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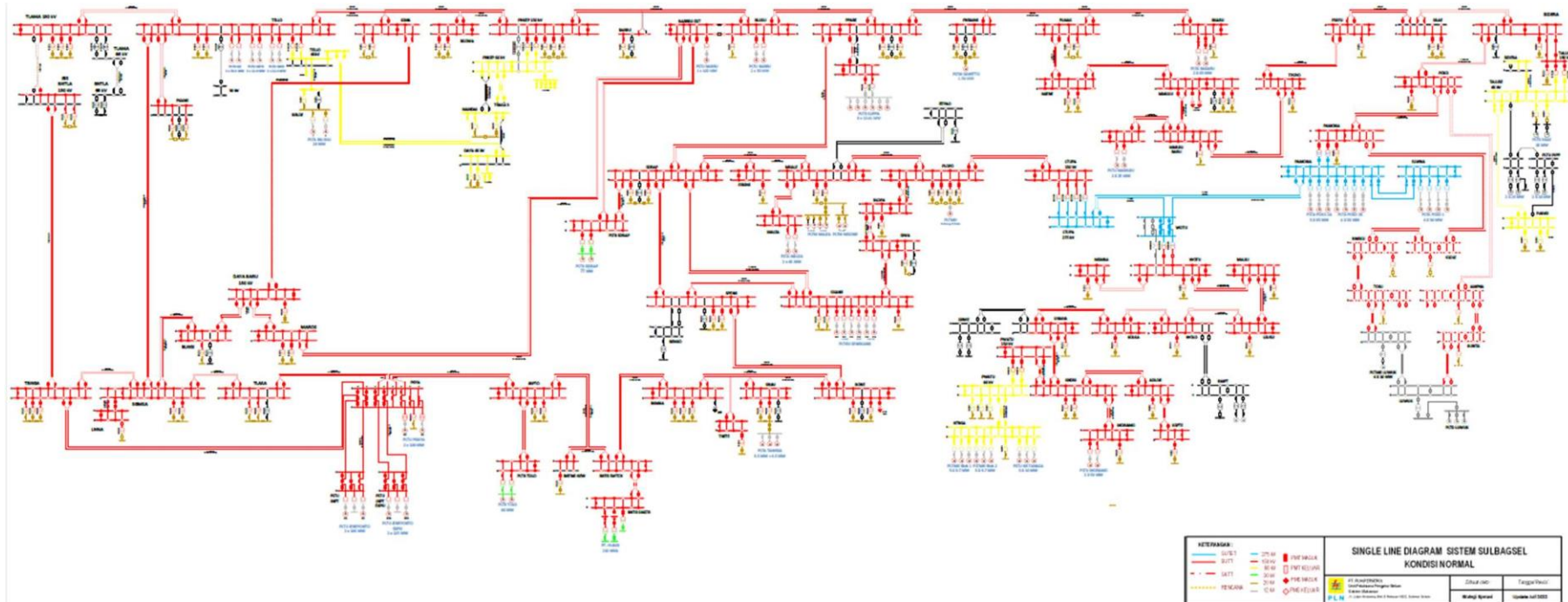
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**Lampiran 1** *Single Line Diagram* Sistem Sulbagsel September 2022



Sumber: PT. PLN (Persero) UP2B Makassar (2022)

**Lampiran 2** Data Tegangan dan Arus Saluran Transmisi Sistem Sulbagesel

| N0 | RUTE TRANSMISI                      | CC | TEG (KV) | PANJANG |       | KONDUKTOR         |          |
|----|-------------------------------------|----|----------|---------|-------|-------------------|----------|
|    |                                     |    |          | (kms)   | (km)  | JENIS             | KHA (kA) |
|    |                                     |    |          |         |       |                   |          |
| 1  | Tello - Tello lama                  | 2  | 150      | 12.8    | 6.4   | TACSR 330         | 1,129    |
| 2  | Tello – Sungguminasa                | 2  | 150      | 21.86   | 10.93 | ACSR 2x435        | 1,636    |
| 3  | Sungguminasa-Tallasa                | 2  | 150      | 52.86   | 26.43 | ACSR 2x435        | 1,636    |
| 4  | Tello – Panakukang                  | 2  | 150      | 8.4     | 4.2   | BRUSSLES 415      | 1,152    |
| 5  | Sungguminasa - Tanjung Bunga        | 2  | 150      | 23.8    | 11.9  | ACSR 2x435        | 1,836    |
| 6  | Sungguminasa-Bollangi               | 2  | 150      | 10.7    | 5.35  | ACSR 2x435        | 1,836    |
| 7  | Sungguminasa-Lanna                  | 2  | 150      | 45.26   | 22.63 | ACSR 2x250        | 1,200    |
| 8  | Tello Lama - GIS Bontoala (SKTT)    | 2  | 150      | 9       | 4.5   | XLPE/Cu 400       | 0,600    |
| 9  | Tanjung Bunga - GIS Bontoala (SKTT) | 2  | 150      | 22      | 11    | N2XCK2Y 1x1000    | 1,023    |
| 10 | Tello – Borongloe                   | 1  | 70       | 12.4    | 6.2   | ACSR 120          | 0,428    |
| 11 | Tello Lama - Bontoala (SKTT)        | 2  | 70       | 8.4     | 4.2   | XLPE/Cu 325       | 0,553    |
| 12 | Pangkep - Bosowa                    | 1  | 150      | 20.9    | 10.45 | ACSR 240          | 0,638    |
| 13 | Pangkep - Kima                      | 1  | 150      | 36.6    | 18.3  | ACSR 240          | 0,638    |
| 14 | Kima – Tello                        | 1  | 150      | 7.65    | 3.825 | ACSR 240          | 0,638    |
| 15 | Tello – Bosowa                      | 1  | 150      | 20.9    | 10.45 | ACSR 240          | 0,638    |
| 16 | Pangkep - Tonasa III                | 2  | 70       | 7.4     | 3.7   | ACSR 120          | 0,428    |
| 17 | Pangkep – Mandai                    | 2  | 70       | 79.4    | 39.7  | ACCC HELSINKI 160 | 0,792    |

## Lanjutan Lampiran 2

| NO | RUTE TRANSMISI             | CC | TEG (KV) | PANJANG |        | KONDUKTOR               |          |
|----|----------------------------|----|----------|---------|--------|-------------------------|----------|
|    |                            |    |          | (kms)   | (km)   | JENIS                   | KHA (kA) |
|    |                            |    |          |         |        |                         |          |
| 18 | Mandai – Daya              | 1  | 70       | 5       | 2.5    | ACCC<br>HELSINKI<br>160 | 0,792    |
| 19 | Daya – Tello               | 1  | 70       | 14.6    | 7.3    | ACCC<br>HELSINKI<br>160 | 0,792    |
| 20 | Tello – Mandai             | 1  | 70       | 14      | 7      | ACCC<br>HELSINKI<br>160 | 0,792    |
| 21 | Pangkep - Barru            | 2  | 150      | 20      | 10     | ACSR 240                | 0,638    |
| 22 | Kima - Daya Baru           | 2  | 150      | 32.62   | 16.31  | UGC, XPLE<br>1000       | 0,800    |
| 23 | Daya Baru –<br>Bollangi    | 2  | 150      | 7.38    | 3.69   | ACSR 450                | 1,836    |
| 24 | Daya Baru –<br>Maros       | 2  | 150      | 7.38    | 3.69   | ACSR 450                | 1,836    |
| 25 | Bakaru –<br>Pinrang        | 1  | 150      | 58.65   | 29.325 | ACSR 240                | 0,638    |
| 26 | Bakaru –<br>Polmas         | 1  | 150      | 50.02   | 25.01  | ACSR 240                | 0,638    |
| 27 | Pare Pare –<br>Polmas      | 1  | 150      | 91.1    | 45.55  | ACSR 240                | 0,638    |
| 28 | Pinrang - Pare<br>Pare     | 1  | 150      | 26.06   | 13.03  | ACSR 240                | 0,638    |
| 29 | Pare Pare -<br>Suppa       | 2  | 150      | 15      | 7.5    | ACSR 240                | 0,638    |
| 30 | Pare Pare –<br>Ballusu     | 2  | 150      | 89.68   | 44.84  | ACSR 240                | 0,638    |
| 31 | Ballusu –<br>Pangkep       | 2  | 150      | 89.68   | 44.84  | ACSR 240                | 0,638    |
| 32 | Barru EXT -<br>PLTB Sidrap | 2  | 150      | 75      | 37.675 | ACSR 240                | 0,638    |
| 33 | Barru EXT –<br>Maros       | 2  | 150      | 237.98  | 118.99 | ACSR 240                | 0,638    |
| 34 | Pare Pare –<br>Sidrap      | 2  | 150      | 35      | 17.5   | ACSR 240                | 0,638    |
| 35 | Sidrap –<br>Soppeng        | 2  | 150      | 106.16  | 53.08  | ACSR 240                | 0,638    |

## Lanjutan Lampiran 2

| NO | RUTE TRANSMISI                 | CC | TEG (KV) | PANJANG |        | KONDUKTOR  |          |
|----|--------------------------------|----|----------|---------|--------|------------|----------|
|    |                                |    |          | (kms)   | (km)   | JENIS      | KHA (kA) |
|    |                                |    |          |         |        |            |          |
| 36 | Soppeng – Sengkang             | 2  | 150      | 71.16   | 35.58  | ACSR 400   | 0,840    |
| 37 | Siwa-Sengkang                  | 2  | 150      | 132.17  | 66.085 | HAWK 2x240 | 1,200    |
| 38 | Sidrap - Makale                | 1  | 150      | 105.5   | 52.75  | ACSR 433   | 0,918    |
| 39 | Makale – Enrekang              | 1  | 150      | 53.44   | 26.72  | ACSR 433   | 0,918    |
| 40 | Sidrap – Enrekang              | 1  | 150      | 51.52   | 25.76  | ACSR 433   | 0,918    |
| 41 | Sengkang – Sidrap              | 2  | 150      | 124.66  | 62.33  | ACSR 2x435 | 1,836    |
| 42 | Sidrap - PLTB Sidrap           | 2  | 150      | 23.6    | 11.8   | ACSR 2x435 | 1,836    |
| 43 | Makale – Malea                 | 2  | 150      | -       | -      | ACSR 433   | 0,918    |
| 44 | Makale – Rantepao              | 2  | 150      | -       | -      | -          | -        |
| 45 | Bone – Bulukumba               | 1  | 150      | 137.2   | 68.6   | ACSR 240   | 0,638    |
| 46 | Bulukumba - Bantaeng Switching | 2  | 150      | 7.3     | 3.65   | ACSR 240   | 0,638    |
| 47 | Jeneponto - Bantaeng New       | 1  | 150      | 23.4    | 11.7   | ACSR 240   | 0,638    |
| 48 | Punagaya – Jeneponto           | 2  | 150      | 62.14   | 31.07  | ACSR 240   | 0,638    |
| 49 | Tallasa – Punagaya             | 2  | 150      | 27      | 13.5   | ACSR 2x435 | 1,836    |
| 50 | Bulukumba – Tanete             | 1  | 150      | -       | -      | ACSR 240   | 0,638    |
| 51 | Sinjai – Tanete                | 1  | 150      | -       | -      | ACSR 240   | 0,638    |
| 52 | Punagaya - Tanjung Bunga       | 2  | 150      | 121.6   | 60.8   | ACSR 2x450 | 1,836    |
| 53 | Punagaya - PLTU Jeneponto      | 2  | 150      | 1.28    | 0.64   | ACSR 2x435 | 1,836    |

## Lanjutan Lampiran 2

| NO | RUTE TRANSMISI                     | CC | TEG (KV) | PANJANG |        | KONDUKTOR  |          |
|----|------------------------------------|----|----------|---------|--------|------------|----------|
|    |                                    |    |          | (kms)   | (km)   | JENIS      | KHA (kA) |
|    |                                    |    |          |         |        |            |          |
| 54 | Punagaya - PLTU Jeneponto Expansi  | 2  | 150      | 1.28    | 0.64   | ACSR 2x435 | 1,836    |
| 55 | Jeneponto - PLTB Tolo              | 2  | 150      | -       | -      | ACSR 240   | 0,638    |
| 56 | Bantaeng Switch - Bantaeng Smelter | 2  | 150      | -       | -      | ACSR 240   | 0,638    |
| 57 | Jeneponto - Bantaeng Switch        | 1  | 150      | 38.69   | 19.345 | ACSR 240   | 0,638    |
| 58 | Bantaeng Switch - Bantaeng New     | 1  | 150      | 15.51   | 7.755  | ACSR 240   | 0,638    |
| 59 | Bone - Sinjai                      | 1  | 150      | 74      | 37.004 | ACSR 240   | 0,638    |
| 60 | Soppeng - Bone                     | 2  | 150      | 87      | 43.322 | ACSR 240   | 0,638    |
| 61 | Soppeng - Bengo                    | 2  | 150      | -       | -      | -          | -        |
| 62 | Majene - Polmas                    | 2  | 150      | 100.32  | 50.16  | ACSR 240   | 0,638    |
| 63 | Majene - Mamuju                    | 2  | 150      | 228.6   | 114.3  | ACSR 240   | 0,638    |
| 64 | Mamuju - Mamuju Baru               | 2  | 150      | 75.4    | 37.7   | ACSR 2x240 | 1,200    |
| 65 | Mamuju Baru - PLTU Mamuju          | 2  | 150      | 14.62   | 7.31   | ACSR 2x240 | 1,200    |
| 66 | Mamuju Baru - Topoyo               | 2  | 150      | 110.28  | 55.14  | ACSR 2x240 | 1,200    |
| 67 | Topoyo - Pasangkayu                | 2  | 150      | 1252.78 | 626.39 | ACSR 240   | 0,638    |
| 68 | Pasangkayu - Silae                 | 2  | 150      | 175.92  | 87.96  | ACSR 240   | 0,638    |
| 69 | Silae - Sidera                     | 2  | 150      | 57.78   | 28.89  | ACSR 240   | 0,638    |
| 70 | Sidera - Poso                      | 2  | 150      | 285.14  | 142.57 | HAWK 2x240 | 1,200    |
| 71 | Sidera - Tallise                   | 2  | 150      | -       | -      | ACSR 240   | 0,638    |



## Lanjutan Lampiran 2

| NO | RUTE TRANSMISI                 | CC | TEG (KV) | PANJANG |         | KONDUKTOR         |          |
|----|--------------------------------|----|----------|---------|---------|-------------------|----------|
|    |                                |    |          | (kms)   | (km)    | JENIS             | KHA (kA) |
|    |                                |    |          |         |         |                   |          |
| 72 | Sidera 70 KV - Tallise 70 KV   | 1  | 70       | 40.4    | 20.2    | ACSR 185          | 0,638    |
| 73 | Tallise 70 KV - Parigi 70 KV   | 2  | 70       | 87.4    | 43.7    | ACSR 185          | 0,638    |
| 74 | Tallise 70 KV - PLTU PJPP      | 1  | 70       | -       | -       | ACSR 185          | 0,638    |
| 75 | PLTU PJPP - Parigi 70 KV       | 1  | 70       | -       | -       | ACSR 185          | 0,638    |
| 76 | Palopo - Latupa                | 2  | 150      | -       | -       | ACSR 240          | 0,638    |
| 77 | Palopo - Belopa                | 2  | 150      | 48.96   | 24.48   | ACSR 240          | 0,638    |
| 78 | Palopo – Makale                | 2  | 150      | 74.8    | 37.4    | ACSR 240          | 0,638    |
| 79 | Belopa - Siwa                  | 2  | 150      | 40.67   | 20.335  | ACSR 240          | 0,638    |
| 80 | Nii tanasa - Powatu 70 KV      | 2  | 70       | 25.4    | 12.7    | ACCC HELSINKI 160 | 0,775    |
| 81 | Powatu 150 KV - Kendari New    | 2  | 150      | 28.36   | 14.18   | ACSR 2x240        | 1,200    |
| 82 | Unaha - Kendari New            | 2  | 150      | 101.82  | 50.91   | ACSR 2x240        | 1,276    |
| 83 | Unaha - Kolaka                 | 2  | 150      | 147.75  | 73.875  | ACSR 2x240        | 1,276    |
| 84 | Latuppa 275 KV - Pamona 275 KV | 1  | 275      | 418     | 209     | 2 x ACSR          | 1,200    |
| 85 | Latuppa 275 KV - Wotu 275 KV   | 1  | 275      | 187.23  | 93.615  | 2 x ACSR          | 1,200    |
| 86 | Wotu 275 KV - Pamona 275 KV    | 1  | 275      | -       | -       | 2 x ACSR          | 1,200    |
| 87 | Wotu - Malili                  | 2  | 150      | 93.09   | 46.545  | ACSR 2x240        | 1,200    |
| 88 | Wotu – Masamba                 | 2  | 150      | -       | -       | -                 | -        |
| 89 | Malili - Lasusu                | 2  | 150      | 234.39  | 117.195 | ACSR 2x240        | 1,200    |

## Lanjutan Lampiran 2

| N0 | RUTE TRANSMISI    | CC | TEG (KV) | PANJANG |      | KONDUKTOR  |          |
|----|-------------------|----|----------|---------|------|------------|----------|
|    |                   |    |          | (kms)   | (km) | JENIS      | KHA (kA) |
|    |                   |    |          |         |      |            |          |
| 90 | Pamona – Sulewana | 2  | 275      | -       | -    | 2 x ACSR   | 1,200    |
| 91 | Pamona - Poso     | 2  | 150      | 87.2    | 43.6 | HAWK 2x240 | 1,200    |
| 92 | Kolaka - Wolo     | 2  | 150      |         |      | ACSR 2x240 | 1,276    |
| 93 | Wolo - Lasusu     | 2  | 150      | 12.22   | 6.11 | ACSR 2x250 | 1,200    |
| 94 | Wolo - BMPT       | 2  | 150      | -       | -    | -          | -        |
| 95 | Unaha – Konawe    | 2  | 150      | -       | -    | -          | -        |
| 96 | Kendari – Andolo  | 2  | 150      | -       | -    | ACSR 2x240 | 1,200    |
| 97 | Andolo – Kasipute | 2  | 150      | -       | -    | ACSR 2x240 | 1,200    |
| 98 | Kendari – Moramo  | 2  | 150      | 28.2    | 14.1 | ACSR 2x240 | 1,200    |

Sumber: PT. PLN (Persero) UIKL Sulawesi (2022)

## Lampiran 3 Data Impedansi Saluran Transmisi Sistem Sulbagsel

| N0 | RUTE TRANSMISI                   | IMPEDANSI TRANSMISI/KM |        |               |        |
|----|----------------------------------|------------------------|--------|---------------|--------|
|    |                                  | urutan positif/km      |        | urutan nol/km |        |
|    |                                  | R/km                   | JX/km  | R0/km         | JX0/km |
| 1  | Tello - Tello lama               | 0,091                  | 0,373  | 0,283         | 0,862  |
| 2  | Tello – Sungguminasa             | 0,037                  | 0,280  | 0,189         | 0,872  |
| 3  | Sungguminasa – Tallasa           | 0,037                  | 0,246  | 0,188         | 0,911  |
| 4  | Tello – Panakukang               | 0,093                  | 0,371  | 0,321         | 0,980  |
| 5  | Sungguminasa - Tanjung Bunga     | 0,68                   | 0,398  | 0,238         | 0,909  |
| 6  | Sungguminasa – Bollangi          | 0,032                  | 0,269  | 0,222         | 1,138  |
| 7  | Sungguminasa – Lanna             | 0,0336                 | 0,2614 | 0,184         | 0,784  |
| 8  | Tello Lama - GIS Bontoala (SKTT) | -                      | -      | -             | -      |

Lanjutan Lampiran 3

| N0 | RUTE TRANSMISI                      | IMPEDANSI TRANSMISI/KM |        |               |        |
|----|-------------------------------------|------------------------|--------|---------------|--------|
|    |                                     | urutan positif/km      |        | urutan nol/km |        |
|    |                                     | R/km                   | JX/km  | R0/km         | JX0/km |
| 9  | Tanjung Bunga - GIS Bontoala (SKTT) | 0,0298                 | 0,1280 | 0,1777        | 0,3880 |
| 10 | Tello – Borongloe                   | 0,240                  | 0,813  | 0,600         | 2,000  |
| 11 | Tello Lama - Bontoala (SKTT)        | 0,240                  | 0,813  | 0,600         | 2,000  |
| 12 | Pangkep – Bosowa                    | 0,122                  | 0,396  | 0,245         | 0,833  |
| 13 | Pangkep – Kima                      | 0,122                  | 0,396  | 0,244         | 0,833  |
| 14 | Kima – Tello                        | 0,125                  | 0,415  | 0,403         | 0,993  |
| 15 | Tello – Bosowa                      | 0,182                  | 0,651  | 1,25          | 1,91   |
| 16 | Pangkep - Tonasa III                | 0,240                  | 0,813  | 0,600         | 2,00   |
| 17 | Pangkep – Mandai                    | 0,232                  | 0,394  | 0,418         | 1,143  |
| 18 | Mandai – Daya                       | 0,240                  | 0,813  | 0,606         | 2,000  |
| 19 | Daya – Tello                        | 0,180                  | 0,363  | 0,433         | 1,068  |
| 20 | Tello – Mandai                      | -                      | -      | -             | -      |
| 21 | Pangkep – Barru                     | 0,122                  | 0,396  | 0,245         | 0,833  |
| 22 | Kima - Daya Baru                    | 0,023                  | 0,155  | 0,077         | 0,077  |
| 23 | Daya Baru – Bollangi                | 0,037                  | 0,260  | 0,169         | 0,672  |
| 24 | Daya Baru – Maros                   | 0,037                  | 0,260  | 0,169         | 0,672  |
| 25 | Bakaru – Pinrang                    | 0,118                  | 0,423  | 0,267         | 1,289  |
| 26 | Bakaru – Polmas                     | 0,118                  | 0,425  | 0,266         | 1,274  |
| 27 | Pare Pare – Polmas                  | 0,118                  | 0,424  | 0,814         | 1,243  |
| 28 | Pinrang - Pare Pare                 | 0,124                  | 0,410  | 0,317         | 1,006  |
| 29 | Pare Pare – Suppa                   | 0,117                  | 0,409  | 0,329         | 1,009  |
| 30 | Pare Pare – Ballusu                 | 0,120                  | 0,40   | 0,295         | 0,967  |
| 31 | Ballusu – Pangkep                   | 0,119                  | 0,402  | 0,297         | 0,990  |
| 32 | Barru EXT - PLTB Sidrap             | 0,122                  | 0,396  | 0,245         | 0,833  |
| 33 | Barru EXT – Maros                   | 0,122                  | 0,396  | 0,245         | 0,833  |
| 34 | Pare Pare – Sidrap                  | 0,137                  | 0,436  | 0,311         | 1,121  |
| 35 | Sidrap – Soppeng                    | 0,122                  | 0,405  | 0,236         | 0,873  |
| 36 | Soppeng – Sengkang                  | 0,072                  | 0,370  | 0,150         | 0,500  |
| 37 | Siwa-Sengkang                       | 0,0336                 | 0,2614 | 0,184         | 0,784  |
| 38 | Sidrap – Makale                     | 0,073                  | 0,390  | 0,189         | 0,931  |
| 39 | Makale – Enrekang                   | 0,073                  | 0,394  | 0,189         | 0,930  |
| 40 | Sidrap – Enrekang                   | 0,073                  | 0,394  | 0,189         | 0,931  |

## Lanjutan Lampiran 3

| NO | RUTE TRANSMISI                     | IMPEDANSI TRANSMISI/KM |        |               |        |
|----|------------------------------------|------------------------|--------|---------------|--------|
|    |                                    | urutan positif/km      |        | urutan nol/km |        |
|    |                                    | R/km                   | JX/km  | R0/km         | JX0/km |
| 41 | Sengkang – Sidrap                  | 0,035                  | 0,288  | 0,237         | 1,218  |
| 42 | Sidrap - PLTB Sidrap               | 0,039                  | 0,308  | 0,215         | 0,917  |
| 43 | Makale – Malea                     | 0,073                  | 0,390  | 0,189         | 0,931  |
| 44 | Makale – Rantepao                  | -                      | -      | -             | -      |
| 45 | Bone – Bulukumba                   | 0,120                  | 0,406  | 0,300         | 1,000  |
| 46 | Bulukumba - Bantaeng Switching     | 0,120                  | 0,406  | 0,300         | 1,000  |
| 47 | Jeneponto - Bantaeng New           | 0,120                  | 0,406  | 0,300         | 1,000  |
| 48 | Punagaya – Jeneponto               | 0,117                  | 0,396  | 0,293         | 0,975  |
| 49 | Tallasa – Punagaya                 | 0,033                  | 0,274  | 0,226         | 1,161  |
| 50 | Bulukumba – Tanete                 | 0,120                  | 0,406  | 0,300         | 1,000  |
| 51 | Sinjai – Tanete                    | 0,120                  | 0,406  | 0,300         | 1,000  |
| 52 | Punagaya - Tanjung Bunga           | 0,037                  | 0,260  | 0,169         | 0,672  |
| 53 | Punagaya - PLTU Jeneponto          | 0,037                  | 0,260  | 0,169         | 0,672  |
| 54 | Punagaya - PLTU Jeneponto Expansi  | 0,037                  | 0,260  | 0,169         | 0,672  |
| 55 | Jeneponto - PLTB Tolo              | 0,122                  | 0,396  | 0,245         | 0,833  |
| 56 | Bantaeng Switch - Bantaeng Smelter | 0,122                  | 0,396  | 0,245         | 0,833  |
| 57 | Jeneponto - Bantaeng Switch        | 0,122                  | 0,396  | 0,245         | 0,833  |
| 58 | Bantaeng Switch - Bantaeng New     | 0,122                  | 0,396  | 0,245         | 0,833  |
| 59 | Bone – Sinjai                      | 0,122                  | 0,410  | 0,299         | 0,959  |
| 60 | Soppeng – Bone                     | 0,119                  | 0,385  | 0,285         | 0,917  |
| 61 | Soppeng – Bengo                    | -                      | -      | -             | -      |
| 62 | Majene – Polmas                    | 0,122                  | 0,396  | 0,245         | 0,833  |
| 63 | Majene – Mamuju                    | 0,122                  | 0,396  | 0,245         | 0,833  |
| 64 | Mamuju - Mamuju Baru               | 0,0387                 | 0,2807 | 0,1887        | 0,8421 |
| 65 | Mamuju Baru - PLTU Mamuju          | 0,0387                 | 0,2807 | 0,1887        | 0,8421 |
| 66 | Mamuju Baru – Topoyo               | 0,0387                 | 0,2807 | 0,1887        | 0,8421 |
| 67 | Topoyo – Pasangkayu                | 0,122                  | 0,396  | 0,245         | 0,833  |
| 68 | Pasangkayu – Silae                 | 0,122                  | 0,396  | 0,245         | 0,833  |
| 69 | Silae – Sidera                     | 0,122                  | 0,396  | 0,245         | 0,833  |
| 70 | Sidera – Poso                      | 0,0336                 | 0,2614 | 0,184         | 0,784  |

## Lanjutan Lampiran 3

| NO | RUTE TRANSMISI                 | IMPEDANSI TRANSMISI/KM |        |               |        |
|----|--------------------------------|------------------------|--------|---------------|--------|
|    |                                | urutan positif/km      |        | urutan nol/km |        |
|    |                                | R/km                   | JX/km  | R0/km         | JX0/km |
| 71 | Sidera – Tallise               | 0,122                  | 0,396  | 0,245         | 0,833  |
| 72 | Sidera 70 KV - Tallise 70 KV   | 0,122                  | 0,396  | 0,245         | 0,833  |
| 73 | Tallise 70 KV - Parigi 70 KV   | 0,122                  | 0,396  | 0,245         | 0,833  |
| 74 | Tallise 70 KV - PLTU PJPP      | 0,122                  | 0,396  | 0,245         | 0,833  |
| 75 | PLTU PJPP - Parigi 70 KV       | 0,122                  | 0,396  | 0,245         | 0,833  |
| 76 | Palopo – Latupa                | 0,122                  | 0,396  | 0,245         | 0,833  |
| 77 | Palopo – Belopa                | 0,122                  | 0,396  | 0,245         | 0,833  |
| 78 | Palopo – Makale                | 0,122                  | 0,396  | 0,245         | 0,833  |
| 79 | Belopa – Siwa                  | 0,122                  | 0,396  | 0,245         | 0,833  |
| 80 | Nii tanasa - Powatu 70 KV      | 0,200                  | 0,411  | 0,389         | 0,955  |
| 81 | Powatu 150 KV - Kendari New    | 0,061                  | 0,283  | 0,346         | 0,954  |
| 82 | Unaha - Kendari New            | 0,063                  | 0,284  | 0,247         | 0,865  |
| 83 | Unaha – Kolaka                 | 0,064                  | 0,282  | 0,233         | 0,856  |
| 84 | Latuppa 275 KV - Pamona 275 KV | 0,0336                 | 0,2614 | 0,184         | 0,784  |
| 85 | Latuppa 275 KV - Wotu 275 KV   | 0,0336                 | 0,2614 | 0,184         | 0,784  |
| 86 | Wotu 275 KV - Pamona 275 KV    | 0,0336                 | 0,2614 | 0,184         | 0,784  |
| 87 | Wotu – Malili                  | 0,0387                 | 0,2807 | 0,1887        | 0,8421 |
| 88 | Wotu – Masamba                 | -                      | -      | -             | -      |
| 89 | Malili – Lasusu                | 0,0387                 | 0,2807 | 0,1887        | 0,8421 |
| 90 | Pamona – Sulewana              | 0,0336                 | 0,2614 | 0,184         | 0,784  |
| 91 | Pamona – Poso                  | 0,0336                 | 0,2614 | 0,184         | 0,784  |
| 92 | Kolaka – Wolo                  | 0,064                  | 0,282  | 0,233         | 0,856  |
| 93 | Wolo – Lasusu                  | 0,0336                 | 0,2614 | 0,184         | 0,784  |
| 94 | Wolo – BMPT                    | -                      | -      | -             | -      |
| 95 | Unaha – Konawe                 | -                      | -      | -             | -      |
| 96 | Kendari – Andolo               | 0,0387                 | 0,2807 | 0,1887        | 0,8421 |
| 97 | Andolo – Kasipute              | 0,0387                 | 0,2807 | 0,1887        | 0,8421 |
| 98 | Kendari – Moramo               | 0,0387                 | 0,2807 | 0,1887        | 0,8421 |

Sumber: PT. PLN (Persero) UIKL Sulawesi (2022)

**Lampiran 4** Data Pembangkit Sistem Sulbagsel

| <b>UNIT<br/>PEMBANGKIT</b> | <b>DAYA<br/>TERPASANG<br/>(MW)</b> | <b>DAYA<br/>MAMPU<br/>NETTO<br/>(MW)</b> | <b>DAYA<br/>MAMPU<br/>PASOK<br/>(MW)</b> | <b>KETERANGAN</b> |
|----------------------------|------------------------------------|--|--|-------------------|
| PLTA Bakaru #1             | 63                                 | 63                                       | 63                                       | PEMBANGKIT<br>PLN |
| PLTA Bakaru #2             | 63                                 | 63                                       | 59                                       |                   |
| PLTA Bili-bili<br>#1       | 5.78                               | 5.78                                     | 5.78                                     |                   |
| PLTA Bili-bili<br>#2       | 13.685                             | 13.685                                   | 13.685                                   |                   |
| PLTM Sawitto               | 1.62                               | 1.44                                     | 0.48                                     |                   |
| PLTU Barru #1              | 50                                 | 45.27                                    | 45                                       |                   |
| PLTU Barru #2              | 50                                 | 45.5                                     | 45                                       |                   |
| PLTU SULSEL<br>BARRU 2     | 100                                | 100                                      | 100                                      |                   |
| PLTG GE #1                 | 33.4                               | 26                                       | 26                                       |                   |
| PLTG GE #2                 | 33.4                               | 28                                       | 28                                       |                   |
| PLTD<br>Mitsubishi #1      | 12.6                               | 8  | 8  |                   |
| PLTD<br>Mitsubishi #2      | 12.6                               | 8  | 8  |                   |
| PLTD SWD #1                | 12.396                             | 8  | 8  |                   |
| PLTD SWD #2                | 12.396                             | 8  | 8  |                   |
| PLTU Punagaya<br>#1        | 125                                | 100                                      | 100                                      |                   |
| PLTU Punagaya<br>#2        | 125                                | 100                                      | 100                                      |                   |
| PLTU Nii<br>Tanassa #1     | 12                                 | 10                                       | 10                                       |                   |
| PLTU Nii<br>Tanassa #2     | 12                                 | 10                                       | 10                                       |                   |
| PLTU Nii<br>Tanassa #3     | 12                                 | 10.26                                    | 10                                       |                   |
| PLTMG Kendari<br>#1        | 9.78                               | 9.78                                     | 9.78                                     |                   |
| PLTMG Kendari<br>#2        | 9.78                               | 9.78                                     | 9.78                                     |                   |
| PLTMG Kendari<br>#3        | 9.78                               | 9.78                                     | 9.78                                     |                   |
| PLTMG Kendari<br>#4        | 9.78                               | 9.78                                     | 9.78                                     |                   |

## Lanjutan Lampiran 4

| <b>UNIT PEMBANGKIT</b> | <b>DAYA TERPASANG (MW)</b> | <b>DAYA MAMPU NETTO (MW)</b> | <b>DAYA MAMPU PASOK (MW)</b> | <b>KETERANGAN</b> |
|------------------------|----------------------------|------------------------------|------------------------------|-------------------|
| PLTMG Kendari #5       | 9.78                       | 9.78                         | 9.78                         |                   |
| PLTMG Kendari #6       | 9.78                       | 9.78                         | 9.78                         |                   |
| PLTD Silae #1          | 18                         | 18                           | 18                           |                   |
| PLTD Suppa #UNIT1      | 10.417                     | 10.367                       | 10.367                       |                   |
| PLTD Suppa #UNIT2      | 10.417                     | 10.367                       | 10.367                       |                   |
| PLTD Suppa #UNIT3      | 10.417                     | 10.367                       | 10.367                       |                   |
| PLTD Suppa #UNIT4      | 10.417                     | 10.367                       | 10.367                       |                   |
| PLTD Suppa #UNIT5      | 10.417                     | 10.367                       | 10.367                       |                   |
| PLTD Suppa #UNIT6      | 10.417                     | 10.367                       | 10.367                       |                   |
| PLTA Poso Dua #1       | 65                         | 65                           | 65                           | PEMBANGKIT IPP    |
| PLTA Poso Dua #2       | 65                         | 65                           | 65                           |                   |
| PLTA Poso Dua #3       | 65                         | 65                           | 65                           |                   |
| PLTA Poso Dua Ext #1   | 50                         | 50                           | 30                           |                   |
| PLTA Poso Dua Ext #2   | 50                         | 50                           | 30                           |                   |
| PLTA Poso Dua Ext #3   | 50                         | 50                           | 30                           |                   |
| PLTA Poso Dua Ext #4   | 50                         | 50                           | 30                           |                   |
| PLTA Poso Satu #1      | 30                         | 30                           | 50                           |                   |
| PLTA Poso Satu #2      | 30                         | 30                           | 50                           |                   |
| PLTA Poso Satu #3      | 30                         | 30                           | 50                           |                   |
| PLTA Poso Satu #4      | 30                         | 30                           | 50                           |                   |

## Lanjutan Lampiran 4

| <b>UNIT PEMBANGKIT</b> | <b>DAYA TERPASANG (MW)</b> | <b>DAYA MAMPU NETTO (MW)</b> | <b>DAYA MAMPU PASOK (MW)</b> | <b>KETERANGAN</b> |
|------------------------|----------------------------|------------------------------|------------------------------|-------------------|
| PLTU Jenepono #1       | 125                        | 100                          | 100                          |                   |
| PLTU Jenepono #2       | 125                        | 100                          | 100                          |                   |
| PLTU Jenepono #3       | 135                        | 125                          | 125                          |                   |
| PLTU Jenepono #4       | 135                        | 125                          | 125                          |                   |
| PLTU Mamuju #1         | 25                         | 25                           | 25                           |                   |
| PLTU Mamuju #2         | 25                         | 25                           | 25                           |                   |
| PLTU Moramo #1         | 50                         | 50                           | 50                           |                   |
| PLTU Moramo #2         | 50                         | 50                           | 50                           |                   |
| PLTA Malea Ekspansi #1 | 45                         | 45                           | 45                           |                   |
| PLTA Malea Ekspansi #2 | 45                         | 45                           | 45                           |                   |
| PLTB Sidrap (VRE)      | 78.75                      | 77                           | 77                           |                   |
| PLTB Tolo (VRE)        | 72                         | 66                           | 66                           |                   |
| Sengkang GT #11        | 42.5                       | 42.5                         | 42.5                         |                   |
| Sengkang GT #12        | 42.5                       | 42.5                         | 42.5                         |                   |
| Sengkang ST #18        | 50                         | 50                           | 50                           |                   |
| Sengkang GT #21        | 60                         | 60                           | 60                           |                   |
| Sengkang GT #22        | 60                         | 60                           | 60                           |                   |
| Sengkang ST #28        | 60                         | 60                           | 60                           |                   |
| PLTM Malea #1          | 6.7                        | 6.7                          | 6.7                          |                   |
| PLTM Malea #2          | 6.7                        | 6.7                          | 6.7                          |                   |



## Lanjutan Lampiran 4

| UNIT PEMBANGKIT       | DAYA TERPASANG (MW) | DAYA MAMPU NETTO (MW) | DAYA MAMPU PASOK (MW) | KETERANGAN |
|-----------------------|---------------------|-----------------------|-----------------------|------------|
| PLTA Tangka Manipi #1 | 10                  | 10                    | 10                    |            |
| PLTA Tangka Manipi #2 | 10                  | 10                    | 10                    |            |
| PLTA Tangka Manipi #3 | 10                  | 10                    | 10                    |            |
| PLTM Simbuang         | 3                   | 3                     | 3                     |            |
| PLTM Siteba           | 7.5                 | 7.5                   | 7.5                   |            |
| PLTM Madong #1        | 10                  | 10                    | 10                    |            |

Sumber: PT. PLN (Persero) UP2B Makassar (2022)

## Lampiran 5 Data Transformator Distribusi Sistem Sulbagsel

| ULTG  | GARDU INDUK | KAPASITAS |       |          | DATA INPUT BASE 100 MVA |             |
|-------|-------------|-----------|-------|----------|-------------------------|-------------|
|       |             | UNIT      | (MVA) | TEG (KV) | Xpos. (pu)              | Xpos. (ohm) |
| MAROS | Tello       | 1         | 60    | 150/20   | 0,2083                  | 46,88       |
|       |             | 2         | 60    | 150/20   | 0,2208                  | 49,69       |
|       | Daya        | 1         | 20    | 69/20    | 0,5810                  | 28,47       |
|       |             | 2         | 20    | 69/20    | 0,5950                  | 29,16       |
|       | Kima        | 1         | 30    | 150/20   | 0,4167                  | 93,75       |
|       |             | 2         | 60    | 150/20   | 0,2083                  | 46,88       |
|       | Mandai      | 1         | 20    | 69/20    | 0,5810                  | 28,47       |
|       |             | 2         | 20    | 69/20    | 0,5870                  | 28,76       |
|       | Maros       | 1         | 30    | 150/20   | 0,4247                  | 95,55       |
|       |             | 2         | 30    | 150/20   | 0,4146                  | 93,70       |
|       | Pangkep     | 4         | 20    | 150/20   | 0,6165                  | 138,71      |
|       |             | 5         | 30    | 150/20   | 0,4167                  | 93,75       |
|       |             | 6         | 30    | 150/20   | 0,4167                  | 93,75       |
|       | Daya Baru   | 1         | 60    | 150/20   | 0,2083                  | 46,88       |

## Lanjutan Lampiran 5

| ULTG              | GARDU<br>INDUK   | KAPASITAS |        |             | DATA INPUT<br>BASE 100 MVA |                 |
|-------------------|------------------|-----------|--------|-------------|----------------------------|-----------------|
|                   |                  | UNIT      | (MVA)  | TEG<br>(KV) | X pos.<br>(pu)             | X pos.<br>(ohm) |
| PANAKUKANG        | Bontoala         | 1         | 20     | 69/20/7     | 0,6000                     | 29,40           |
|                   |                  | 2         | 20     | 69/20/7     | 0,6000                     | 29,40           |
|                   | GIS Bontoala     | 1         | 60     | 150/20      | 0,2083                     | 46,88           |
|                   |                  | 2         | 60     | 150/20      | 0,2013                     | 45,29           |
|                   | Panakkukang      | 1         | 60     | 150/20      | 0,4167                     | 93,75           |
|                   |                  | 2         | 60     | 150/20      | 0,2214                     | 49,81           |
|                   |                  | 3         | 60     | 150/20      | 0,2015                     | 45,33           |
|                   | Tallo lama       | 1         | 30     | 150/20      | 0,4243                     | 95,48           |
|                   |                  | 2         | 30     | 150/20      | 0,4243                     | 95,48           |
|                   |                  | 3         | 60     | 150/20      | 0,2083                     | 46,88           |
|                   | Tanjung<br>Bunga | 1         | 60     | 150/20      | 0,2214                     | 49,81           |
|                   |                  | 2         | 60     | 150/20      | 0,2083                     | 46,88           |
|                   |                  | 3         | 60     | 150/20      | 0,2021                     | 45,48           |
|                   | Sungguminasa     | 1         | 60     | 150/20      | 0,2200                     | 49,50           |
| 2                 |                  | 60        | 150/20 | 0,2015      | 45,33                      |                 |
| Borongloe         | 1                | 20        | 69/20  | 0,5950      | 29,16                      |                 |
| Bolangi           | 1                | 60        | 150/20 | 0,2083      | 46,88                      |                 |
|                   | 2                | 60        | 150/20 | 0,2083      | 46,88                      |                 |
| Lanna             | 1                | 60        | 150/20 | 0,2083      | 46,88                      |                 |
| ULTG PAREPARE     | Barru            | 1         | 20     | 150/20      | 0,6500                     | 146,25          |
|                   | Balusu           | 1         | 6.3    | -           | -                          | -               |
|                   | Pare pare        | 1         | 30     | 150/20      | 0,3990                     | 89,78           |
|                   |                  | 2         | 16     | 150/20      | 0,6650                     | 149,63          |
|                   |                  | 3         | 30     | 150/20      | 0,3990                     | 89,78           |
|                   | Pinrang          | 1         | 30     | 150/20      | 0,4167                     | 93,75           |
|                   |                  | 2         | 16     | 150/20      | 0,6650                     | 149,63          |
| 3                 |                  | 30        | 150/20 | 0,6867      | 153,15                     |                 |
| Bakaru            | 1                | 20        | 150/20 | 0,6165      | 138,71                     |                 |
| ULTG<br>JENEPONTO | Tallasa          | 1         | 30     | 150/20      | 0,4240                     | 95,40           |
|                   |                  | 2         | 20     | 150/20      | 0,6250                     | 140,63          |
|                   |                  | 3         | 60     | 150/20      | 0,2083                     | 46,88           |
|                   | Jeneponto        | 1         | 20     | 150/20      | 0,6120                     | 137,70          |
|                   |                  | 2         | 30     | 150/20      | 0,4167                     | 93,75           |

## Lanjutan Lampiran 5

| ULTG           | GARDU INDUK | KAPASITAS |        |          | DATA INPUT BASE 100 MVA |              |
|----------------|-------------|-----------|--------|----------|-------------------------|--------------|
|                |             | UNIT      | (MVA)  | TEG (KV) | X pos. (pu)             | X pos. (ohm) |
|                | Bantaeng    | 1         | 30     | 150/20   | 0,4158                  | 93,56        |
|                | Punagaya    | 1         | 30     | 150/20   | 0,4181                  | 94,07        |
| ULTG WATAMPONE | Bulukumba   | 1         | 20     | 150/20   | 0,6120                  | 137,70       |
|                |             | 2         | 30     | 150/20   | 0,4147                  | 93,30        |
|                |             | 3         | 60     | 150/20   | 0,2083                  | 46,88        |
|                | Sinjai      | 1         | 20     | 150/20   | 0,6250                  | 140,63       |
|                |             | 2         | 30     | 150/20   | 0,4167                  | 93,75        |
|                |             | 3         | 30     | 150/20   | 0,4167                  | 93,75        |
|                | Bone        | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
|                |             | 2         | 20     | 150/20   | 0,6120                  | 137,70       |
|                |             | 3         | 30     | 150/20   | 0,4167                  | 93,75        |
|                | Sopeng      | 2         | 30     | 150/20   | 0,4167                  | 93,75        |
|                |             | 3         | 60     | 150/20   | 0,2083                  | 46,88        |
| Tanete         | 1           | 30        | 150/20 | 0,4167   | 93,75                   |              |
| ULTG SIDRAP    | Sidrap      | 1         | 20     | 150/20   | 0,6165                  | 138,71       |
|                |             | 2         | 30     | 150/20   | 0,4100                  | 92,25        |
|                |             | 3         | 30     | 150/20   | 0,4100                  | 92,25        |
|                | Sengkang    | 1         | 20     | 150/20   | 0,6120                  | 137,70       |
|                |             | 2         | 30     | 150/20   | 0,4113                  | 92,55        |
|                |             | 3         | 60     | 150/20   | 0,2083                  | 46,88        |
|                | Enrekang    | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
|                | Makale      | 1         | 20     | 150/20   | 0,6165                  | 138,71       |
|                |             | 2         | 30     | 150/20   | 0,4167                  | 93,75        |
| ULTG PALOPO    | Palopo      | 1         | 20     | 150/20   | 0,6165                  | 138,71       |
|                |             | 2         | 20     | 150/20   | 0,6165                  | 138,71       |
|                |             | 3         | 30     | 150/20   | 0,4167                  | 93,75        |
|                |             | 4         | 30     | 150/20   | 0,4148                  | 93,33        |
|                | Siwa        | 1         | 30     | 150/20   | 0,4095                  | 92,15        |
|                |             | 2         | 60     | 150/20   | 0,2083                  | 46,88        |
|                | Wotu        | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
|                | Malili      | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
|                | Belopa      | 1         | 60     | 150/20   | 0,2083                  | 46,88        |
|                | Masamba     | 1         | 30     | 150/20   | 0,4167                  | 93,75        |

| ULTG           | GARDU INDUK  | KAPASITAS |        |          | DATA INPUT BASE 100 MVA |              |
|----------------|--------------|-----------|--------|----------|-------------------------|--------------|
|                |              | UNIT      | (MVA)  | TEG (KV) | X pos. (pu)             | X pos. (ohm) |
| ULTG MAMUJU    | Mamuju       | 1         | 20     | 150/20   | 0,5885                  | 132,41       |
|                |              | 2         | 30     | 150/20   | 0,4167                  | 93,75        |
|                |              | 3         | 60     | 150/20   | 0,6250                  | 140,63       |
|                | Mamuju Baru  | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
|                | Majene       | 1         | 20     | 150/20   | 0,6165                  | 138,71       |
|                |              | 2         | 30     | 150/20   | 0,4167                  | 93,75        |
|                | Polmas       | 1         | 20     | 150/20   | 0,6099                  | 137,23       |
|                |              | 2         | 30     | 150/20   | 0,6099                  | 137,23       |
|                | Topoyo       | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
|                | ULTG KENDARI | Tanassa   | 1      | 10       | 70/20                   | 0,4167       |
| Puuwatu        |              | 1         | 20     | 70/20    | 0,6099                  | 137,23       |
|                |              | 2         | 30     | 70/20    | 0,4167                  | 93,75        |
|                |              | 3         | 30     | 70/20    | 0,4167                  | 93,75        |
| Kendari        |              | 1         | 60     | 150/20   | 0,2083                  | 46,88        |
|                |              | 2         | 60     | 150/20   | 0,2083                  | 46,88        |
| Unaaha         |              | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
| Kolaka         |              | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
| Lasusua        |              | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
| Moramo         |              | 1         | 60     | 150/20   | 0,2083                  | 46,88        |
| Konawe         |              | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
|                |              | 2         | 30     | 150/20   | 0,4167                  | 93,75        |
| Kolaka Smelter |              | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
| Andolo         |              | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
| Kasipute       | 1            | 30        | 150/20 | 0,4167   | 93,75                   |              |
| ULTG PALU      | Pamona       | 1         | 10     | 150/20   | 0,4167                  | 93,75        |
|                | Poso         | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
|                | Sidera       | 1         | 30     | 150/20   | 0,4167                  | 93,75        |
|                |              | 2         | 60     | 150/20   | 0,2083                  | 46,88        |
|                | Silae        | 1         | 30     | 150/20   | 0,4167                  | 93,75        |

## Lanjutan Lampiran 5

| ULT<br>G | GARDU<br>INDUK    | KAPASITAS |       |             | DATA INPUT<br>BASE 100 MVA |                 |
|----------|-------------------|-----------|-------|-------------|----------------------------|-----------------|
|          |                   | UNIT      | (MVA) | TEG<br>(KV) | X pos.<br>(pu)             | X pos.<br>(ohm) |
|          |                   | 2         | 60    | 150/20      | 0,2083                     | 46,88           |
|          | Tallise 150<br>kV | 4         | 60    | 150/20      | 0,2083                     | 46,88           |
|          | Tallise 70<br>kV  | 2         | 30    | 150/20      | 0,4167                     | 93,75           |
|          |                   | 3         | 30    | 150/20      | 0,4167                     | 93,75           |
|          | Parigi            | 1         | 20    | 70/20       | 0,6099                     | 137,23          |
|          |                   | 2         | 30    | 70/20       | 0,4167                     | 93,75           |
|          | Pasangkayu        | 1         | 30    | 150/20      | 0,4167                     | 93,75           |

Sumber: PT. PLN (Persero) UIKL Makassar (2022)

## Lampiran 6 Data Transformator IBT Sistem Sulbagsel

| TRAFO IBT  | TEGANGAN (KV) | UNIT | DAYA (MW) |
|------------|---------------|------|-----------|
| Tello      | 150/30        | 1    | 20        |
|            | 150/70        | 3    | 31.5      |
|            | 150/70        | 5    | 31.5      |
| Pangkep    | 150/70        | 1    | 31.5      |
|            | 150/70        | 2    | 60        |
|            | 150/70        | 3    | 60        |
| Tello Lama | 150/70        | 1    | 31.5      |
|            | 150/70        | 2    | 31.5      |
| Wotu       | 275/150       | 1    | 90        |
|            | 275/150       | 2    | 250       |
| Latuppa    | 275/150       | 1    | 90        |
|            | 275/150       | 2    | 90        |
|            | 275/150       | 3    | 90        |
|            | 275/150       | 4    | 90        |
| Pamona     | 275/150       | 1    | 90        |
|            | 275/150       | 2    | 90        |
| Puuwatu    | 150/70        | 1    | 30        |
|            | 150/70        | 2    | 30        |

## Lanjutan Lampiran 6

| <b>TRAFO IBT</b> | <b>TEGANGAN (KV)</b> | <b>UNIT</b> | <b>DAYA (MW)</b> |
|------------------|----------------------|-------------|------------------|
| Talise           | 150/70               | 1           | 30               |
|                  | 150/70               | 2           | 30               |

Sumber: PT. PLN (Persero) UIKL Makassar (2022)

## Lampiran 7 Data Daya Bangkitan Sistem Sulbagsel

| <b>JENIS PEMBANGKIT</b> | <b>PEMBANGKIT</b>   | <b>BP MALAM (19.00)</b> |             |
|-------------------------|---------------------|-------------------------|-------------|
|                         |                     | <b>MW</b>               | <b>MVAR</b> |
| PLTA                    | BAKARU #1           | 63.00                   | -0.20       |
|                         | BAKARU #2           | 59.00                   | -0.80       |
| PLTA                    | BILI-BILI #1        | 0.00                    | 0.00        |
|                         | BILI-BILI #2        | 8.00                    | -0.10       |
| PLTM                    | SAWITTO             | 0.57                    | 0.00        |
| PLTU                    | BARRU #1            | 0.00                    | 0.00        |
|                         | BARRU #2            | 0.00                    | 0.00        |
| PLTU                    | PLTU SULSEL BARRU-2 | 55.88                   | 21.04       |
| PLTG                    | GE #1               | 25.00                   | 9.20        |
|                         | GE #2               | 28.00                   | 8.40        |
| PLTD                    | MITSUBISHI #1       | 8.00                    | 0.00        |
|                         | MITSUBISHI #2       | 8.00                    | 0.00        |
| PLTD                    | SWD #1              | 8.00                    | 0.00        |
|                         | SWD #2              | 8.00                    | 0.00        |
| PLTU                    | PUNAGAYA #1         | 101.98                  | 43.20       |
|                         | PUNAGAYA #2         | 99.63                   | 41.72       |
| PLTU                    | NII TANASSA #1      | 7.08                    | 0           |
|                         | NII TANASSA #2      | 3.90                    | 0           |
|                         | NII TANASSA #3      | 0.00                    | 0           |
| PLTMG                   | NII TANASSA #1      | 9.00                    | 0           |
|                         | NII TANASSA #2      | 0.00                    | 0           |
|                         | NII TANASSA #3      | 9.00                    | 0           |
|                         | NII TANASSA #4      | 8.80                    | 0           |
|                         | NII TANASSA #5      | 9.00                    | 0           |
|                         | NII TANASSA #6      | 9.00                    | 0           |

## Lanjutan Lampiran 7

| JENIS<br>PEMBANGKIT | PEMBANGKIT       | BP MALAM (19.00) |       |
|---------------------|------------------|------------------|-------|
|                     |                  | MW               | MVAR  |
| PLTD                | SILAE            | 10.25            | 0     |
| PLTD                | SUPPA #1         | 10.00            | 0     |
|                     | SUPPA #2         | 10.00            | 0     |
|                     | SUPPA #3         | 10.00            | 0     |
|                     | SUPPA #4         | 10.00            | 0     |
|                     | SUPPA #5         | 10.00            | 0     |
|                     | SUPPA #6         | 0.00             | 0     |
| PLTA POSO - 2A      | Unit # 1         | 0.00             | 0     |
|                     | Unit # 2         | 55.20            | -1.22 |
|                     | Unit # 3         | 57.30            | -0.78 |
| PLTA POSO - 2B      | Unit # 1         | 49.90            | 1.02  |
|                     | Unit # 2         | 48.70            | 1.50  |
|                     | Unit # 3         | 50.10            | 2.66  |
|                     | Unit # 4         | 50.20            | 2.63  |
| PLTA POSO – 1       | Unit # 1         | 0.00             | 0.00  |
|                     | Unit # 2         | 26.70            | 2.04  |
|                     | Unit # 3         | 30.00            | 1.93  |
|                     | Unit # 4         | 29.80            | 2.24  |
| PLTU                | JENEPONTO #1     | 77.58            | 23.31 |
|                     | JENEPONTO #2     | 85.73            | 26.27 |
| PLTU                | JENEPONTO EXP #3 | 118.28           | 57.42 |
|                     | JENEPONTO EXP #4 | 109.24           | 56.62 |
| PLTU                | MAMUJU #1        | 25.01            | 4.56  |
|                     | MAMUJU #2        | 23.03            | 4.99  |
| PLTU                | MORAMO #1        | 49.80            | 0     |
|                     | MORAMO #2        | 50.80            | 0     |
| PLTA                | MALEA #1         | 45.39            | 12.04 |
|                     | MALEA #2         | 45.50            | 10.12 |
| PLTB                | SIDRAP           | 19.51            | -0.11 |
| PLTB                | TOLO             | 37.80            | 0.06  |
| PLTG                | SENGKANG GT #11  | 0.00             | 0.00  |
| PLTG                | SENGKANG GT #12  | 0.00             | 0.00  |
| PLTGU               | SENGKANG ST #18  | 0.00             | 0.00  |
| PLTG                | SENGKANG GT #21  | 0.00             | 0.00  |

## Lanjutan Lampiran 7

| JENIS PEMBANGKIT | PEMBANGKIT       | BP MALAM (19.00) |      |
|------------------|------------------|------------------|------|
|                  |                  | MW               | MVAR |
| PLTG             | SENGKANG GT #22  | 0.00             | 0.00 |
| PLTGU            | SENGKANG ST #28  | 0.00             | 0.00 |
| PLTM             | MALEA #1         | 2.07             | 0.00 |
|                  | MALEA #2         | 2.07             | 0.00 |
| PLTA             | TANGKA MANIPI #1 | 0.00             | 0.00 |
|                  | TANGKA MANIPI #2 | 0.00             | 0.00 |
|                  | TANGKA MANIPI #3 | 0.00             | 0.00 |
| PLTM             | SIMBUANG         | 0.00             | 0.00 |
| PLTM             | SITEBA           | 2.01             | 0.04 |
| PLTM             | MADONG #1        | 6.00             | 1.09 |

Sumber: PT. PLN (Persero) UP2B Makassar (2022)

## Lampiran 8 Data Beban Sistem Sulbagsel

| ULTG       | GARDU INDUK | KAPASITAS |      | BP MALAM (19.00) |      |
|------------|-------------|-----------|------|------------------|------|
|            |             | UNIT      | DAYA | MW               | MVAR |
| ULTG MAROS | Tello       | 1         | 60   | 45.8             | 8.9  |
|            |             | 2         | 60   | 0                | 0    |
|            | Daya        | 1         | 20   | 0                | 0    |
|            |             | 2         | 20   | 13               | 2.7  |
|            | Kima        | 1         | 30   | 12               | 3.3  |
|            |             | 2         | 60   | 16.2             | 6    |
|            | Mandai      | 1         | 20   | 10.7             | 2.6  |
|            |             | 2         | 20   | 12.7             | 2.8  |
|            | Maros       | 1         | 30   | 10               | 2    |
|            |             | 2         | 30   | 15.4             | 2.6  |
|            | Pangkep     | 4         | 20   | 9.7              | 2    |
|            |             | 5         | 30   | 13.3             | 2.5  |
|            |             | 6         | 30   | 0                | 0    |
|            | Daya Baru   | 1         | 60   | 17.8             | 0    |



Lanjutan Lampiran 8

| ULTG             | GARDU INDUK   | KAPASITAS |      | BP MALAM (19.00) |      |
|------------------|---------------|-----------|------|------------------|------|
|                  |               | UNIT      | DAYA | MW               | MVAR |
| ULTG PANAKKUKANG | Bontoala      | 1         | 20   | 0                | 0    |
|                  |               | 2         | 20   | 0                | 0    |
|                  | GIS Bontoala  | 1         | 60   | 26.6             | 7.3  |
|                  |               | 2         | 60   | 21.3             | 6.3  |
|                  | Panakkukang   | 1         | 60   | 0                | 0    |
|                  |               | 2         | 60   | 34.7             | 7.8  |
|                  |               | 3         | 60   | 45.4             | 8.9  |
|                  | Tallo lama    | 1         | 30   | 0                | 0    |
|                  |               | 2         | 60   | 14.9             | 4.2  |
|                  |               | 3         | 60   | 27.2             | 5.2  |
|                  | Tanjung Bunga | 1         | 60   | 30.1             | 5.7  |
|                  |               | 2         | 60   | 16.5             | 4.6  |
|                  |               | 3         | 60   | 14.8             | 2.7  |
|                  | Sungguminasa  | 1         | 60   | 17.5             | 3.7  |
|                  |               | 2         | 60   | 29.2             | 5.5  |
|                  | Borongloe     | 1         | 20   | 6.1              | 4.1  |
| Bolangi          | 1             | 60        | 26   | 5.3              |      |
|                  | 2             | 60        | 0    | 0                |      |
| Lanna            | 1             | 60        | 1.9  | 0                |      |
|                  | 2             | 0         | 0    | 0                |      |
| ULTG PAREPARE    | Baru          | 1         | 20   | 10               | 1.7  |
|                  | Balusu        | 1         | 6.3  | 3.7              | 0.6  |
|                  | Pare pare     | 1         | 30   | 16.9             | 3.8  |
|                  |               | 2         | 16   | 0                | 0    |
|                  |               | 3         | 30   | 5.5              | 1.1  |
|                  | Pinrang       | 1         | 30   | 19.8             | 6.6  |
|                  |               | 2         | 16   | 0                | 0    |
| 3                |               | 30        | 16.8 | 5.1              |      |
| Bakaru           | 1             | 20        | 0.1  | 0                |      |
| ULTG JENEPONTO   | Tallasa       | 1         | 30   | 8.6              | 2.4  |
|                  |               | 2         | 20   | 0                | 0    |
|                  |               | 3         | 60   | 17.5             | 4.7  |
|                  | Jeneponto     | 1         | 20   | 11.3             | 2.2  |
|                  |               | 2         | 30   | 13.4             | 2.2  |

## Lanjutan Lampiran 8

| ULTG           | GARDU INDUK | KAPASITAS |      | BP MALAM (19.00) |       |
|----------------|-------------|-----------|------|------------------|-------|
|                |             | UNIT      | DAYA | MW               | MVAR  |
|                | Bantaeng    | 1         | 30   | 12.5             | 0.9   |
|                | Punagaya    | 1         | 30   | 4.71             | 0     |
| ULTG WATAMPONE | Bulukumba   | 1         | 20   | 4.1              | 0.5   |
|                |             | 2         | 30   | 15.2             | 3.9   |
|                |             | 3         | 60   | 11.1             | 1.4   |
|                | Sinjai      | 1         | 20   | 12.8             | 0.5   |
|                |             | 2         | 30   | 15.9             | 2.5   |
|                |             | 3         | 30   | 0                | 0     |
|                | Bone        | 1         | 30   | 16.5             | 3.4   |
|                |             | 2         | 20   | 0                | 0     |
|                |             | 3         | 30   | 20.5             | 3.7   |
|                | Sopeng      | 2         | 30   | 6.8              | 1.1   |
|                |             | 3         | 60   | 11.1             | 2.2   |
|                | Tanete      | 1         | 30   | 5.24             | 0.47  |
| ULTG SIDRAP    | Sidrap      | 1         | 20   | 12.3             | 3.1   |
|                |             | 2         | 30   | 0                | 0     |
|                |             | 3         | 30   | 26.2             | 0     |
|                | Sengkang    | 1         | 20   | 0                | 5.5   |
|                |             | 2         | 30   | 16.5             | 3.3   |
|                |             | 3         | 60   | 12.5             | 0     |
|                | Enrekang    | 1         | 30   | 13.9             | 1.7   |
|                | Makale      | 1         | 20   | 3.4              | 0.3   |
|                |             | 2         | 30   | 2.5              | -2.6  |
| ULTG PALOPO    | Palopo      | 1         | 20   | 11.9             | 3.1   |
|                |             | 2         | 20   | 5.7              | 1     |
|                |             | 3         | 30   | 0                | 0     |
|                |             | 4         | 30   | 8.5              | 1.4   |
|                | Siwa        | 1         | 30   | 4.8              | 0.5   |
|                |             | 2         | 60   | 0                | 0     |
|                | Wotu        | 1         | 30   | 8.89             | 1.48  |
|                | Malili      | 1         | 30   | 3.45             | -0.27 |
|                | Belopa      | 1         | 60   | 12.5             | 3.6   |

Lanjutan Lampiran 8

| ULTG         | GARDU INDUK    | KAPASITAS |      | BP MALAM (19.00) |       |
|--------------|----------------|-----------|------|------------------|-------|
|              |                | UNIT      | DAYA | MW               | MVAR  |
|              | Masamba        | 1         | 30   | 19.74            | 0     |
| ULTG MAMUJU  | Mamuju         | 1         | 20   | 4.3              | 0.7   |
|              |                | 2         | 30   | 4.8              | 0.3   |
|              |                | 3         | 60   | 5.1              | 0.9   |
|              | Mamuju Baru    | 1         | 30   | 7.5              | -0.14 |
|              | Majene         | 1         | 20   | 6.7              | 0.6   |
|              |                | 2         | 30   | 10.3             | 0     |
|              | Polmas         | 1         | 20   | 10.6             | 2.1   |
|              |                | 2         | 30   | 8.1              | 0.3   |
| Topoyo       | 1              | 30        | 8.3  | 0                |       |
| ULTG KENDARI | Tanassa        | 1         | 10   | 1.84             | 0.32  |
|              | Puuwatu        | 1         | 20   | 8.7              | 3.5   |
|              |                | 2         | 30   | 1.4              | 0.6   |
|              |                | 3         | 30   | 11.7             | 3.8   |
|              | Kendari        | 1         | 60   | 28.61            | 6.07  |
|              |                | 2         | 60   | 13.35            | 3.46  |
|              | Unaaha         | 1         | 30   | 17.24            | 4.61  |
|              | Kolaka         | 1         | 30   | 12.35            | 3.33  |
|              | Lasusua        | 1         | 30   | 7.65             | 1.45  |
|              | Moramo         | 1         | 60   | 9.6              | 1.86  |
|              | Konawe         | 1         | 30   | 0                | 1.25  |
|              | Kolaka Smelter | 1         | 30   | 2.74             | 0     |
|              | Andolo         | 1         | 30   | 9.97             | 0     |
|              | Kasipute       | 1         | 30   | 7.05             | 0     |
| ULTG PALU    | Pamona         | 1         | 10   | -1.13            | 2.15  |
|              | Poso           | 1         | 30   | 9.2              | 1.81  |
|              | Sidera         | 1         | 30   | 0                | 0     |
|              |                | 2         | 60   | 16.5             | 2.2   |
|              | Silae          | 1         | 30   | 0                | 0     |
|              |                | 2         | 60   | 32.5             | 6.7   |
|              | Tallise 150 kV | 4         | 60   | 22.7             | 6.4   |
|              | Tallise 70 kV  | 2         | 30   | 14.1             | 2.3   |
|              |                | 3         | 30   | 7.4              | 0     |
| Parigi       | 1              | 20        | 8.2  | 0                |       |

## Lanjutan Lampiran 8

| ULTG      | GARDU INDUK    | KAPASITAS |      | BP MALAM (19.00) |      |
|-----------|----------------|-----------|------|------------------|------|
|           |                | UNIT      | DAYA | MW               | MVAR |
|           |                |           |      |                  |      |
|           |                | 2         | 30   | 10.1             | 3.3  |
|           | Pasangkayu     | 1         | 30   | 14.1             | 2.4  |
| PELANGGAN | TONASA         |           | 90   | 86.7             |      |
|           | BOSOWA         |           | 68   | 46.3             |      |
|           | HUADI#1        |           | 40   | 29.6             |      |
|           | HUADI#2 YATAI  |           | 150  | 88.2             |      |
|           | HUADI#3 WUZHOU |           | 90   | 59.3             |      |
|           | TONASA 3&4     |           |      | 43.1             |      |
|           | TONASA 5       |           |      | 43.6             |      |

Sumber: PT. PLN (Persero) UP2B Makassar (2022)