------------------|-----------------|------|------------------|------|
| ID | Conn. | Type | Phase | Ampacity (Amp) | Loading Amp | % | Capability (MVA) | Loading (input) | | Loading (output) | |
| | | | | | | | | MVA | % | MVA | % |
| T15 Abu hashim | 3-Phase | Transformer | B | 0.250 | | | | 0.024 | 11.7 | 0.024 | 11.4 |
| | | | C | | | | | 0.024 | 11.7 | 0.024 | 11.4 |
| | | | A | | | | | 0.042 | 50.5 | 0.041 | 49.6 |
| T16 Sa'ada | 3-Phase | Transformer | B | 0.630 | | | | 0.042 | 50.5 | 0.041 | 49.6 |
| | | | C | | | | | 0.042 | 50.5 | 0.041 | 49.6 |
| | | | A | | | | | 0.020 | 9.4 | 0.019 | 9.2 |
| T17 Al_baladiya | 3-Phase | Transformer | B | 0.630 | | | | 0.020 | 9.4 | 0.019 | 9.2 |
| | | | C | | | | | 0.020 | 9.4 | 0.019 | 9.2 |
| | | | A | | | | | 0.020 | 9.4 | 0.019 | 9.2 |
| T18 Al_sheehk | 3-Phase | Transformer | B | 0.630 | | | | 0.020 | 9.4 | 0.019 | 9.2 |
| | | | C | | | | | 0.020 | 9.4 | 0.019 | 9.2 |
| | | | A | | | | | 0.042 | 20.0 | 0.041 | 19.7 |
| T19 Kerbit alama | 3-Phase | Transformer | B | 0.630 | | | | 0.042 | 20.0 | 0.041 | 19.7 |
| | | | C | | | | | 0.042 | 20.0 | 0.041 | 19.7 |
| | | | A | | | | | 0.012 | 5.8 | 0.012 | 5.7 |
| T20 Aqabit al_tarsha | 3-Phase | Transformer | B | 0.250 | | | | 0.012 | 5.8 | 0.012 | 5.7 |
| | | | C | | | | | 0.012 | 5.8 | 0.012 | 5.7 |
| | | | A | | | | | 0.026 | 30.7 | 0.025 | 30.2 |
| T21 Al_mustashfah | 3-Phase | Transformer | B | 0.630 | | | | 0.026 | 30.7 | 0.025 | 30.2 |
| | | | C | | | | | 0.026 | 30.7 | 0.025 | 30.2 |
| | | | A | | | | | 0.017 | 8.2 | 0.017 | 8.0 |
| T22 Da'na | 3-Phase | Transformer | B | 0.630 | | | | 0.017 | 8.2 | 0.017 | 8.0 |
| | | | C | | | | | 0.017 | 8.2 | 0.017 | 8.0 |
| | | | A | | | | | 0.009 | 4.4 | 0.009 | 4.2 |
| T23 Kurza | 3-Phase | Transformer | B | 0.630 | | | | 0.009 | 4.4 | 0.009 | 4.2 |
| | | | C | | | | | 0.009 | 4.4 | 0.009 | 4.2 |
| | | | A | | | | | 0.026 | 12.2 | 0.025 | 12.0 |
| T24 Al-deire 2 | 3-Phase | Transformer | B | 0.630 | | | | 0.026 | 12.2 | 0.025 | 12.0 |
| | | | C | | | | | 0.026 | 12.2 | 0.025 | 12.0 |
| | | | A | | | | | 0.009 | 4.4 | 0.009 | 4.2 |
| T25 Rasmi wahab | 3-Phase | Transformer | B | 0.250 | | | | 0.009 | 4.4 | 0.009 | 4.2 |
| | | | C | | | | | 0.009 | 4.4 | 0.009 | 4.2 |
| | | | A | | | | | 0.009 | 11.0 | 0.009 | 10.6 |
| T26 Baten alqar' | 3-Phase | Transformer | B | 0.250 | | | | 0.009 | 11.0 | 0.009 | 10.6 |
| | | | C | | | | | 0.009 | 11.0 | 0.009 | 10.6 |
| | | | A | | | | | 0.022 | 26.2 | 0.021 | 25.6 |
| T27 Al_muntazah | 3-Phase | Transformer | B | 0.250 | | | | 0.022 | 26.2 | 0.021 | 25.6 |
| | | | C | | | | | 0.022 | 26.2 | 0.021 | 25.6 |
| | | | A | | | | | 0.024 | 29.0 | 0.024 | 28.5 |
| T28 Domet al_wridat | 3-Phase | Transformer | B | 0.630 | | | | 0.024 | 29.0 | 0.024 | 28.5 |
| | | | C | | | | | 0.024 | 29.0 | 0.024 | 28.5 |
| | | | A | | | | | 0.024 | 11.4 | 0.024 | 11.2 |

Project:
Location:
Contract:
Engineer:
Filename: unbalance~

ETAP
12.6.0H

Study Case: ULF

Page: 7
Date: 11-04-2017
SN:
Revision: Base
Config.: Normal

| CKT / Branch | | | | Cable & Reactor | | | Transformer | | | | |
|----------------------|---------|-------------|-------|-------------------|----------------|---|---------------------|-----------------|------|------------------|------|
| ID | Conn. | Type | Phase | Ampacity (Amp) | Loading Amp | % | Capability (MVA) | Loading (input) | | Loading (output) | |
| | | | | | | | | MVA | % | MVA | % |
| T29 Juret al_dama | 3-Phase | Transformer | B | 0.630 | | | | 0.024 | 11.4 | 0.024 | 11.2 |
| | | | C | | | | | 0.024 | 11.4 | 0.024 | 11.2 |
| | | | A | | | | | 0.027 | 12.9 | 0.027 | 12.6 |
| | | | B | | | | | 0.027 | 12.9 | 0.027 | 12.6 |
| T30 Kafar joul | 3-Phase | Transformer | C | 0.250 | | | | 0.027 | 12.9 | 0.027 | 12.6 |
| | | | A | | | | | 0.017 | 20.7 | 0.017 | 20.3 |
| | | | B | | | | | 0.017 | 20.7 | 0.017 | 20.3 |
| T31 Sam'a | 3-Phase | Transformer | C | 0.250 | | | | 0.017 | 20.7 | 0.017 | 20.3 |
| | | | A | | | | | 0.005 | 6.5 | 0.005 | 6.1 |
| | | | B | | | | | 0.005 | 6.5 | 0.005 | 6.1 |
| T32 Khalet al_ayaseh | 3-Phase | Transformer | C | 0.630 | | | | 0.005 | 6.5 | 0.005 | 6.1 |
| | | | A | | | | | 0.009 | 4.2 | 0.008 | 4.0 |
| | | | B | | | | | 0.009 | 4.2 | 0.008 | 4.0 |
| T33 Al_mizrab | 3-Phase | Transformer | C | 0.250 | | | | 0.009 | 4.2 | 0.008 | 4.0 |
| | | | A | | | | | 0.006 | 7.0 | 0.006 | 6.7 |
| | | | B | | | | | 0.006 | 7.0 | 0.006 | 6.7 |
| T34 Al_shadaqa | 3-Phase | Transformer | C | 0.250 | | | | 0.006 | 7.0 | 0.006 | 6.7 |
| | | | A | | | | | 0.006 | 7.0 | 0.006 | 6.7 |
| | | | B | | | | | 0.006 | 7.0 | 0.006 | 6.7 |
| T35 Al_shuqfan | 3-Phase | Transformer | C | 0.250 | | | | 0.006 | 7.0 | 0.006 | 6.7 |
| | | | A | | | | | 0.014 | 17.3 | 0.014 | 16.9 |
| | | | B | | | | | 0.014 | 17.3 | 0.014 | 16.9 |
| T36 Al_estad | 3-Phase | Transformer | C | 0.250 | | | | 0.014 | 17.3 | 0.014 | 16.9 |
| | | | A | | | | | 0.006 | 7.0 | 0.006 | 6.7 |
| | | | B | | | | | 0.006 | 7.0 | 0.006 | 6.7 |
| T37 Eshreeteh | 3-Phase | Transformer | C | 0.630 | | | | 0.006 | 7.0 | 0.006 | 6.7 |
| | | | A | | | | | 0.018 | 8.7 | 0.018 | 8.5 |
| | | | B | | | | | 0.018 | 8.7 | 0.018 | 8.5 |
| T38 Al_muhtasib | 3-Phase | Transformer | C | 0.630 | | | | 0.018 | 8.7 | 0.018 | 8.5 |
| | | | A | | | | | 0.014 | 6.5 | 0.013 | 6.4 |
| | | | B | | | | | 0.014 | 6.5 | 0.013 | 6.4 |
| T39 Jammoq | 3-Phase | Transformer | C | 0.630 | | | | 0.014 | 6.5 | 0.013 | 6.4 |
| | | | A | | | | | 0.019 | 9.1 | 0.019 | 8.9 |
| | | | B | | | | | 0.019 | 9.1 | 0.019 | 8.9 |
| T40 Al_helal | 3-Phase | Transformer | C | 0.250 | | | | 0.019 | 9.1 | 0.019 | 8.9 |
| | | | A | | | | | 0.003 | 3.1 | 0.002 | 2.7 |
| | | | B | | | | | 0.003 | 3.1 | 0.002 | 2.7 |
| T41 Al_muntazah 2 | 3-Phase | Transformer | C | 0.250 | | | | 0.003 | 3.1 | 0.002 | 2.7 |
| | | | A | | | | | 0.011 | 13.4 | 0.011 | 13.0 |
| | | | B | | | | | 0.011 | 13.4 | 0.011 | 13.0 |
| T42 Abu njeem 2 | 3-Phase | Transformer | C | 0.250 | | | | 0.011 | 13.4 | 0.011 | 13.0 |
| | | | A | | | | | 0.011 | 13.4 | 0.011 | 13.1 |

Project:
Location:
Contract:
Engineer:
Filename: unbalance~

ETAP
12.6.0H

Study Case: ULF

Page: 8
Date: 11-04-2017
SN:
Revision: Base
Config.: Normal

| CKT / Branch | | | | Cable & Reactor | | | Transformer | | | | |
|------------------------|---------|-------------|-------|-------------------|----------------|---|---------------------|-----------------|------|------------------|------|
| ID | Conn. | Type | Phase | Ampacity (Amp) | Loading Amp | % | Capability (MVA) | Loading (input) | | Loading (output) | |
| | | | | | | | | MVA | % | MVA | % |
| T43 Al_jame'a | 3-Phase | Transformer | B | 0.630 | | | | 0.011 | 13.4 | 0.011 | 13.1 |
| | | | C | | | | | 0.011 | 13.4 | 0.011 | 13.1 |
| | | | A | | | | | 0.012 | 5.6 | 0.012 | 5.5 |
| T44 Alghwla | 3-Phase | Transformer | B | 0.250 | | | | 0.012 | 5.6 | 0.012 | 5.5 |
| | | | C | | | | | 0.012 | 5.6 | 0.012 | 5.5 |
| | | | A | | | | | 0.004 | 5.2 | 0.004 | 4.9 |
| T45 Masafi | 3-Phase | Transformer | B | 0.630 | | | | 0.004 | 5.2 | 0.004 | 4.9 |
| | | | C | | | | | 0.004 | 5.2 | 0.004 | 4.9 |
| | | | A | | | | | 0.017 | 7.9 | 0.016 | 7.8 |
| T46 Al_jebreni | 3-Phase | Transformer | B | 0.630 | | | | 0.017 | 7.9 | 0.016 | 7.8 |
| | | | C | | | | | 0.017 | 7.9 | 0.016 | 7.8 |
| | | | A | | | | | 0.017 | 7.9 | 0.016 | 7.8 |
| T47 Abu_njeem I | 3-Phase | Transformer | B | 0.630 | | | | 0.027 | 12.9 | 0.027 | 12.6 |
| | | | C | | | | | 0.027 | 12.9 | 0.027 | 12.6 |
| | | | A | | | | | 0.027 | 12.9 | 0.027 | 12.6 |
| T48 Inab_al_kabeer | 3-Phase | Transformer | B | 0.160 | | | | 0.006 | 10.9 | 0.006 | 10.5 |
| | | | C | | | | | 0.006 | 10.9 | 0.006 | 10.5 |
| | | | A | | | | | 0.006 | 10.9 | 0.006 | 10.5 |
| T49 Shweki | 3-Phase | Transformer | B | 0.250 | | | | 0.005 | 6.4 | 0.005 | 6.1 |
| | | | C | | | | | 0.005 | 6.4 | 0.005 | 6.1 |
| | | | A | | | | | 0.005 | 6.4 | 0.005 | 6.1 |
| T50 Al-baha | 3-Phase | Transformer | B | 0.630 | | | | 0.005 | 2.5 | 0.005 | 2.4 |
| | | | C | | | | | 0.005 | 2.5 | 0.005 | 2.4 |
| | | | A | | | | | 0.005 | 2.5 | 0.005 | 2.4 |
| T51 Inab_al_sagher | 3-Phase | Transformer | B | 0.630 | | | | 0.019 | 9.1 | 0.019 | 8.9 |
| | | | C | | | | | 0.019 | 9.1 | 0.019 | 8.9 |
| | | | A | | | | | 0.019 | 9.1 | 0.019 | 8.9 |
| T52 Bank al_eskan | 3-Phase | Transformer | B | 0.250 | | | | 0.019 | 22.9 | 0.019 | 22.5 |
| | | | C | | | | | 0.019 | 22.9 | 0.019 | 22.5 |
| | | | A | | | | | 0.019 | 22.9 | 0.019 | 22.5 |
| T53 Al_tork | 3-Phase | Transformer | B | 0.630 | | | | 0.006 | 2.8 | 0.006 | 2.7 |
| | | | C | | | | | 0.006 | 2.8 | 0.006 | 2.7 |
| | | | A | | | | | 0.006 | 2.8 | 0.006 | 2.7 |
| T54 Wad algamary 3 | 3-Phase | Transformer | B | 0.630 | | | | 0.035 | 16.6 | 0.034 | 16.0 |
| | | | C | | | | | 0.035 | 16.6 | 0.034 | 16.0 |
| | | | A | | | | | 0.035 | 16.6 | 0.034 | 16.0 |
| T55 Mana' | 3-Phase | Transformer | B | 0.630 | | | | 0.006 | 2.8 | 0.006 | 2.7 |
| | | | C | | | | | 0.006 | 2.8 | 0.006 | 2.7 |
| | | | A | | | | | 0.007 | 3.4 | 0.007 | 3.2 |
| T56 Al_jebreny step up | 3-Phase | Transformer | B | 0.630 | | | | 0.007 | 3.4 | 0.007 | 3.2 |
| | | | C | | | | | 0.007 | 3.4 | 0.007 | 3.2 |
| | | | A | | | | | 0.141 | 67.0 | 0.137 | 65.2 |

| CKT / Branch | | | | Cable & Reactor | | | Transformer | | | | |
|--------------|-------|------|-------|-------------------|----------------|---|---------------------|-----------------|------|------------------|------|
| ID | Conn. | Type | Phase | Ampacity (Amp) | Loading Amp | % | Capability (MVA) | Loading (input) | | Loading (output) | |
| | | | | | | | | MVA | % | MVA | % |
| | | | B | | | | | 0.141 | 67.0 | 0.137 | 65.2 |
| | | | C | | | | | 0.141 | 67.0 | 0.137 | 65.2 |

* Indicates a branch with operating load exceeding the branch capability.
For branches below center-tap transformers, Phases A, B, and C correspond to (1), (2) and (N) respectively.