

LAMPIRAN

A Kode Pemograman Jaringan Syaraf Tiruan Levenberg-Marquardt (trainlm)

Pelatihan

```
clear

clc

close all

data_inputan_unit_1 = xlsread('data_skripsi_1.xlsx', 1, 'B5:F178');
data_inputan2_unit_1 = xlsread('data_skripsi_1.xlsx', 1,
'H5:H178');

data_target_unit_1 = xlsread('data_skripsi_1.xlsx', 1, 'W5:X178');

data_inputan_unit_2 = xlsread('data_skripsi_1.xlsx', 1,
'B257:F430');

data_inputan2_unit_2 = xlsread('data_skripsi_1.xlsx', 1,
'H257:H430');

data_target_unit_2 = xlsread('data_skripsi_1.xlsx', 1,
'W257:X430');

data = [data_inputan_unit_1, data_inputan2_unit_1,
data_target_unit_1; ...

        data_inputan_unit_2, data_inputan2_unit_2,
data_target_unit_2];

IminVal = min(data);
minData = min(IminVal);

ImaxVal = max(data);
maxData = max(ImaxVal);

input = transpose(data(:, 1:6));
target = transpose(data(:, 7:8));

[nrow, ncol] = size(input);
```

```

for ii = 1:nrow
    for jj = 1:ncol
        inputn(ii,jj) = normalize2(input(ii,jj), minData, maxData);
    end
end

[nrow, ncol] = size(target);
for ii = 1:nrow
    for jj = 1:ncol
        targetn(ii,jj) = normalize2(target(ii,jj), minData,
maxData);
    end
end

net = newff(inputn, targetn, [30 10 ], {'logsig',
'tansig','tansig', 'purelin'}, 'trainlm');

BobotAwal_Input = net.IW{1,1};
BobotAwal_Bias_Input = net.b{1,1};
BobotAwal_Lapisan1 = net.LW{2,1};
BobotAwal_Bias_Lapisan1 = net.b{2,1};
BobotAkhir_Lapisan2 = net.LW{3,2};
BobotAkhir_Bias_Lapisan2 = net.b{3,1};

net.trainParam.epochs = 5000;
net.trainParam.goal = 1e-100;
net.trainParam.max_fail = 10;
net.verbosity.memoryReduction = 1;
net.trainParam.showWindow = 1;

```

```

net.trainParam.showCommandLine = true;

net.trainParam.show = 25;

net.trainParam.mu = 0.1;

net.trainParam.mu_dec = 0.1;

net.trainParam.mu_inc = 10;

net.trainParam.mu_max = 1e10;

net.trainParam.min_grad = 1e-100;

net.trainParam.lr = 0.01;


[net, tr] = train(net, inputn, targetn);


BobotAkhir_Input = net.IW{1,1};

BobotAkhir_Bias_Input = net.b{1,1};

BobotAkhir_Lapisan1 = net.LW{2,1};

BobotAkhir_Bias_Lapisan1 = net.b{2,1};

BobotAkhir_Lapisan2 = net.LW{3,2};


save jaringan____JST.mat net;


estn = sim(net, inputn);

est = denormalize2(estn, minData, maxData);


figure;

plotregression(target, est, 'Regression');

figure;

plotperform(tr);

```

```

errorabs = abs(est - target);
MSE = power(errorabs,2);
MAPE = abs((target - est) ./ target) * 100;

[nrow, ncol] = size(est);
for ii = 1:nrow
    for jj = 1:ncol
        akurasi(ii,jj) = 100 - ((errorabs(ii,jj) / est(ii,jj)) *
100);
    end
end

MSE_Transpose = transpose(MSE);
MAPE_Transpose = transpose(MAPE);
est_transpose = transpose(est);
errorabs_transpose = transpose(errorabs);
akurasi_transpose = transpose(akurasi);
target_transpose = transpose(target);

N = size(target_transpose, 1);
figure;
plot(1:N, target_transpose(:,1), 'b-', 'LineWidth', 1.5);
hold on;
plot(1:N, est_transpose(:,1), 'r--', 'LineWidth', 1.5);
hold off;
grid on;
xlabel('Data ke-');
ylabel('Nilai Umur');

```

```

title('Perbandingan Prediksi vs Target (ONAN/ONAF)');
legend('Target', 'Prediksi');

figure;
plot(1:N, target_transpose(:,2), 'b-', 'LineWidth', 1.5);
hold on;
plot(1:N, est_transpose(:,2), 'r--', 'LineWidth', 1.5);
hold off;
grid on;
xlabel('Data ke-');
ylabel('Nilai Umur');
title('Perbandingan Prediksi vs Target (ODAF)');
legend('Target', 'Prediksi');

```

Pengujian Untuk Setiap Unit 1 dan 2

```

clear
clc
close all

%{
% Data untuk unit 1
data_inputan = xlsread('data_skripsi_1.xlsx', 1, 'B179:F248');
data_inputan1 = xlsread('data_skripsi_1.xlsx', 1, 'H179:H248');
data_target = xlsread('data_skripsi_1.xlsx', 1, 'W179:X248');
%}

%{
% Data Untuk Unit 2
data_inputan = xlsread('data_skripsi_1.xlsx', 1, 'B431:F500');
data_inputan1 = xlsread('data_skripsi_1.xlsx', 1, 'H431:H500');

```

```

data_target= xlsread('data_skripsi_1.xlsx', 1, 'W431:X500');

%}

data = [data_inputan, data_inputan1, data_target];

IminVal = min(data);
minData = min(IminVal);
ImaxVal = max(data);
maxData = max(ImaxVal);

input = transpose(data(:, 1:6));
target = transpose(data(:, 7:8));

[nrow, ncol] = size(input);
for ii = 1:nrow
    for jj = 1:ncol
        inputn(ii,jj) = normalize2(input(ii,jj), minData, maxData);
    end
end

load jaringan____JST;

estn = sim(net, inputn);
est_UJI = denormalize2(estn, minData, maxData);
disp('Hasil Prediksi untuk Data Uji:');
disp(est_UJI);
errorabs = abs(est_UJI - target);
MSE = power(errorabs, 2);

```

```

MAPE = abs((target - est_UJI) ./ target) * 100;

[nrow, ncol] = size(est_UJI);
for ii = 1:nrow
    for jj = 1:ncol
        akurasi(ii,jj) = 100 - ((errorabs(ii,jj) / est_UJI(ii,jj))
* 100);
    end
end

MSE_Transpose = transpose(MSE);
MAPE_Transpose = transpose(MAPE);
est_transpose_UJI = transpose(est_UJI);
errorabs_transpose = transpose(errorabs);
akurasi_transpose = transpose(akurasi);
target_transpose = transpose(target);

figure;
plotregression(target, est_UJI, 'Regression');
tanggal_mulai = datetime(2024,6,23);
tanggal_selesai = datetime(2024,8,31);
tanggal_data = tanggal_mulai:days(1):tanggal_selesai;
if numel(tanggal_data) ~= size(target_transpose, 1)
    error('Jumlah tanggal tidak sesuai jumlah data.');
```

```

end

disp('Menampilkan grafik per 2 minggu ONAN/ONAF...');
jumlah_data = length(tanggal_data);
jumlah_periode = ceil(jumlah_data / 14);

for i = 1:jumlah_periode
```

```

idx_awal = (i - 1) * 14 + 1;
idx_akhir = min(i * 14, jumlah_data);

tanggal_periodik = tanggal_data(idx_awal:idx_akhir);
target_onaf = target_transpose(idx_awal:idx_akhir, 1);
pred_onaf     = est_transpose_UJI(idx_awal:idx_akhir, 1);

figure;
plot(tanggal_periodik, target_onaf, 'k-', 'LineWidth', 1.5);
hold on;
plot(tanggal_periodik, pred_onaf, 'b--', 'LineWidth', 1.5);
hold off;

grid on;
xlabel('Tanggal');
ylabel('Nilai Umur (tahun)');
title('ONAN/ONAF - Prediksi vs Target (Per 2 Minggu)');
legend('Target ONAN/ONAF', 'Prediksi ONAN/ONAF');
xticks(tanggal_periodik);
datetick('x','dd-mmm','keepticks');
ylim([19 24]);
set(gca, 'YTick', 19:0.4:24);
end

disp('Menampilkan grafik per 2 minggu ODAF...');
for i = 1:jumlah_periode
    idx_awal = (i - 1) * 14 + 1;
    idx_akhir = min(i * 14, jumlah_data);

```

```

tanggal_periodik = tanggal_data(idx_awal:idx_akhir);
target_odaf = target_transpose(idx_awal:idx_akhir, 2);
pred_odaf     = est_transpose_UJI(idx_awal:idx_akhir, 2);

figure;
plot(tanggal_periodik, target_odaf, 'r-', 'LineWidth', 1.5);
hold on;
plot(tanggal_periodik, pred_odaf, 'g--', 'LineWidth', 1.5);
hold off;

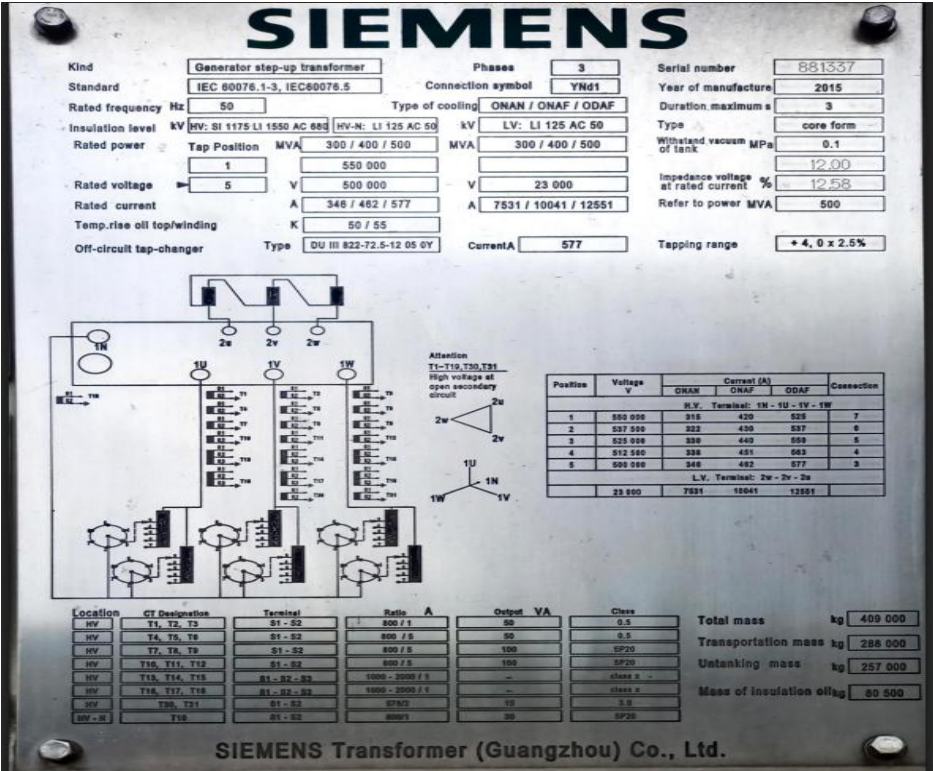
grid on;
xlabel('Tanggal');
ylabel('Nilai Umur (tahun)');
title('ODAF - Prediksi vs Target (Per 2 Minggu)');
legend('Target ODAF', 'Prediksi ODAF');
xticks(tanggal_periodik);
datetick('x','dd-mmm','keepticks');
ylim([19 24]);
set(gca, 'YTick', 19:0.4:24);
end

```

B Data Peneltian



Gambar B. 1 Transformator Step-Up 500 MVAUnit 1 dan unit 2



Gambar B. 2 Name Plate Transformator Step-Up 500 MVAUnit 1 dan unit 2

Tabel B. 1 Data Transformator Unit satu 1 Bulan Januari – Agustus 2024

NO	Tanggal	Daya Aktif (MW)	Daya reaktif (MVAR)	Rasio Beban	Suhu Minyak Atas (°C)	Suhu Kumparan (°C)	Suhu Lingkungan (°C)
1	01-Januari-2024	269.4829292	10.542355	0.5394	46.21	62.66	31.04
2	02-Januari-2024	352.3753535	23.43674258	0.7063	49.66	79	31.79
3	03-Januari-2024	375.7949104	23.56500729	0.7531	49.64	69	30.06
4	04-Januari-2024	247.0940113	16.16803371	0.4952	46.6	58	30.62
5	05-Januari-2024	240.4755437	23.27403498	0.4832	42.62	78	30.83
6	06-Januari-2024	345.6815834	18.02855933	0.6923	49.33	66.5	30.76
7	07-Januari-2024	324.9634743	26.85554435	0.6521	47.7	66.25	30.28
8	08-Januari-2024	244.9624278	19.27809943	0.4914	45.01	61.75	29.7
9	09-Januari-2024	253.5385965	31.03351374	0.5109	44.9	64.5	30.65
10	10-Januari-2024	293.3370088	28.71040486	0.5895	47.96	66.5	32.39
11	11-Januari-2024	309.4947987	27.01243803	0.6213	47.45	66	30.54
12	12-Januari-2024	149.8274234	21.63996521	0.3028	39.76	64	28.17
13	13-Januari-2024	208.3336016	23.88893517	0.4194	42.65	59.5	30.53
14	14-Januari-2024	255.9131514	17.91895776	0.5131	44.23	60.66	30.57
15	15-Januari-2024	344.818868	34.14887617	0.6930	46.9	62.75	30.35
16	16-Januari-2024	361.4239553	37.28848228	0.7267	51.54	62	32.02
17	17-Januari-2024	308.4288241	32.37056404	0.6202	48.91	60.75	31.2
18	18-Januari-2024	342.9269727	27.86350071	0.6881	49.8	64.75	31.5
19	19-Januari-2024	260.4030139	16.09364956	0.5218	42.08	60.4	28
20	20-Januari-2024	263.4215164	22.82581731	0.5288	45.17	60	30.84
21	21-Januari-2024	400.9689026	19.48052216	0.8029	48.33	61.6	32
22	22-Januari-2024	397.4846954	30.47500594	0.7973	49.97	61.33	31.31
23	23-Januari-2024	393.1139539	35.36829656	0.7894	52.92	61.33	31.91
24	24-Januari-2024	275.0231794	29.92684505	0.5533	46.82	62.25	29.85
25	25-Januari-2024	200.3757807	40.09217872	0.4087	43.76	63.5	31.23
26	26-Januari-2024	177.0105909	34.18632678	0.3606	42.46	63.66	30.56
27	27-Januari-2024	313.8208917	29.92037056	0.6305	44.1	60	29.2
28	28-Januari-2024	323.516964	27.02688165	0.6493	45.76	60	29.57
29	29-Januari-2024	372.1658885	24.27395141	0.7459	48.67	64	29.91
30	30-Januari-2024	376.9538549	26.06635042	0.7557	47.81	65.66	29.37
31	31-Januari-2024	368.2316246	26.64362591	0.7384	47.86	65.75	29.42
32	01-Februari-2024	367.4207611	20.47734568	0.7360	49.8	61.75	30.93
33	02-Februari-2024	337.2355556	40.13169235	0.6792	49.56	63.83	32.51
34	03-Februari-2024	352.3870265	25.7345915	0.7067	47.93	65.75	29.53
35	04-Februari-2024	273.8923836	21.49146827	0.5495	47	63.2	31.1
36	05-Februari-2024	345.5682106	24.39045132	0.6929	46.72	65	29.8
37	06-Februari-2024	295.7038587	15.67868358	0.5922	45.62	61.8	29.12
38	07-Februari-2024	374.2810135	20.98569604	0.7497	50.87	63.5	30.65
39	08-Februari-2024	317.5097319	36.62905792	0.6392	49.24	57.25	31.5

40	09-Februari-2024	351.185243	29.18923895	0.7048	51.26	55.25	33.23
41	10-Februari-2024	291.2022565	20.12213433	0.5838	48.27	62.5	31.86
42	11-Februari-2024	259.1040306	12.83189874	0.5188	45.4	63.66	31.92
43	12-Februari-2024	362.9636917	18.9308768	0.7269	48.83	65	31.56
44	13-Februari-2024	367.4534187	21.65354058	0.7362	51.67	64.8	33.3
45	14-Februari-2024	273.3073413	21.48778156	0.5483	47.03	62	31.73
46	15-Februari-2024	338.8789171	21.64509384	0.6791	48.56	65.33	31.37
47	16-Februari-2024	343.4089495	23.65694877	0.6884	48.09	62.5	30.6
48	17-Februari-2024	291.1374359	25.92533587	0.5846	45.96	60	30.7
49	18-Februari-2024	277.2616348	15.84161058	0.5554	44.48	62.5	30.51
50	19-Februari-2024	340.808595	19.30908603	0.6827	46.98	61	30.75
51	20-Februari-2024	356.678196	26.59404242	0.7153	49.95	62.8	32.29
52	21-Februari-2024	357.8251368	24.39934066	0.7173	48.92	66	30.55
53	22-Februari-2024	343.6285413	27.27603871	0.6894	48.66	60.6	31.04
54	23-Februari-2024	340.3158366	21.90283803	0.6820	50.36	66	32.16
55	24-Februari-2024	378.9771093	31.26735042	0.7605	52.8	66.25	32.16
56	25-Februari-2024	329.1803347	16.02253933	0.6591	48.85	62	31.24
57	26-Februari-2024	346.9440238	29.52955207	0.6964	49.15	67	31.43
58	27-Februari-2024	251.8019129	28.92540797	0.5069	44.7	66.33	31.18
59	28-Februari-2024	317.1142267	22.0884533	0.6358	43.23	65.4	28.99
60	29-Februari-2024	278.796519	21.62180537	0.5593	45.5	66.75	30.01
61	01-Maret-2024	340.195062	20.32492518	0.6816	48.55	64.6	31.46
62	02-Maret-2024	272.5950629	24.24430078	0.5473	43.35	63.5	29.69
63	03-Maret-2024	283.0857302	25.49095277	0.5685	44.23	62.75	29.81
64	04-Maret-2024	337.6259028	30.26264848	0.6780	49.43	62.5	31.54
65	05-Maret-2024	356.0650558	34.69481019	0.7155	49.2	70.66	31.01
66	06-Maret-2024	357.1165288	26.14098627	0.7161	51.81	72	32.57
67	07-Maret-2024	347.3263028	22.89805293	0.6962	51.27	67.2	32.36
68	08-Maret-2024	254.6073875	28.05557918	0.5123	44.75	66	31.43
69	09-Maret-2024	287.7549515	18.92590922	0.5768	43.59	65.6	28.41
70	10-Maret-2024	290.8098062	7.997889905	0.5818	45.14	65.83	30.23
71	11-Maret-2024	274.7656536	13.98533628	0.5502	45.59	65.75	31.23
72	12-Maret-2024	274.3261566	17.45407399	0.5498	44.93	61.75	30.74
73	13-Maret-2024	325.5848834	35.31124263	0.6550	47.31	69.25	30.8
74	14-Maret-2024	311.9487534	34.03525847	0.6276	47.41	69.5	30.8
75	15-Maret-2024	285.7143885	20.00602002	0.5728	44.85	65.6	29.65
76	16-Maret-2024	279.5946999	32.90114339	0.5630	42.57	66	28.88
77	17-Maret-2024	275.4974085	5.085817538	0.5511	45.21	65.16	30.18
78	18-Maret-2024	300.071977	29.90970989	0.6031	45.65	66.16	30.52
79	19-Maret-2024	302.8253028	31.82690572	0.6090	48.96	66.25	31.68
80	20-Maret-2024	352.5011597	28.96071409	0.7074	50.58	62.25	32.05
81	21-Maret-2024	323.9735546	42.31669913	0.6535	50.17	69.33	32.36
82	22-Maret-2024	332.937748	31.52208717	0.6689	47.73	74	31.12

83	23-Maret-2024	304.7755623	16.85219573	0.6105	47.83	67	31.74
84	24-Maret-2024	277.2709071	16.16221058	0.5555	47.35	67	32.55
85	25-Maret-2024	195.8000731	26.98990225	0.3953	41.81	64.66	32.1
86	26-Maret-2024	327.7411181	27.13112275	0.6577	48.28	69.33	32.2
87	27-Maret-2024	356.7102814	24.94070744	0.7152	46.1	67	29.67
88	28-Maret-2024	338.0199979	26.06648708	0.6780	48.14	62.25	30.62
89	29-Maret-2024	367.3541768	33.18499188	0.7377	50.77	68.25	32
90	30-Maret-2024	330.6294009	21.96842884	0.6627	49.94	70	32.37
91	31-Maret-2024	302.6844222	19.10989366	0.6066	46.93	66.2	31.49
92	01-April-2024	223.4314925	19.07338057	0.4485	45.37	65	31.28
93	02-April-2024	282.9819177	16.52544281	0.5669	46.77	63.6	30.8
94	03-April-2024	300.5007064	23.8859411	0.6029	45.99	63.66	31.26
95	04-April-2024	267.0959034	26.2350747	0.5368	48.59	62.75	32.18
96	05-April-2024	299.0632985	28.81848349	0.6009	47.17	62.75	31.41
97	06-April-2024	315.899732	17.04159121	0.6327	48.89	68	31.86
98	07-April-2024	331.2585271	19.65379013	0.6637	50.97	69	32.29
99	08-April-2024	342.4221706	13.76074025	0.6854	51.64	72	32.44
100	09-April-2024	0.192560997	0.12546976	0.0005	39.2	71.33	32.6
101	10-April-2024	0.190233194	0.144805641	0.0005	34.21	69	32.42
102	11-April-2024	0.203277244	0.190139968	0.0006	31	69	31.3
103	12-April-2024	0.228716349	0.262166874	0.0007	29.28	70.66	30.03
104	13-April-2024	0.249167504	0.304071803	0.0008	31.15	63.5	30.89
105	14-April-2024	0.235127971	0.264968265	0.0007	32.91	70	31.81
106	15-April-2024	193.2758308	24.08471227	0.3895	37.49	64	31.85
107	16-April-2024	313.7804248	15.49170329	0.6283	49.33	62.4	32.99
108	17-April-2024	309.9275513	20.49092807	0.6212	47.44	60	31.87
109	18-April-2024	307.9141553	16.13105791	0.6167	46.85	64.66	30.9
110	19-April-2024	308.1854019	21.60216612	0.6179	45.78	64.5	30.08
111	20-April-2024	275.01301	11.86220836	0.5505	46.97	63.33	31.46
112	21-April-2024	243.3746217	12.96352058	0.4874	43.36	62.5	31.06
113	22-April-2024	324.6824404	21.99644641	0.6509	48.33	72.83	31.43
114	23-April-2024	323.7186928	36.98173118	0.6516	48.08	73.66	31.7
115	24-April-2024	325.5940069	30.98163426	0.6541	48.07	69.66	31.24
116	25-April-2024	335.4951019	27.87738134	0.6733	47.52	72	30.86
117	26-April-2024	348.3712145	38.47907337	0.7010	49.46	67.16	31.57
118	27-April-2024	301.4340795	18.97718416	0.6041	45.88	67.16	29.97
119	28-April-2024	280.9885139	15.16575219	0.5628	45.77	65.5	30.62
120	29-April-2024	350.4324951	24.32512975	0.7026	49.7	61.33	32.58
121	30-April-2024	359.8426425	28.86926036	0.7220	50.55	73	31.71
122	01-Mei-2024	388.829795	12.05964272	0.7780	51.2	73.33	31.06
123	02-Mei-2024	372.980379	23.91871067	0.7475	49.5	68	30.52
124	03-Mei-2024	388.597747	30.27323803	0.7796	50.8	70.8	31.02
125	04-Mei-2024	392.178124	11.4259954	0.7847	52.2	69	31.81

126	05-Mei-2024	384.656139	17.80375164	0.7701	51.8	67.16	31.53
127	06-Mei-2024	307.526974	30.77403691	0.6181	48.8	66.5	31.79
128	07-Mei-2024	294.965592	27.00813205	0.5924	47.7	62	31.8
129	08-Mei-2024	239.900744	20.78678187	0.4816	44.2	68	31.04
130	09-Mei-2024	306.652123	25.68274975	0.6155	47.3	69.25	31.01
131	10-Mei-2024	307.82238	18.37981571	0.6167	47.9	67.4	32.3
132	11-Mei-2024	296.700649	15.17008007	0.5942	46.3	68	31.36
133	12-Mei-2024	243.520658	18.7475158	0.4885	43.6	64	30.8
134	13-Mei-2024	247.778728	20.57933807	0.4973	44	67.5	31.11
135	14-Mei-2024	391.936728	23.70352144	0.7853	50.1	66.75	30.53
136	15-Mei-2024	384.051009	19.77388998	0.7691	51	62.25	31.32
137	16-Mei-2024	395.936084	18.95935262	0.7928	51.4	69	31.5
138	17-Mei-2024	251.793215	26.15560563	0.5063	46	54.75	31.38
139	18-Mei-2024	392.404097	10.76207165	0.7851	50.9	69	31.25
140	19-Mei-2024	364.261811	23.7215691	0.7301	50.1	70	31.18
141	20-Mei-2024	360.821212	26.80256741	0.7236	50.6	65.8	31.99
142	21-Mei-2024	294.882294	23.70312774	0.5917	48.9	65.66	32.24
143	22-Mei-2024	336.10508	27.41279515	0.6744	47.1	65.25	31.32
144	23-Mei-2024	276.645418	22.33506225	0.5551	42.2	60	28.19
145	24-Mei-2024	315.422273	23.89486326	0.6327	44.8	66	29.19
146	25-Mei-2024	374.586501	28.59655759	0.7514	46.7	71.5	28.6
147	26-Mei-2024	336.862944	15.90844402	0.6745	48.3	65.5	30.69
148	27-Mei-2024	314.491229	25.52802678	0.6311	48	69	31.55
149	28-Mei-2024	322.137779	17.54484294	0.6452	47.9	66	31.5
150	29-Mei-2024	375.319915	40.73343	0.7550	50.8	69.5	32.2
151	30-Mei-2024	387.201354	24.05790308	0.7759	51.5	70	31.4
152	31-Mei-2024	319.451339	23.8922176	0.6407	48.6	62.5	31.34
153	01-Juni-2024	314.427782	16.59684064	0.6297	47.8	73.66	31.07
154	02-Juni-2024	283.847898	26.23563049	0.5701	46.3	76	31.17
155	03-Juni-2024	283.720498	18.01927563	0.5686	43.9	69	29.87
156	04-Juni-2024	291.343647	19.19828958	0.5840	45.6	69	30.87
157	05-Juni-2024	360.977818	24.95595378	0.7237	48.8	65.2	30.9
158	06-Juni-2024	367.269043	24.51379744	0.7362	50.5	67.16	31.97
159	07-Juni-2024	308.91934	310.1747297	0.8755	47.4	66.5	30.7
160	08-Juni-2024	297.418751	26.19411871	0.5971	45.8	62.25	30.72
161	09-Juni-2024	282.30148	8.005663154	0.5648	44.9	72	30.41
162	10-Juni-2024	232.21057	17.10418883	0.4657	43.3	62.33	29.8
163	11-Juni-2024	373.531515	22.96354745	0.7485	47.4	68.8	28.69
164	12-Juni-2024	370.427734	21.72794254	0.7421	50	70	30.34
165	13-Juni-2024	361.448189	31.55202311	0.7256	49	66	30.86
166	14-Juni-2024	375.031546	29.77092964	0.7524	50.3	68.5	31.52
167	15-Juni-2024	387.635919	26.85176782	0.7771	47	66.12	28.46
168	16-Juni-2024	308.537862	19.93665769	0.6184	46	62.28	29.3

169	17-Juni-2024	331.54298	19.06703952	0.6642	47.8	51	30.55
170	18-Juni-2024	369.887638	24.17705768	0.7414	48.2	64.66	30.02
171	19-Juni-2024	369.858934	27.54614895	0.7418	50	70	30.67
172	20-Juni-2024	209.246535	26.15158818	0.4217	46.3	63	31.52
173	21-Juni-2024	362.473881	27.78888761	0.7271	48.1	64	31.24
174	22-Juni-2024	318.169367	14.65788615	0.6370	47.7	73	30.63
175	23-Juni-2024	332.283985	15.86567138	0.6653	48.2	69	30.98
176	24-Juni-2024	377.049895	28.51007027	0.7563	50.6	60	30.7
177	25-Juni-2024	374.077085	14.87610774	0.7487	47.3	73.33	29
178	26-Juni-2024	374.904573	21.09984525	0.7510	49.3	80	30.28
179	27-Juni-2024	333.086928	13.35595092	0.6667	49.4	63	31.71
180	28-Juni-2024	281.199415	19.09003517	0.5637	46.1	69	31.53
181	29-Juni-2024	373.525283	18.14078919	0.7479	49.2	63.8	29.97
182	30-Juni-2024	188.928411	33.16513174	0.3836	42.3	59.33	29.76
183	01-Juli-2024	280.42473	21.95945237	0.5626	45.6	64.75	30.52
184	02-Juli-2024	252.664626	14.33908357	0.5061	43	62.25	29.47
185	03-Juli-2024	191.187912	20.11514638	0.3845	43.6	52	30.38
186	04-Juli-2024	96.266112	24.59447578	0.1987	40.8	40	30.1
187	05-Juli-2024	120.494398	19.91943046	0.2443	43.9	56	28.73
188	06-Juli-2024	267.107313	15.67194704	0.5351	49.6	69.75	27
189	07-Juli-2024	292.82089	10.05838797	0.5860	52.5	62.5	27.58
190	08-Juli-2024	246.494195	22.82453349	0.4951	53.6	60	29.97
191	09-Juli-2024	363.553089	23.35106203	0.7286	49.5	65.33	28.96
192	10-Juli-2024	365.364351	24.02264617	0.7323	52.6	74	30.8
193	11-Juli-2024	390.894964	23.58663062	0.7832	50.6	85.2	29.82
194	12-Juli-2024	347.367199	16.9073567	0.6956	52.4	76.5	29.77
195	13-Juli-2024	370.649634	15.13739605	0.7419	49.3	60	28.85
196	14-Juli-2024	313.697563	20.55048132	0.6287	53.3	65.6	28.68
197	15-Juli-2024	377.360836	27.91274232	0.7568	50.9	71	29.43
198	16-Juli-2024	366.447399	27.2383374	0.7349	50.9	67.5	29.81
199	17-Juli-2024	256.798263	34.39562179	0.5182	54.9	68.66	29.86
200	18-Juli-2024	168.19972	17.22628141	0.3382	54.1	66.66	29.68
201	19-Juli-2024	241.363056	22.8961802	0.4849	55.3	69	31.14
202	20-Juli-2024	285.611968	12.18152359	0.5717	54.3	70.8	31.04
203	21-Juli-2024	265.966551	10.7639378	0.5324	54.7	66.16	30.28
204	22-Juli-2024	123.659107	15.32721577	0.2492	55.2	55	30.36
205	23-Juli-2024	328.079596	15.82325185	0.6569	52.3	60.5	29.36
206	24-Juli-2024	256.562298	25.89515651	0.5157	53.8	63.5	29.43
207	25-Juli-2024	147.851669	32.17700998	0.3026	53.3	60.5	29.03
208	26-Juli-2024	212.203812	24.0025769	0.4271	53.5	63.33	29.73
209	27-Juli-2024	330.337542	27.34062183	0.6629	53.3	71.5	30.53
210	28-Juli-2024	279.608498	29.33518936	0.5623	54.6	67.66	31.07
211	29-Juli-2024	276.113759	19.97067884	0.5537	55.6	68.5	30.39

212	30-Juli-2024	271.674508	20.81783388	0.5449	55.6	67.66	30.39
213	31-Juli-2024	217.622716	28.24868993	0.4389	55.3	63.5	30.09
214	01-Agustus-2024	178.263652	25.77093219	0.3602	55.2	61	30.23
215	02-Agustus-2024	208.953389	23.30209216	0.4205	55.3	65	30.69
216	03-Agustus-2024	197.671169	17.61610676	0.3969	56.6	66.66	31.22
217	04-Agustus-2024	150.988186	14.31299018	0.3033	54.9	60	30.98
218	05-Agustus-2024	230.892288	20.36544346	0.4636	52.8	64.75	28.85
219	06-Agustus-2024	216.93622	21.97959117	0.4361	54.6	71	29.85
220	07-Agustus-2024	220.589091	27.07664305	0.4445	54.2	61.66	30.23
221	08-Agustus-2024	200.699401	30.90146393	0.4061	56.4	63.75	30.91
222	09-Agustus-2024	298.060501	26.88369851	0.5985	54.5	68.33	31.24
223	10-Agustus-2024	274.804943	13.62530334	0.5503	55.8	70.33	31.32
224	11-Agustus-2024	223.48752	14.27327154	0.4479	55.1	60	30.95
225	12-Agustus-2024	248.899324	17.99788377	0.4991	55.2	68.66	29.59
226	13-Agustus-2024	278.438117	19.60097269	0.5583	54.8	71.66	29.54
227	14-Agustus-2024	241.811194	28.53864547	0.4870	55.1	65.33	29.61
228	15-Agustus-2024	197.354535	18.13074057	0.3964	54.8	64.33	30.12
229	16-Agustus-2024	158.022782	29.49879152	0.3215	55.2	61.5	30.61
230	17-Agustus-2024	137.207243	15.06680311	0.2761	54.1	60	30.25
231	18-Agustus-2024	146.568896	12.31833781	0.2942	54.2	60	30.22
232	19-Agustus-2024	134.457743	21.54872508	0.2723	54	60	30.49
233	20-Agustus-2024	139.466478	30.27033977	0.2854	54.9	64	30.27
234	21-Agustus-2024	147.393244	34.04482422	0.3025	55.1	64	30.54
235	22-Agustus-2024	195.117237	26.40589329	0.3938	56.1	62	31.58
236	23-Agustus-2024	217.971026	24.62380093	0.4387	55.3	66	30.59
237	24-Agustus-2024	162.515679	26.06989884	0.3292	55	63	30.47
238	25-Agustus-2024	190.092403	16.21903148	0.3816	55.4	63	30.5
239	26-Agustus-2024	211.114579	28.71577169	0.4261	55.3	67	30.05
240	27-Agustus-2024	245.033377	21.59051238	0.4920	56.4	67	30.67
241	28-Agustus-2024	211.191671	25.20287577	0.4254	56.6	67.2	30.68
242	29-Agustus-2024	222.056666	24.41451869	0.4468	55.9	74.5	31.21
243	30-Agustus-2024	246.539293	27.6220626	0.4962	55.8	68.6	30.61
244	31-Agustus-2024	201.884495	26.0890068	0.4071	57.2	63	30.82

Tabel B. 2 Data Transformator Unit 2 Bulan Januari – Agustus 2024

NO	Tanggal	Daya Aktif (MW)	Daya reaktif (MVAR)	Rasio Beban	Suhu Minyak Atas (°C)	Suhu Kumparan (°C)	Suhu Lingkungan (°C)
1	01-Januari-2024	298.598543	13.25251521	0.5978	45.79	68.33	31.04
2	02-Januari-2024	364.825626	106.7978015	0.7603	49.48	72.16	31.79
3	03-Januari-2024	369.692523	51.88210213	0.7466	48.18	73.33	30.06
4	04-Januari-2024	255.543053	86.03886829	0.5393	45.71	67.5	30.62
5	05-Januari-2024	208.322683	22.61711368	0.4191	41.09	70	30.83

6	06-Januari-2024	344.312824	17.91919859	0.6896	47.68	73.66	30.76
7	07-Januari-2024	280.811624	34.35622456	0.5658	44.11	66.66	30.28
8	08-Januari-2024	233.309173	66.45485759	0.4852	43.38	64	29.7
9	09-Januari-2024	231.515062	95.2702325	0.5007	43.35	69	30.65
10	10-Januari-2024	320.497163	89.91442898	0.6657	47.52	74.16	32.39
11	11-Januari-2024	326.02459	74.37042659	0.6688	47.13	74.16	30.54
12	12-Januari-2024	146.661831	79.71269258	0.3338	39.13	65	28.17
13	13-Januari-2024	227.445089	73.27436358	0.4779	41.98	68	30.53
14	14-Januari-2024	305.823068	17.90418171	0.6127	44.42	68.33	30.57
15	15-Januari-2024	320.057709	84.33622742	0.6620	45.46	73.5	30.35
16	16-Januari-2024	340.92447	95.29893526	0.7080	48.13	73.66	32.02
17	17-Januari-2024	270.95546	61.76565223	0.5558	47.86	70.83	31.2
18	18-Januari-2024	303.137009	95.59680559	0.6357	45.93	71.33	31.5
19	19-Januari-2024	264.776091	79.7211862	0.5530	40.94	68	28
20	20-Januari-2024	277.153072	75.65946038	0.5746	43.96	70.83	30.84
21	21-Januari-2024	397.244476	109.8285217	0.8243	47.4	72.5	32
22	22-Januari-2024	393.000877	119.2410162	0.8214	47.29	71.66	31.31
23	23-Januari-2024	368.429821	104.6552068	0.7660	50.65	76.66	31.91
24	24-Januari-2024	268.768805	97.02296279	0.5715	45.33	64.66	29.85
25	25-Januari-2024	188.193463	88.41005063	0.4159	43.12	68	31.23
26	26-Januari-2024	194.613044	93.24505861	0.4316	42.35	60	30.56
27	27-Januari-2024	330.648617	84.15484605	0.6824	44.66	70.6	29.2
28	28-Januari-2024	332.65801	35.64078472	0.6691	45.73	70.33	29.57
29	29-Januari-2024	350.643845	99.64070966	0.7291	47.75	73.16	29.91
30	30-Januari-2024	364.667442	94.78235851	0.7536	47.41	73.16	29.37
31	31-Januari-2024	360.557866	98.28267515	0.7474	47.3	75	29.42
32	01-Februari-2024	352.247892	85.79455933	0.7251	49.1	72	30.93
33	02-Februari-2024	305.019145	101.292973	0.6428	47.45	69.16	32.51
34	03-Februari-2024	344.795232	26.49975023	0.6916	45.69	70	29.53
35	04-Februari-2024	274.20241	17.4119361	0.5495	46.03	68.33	31.1
36	05-Februari-2024	305.448886	71.28053488	0.6273	44.86	68.33	29.8
37	06-Februari-2024	280.83186	77.40583503	0.5826	43.9	70	29.12
38	07-Februari-2024	332.739394	90.16648709	0.6895	47.25	70.66	30.65
39	08-Februari-2024	305.897628	59.6843226	0.6233	47.7	72.83	31.5
40	09-Februari-2024	335.204713	78.35460487	0.6885	49.58	69.16	33.23

41	10-Februari-2024	272.355934	12.71356621	0.5453	46.63	68.33	31.86
42	11-Februari-2024	267.572334	11.97735257	0.5357	44.88	70	31.92
43	12-Februari-2024	347.201808	64.39347932	0.7062	47.69	73.33	31.56
44	13-Februari-2024	364.965697	82.93372637	0.7485	52.02	75	33.3
45	14-Februari-2024	269.694993	16.24823573	0.5404	46.13	70.66	31.73
46	15-Februari-2024	330.217295	74.66743775	0.6771	47.81	71.66	31.37
47	16-Februari-2024	335.161261	96.69717238	0.6977	47.73	72.5	30.6
48	17-Februari-2024	290.372492	87.53916246	0.6066	46.58	68.33	30.7
49	18-Februari-2024	275.006209	13.75938302	0.5507	44.27	70	30.51
50	19-Februari-2024	337.059153	96.59358608	0.7013	47	77	30.75
51	20-Februari-2024	341.058937	76.2953831	0.6990	48.79	71.33	32.29
52	21-Februari-2024	342.561072	61.10098682	0.6959	48.06	70.16	30.55
53	22-Februari-2024	320.99728	78.17661301	0.6608	45.93	72.33	31.04
54	23-Februari-2024	314.88583	85.5019994	0.6526	48.04	71.33	32.16
55	24-Februari-2024	367.405596	57.70016813	0.7438	50.5	75.5	32.16
56	25-Februari-2024	311.461618	10.75285291	0.6233	47.45	72.33	31.24
57	26-Februari-2024	281.937946	109.5517821	0.6049	46.59	71.6	31.43
58	27-Februari-2024	331.16467	110.7645114	0.6984	47.14	75.6	31.18
59	28-Februari-2024	316.005743	82.02171317	0.6530	43.76	74.33	28.99
60	29-Februari-2024	278.266662	40.66012241	0.5624	44.99	71	30.01
61	01-Maret-2024	329.179525	60.9276418	0.6695	47.6	70.66	31.46
62	02-Maret-2024	295.956953	62.41412743	0.6049	44.36	70.33	29.69
63	03-Maret-2024	301.316062	12.82688988	0.6032	43.69	71	29.81
64	04-Maret-2024	323.235711	90.40181485	0.6713	47.84	65.83	31.54
65	05-Maret-2024	330.965989	84.50248631	0.6832	46.67	73.33	31.01
66	06-Maret-2024	335.706085	78.24350166	0.6894	50.02	78.66	32.57
67	07-Maret-2024	329.535416	96.47508019	0.6867	48.7	70.83	32.36
68	08-Maret-2024	238.29057	92.82902155	0.5115	44.48	70.66	31.43

69	09-Maret-2024	287.649313	48.35585487	0.5834	43.19	71.5	28.41
70	10-Maret-2024	290.005102	11.78486707	0.5805	44.19	73.33	30.23
71	11-Maret-2024	262.044494	17.66118423	0.5253	45.08	75	31.23
72	12-Maret-2024	279.973339	90.61024206	0.5885	45.37	72.5	30.74
73	13-Maret-2024	312.223432	83.28560873	0.6463	46.82	73.33	30.8
74	14-Maret-2024	324.503886	48.76294022	0.6563	46.98	73	30.8
75	15-Maret-2024	294.466113	55.13845952	0.5992	44.54	70.5	29.65
76	16-Maret-2024	278.66008	22.19325679	0.5591	41.49	72	28.88
77	17-Maret-2024	285.669684	8.925698926	0.5716	44.01	72	30.18
78	18-Maret-2024	322.243488	101.4610634	0.6757	45.53	70.83	30.52
79	19-Maret-2024	319.401812	82.11312745	0.6596	48.83	73.33	31.68
80	20-Maret-2024	356.38792	64.88359743	0.7245	49.22	68	32.05
81	21-Maret-2024	338.472939	73.91595192	0.6929	50.14	71.33	32.36
82	22-Maret-2024	337.403426	75.39866237	0.6915	47.9	71.66	31.12
83	23-Maret-2024	332.57749	42.40795389	0.6705	48.4	70.16	31.74
84	24-Maret-2024	239.292097	25.59788702	0.4813	45.86	68.66	32.55
85	25-Maret-2024	349.631124	55.36545361	0.7080	48.37	68	32.1
86	26-Maret-2024	334.234685	82.80813825	0.6887	49.41	70.66	32.2
87	27-Maret-2024	356.442533	72.96577355	0.7277	45.68	73.5	29.67
88	28-Maret-2024	337.346334	69.05891955	0.6887	47.66	70	30.62
89	29-Maret-2024	366.732882	25.96492964	0.7353	49.78	73	32
90	30-Maret-2024	336.431107	63.94913252	0.6849	49.49	70	32.37
91	31-Maret-2024	301.527259	24.71563245	0.6051	46.6	72.4	31.49
92	01-April-2024	261.583656	90.40886239	0.5535	45.54	65.6	31.28
93	02-April-2024	236.933668	62.02059099	0.4898	46.25	70	30.8
94	03-April-2024	285.030458	60.33680347	0.5827	44.63	68.83	31.26
95	04-April-2024	252.75891	70.07491056	0.5246	47.76	71.16	32.18
96	05-April-2024	306.408278	41.54719505	0.6184	46.1	68.5	31.41
97	06-April-2024	310.762749	17.98396888	0.6226	46.64	72.16	31.86
98	07-April-2024	288.215958	17.177845	0.5775	47.76	73.6	32.29
99	08-April-2024	275.939378	12.05933676	0.5524	47.09	69.2	32.44
100	09-April-2024	323.208862	14.22050212	0.6470	47.78	71.33	32.6
101	10-April-2024	318.379248	15.27567121	0.6375	49.22	69	32.42
102	11-April-2024	306.783691	17.04577327	0.6145	46.48	69	31.3
103	12-April-2024	288.735655	16.98625534	0.5785	43.9	70.66	30.03
104	13-April-2024	295.614038	19.49842745	0.5925	45.76	63.5	30.89
105	14-April-2024	296.617938	21.30330405	0.5948	46.88	70	31.81
106	15-April-2024	338.001278	35.3120649	0.6797	48.21	73	31.85
107	16-April-2024	332.541256	43.84472668	0.6708	49.68	71	32.99
108	17-April-2024	329.176119	50.1304444	0.6659	48.26	75.83	31.87
109	18-April-2024	323.937944	44.99310575	0.6541	47.17	68	30.9
110	19-April-2024	336.107798	18.33097602	0.6732	45.72	71.66	30.08
111	20-April-2024	288.034546	12.93040386	0.5766	47.87	65	31.46

112	21-April-2024	236.35686	33.31766554	0.4774	42.69	70	31.06
113	22-April-2024	351.733931	98.47393193	0.7305	48.83	68.75	31.43
114	23-April-2024	363.202688	103.6196015	0.7554	50.52	70.5	31.7
115	24-April-2024	365.995066	95.36666973	0.7564	48.93	67.4	31.24
116	25-April-2024	372.819584	78.03766925	0.7618	49.82	67.5	30.86
117	26-April-2024	348.909779	78.79317631	0.7154	49.27	65	31.57
118	27-April-2024	280.487357	63.8425507	0.5753	45.12	66.25	29.97
119	28-April-2024	279.290755	17.66954365	0.5597	44.41	68.75	30.62
120	29-April-2024	348.444989	97.99253417	0.7239	48.92	65.25	32.58
121	30-April-2024	359.564465	97.73934028	0.7452	50.81	71.66	31.71
122	01-Mei-2024	385.223615	16.19888384	0.7711	50.3	75	31.06
123	02-Mei-2024	364.135138	73.29739046	0.7429	48.6	70	30.52
124	03-Mei-2024	391.235762	72.22329898	0.7957	50.6	69.5	31.02
125	04-Mei-2024	392.773691	55.76449794	0.7934	51.6	65.4	31.81
126	05-Mei-2024	386.242906	21.92296368	0.7737	50.7	70	31.53
127	06-Mei-2024	311.78778	57.93109792	0.6342	48.5	73	31.79
128	07-Mei-2024	293.742594	81.84246494	0.6099	47.4	66.83	31.8
129	08-Mei-2024	231.29216	82.39642356	0.4911	43.9	65	31.04
130	09-Mei-2024	289.536278	10.56073956	0.5795	45.7	71.6	31.01
131	10-Mei-2024	259.924092	91.92809073	0.5514	46	68.66	32.3
132	11-Mei-2024	241.855185	22.24980307	0.4858	43.8	68.16	31.36
133	12-Mei-2024	237.135116	48.90230888	0.4842	42.5	65.25	30.8
134	13-Mei-2024	261.027571	93.00597433	0.5542	44.4	68.25	31.11
135	14-Mei-2024	392.135817	95.07331553	0.8070	49.7	77.5	30.53
136	15-Mei-2024	381.384668	90.46893494	0.7839	50.5	76.33	31.32
137	16-Mei-2024	393.263046	90.18247573	0.8069	51.3	79.4	31.5
138	17-Mei-2024	248.863052	64.16388792	0.5140	46.1	61.6	31.38
139	18-Mei-2024	391.412554	44.91311295	0.7880	49.9	74.66	31.25
140	19-Mei-2024	330.302971	30.62167011	0.6634	48.2	73.5	31.18
141	20-Mei-2024	359.340344	77.1032846	0.7350	50.1	74.66	31.99
142	21-Mei-2024	288.598166	74.9234519	0.5963	49.2	65.75	32.24
143	22-Mei-2024	327.825006	88.08576661	0.6789	46.6	67.66	31.32
144	23-Mei-2024	272.792423	42.01890589	0.5520	42.4	65.5	28.19
145	24-Mei-2024	327.519978	105.4352299	0.6881	45.2	76.16	29.19
146	25-Mei-2024	372.084117	49.67684845	0.7508	46.2	80.33	28.6
147	26-Mei-2024	316.952993	17.46027962	0.6349	46.2	71	30.69
148	27-Mei-2024	357.566329	76.38890141	0.7313	49.5	72	31.55
149	28-Mei-2024	337.83286	85.10422297	0.6968	49.3	74.16	31.5
150	29-Mei-2024	379.300971	61.55041188	0.7685	50.9	73.33	32.2
151	30-Mei-2024	381.125975	74.89244868	0.7768	50.7	77.33	31.4
152	31-Mei-2024	317.27233	91.13820876	0.6602	48.1	67.83	31.34
153	01-Juni-2024	311.806833	9.861332126	0.6239	47.3	72.4	31.07
154	02-Juni-2024	315.049594	38.31810187	0.6347	46.2	70	31.17

155	03-Juni-2024	317.88725	87.88191708	0.6596	45.5	68.66	29.87
156	04-Juni-2024	316.60776	73.16414268	0.6499	46.7	68	30.87
157	05-Juni-2024	342.077646	75.23513226	0.7005	48.2	73	30.9
158	06-Juni-2024	360.300148	87.45775384	0.7415	49.7	71.66	31.97
159	07-Juni-2024	276.541941	68.7472716	0.5699	46.2	72.33	30.7
160	08-Juni-2024	294.833402	23.60671352	0.5916	44.5	74	30.72
161	09-Juni-2024	278.524181	10.90833737	0.5575	44.5	64	30.41
162	10-Juni-2024	240.168284	33.40321571	0.4850	42	66.5	29.8
163	11-Juni-2024	369.872897	82.60475668	0.7580	47.4	70.8	28.69
164	12-Juni-2024	370.617831	74.69801102	0.7561	49.2	71.66	30.34
165	13-Juni-2024	360.767954	91.12062767	0.7442	49	71.25	30.86
166	14-Juni-2024	314.006107	83.14848318	0.6497	48.2	74.16	31.52
167	15-Juni-2024	351.136163	67.50702423	0.7151	43.6	74.5	28.46
168	16-Juni-2024	303.600627	18.94782259	0.6084	45.1	71.83	29.3
169	17-Juni-2024	301.095472	24.40185344	0.6042	45.7	73.66	30.55
170	18-Juni-2024	356.316467	83.16321384	0.7318	47	80.4	30.02
171	19-Juni-2024	355.159193	90.06457982	0.7328	48.9	72	30.67
172	20-Juni-2024	243.280019	67.01547749	0.5047	46.7	71.33	31.52
173	21-Juni-2024	360.650387	90.60044052	0.7437	47.8	75	31.24
174	22-Juni-2024	325.880188	45.15628934	0.6580	47.5	73.83	30.63
175	23-Juni-2024	348.563921	22.65611782	0.6986	48.1	76.83	30.98
176	24-Juni-2024	368.704439	84.13954882	0.7564	49.2	76.66	30.7
177	25-Juni-2024	362.299885	44.37373237	0.7300	46.5	69.2	29
178	26-Juni-2024	371.296346	70.86028131	0.7560	48.4	82.5	30.28
179	27-Juni-2024	385.700044	91.56181952	0.7928	51.3	72.4	31.71
180	28-Juni-2024	296.913769	20.25309973	0.5952	47.7	75.5	31.53
181	29-Juni-2024	373.820859	12.47109226	0.7481	47.5	75.66	29.97
182	30-Juni-2024	282.473129	26.87724046	0.5675	44.7	70.5	29.76
183	01-Juli-2024	265.758847	67.13544162	0.5482	45.9	74.83	30.52
184	02-Juli-2024	263.086345	54.85483619	0.5375	43	69.5	29.47
185	03-Juli-2024	195.510047	65.38102171	0.4123	43.4	69	30.38
186	04-Juli-2024	93.605715	70.28554257	0.2341	41	61	30.1
187	05-Juli-2024	139.533718	29.32915658	0.2852	42.9	65.5	28.73
188	06-Juli-2024	265.527614	14.08984996	0.5318	48.9	70.5	27
189	07-Juli-2024	293.421817	11.35289519	0.5873	51.9	65.25	27.58
190	08-Juli-2024	205.574893	93.85394116	0.4520	55	66.25	29.97
191	09-Juli-2024	271.397886	66.61312665	0.5589	53.2	70.75	28.96
192	10-Juli-2024	282.855174	100.39513	0.6003	52.7	70.5	30.8
193	11-Juli-2024	314.747653	82.22823278	0.6506	50.4	73.4	29.82
194	12-Juli-2024	252.179271	91.33547673	0.5364	54.6	72	29.77
195	13-Juli-2024	338.10721	67.65420832	0.6896	48	70	28.85
196	14-Juli-2024	280.52149	14.07528708	0.5617	53.3	67.33	28.68
197	15-Juli-2024	300.286935	72.10146704	0.6176	51.1	66.5	29.43

198	16-Juli-2024	306.472287	78.22209186	0.6326	52.7	69.75	29.81
199	17-Juli-2024	294.145963	57.67733151	0.5995	51.6	71.75	29.86
200	18-Juli-2024	151.375062	48.95030829	0.3182	53	67	29.68
201	19-Juli-2024	243.932971	58.23985159	0.5016	54	73.8	31.14
202	20-Juli-2024	283.002078	15.60070687	0.5669	54.3	73	31.04
203	21-Juli-2024	295.422483	11.19130265	0.5913	50.5	66	30.28
204	22-Juli-2024	139.52703	67.10520719	0.3097	55.5	69.33	30.36
205	23-Juli-2024	353.561651	96.45250843	0.7330	50.9	70.5	29.36
206	24-Juli-2024	277.354467	84.64396387	0.5800	51	69.25	29.43
207	25-Juli-2024	160.836364	44.87875443	0.3340	54	58	29.03
208	26-Juli-2024	256.811756	69.80615891	0.5323	52.3	69	29.73
209	27-Juli-2024	252.884327	55.93563107	0.5180	55.5	71.6	30.53
210	28-Juli-2024	289.319844	68.73085492	0.5947	55.8	70	31.07
211	29-Juli-2024	234.557111	73.07576852	0.4914	55.1	67.2	30.39
212	30-Juli-2024	261.307189	89.72716656	0.5526	54.8	66.83	30.39
213	31-Juli-2024	234.418966	83.64814885	0.4978	55.7	64.5	30.09
214	01-Agustus-2024	180.108045	80.66357072	0.3947	55.4	67.5	30.23
215	02-Agustus-2024	204.273217	51.18244908	0.4212	54.7	63.75	30.69
216	03-Agustus-2024	212.641303	58.91107469	0.4413	56	60	31.22
217	04-Agustus-2024	143.75439	48.30976832	0.3033	55.2	59	30.98
218	05-Agustus-2024	230.231086	49.75486376	0.4711	52	66	28.85
219	06-Agustus-2024	191.647794	37.06065748	0.3904	54.3	65.33	29.85
220	07-Agustus-2024	197.609389	48.77110722	0.4071	53.5	69.33	30.23
221	08-Agustus-2024	200.737265	82.05450745	0.4337	56.1	70	30.91
222	09-Agustus-2024	295.410934	44.10491465	0.5974	53.5	71.25	31.24
223	10-Agustus-2024	258.84505	64.54111862	0.5335	55.4	69.75	31.32
224	11-Agustus-2024	222.734081	26.19787481	0.4485	54.7	69.25	30.95
225	12-Agustus-2024	234.524003	76.99876318	0.4937	55.1	72.2	29.59
226	13-Agustus-2024	273.952748	86.10369275	0.5743	53.1	75	29.54
227	14-Agustus-2024	243.573385	91.26528754	0.5202	54.8	69.4	29.61
228	15-Agustus-2024	190.439869	94.65875456	0.4253	55.6	67.16	30.12
229	16-Agustus-2024	149.123332	78.87232049	0.3374	56.1	69.25	30.61
230	17-Agustus-2024	135.773411	39.81064725	0.2830	54.5	65	30.25
231	18-Agustus-2024	139.85206	29.86705889	0.2860	53.7	61.5	30.22
232	19-Agustus-2024	146.370865	48.58183006	0.3084	54.2	62.75	30.49
233	20-Agustus-2024	140.759877	60.73325169	0.3066	55.3	65.2	30.27
234	21-Agustus-2024	161.855939	56.03831206	0.3426	54.9	64	30.54
235	22-Agustus-2024	192.342135	77.05873046	0.4144	55.2	67	31.58
236	23-Agustus-2024	223.446856	57.4347986	0.4614	55.1	71.16	30.59
237	24-Agustus-2024	214.003978	43.50406459	0.4368	55.1	69.5	30.47
238	25-Agustus-2024	199.140758	18.03616729	0.3999	55.4	60.25	30.5
239	26-Agustus-2024	218.533554	66.60045501	0.4569	55.8	66	30.05
240	27-Agustus-2024	250.722207	101.5592296	0.5410	54.2	70.5	30.67

241	28-Agustus-2024	214.624856	82.43465598	0.4598	56.5	68.4	30.68
242	29-Agustus-2024	214.296485	76.59434154	0.4551	55.8	63.5	31.21
243	30-Agustus-2024	234.587208	92.27070978	0.5042	56.3	68.8	30.61
244	31-Agustus-2024	231.78387	23.86952426	0.4660	56.3	64.66	30.82

C Data Perhitungan

Pada perhitungan berdasarkan standari IEC 60076-7 digunakan sebagai target dalam proses pelatihan dan pengujian pada jaringan syaraf tiruan *backpropagation*. Salah satu perhitungan yaitu tanggal 1 januari 2024, disajikan sebagai contoh menggambarkan proses perhitungan yang dilakukan selama periode 1 januari hingga 31 agustus 2024. Hasil perhitungan untuk unit satu pada tabel C.1.

1. Perhitungan daya semu dengan menggunakan persamaan (2.5)

$$S = \sqrt{P^2 + Q^2} = \sqrt{269.4829292^2 + 10.5423550034563^2} = 269.689062431642 \text{ MVA}$$

2. Perhitungan rasio pembebanan dengan menggunakan persamaan (2.5)

$$K = \frac{S}{S_r} = \frac{269.689062431642}{500} = 0.539378124863284$$

3. Perhitungan rugi tembaga dengan menggunakan persamaan (2.7)

$$Pt_2 = K^2 \times Pt_1 = 0.539378124863284^2 \times 734.710 = 213.7482704212 \text{ KW}$$

4. Perhitungan perbandingan rugi transformator dengan menggunakan persamaan (2.8)

$$d = \frac{\text{Rugi tembaga}}{\text{Rugi beban nol}} = \frac{213.7482704212}{228.66} = 0.934786453342082$$

5. Perhitungan kenaikan temperatur minyak atas pada saat sistem pendingin ONAN/ONAF dengan menggunakan persamaan (2.9.)

$$\Delta\theta_b = \Delta\theta_{br} \left(\frac{1 + dk^2}{1 + d} \right)^x$$

$$\Delta\theta_b = 50^\circ\text{C} \left(\frac{1 + 0.934786453342082 \times 0.539378124863284^2}{1 + 0.934786453342082} \right)^{0.8} = 35.7471413049637$$

6. Perhitungan kenaikan temperatur minyak atas pada saat sistem pendingin ODAF dengan menggunakan persamaan (2.9.)

$$\Delta\theta_b = \Delta\theta_{br} \left(\frac{1 + dk^2}{1 + d} \right)^x$$

$$\Delta\theta_b = 50^\circ\text{C} \left(\frac{1 + 0.290928761581032 \times 0.539378124863284^2}{1 + 0.290928761581032} \right)^1 = 32.8707145694659^\circ\text{C}$$

7. Perhitungan selisih antara temperatur pada minyak dengan kumparan dengan menggunakan persamaan (2.10)

$$\Delta\theta_{wo} = \Delta\theta_k - \Delta\theta_m = 62.66^\circ\text{C} - 46.208683^\circ\text{C} = 16.451317^\circ\text{C}$$

8. Kenaikan temperatur hotspot dengan menggunakan persamaan (2.11)

$$\Delta\theta_{cr} = \Delta\theta_{br} + 1,3 \Delta\theta_{wo} = 50^\circ\text{C} + 1,3 \times 16.451317^\circ\text{C} = 71.3867121^\circ\text{C}$$

9. Perhitungan Selisih kenaikan temperatur hotspot spot dengan top oil pada saat sistem pendingin ONAN/ONAF dengan menggunakan persamaan (2.12)

$$\Delta\theta_{td} = (\Delta\theta_{cr} - \Delta\theta_{br})k^{2y} = (71.3867121^\circ\text{C} - 50^\circ\text{C})0.539378124863284^{2 \times 1.3}$$

$$= 4.29602380210052^{\circ}\text{C}$$

10. Perhitungan selisih kenaikan *temperatur hotspot* spot dengan *top oil* pada saat sistem pendingin ODAF dengan menggunakan persamaan (2.12)

$$\begin{aligned}\Delta\theta_{td} &= (\Delta\theta_{cr} - \Delta\theta_{br})k^{2y} = (71.3867121^{\circ}\text{C} - 50^{\circ}\text{C})0.539378124863284^{2x2} \\ &= 1.81016156654166^{\circ}\text{C}\end{aligned}$$

11. Perhitungan *temperatur hotspot* pada saat sistem pendingin ONAN/ONAF dengan menggunakan persamaan (2.13)

$$\begin{aligned}\theta_c &= \theta_a + \Delta\theta_b + \Delta\theta_{td} = 31.04^{\circ}\text{C} + 43.4987252669979 + 4.29602380210052^{\circ}\text{C} \\ &= 71.0831651070642^{\circ}\text{C}\end{aligned}$$

12. Perhitungan *temperatur hotspot* pada saat sistem pendingin ODAF dengan menggunakan persamaan (2.13)

$$\begin{aligned}\theta_c &= \theta_a + \Delta\theta_b + \Delta\theta_{td} = 31.04^{\circ}\text{C} + 42.0100464330304 + 1.81016156654166^{\circ}\text{C} \\ &= 65.7208761360076^{\circ}\text{C}\end{aligned}$$

13. Perhitungan laju penuaan thermal pada saat sistem pendingin ONAN/ONAF dengan menggunakan persamaan (2.14)

$$V = 10^{\theta_c - 98^{\circ}\text{C}/19,93} = 10^{78.8347490690984^{\circ}\text{C} - 98^{\circ}\text{C}/19,93} = 0.0446099015485345$$

14. Perhitungan laju penuaan thermal pada sistem pendingin ODAF dengan menggunakan persamaan (2.14)

$$V = 10^{\theta_c - 98^{\circ}\text{C}/19,93} = 10^{74.8602079995721 - 98^{\circ}\text{C}/19,93} = 0.0240090579422558$$

15. Perhitungan laju umur relatif (susut Umur) pada saat sistem pendingin ONAN/ONAF dengan menggunakan persamaan (2.15)

$$L = \frac{1}{N} \sum_{n=1}^N V = \frac{1}{1} \sum_{n=1}^1 0.10923750056358 = 0.0446099015485345$$

16. Perhitungan laju umur relatif (susut Umur) pada saat sistem pendingin ODAF dengan menggunakan persamaan (2.15)

$$L = \frac{1}{N} \sum_{n=1}^N V = \frac{1}{1} \sum_{n=1}^1 0.0690155118850602 = 0.0240090579422558$$

17. Perhitungan sisa umur trafo pada saat sistem pendingin ONAN/ONAF dengan menggunakan persamaan (2.16)

$$\begin{aligned}n &= \frac{8760 - (L \times 365)}{8760} \times (30 - \text{Lama masa pakai}) \\ &= \frac{8760 - (0.0446099015485345 \times 365)}{8760} \times (30 - 9) = 20.960966336145 \text{ tahun}\end{aligned}$$

18. Perhitungan sisa umur trafo pada saat sistem pendingin ODAF dengan menggunakan persamaan (2.16)

$$n = \frac{8760 - (L \times 365)}{8760} \times (30 - \text{Lama masa pakai})$$

$$= \frac{8760 - (0.0240090579422558 \times 365)}{8760} \times (30 - 9) = 20.9789920743005 \text{ tahun}$$

Tabel C. 1 Perhitungan Unit 1 Bulan Januari – Agustus 2024

NO	Tanggal	S (MVA)	K	Pt ₂ (KW)	d	$\Delta\Theta_b$ (°C)		$\Delta\Theta_{wo}$ (°C)	$\Delta\Theta_{cr}$ (°C)	$\Delta\Theta_{td}$ (°C)	
						ONAN/ ONAF	ODAF	ONAN/ ONAF/ ODAF	ONAN /ONAF /ODAF	ONAN/ ONAF	ODAF
1	01- Januari- 2024	269.689 0624	0.539 37812 5	213.7 48270 4	0.934 78645 3	35.7471 413	32.870 71457	16.45	71.39	4.29602 3802	1.81016 1567
2	02- Januari- 2024	353.153 8909	0.706 30778 2	366.5 25279 2	1.602 92696 2	37.2178 6791	34.569 79957	29.34	88.14	15.4439 0401	9.49180 2242
3	03- Januari- 2024	376.533 0321	0.753 06606 4	416.6 60283 9	1.822 18264 6	38.4659 0363	36.024 87005	19.36	75.17	12.0415 0983	8.09556 6647
4	04- Januari- 2024	247.622 4056	0.495 24481 1	180.2 00428 3	0.788 07149 6	36.1791 5306	33.368 02436	11.40	64.82	2.38487 8893	0.89169 0701
5	05- Januari- 2024	241.599 1883	0.483 19837 7	171.5 40583 9	0.750 19935 2	36.3560 521	33.572 09128	35.38	95.99	6.94049 8214	2.50706 9076
6	06- Januari- 2024	346.151 3918	0.692 30278 4	352.1 34118 9	1.539 99002 4	36.9115 6477	34.214 52928	17.17	72.32	8.58072 3953	5.12788 6921
7	07- Januari- 2024	326.071 2804	0.652 14256 1	312.4 64756 8	1.366 50379 1	36.2130 379	33.407 0939	18.55	74.11	7.93455 2507	4.36115 9804
8	08- Januari- 2024	245.719 8326	0.491 43966 5	177.4 41975 5	0.776 00794	36.2323 4043	33.429 354	16.74	71.76	3.43187 3152	1.26937 3759
9	09- Januari- 2024	255.430 8103	0.510 86162 1	191.7 44318 6	0.838 55645 3	35.9871 5655	33.146 82347	19.60	75.48	4.44442 4687	1.73556 2025
10	10- Januari- 2024	294.738 6776	0.589 47735 5	255.2 99640 7	1.116 50328 3	35.6761 5492	32.789 14184	18.54	74.10	6.09929 138	2.91027 0507
11	11- Januari- 2024	310.671 3733	0.621 34274 7	283.6 47145 1	1.240 47557 6	35.8633 1204	33.004 29746	18.55	74.11	6.99690 0086	3.59392 8216
12	12- Januari- 2024	151.382 1155	0.302 76423 1	67.34 80588 2	0.294 53362 6	41.5465 7958	39.666 74762	24.24	81.51	1.41018 4346	0.26474 1656
13	13- Januari- 2024	209.698 762	0.419 39752 4	129.2 31288 8	0.565 16788 6	37.6919 7937	35.121 14611	16.85	71.91	2.28789 2626	0.67781 6046

14	14- Januari- 2024	256.539 7243	0.513 07944 9	193.4 12789 9	0.845 85318 8	35.9633 4272	33.119 40787	16.43	71.36	3.76799 0373	1.48036 3101
15	15- Januari- 2024	346.505 6962	0.693 01139 2	352.8 55343 8	1.543 14416 1	36.9262 9599	34.231 59868	15.85	70.61	7.94331 0431	4.75376 8834
16	16- Januari- 2024	363.342 4093	0.726 68481 9	387.9 78916 2	1.696 75026 7	37.7197 5619	35.153 50192	10.46	63.60	5.93161 2381	3.79365 0214
17	17- Januari- 2024	310.122 8675	0.620 24573 5	282.6 46442 9	1.236 09919 9	35.8538 9599	32.993 46605	11.84	65.39	4.44416 7816	2.27708 7668
18	18- Januari- 2024	344.057 0931	0.688 11418 6	347.8 86017 5	1.521 41178	36.8261 6975	34.115 61363	14.95	69.44	7.35374 5563	4.35745 9058
19	19- Januari- 2024	260.899 8566	0.521 79971 3	200.0 43121 7	0.874 84965 3	35.8780 9578	33.021 30481	18.32	73.82	4.39024 8562	1.76601 5374
20	20- Januari- 2024	264.408 6104	0.528 81722 1	205.4 59927 1	0.898 53899 7	35.8192 4374	32.953 61126	14.83	69.28	3.67962 6535	1.50810 4956
21	21- Januari- 2024	401.441 8409	0.802 88368 2	473.6 10381 2	2.071 24281 1	40.1581 1802	38.016 68013	13.27	67.25	9.74512 8462	7.16640 3415
22	22- Januari- 2024	398.651 2374	0.797 30247 5	467.0 48708 3	2.042 54661 2	39.9507 6348	37.771 46703	11.36	64.77	8.19702 9325	5.96937 4772
23	23- Januari- 2024	394.701 7826	0.789 40356 5	457.8 40405 8	2.002 27589 4	39.6648 2027	37.433 8385	8.41	60.94	5.91475 0887	4.24771 3091
24	24- Januari- 2024	276.646 6433	0.553 29328 7	224.9 19315 1	0.983 64084 3	35.6824 6828	32.796 39508	15.43	70.05	4.30422 4033	1.87945 7152
25	25- Januari- 2024	204.347 3423	0.408 69468 5	122.7 19599 6	0.536 69028 1	37.9777 0056	35.454 25233	19.74	75.66	2.50572 5953	0.71596 56
26	26- Januari- 2024	180.281 597	0.360 56319 4	95.51 65737 2	0.417 72314 2	39.4521 2026	37.183 08628	21.20	77.56	1.94253 2879	0.46573 8701
27	27- Januari- 2024	315.244 0018	0.630 48800 4	292.0 58335 7	1.277 26028	35.9499 9151	33.104 03931	15.90	70.66	6.22842 8732	3.26532 2328
28	28- Januari- 2024	324.643 9254	0.649 28785 1	309.7 35157 5	1.354 56642	36.1737 4421	33.361 78875	14.24	68.51	6.02355 8442	3.29052 5916
29	29- Januari- 2024	372.956 664	0.745 91332 8	408.7 82867 2	1.787 73229 8	38.2530 5069	35.775 86095	15.33	69.93	9.29874 3142	6.16861 9261

30	30- Januari- 2024	377.854 0238	0.755 70804 8	419.5 88952 7	1.834 99060 9	38.5464 8205	36.119 22592	17.85	73.21	11.2039 9302	7.56952 2699
31	31- Januari- 2024	369.194 2743	0.738 38854 9	400.5 76858 6	1.751 84491 7	38.0375 5159	35.524 10883	17.89	73.26	10.5719 257	6.91437 6694
32	01- Februari- 2024	367.990 9474	0.735 98189 5	397.9 69887 8	1.740 44383 7	37.9704 6659	35.445 81091	11.95	65.54	7.00113 1756	4.55808 3051
33	02- Februari- 2024	339.615 0361	0.679 23007 2	338.9 61023 3	1.482 38005 5	36.6546 1596	33.917 07104	14.27	68.55	6.78525 3581	3.94811 4604
34	03- Februari- 2024	353.325 467	0.706 65093 4	366.8 81510 6	1.604 48487 1	37.2257 7144	34.578 97631	17.82	73.17	9.39492 5452	5.77803 6096
35	04- Februari- 2024	274.734 2734	0.549 46854 7	221.8 20472 2	0.970 08865 6	35.6968 0116	32.812 86291	16.20	71.06	4.43820 5606	1.91923 1618
36	05- Februari- 2024	346.427 889	0.692 85577 8	352.6 96895 7	1.542 45121 9	36.9230 5389	34.227 84185	18.28	73.76	9.15263 0879	5.47577 9206
37	06- Februari- 2024	296.119 2212	0.592 23844 2	257.6 96867 5	1.126 98708 8	35.6852 6026	32.799 60281	16.18	71.03	5.38689 0994	2.58722 0355
38	07- Februari- 2024	374.868 8791	0.749 73775 8	412.9 85418	1.806 11133 5	38.3658 9333	35.907 82853	12.63	66.42	7.76364 1698	5.18726 7213
39	08- Februari- 2024	319.615 5781	0.639 23115 6	300.2 14607 4	1.312 93014 7	36.0464 6031	33.215 11645	8.01	60.41	3.25349 9284	1.73888 8853
40	09- Februari- 2024	352.396 2068	0.704 79241 4	364.9 54222 1	1.596 05625	37.1831 9245	34.529 54391	3.99	55.19	2.08883 6406	1.27994 1548
41	10- Februari- 2024	291.896 6504	0.583 79330 1	250.3 99908	1.095 07525 6	35.6616 8052	32.772 51381	14.23	68.50	4.56612 157	2.14936 5234
42	11- Februari- 2024	259.421 5803	0.518 84316 1	197.7 82628	0.864 96382 4	35.9054 971	33.052 83219	18.26	73.74	4.31146 5319	1.72058 2224
43	12- Februari- 2024	363.457 0395	0.726 91407 9	388.2 23760 4	1.697 82104 6	37.7257 7639	35.160 51533	16.17	71.02	9.17057 8037	5.86776 9204
44	13- Februari- 2024	368.090 873	0.736 18174 6	398.1 86049 4	1.741 38917 8	37.9760 0333	35.452 27177	13.13	67.06	7.69561 8006	5.01213 2745
45	14- Februari- 2024	274.150 7387	0.548 30147 7	220.8 79181	0.965 97210 3	35.7016 9473	32.818 48578	14.97	69.46	4.07833 2478	1.75836 8157

46	15- Februari- 2024	339.569 4782	0.679 13895 6	338.8 70089 1	1.481 98237 2	36.6529 2423	33.915 11432	16.77	71.80	7.97242 2202	4.63801 7576
47	16- Februari- 2024	344.222 8317	0.688 44566 3	348.2 21264 4	1.522 87791 7	36.8328 2275	34.123 31794	14.41	68.74	7.09884 4573	4.20925 4681
48	17- Februari- 2024	292.289 4621	0.584 57892 4	251.0 74298 7	1.098 02457 2	35.6633 385	32.774 41839	14.04	68.25	4.51820 789	2.13081 9315
49	18- Februari- 2024	277.713 8289	0.555 42765 8	226.6 57949 1	0.991 24442	35.6756 0574	32.788 51091	18.02	73.42	5.07766 8852	2.22916 8395
50	19- Februari- 2024	341.355 1512	0.682 71030 2	342.4 43450 3	1.497 60977 1	36.7202 6428	33.993 01975	14.02	68.23	6.75601 4476	3.95932 918
51	20- Februari- 2024	357.668 2521	0.715 33650 4	375.9 55746 1	1.644 16927 4	37.4321 0441	34.818 72014	12.85	66.71	6.99186 9446	4.37429 2838
52	21- Februari- 2024	358.656 0419	0.717 31208 4	378.0 35204 1	1.653 26337 8	37.4807 1618	34.875 25164	17.08	72.21	9.36090 1959	5.87907 6379
53	22- Februari- 2024	344.709 38	0.689 41876	349.2 06360 2	1.527 18604 1	36.8524 579	34.146 05789	11.94	65.52	5.90223 4025	3.50665 2747
54	23- Februari- 2024	341.019 9451	0.682 03989	341.7 71230 9	1.494 66995 1	36.7074 6199	33.978 20608	15.64	70.34	7.51892 8111	4.40037 4291
55	24- Februari- 2024	380.264 7716	0.760 52954 3	424.9 60074 4	1.858 48016 4	38.6962 3673	36.294 71688	13.45	67.49	8.58235 9743	5.85018 0145
56	25- Februari- 2024	329.570 045	0.659 14009	319.2 06263 7	1.395 98645 9	36.3152 3584	33.524 98445	13.15	67.10	5.78385 7076	3.22690 6414
57	26- Februari- 2024	348.198 4349	0.696 39687	356.3 11280 3	1.558 25802 6	36.9978 0891	34.314 48657	17.85	73.20	9.05556 4691	5.45651 1464
58	27- Februari- 2024	253.457 8517	0.506 91570 3	188.7 93675 4	0.825 65239	36.0316 5604	33.198 06552	21.63	78.12	4.80653 2859	1.85670 0947
59	28- Februari- 2024	317.882 5766	0.635 76515 3	296.9 67820 4	1.298 73095 6	36.0066 3288	33.169 24891	22.17	78.82	8.87759 6378	4.70880 6065
60	29- Februari- 2024	279.633 6916	0.559 26738 3	229.8 02598 1	1.004 99693	35.6653 0921	32.776 68224	21.25	77.62	6.09649 7169	2.70238 7758
61	01- Maret- 2024	340.801 6766	0.681 60335 3	341.3 33872 3	1.492 75724 8	36.6991 6584	33.968 60721	16.05	70.87	7.70373 4397	4.50449 0826

62	02-Maret-2024	273.671 0698	0.547 34214	220.1 06932 8	0.962 59482 6	35.7058 9932	32.823 31714	20.15	76.20	5.46753 735	2.35154 9896
63	03-Maret-2024	284.231 102	0.568 46220 4	237.4 21005 6	1.038 31455 2	35.6513 6102	32.760 65992	18.52	74.08	5.54528 728	2.51481 6392
64	04-Maret-2024	338.979 4657	0.677 95893 1	337.6 93517 5	1.476 83686 5	36.6311 3961	33.889 91944	13.07	66.99	6.18492 664	3.58937 8803
65	05-Maret-2024	357.751 3855	0.715 50277 1	376.1 30534 5	1.644 93367 7	37.4361 7172	34.823 44939	21.46	77.89	11.6814 4786	7.31059 16
66	06-Maret-2024	358.072 0128	0.716 14402 6	376.8 05034 9	1.647 88347 3	37.4518 9961	34.841 73812	20.19	76.25	11.0191 4067	6.90475 4624
67	07-Maret-2024	348.080 2802	0.696 16056	356.0 69506 1	1.557 20067 4	36.9927 5654	34.308 62924	15.93	70.71	8.07512 7849	4.86342 9098
68	08-Maret-2024	256.148 4673	0.512 29693 5	192.8 23279 7	0.843 27508	35.9716 4641	33.128 96695	21.25	77.62	4.85316 8929	1.90263 6696
69	09-Maret-2024	288.376 6671	0.576 75333 4	244.3 97173 4	1.068 82346 5	35.6517 3365	32.761 08794	22.01	78.62	6.84235 8719	3.16659 1184
70	10-Maret-2024	290.919 7649	0.581 83953	248.7 26694 5	1.087 75778 2	35.6580 3411	32.768 32512	20.69	76.89	6.57799 9256	3.08189 8512
71	11-Maret-2024	275.121 3442	0.550 24268 8	222.4 45954 4	0.972 82408 1	35.6936 8929	32.809 28737	20.16	76.20	5.54363 5949	2.40198 7234
72	12-Maret-2024	274.880 8558	0.549 76171 2	222.0 57236 6	0.971 1241	35.6956 1012	32.811 4944	16.82	71.86	4.61440 9387	1.99691 8811
73	13-Maret-2024	327.494 1223	0.654 98824 5	315.1 97643 6	1.378 45553 9	36.2535 9274	33.453 86605	21.94	78.52	9.49107 4836	5.24858 5853
74	14-Maret-2024	313.799 9738	0.627 59994 8	289.3 88819 5	1.265 58567 1	35.9210 4236	33.070 7209	22.09	78.72	8.55390 7673	4.45574 7955
75	15-Maret-2024	286.413 9533	0.572 82790 7	241.0 81722 6	1.054 32398 6	35.6500 2713	32.759 12777	20.75	76.97	6.33505 9579	2.90391 9266
76	16-Maret-2024	281.523 8559	0.563 04771 2	232.9 19766 8	1.018 62926 1	35.6577 4573	32.767 99387	23.43	80.46	6.84178 2901	3.06148 8034
77	17-Maret-2024	275.544 3479	0.551 08869 6	223.1 30509 1	0.975 81784 8	35.6904 1089	32.805 52058	19.95	75.93	5.50855 1272	2.39192 468

78	18-Maret-2024	301.558 9198	0.603 11784	267.2 51591 6	1.168 77281 4	35.7343 0765	32.855 964	20.51	76.67	7.16189 7393	3.52850 8266
79	19-Maret-2024	304.493 2116	0.608 98642 3	272.4 77830 1	1.191 62875 1	35.7694 6295	32.896 37346	17.29	72.47	6.18980 6179	3.09120 4272
80	20-Maret-2024	353.688 8329	0.707 37766 6	367.6 36513	1.607 78672 7	37.2425 7218	34.598 48514	11.67	65.18	6.16976 8737	3.79997 5238
81	21-Maret-2024	326.725 5226	0.653 45104 5	313.7 19897 8	1.371 99290 6	36.2315 1401	33.428 40089	19.16	74.91	8.24087 7691	4.54225 7474
82	22-Maret-2024	334.426 6526	0.668 85330 5	328.6 83351	1.437 43265 6	36.4708 5485	33.704 65822	26.27	84.16	12.0041 9851	6.83591 0957
83	23-Maret-2024	305.241 1176	0.610 48223 5	273.8 18011 5	1.197 48977 3	35.7793 9547	32.907 79225	19.17	74.92	6.90736 5806	3.46142 3193
84	24-Maret-2024	277.741 5579	0.555 48311 6	226.7 03213 7	0.991 44237 6	35.6754 3827	32.788 31852	19.65	75.54	5.53910 1745	2.43208 3887
85	25-Maret-2024	197.651 5202	0.395 30304	114.8 09086 2	0.502 09519	38.3579 2987	35.898 51221	22.85	79.70	2.65945 3434	0.72526 1472
86	26-Maret-2024	328.862 1874	0.657 72437 5	317.8 36540 3	1.389 99624	36.2938 8726	33.500 35091	21.05	77.37	9.20703 4856	5.12131 2757
87	27-Maret-2024	357.581 1289	0.715 16225 8	375.7 72612 8	1.643 36837 6	37.4278 4662	34.813 76955	20.90	77.17	11.3651 0954	7.10787 9347
88	28-Maret-2024	339.023 5696	0.678 04713 9	337.7 81396 5	1.477 22118 6	36.6327 6002	33.891 79338	14.11	68.34	6.67848 9025	3.87652 0275
89	29-Maret-2024	368.850 0168	0.737 70003 4	399.8 30166 3	1.748 57940 3	38.0182 6805	35.501 5986	17.48	72.72	10.3024 226	6.72931 8515
90	30-Maret-2024	331.358 4352	0.662 71687	322.6 79966 9	1.411 17802 4	36.3706 8667	33.588 98455	20.06	76.08	8.94711 1768	5.02970 0203
91	31-Maret-2024	303.287 071	0.606 57414 2	270.3 23459 2	1.182 20702 9	35.7542 762	32.878 91575	19.27	75.05	6.82820 0806	3.39112 4497
92	01-April-2024	224.244 1207	0.448 48824 1	147.7 80820 4	0.646 29065 2	37.0020 9555	34.319 45632	19.63	75.52	3.17304 6203	1.03258 9921
93	02-April-2024	283.464 0295	0.566 92805 9	236.1 41248 5	1.032 71778 4	35.6526 3821	32.762 12697	16.83	71.88	5.00323 7042	2.26042 5574

94	03-April-2024	301.448 5241	0.602 89704 8	267.0 55954 7	1.167 91723 4	35.7331 038	32.854 58041	17.67	72.97	6.16357 7936	3.03510 2151
95	04-April-2024	268.381 2601	0.536 76252	211.6 80239 2	0.925 74232 1	35.7631 5144	32.889 11793	14.16	68.41	3.65095 3855	1.52792 2761
96	05-April-2024	300.448 6005	0.600 89720 1	265.2 87210 4	1.160 18197 5	35.7225 9264	32.842 50033	15.58	70.26	5.38818 5979	2.64096 6126
97	06-April-2024	316.359 0626	0.632 71812 5	294.1 28089 7	1.286 31194 7	35.9733 3836	33.130 91477	19.11	74.84	7.55646 0091	3.98118 8849
98	07-April-2024	331.841 0512	0.663 68210 2	323.6 20603 3	1.415 29171 4	36.3860 2164	33.606 68813	18.03	73.44	8.07356 5383	4.54788 5428
99	08-April-2024	342.698 5569	0.685 39711 4	345.1 44131 6	1.509 42067 5	36.7723 1807	34.053 26507	20.36	76.47	9.91125 0507	5.84046 7787
100	09-April-2024	0.22983 1238	0.000 45966 2	0.000 15523 7	6.79E- 07	49.9999 7284	49.999 96606	32.13	91.77	8.77384 E-08	1.86468 E-12
101	10-April-2024	0.23907 6017	0.000 47815 2	0.000 16797 6	7.35E- 07	49.9999 7062	49.999 96327	34.79	95.23	1.0526E -07	2.36405 E-12
102	11-April-2024	0.27834 3035	0.000 55668 6	0.000 22768 6	9.96E- 07	49.9999 6017	49.999 95021	38.00	99.39	1.70712 E-07	4.74372 E-12
103	12-April-2024	0.34791 1826	0.000 69582 4	0.000 35572 5	1.56E- 06	49.9999 3777	49.999 92222	41.38	103.79	3.32032 E-07	1.26089 E-11
104	13-April-2024	0.39312 0982	0.000 78624 2	0.000 45418	1.99E- 06	49.9999 2055	49.999 90069	32.35	92.06	3.56705 E-07	1.60727 E-11
105	14-April-2024	0.35425 0398	0.000 70850 1	0.000 36880 5	1.61E- 06	49.9999 3548	49.999 91936	37.09	98.22	3.11957 E-07	1.21498 E-11
106	15-April-2024	194.770 6861	0.389 54137 2	111.4 86717 9	0.487 56545 9	38.5289 8	36.098 72714	26.51	84.46	2.96999 4252	0.79347 0225
107	16-April-2024	314.162 6137	0.628 32522 7	290.0 58064 8	1.268 51248 5	35.9281 7582	33.078 93038	13.07	66.99	5.07439 218	2.64753 8748
108	17-April-2024	310.604 1937	0.621 20838 7	283.5 24486 6	1.239 93915 3	35.8621 4747	33.002 95779	12.56	66.32	4.73445 6367	2.43109 7371
109	18-April-2024	308.336 4041	0.616 67280 8	279.3 99451 2	1.221 89911 3	35.8246 9027	32.959 87487	17.81	73.15	6.58817 2358	3.34843 3444
110	19-April-2024	308.941 573	0.617 88314 6	280.4 97276 8	1.226 70024	35.8343 3303	32.970 96481	18.72	74.34	6.96002 5326	3.54715 1263

111	20-April-2024	275.268 719	0.550 53743 8	222.6 84334 4	0.973 86659	35.6925 3259	32.807 95834	16.36	71.27	4.50623 061	1.95395 7053
112	21-April-2024	243.719 6327	0.487 43926 5	174.5 64919 4	0.763 42569 5	36.2909 4053	33.496 95104	19.14	74.88	3.84046 7629	1.40434 1803
113	22-April-2024	325.426 6903	0.650 85338 1	311.2 30593 6	1.361 10641 8	36.1951 2038	33.386 43369	24.50	81.85	10.4274 9687	5.71552 9875
114	23-April-2024	325.824 2479	0.651 64849 6	311.9 91487 8	1.364 43404 1	36.2061 3762	33.399 13708	25.58	83.25	10.9194 6408	5.99542 6457
115	24-April-2024	327.064 7015	0.654 12940 3	314.3 71591	1.374 84295 9	36.2412 0757	33.439 58077	21.59	78.06	9.30806 4367	5.13793 3954
116	25-April-2024	336.651 3208	0.673 30264 2	333.0 70821 1	1.456 62040 2	36.5474 433	33.793 15576	24.48	81.82	11.3771 4156	6.53924 4981
117	26-April-2024	350.489 8604	0.700 97972 1	361.0 16340 1	1.578 83468 9	37.0975 878	34.430 20339	17.70	73.01	9.13549 9245	5.55545 8679
118	27-April-2024	302.030 8557	0.604 06171 1	268.0 88736 9	1.172 43390 6	35.7395 5125	32.861 99065	21.28	77.67	7.46108 8824	3.68396 9641
119	28-April-2024	281.397 4858	0.562 79497 2	232.7 10708 3	1.017 71498 4	35.6581 7174	32.768 48322	19.73	75.65	5.75466 6778	2.57341 8821
120	29-April-2024	351.275 7401	0.702 55148	362.6 37120 2	1.585 92285 6	37.1325 9311	34.470 81862	11.63	65.11	6.03547 8531	3.68180 7887
121	30-April-2024	360.998 8387	0.721 99767 7	382.9 90103 5	1.674 93266 6	37.5984 8481	35.012 28285	22.45	79.19	12.5135 872	7.93107 2959
122	01-Mei-2024	389.016 7659	0.778 03353 2	444.7 46542 3	1.945 01243	39.2688 9688	36.967 3548	22.13	78.769	14.9802 9564	10.5418 7895
123	02-Mei-2024	373.746 5284	0.747 49305 7	410.5 16178	1.795 31259 5	38.2993 92	35.830 04457	18.47	74.011	11.2664 9612	7.49616 0897
124	03-Mei-2024	389.775 1628	0.779 55032 6	446.4 82319 3	1.952 60351 3	39.3206 3487	37.028 24688	19.98	75.974	13.5935 7367	9.59213 9038
125	04-Mei-2024	392.344 5347	0.784 68906 9	452.3 88084	1.978 43122 5	39.4983 9384	37.237 60954	16.84	71.892	11.6546 4924	8.29995 7174
126	05-Mei-2024	385.067 941	0.770 13588 2	435.7 63316 6	1.905 72604 1	39.0049 3015	36.656 99662	15.33	69.929	10.1055 6591	7.01059 5998
127	06-Mei-2024	309.062 9077	0.618 12581 5	280.7 17646 8	1.227 66398 5	35.8362 9731	32.973 22398	17.67	72.971	6.57627 2406	3.35341 5976

128	07-Mei-2024	296.199 4931	0.592 39898 6	257.8 36599 2	1.127 59817 7	35.6858 3138	32.800 25897	14.30	68.59	4.76515 0119	2.28947 8747
129	08-Mei-2024	240.799 6207	0.481 59924 1	170.4 07042 6	0.745 24203	36.3813 992	33.601 35152	23.81	80.953	4.63111 7633	1.66512 1484
130	09-Mei-2024	307.725 7354	0.615 45147 1	278.2 93830 7	1.217 06389 7	35.8152 2055	32.948 98467	21.93	78.509	8.07022 9776	4.09031 9566
131	10-Mei-2024	308.370 6136	0.616 74122 7	279.4 61452 6	1.222 17026 4	35.8252 285	32.960 49386	19.55	75.415	7.23365 6195	3.67707 1175
132	11-Mei-2024	297.088 2135	0.594 17642 7	259.3 86152 2	1.134 37484 6	35.6924 6036	32.807 87536	21.71	78.223	7.29093 5603	3.51774 8994
133	12-Mei-2024	244.241 2336	0.488 48246 7	175.3 12915 3	0.766 69690 9	36.2753 9473	33.479 01582	20.44	76.572	4.12507 2566	1.51293 4636
134	13-Mei-2024	248.631 8707	0.497 26374 1	181.6 72644 2	0.794 50994 6	36.1519 4737	33.336 66255	23.55	80.615	4.97805 7699	1.87189 4794
135	14-Mei-2024	392.652 8439	0.785 30568 8	453.0 99347 7	1.981 54179 9	39.5199 7979	37.263 04931	16.64	71.632	11.5397 7672	8.22719 2257
136	15-Mei-2024	384.559 7277	0.769 11945 5	434.6 13833 5	1.900 69900 1	38.9716 2204	36.617 87192	11.24	64.612	7.38403 1427	5.11310 6664
137	16-Mei-2024	396.389 7568	0.792 77951 4	461.7 64762 6	2.019 43830 4	39.7859 4668	37.576 78494	17.56	72.828	12.4814 2447	9.01732 1194
138	17-Mei-2024	253.148 0575	0.506 29611 5	188.3 32443 4	0.823 63528 1	36.0388 9066	33.206 39782	8.80	61.44	1.94929 6806	0.75169 9747
139	18-Mei-2024	392.551 6497	0.785 10329 9	452.8 65832 9	1.980 52056 7	39.5128 8875	37.254 6919	18.09	73.517	12.5369 4168	8.93488 8333
140	19-Mei-2024	365.033 3959	0.730 06679 2	391.5 98608 2	1.712 58028 6	37.8093 9811	35.257 96187	19.88	75.844	11.4051 8876	7.34192 7803
141	20-Mei-2024	361.815 3179	0.723 63063 6	384.7 24497 4	1.682 51770 1	37.6403 4255	35.061 01285	15.19	69.747	8.51618 6882	5.41463 1509
142	21-Mei-2024	295.833 4082	0.591 66681 6	257.1 99651 7	1.124 81261 1	35.6832 6395	32.797 30923	16.74	71.762	5.56031 7086	2.66690 5679
143	22-Mei-2024	337.221 1232	0.674 44224 6	334.1 99259 7	1.461 55540 8	36.5675 9311	33.816 44647	18.13	73.569	8.46442 6704	4.87663 4665
144	23-Mei-2024	277.545 5682	0.555 09113 6	226.3 83378 1	0.990 04363 7	35.6766 337	32.789 69188	17.81	73.153	5.01134 6504	2.19818 6024

145	24-Mei-2024	316.326 0577	0.632 65211 5	294.0 66721 8	1.286 04356 6	35.9726 3491	33.130 10493	21.22	77.586	8.38914 3818	4.41925 0199
146	25-Mei-2024	375.676 4694	0.751 35293 9	414.7 66746 4	1.813 90162 9	38.4142 1756	35.964 37261	24.80	82.24	15.3316 6798	10.2747 4355
147	26-Mei-2024	337.238 3754	0.674 47675 1	334.2 33455 7	1.461 70495 8	36.5682 0658	33.817 15562	17.24	72.412	8.04997 9465	4.63819 0161
148	27-Mei-2024	315.525 614	0.631 05122 8	292.5 80369	1.279 54329 1	35.9558 0625	33.110 73248	20.98	77.274	8.23980 3183	4.32521 102
149	28-Mei-2024	322.615 2047	0.645 23040 9	305.8 76143 2	1.337 68977 2	36.1202 978	33.300 18542	18.09	73.517	7.52732 1578	4.07606 6195
150	29-Mei-2024	377.523 841	0.755 04768 2	418.8 55968 5	1.831 78504 5	38.5262 4286	36.095 52156	18.74	74.362	11.7340 0647	7.91790 8039
151	30-Mei-2024	387.948 0262	0.775 89605 2	442.3 06208 5	1.934 34010 5	39.1965 5524	36.882 24728	18.55	74.115	12.4674 1673	8.73979 8808
152	31-Mei-2024	320.343 5589	0.640 68711 8	301.5 83748 3	1.318 91781 8	36.0638 0985	33.235 10112	13.92	68.096	5.68672 4204	3.04906 4101
153	01-Juni-2024	314.865 5036	0.629 73100 7	291.3 57436 3	1.274 19503 3	35.9422 6317	33.095 14388	25.88	83.644	10.1090 6123	5.29088 0302
154	02-Juni-2024	285.057 779	0.570 11555 8	238.8 04076 7	1.044 36314 5	35.6504 5535	32.759 61963	29.71	88.623	8.96085 6558	4.08035 1485
155	03-Juni-2024	284.292 1306	0.568 58426 1	237.5 22972 1	1.038 76048 3	35.6512 7746	32.760 56395	25.09	82.617	7.51468 156	3.40897 1334
156	04-Juni-2024	291.975 5041	0.583 95100 8	250.5 35213 6	1.095 66698 8	35.6620 0452	32.772 886	23.41	80.433	7.51490 4027	3.53875 4349
157	05-Juni-2024	361.839 4456	0.723 67889 1	384.7 75809 8	1.682 74210 5	37.6415 8587	35.062 4605	16.41	71.333	9.20176 8144	5.85107 3492
158	06-Juni-2024	368.086 2347	0.736 17246 9	398.1 76014 6	1.741 34529 3	37.9757 462	35.451 97172	16.64	71.632	9.75536 5868	6.35352 8217
159	07-Juni-2024	437.766 5146	0.875 53302 9	563.1 97890 7	2.463 03634 5	43.2403 6835	41.698 38454	19.11	74.843	17.5837 9567	14.5980 2747
160	08-Juni-2024	298.570 0005	0.597 14000 1	261.9 80085 7	1.145 71890 9	35.7047 602	32.822 00821	16.43	71.359	5.58957 7002	2.71572 3646
161	09-Juni-2024	282.414 972	0.564 82994 4	234.3 96636 7	1.025 08806 4	35.6550 6576	32.764 91542	27.13	85.269	7.98691 75	3.58974 8278

162	10-Juni-2024	232.839 6489	0.465 67929 8	159.3 27159 6	0.696 78631 8	36.6572 3224	33.920 09717	19.07	74.791	3.39875 6624	1.16584 7567
163	11-Juni-2024	374.236 7123	0.748 47342 5	411.5 93701 9	1.800 02493 6	38.3283 4212	35.863 90223	21.41	77.833	13.1044 4463	8.73505 3292
164	12-Juni-2024	371.064 4282	0.742 12885 6	404.6 45382 1	1.769 63781 2	38.1435 8329	35.647 93361	20.01	76.013	11.9794 4422	7.89055 799
165	13-Juni-2024	362.822 7161	0.725 64543 2	386.8 69847 9	1.691 89997 3	37.6925 661	35.121 82951	16.98	72.074	9.58880 8591	6.12038 7248
166	14-Juni-2024	376.211 3355	0.752 42267 1	415.9 48628 2	1.819 07035 9	38.4464 4004	36.002 08595	18.24	73.712	11.3179 8347	7.60003 6482
167	15-Juni-2024	388.564 8248	0.777 12965	443.7 13771 9	1.940 49581	39.2382 2437	36.931 26483	19.11	74.843	12.8969 5202	9.06103 8056
168	16-Juni-2024	309.181 3103	0.618 36262 1	280.9 32775 1	1.228 60480 7	35.8382 2408	32.975 44004	16.25	71.125	6.05381 4557	3.08865 666
169	17-Juni-2024	332.090 8004	0.664 18160 1	324.1 07911 4	1.417 42286 1	36.3940 1915	33.615 92166	3.18	54.134	1.42664 6114	0.80448 4785
170	18-Juni-2024	370.676 9415	0.741 35388 3	403.8 00715 5	1.765 94382 7	38.1214 3744	35.622 06437	16.48	71.424	9.83936 4124	6.47146 8267
171	19-Juni-2024	370.883 2984	0.741 76659 7	404.2 50434 6	1.767 91058 6	38.1332 1979	35.635 82722	19.99	75.987	11.9522 8814	7.86729 1382
172	20-Juni-2024	210.874 4131	0.421 74882 6	130.6 84390 3	0.571 52274 3	37.6314 4383	35.050 65198	16.75	71.775	2.30726 9145	0.68892 7774
173	21-Juni-2024	363.537 5311	0.727 07506 2	388.3 95732 4	1.698 57313 2	37.7300 086	35.165 44594	15.88	70.644	9.01363 3558	5.76913 693
174	22-Juni-2024	318.506 8282	0.637 01365 6	298.1 35324 8	1.303 83680 9	36.0207 3981	33.185 4938	25.28	82.864	10.1743 6125	5.41147 1723
175	23-Juni-2024	332.662 5411	0.665 32508 2	325.2 24866 2	1.422 30764 5	36.4124 861	33.637 24463	20.76	76.988	9.35532 3981	5.28818 0701
176	24-Juni-2024	378.126 2321	0.756 25246 4	420.1 93719 3	1.837 63543 8	38.5632 169	36.138 82831	9.44	62.272	5.93538 6901	4.01404 7967
177	25-Juni-2024	374.372 7608	0.748 74552 2	411.8 93014 5	1.801 33392 1	38.3364 0301	35.873 33071	26.05	83.865	15.9595 3003	10.6435 8741
178	26-Juni-2024	375.497 8591	0.750 99571 8	414.3 72449 6	1.812 17724 8	38.4034 9592	35.951 8257	30.69	89.897	18.9494 9493	12.6908 3168

179	27-Juni-2024	333.354 5905	0.666 70918 1	326.5 79426 8	1.428 23155 2	36.4351 3394	33.663 39879	13.60	67.68	6.16193 3308	3.49323 6614
180	28-Juni-2024	281.846 6614	0.563 69332 3	233.4 54221 7	1.020 96659 5	35.6567 0935	32.766 80338	22.94	79.822	6.71812 8107	3.01098 3168
181	29-Juni-2024	373.965 5397	0.747 93107 9	410.9 97434 9	1.797 41727 9	38.3123 0868	35.845 15006	14.58	68.954	8.90719 5506	5.93126 3212
182	30-Juni-2024	191.817 2836	0.383 63456 7	108.1 31297 8	0.472 89118 2	38.7088 2033	36.309 47079	17.02	72.126	1.83269 0007	0.47926 2928
183	01-Juli-2024	281.283 2142	0.562 56642 8	232.5 21745 4	1.016 88859 2	35.6585 6679	32.768 93701	19.12	74.856	5.57035 8552	2.48958 2296
184	02-Juli-2024	253.071 1804	0.506 14236 1	188.2 18073 5	0.823 13510 7	36.0406 9635	33.208 47755	19.28	75.064	4.26736 0831	1.64490 6162
185	03-Juli-2024	192.243 1714	0.384 48634 3	108.6 11994	0.474 99341 4	38.6826 1196	36.278 74357	8.38	60.894	0.90756 5039	0.23807 3493
186	04-Juli-2024	99.3582 0329	0.198 71640 7	29.01 23829 5	0.126 88000 9	45.6251 4551	44.592 6033	0.76	50.988	0.01479 6692	0.00154 0607
187	05-Juli-2024	122.129 7823	0.244 25956 5	43.83 48079 8	0.191 703	43.8517 3976	42.436 64425	12.10	65.73	0.40284 9498	0.05599 3168
188	06-Juli-2024	267.566 6772	0.535 13335 4	210.3 97218 1	0.920 13127 8	35.7737 3882	32.901 28906	20.13	76.169	5.14977 6511	2.14602 7147
189	07-Juli-2024	292.993 5915	0.585 98718 3	252.2 85438 9	1.103 32125 8	35.6665 8564	32.778 14856	9.99	62.987	3.23607 028	1.53130 3618
190	08-Juli-2024	247.548 6773	0.495 09735 5	180.0 93136 9	0.787 60227 8	36.1811 6768	33.370 34698	6.43	58.359	1.34384 723	0.50224 6303
191	09-Juli-2024	364.302 2381	0.728 60447 6	390.0 31444 1	1.705 72659 9	37.7704 1885	35.212 53162	15.85	70.605	9.04589 1825	5.80684 1326
192	10-Juli-2024	366.153 2414	0.732 30648 3	394.0 04977 8	1.723 10407 5	37.8697 4539	35.328 31959	21.41	77.833	12.3811 6481	8.00445 0715
193	11-Juli-2024	391.605 9266	0.783 21185 3	450.6 86401	1.970 98924 6	39.4469 036	37.176 94059	34.57	94.941	23.8083 2189	16.9106 2806
194	12-Juli-2024	347.778 4202	0.695 55684	355.4 52197 2	1.554 50099 3	36.9798 9013	34.293 71383	24.13	81.369	12.2057 7899	7.34228 399
195	13-Juli-2024	370.958 6122	0.741 91722 4	404.4 14630 4	1.768 62866 4	38.1375 2649	35.640 8581	10.70	63.91	6.40105 133	4.21452 8015

196	14-Juli-2024	314.369 9779	0.628 73995 6	290.4 41099	1.270 18761	35.9322 9604	33.083 67229	12.27	65.951	4.77323 3408	2.49271 2295
197	15-Juli-2024	378.391 757	0.756 78351 4	420.7 84056 7	1.840 21716 4	38.5795 8377	36.158 00173	20.14	76.182	12.6861 2953	8.58794 9245
198	16-Juli-2024	367.458 3287	0.734 91665 7	396.8 18702 9	1.735 40935 4	37.9410 5922	35.411 49913	16.59	71.567	9.68297 421	6.29132 4738
199	17-Juli-2024	259.091 5024	0.518 18300 5	197.2 79646 5	0.862 76413 2	35.9118 2599	33.060 11493	13.76	67.888	3.23756 1414	1.28971 7066
200	18-Juli-2024	169.079 5396	0.338 15907 9	84.01 52367 5	0.367 42428 4	40.2296 9415	38.101 39813	12.55	66.315	0.97342 3472	0.21333 9507
201	19-Juli-2024	242.446 6126	0.484 89322 5	172.7 46073 1	0.755 47132 5	36.3296 6266	33.541 63321	13.67	67.771	2.70639 8657	0.98241 8048
202	20-Juli-2024	285.871 6244	0.571 74324 9	240.1 69603 5	1.050 33501	35.6500 4072	32.759 14337	16.49	71.437	5.01056 5284	2.29069 9854
203	21-Juli-2024	266.184 2755	0.532 36855 1	208.2 28770 7	0.910 64799 6	35.7927 8618	32.923 18796	11.42	64.846	2.88244 929	1.19250 1749
204	22-Juli-2024	124.605 3698	0.249 21074	45.62 98939 4	0.199 55345 9	43.6549 7915	42.198 76397	0.19	49.753	- 0.00666 4545	- 0.00095 272
205	23-Juli-2024	328.460 951	0.656 92190 2	317.0 61444 8	1.386 60651 1	36.2819 374	33.486 56388	8.24	60.712	3.59257 8714	1.99492 0213
206	24-Juli-2024	257.865 8025	0.515 73160 5	195.4 17496	0.854 62038	35.9359 9927	33.087 93441	9.74	62.662	2.26362 2751	0.89577 1613
207	25-Juli-2024	151.312 511	0.302 62502 2	67.28 61406 8	0.294 26283 9	41.5519 2718	39.673 12977	7.21	59.373	0.41901 6559	0.07861 3649
208	26-Juli-2024	213.556 9745	0.427 11394 9	134.0 30445 6	0.586 15606 4	37.4963 9289	34.893 48627	9.80	62.74	1.39502 8857	0.42397 91
209	27-Juli-2024	331.467 0442	0.662 93408 8	322.8 91530 4	1.412 10325 6	36.3741 2396	33.592 95259	18.24	73.712	8.14312 4964	4.57983 2463
210	28-Juli-2024	281.143 1409	0.562 28628 2	232.2 90220 9	1.015 87606 5	35.6590 6377	32.769 5079	13.08	67.004	3.80575 2709	1.69973 4339
211	29-Juli-2024	276.835 0335	0.553 67006 7	225.2 25749 5	0.984 98097 4	35.6811 9769	32.794 93531	12.94	66.822	3.61684 873	1.58081 7766
212	30-Juli-2024	272.470 9533	0.544 94190 7	218.1 80717 1	0.954 17089 6	35.7171 3847	32.836 2324	12.03	65.639	3.22640 9722	1.37914 4613

213	31-Juli-2024	219.448 4794	0.438 89695 9	141.5 27584 4	0.618 94334 1	37.2151 1354	34.566 60162	8.17	60.621	1.24826 8741	0.39410 8404
214	01-Agustus-2024	180.116 8243	0.360 23364 9	95.34 20541 5	0.416 95991 5	39.4631 8167	37.196 11827	5.83	57.579	0.53300 4685	0.12762 8897
215	02-Agustus-2024	210.248 6767	0.420 49735 3	129.9 09970 6	0.568 13596 9	37.6635 621	35.088 05045	9.70	62.61	1.32586 5836	0.39424 6779
216	03-Agustus-2024	198.454 5744	0.396 90914 9	115.7 43915 6	0.506 18348 4	38.3110 3426	35.843 65963	10.07	63.091	1.18459 4489	0.32489 0686
217	04-Agustus-2024	151.665 0714	0.303 33014 3	67.60 00613 4	0.295 63571	41.5248 5175	39.640 81842	5.15	56.695	0.30111 4079	0.05667 7784
218	05-Agustus-2024	231.788 6964	0.463 57739 3	157.8 92117 1	0.690 51044	36.6968 0766	33.965 87882	11.96	65.548	2.10664 9954	0.71806 4615
219	06-Agustus-2024	218.046 8437	0.436 09368 7	139.7 25461 1	0.611 06210 6	37.2800 9637	34.642 06577	16.42	71.346	2.46731 1515	0.77203 2719
220	07-Agustus-2024	222.244 6659	0.444 48933 2	145.1 57217 6	0.634 81683 5	37.0891 4413	34.420 40797	7.45	59.685	1.17635 6927	0.37804 6301
221	08-Agustus-2024	203.064 3983	0.406 12879 7	121.1 83507 9	0.529 97248 3	38.0486 3121	35.537 04369	7.35	59.555	0.91781 7916	0.25994 761
222	09-Agustus-2024	299.270 4388	0.598 54087 8	263.2 10726 1	1.151 10087 5	35.7111 1657	32.829 31232	13.82	67.966	4.73037 2239	2.30582 668
223	10-Agustus-2024	275.142 5188	0.550 28503 8	222.4 80196 6	0.972 97383 3	35.6935 2214	32.809 09532	14.54	68.902	3.99977 7105	1.73323 9493
224	11-Agustus-2024	223.942 8453	0.447 88569 1	147.3 83995 6	0.644 55521 5	37.0150 4919	34.334 47511	4.90	56.37	0.78917 6455	0.25633 5161
225	12-Agustus-2024	249.549 1886	0.499 09837 7	183.0 15665 9	0.800 38339	36.1278 3674	33.308 87357	13.50	67.55	2.88111 8564	1.08898 4634
226	13-Agustus-2024	279.127 1806	0.558 25436 1	228.9 70852	1.001 35945 1	35.6677 6987	32.779 50898	16.91	71.983	4.82892 5262	2.13508 642
227	14-Agustus-2024	243.489 441	0.486 97888 2	174.2 35324 1	0.761 98427 4	36.2978 6038	33.504 93511	10.22	63.286	2.04607 0443	0.74719 6384
228	15-Agustus-2024	198.185 6104	0.396 37122 1	115.4 30394 4	0.504 81236 1	38.3267 0228	35.861 98423	9.54	62.402	1.11829 7165	0.30612 5977

229	16- Agustus- 2024	160.752 5371	0.321 50507 4	75.94 36758 3	0.332 12488 3	40.8377 1516	38.822 57106	6.31	58.203	0.42920 1344	0.08764 4373
230	17- Agustus- 2024	138.032 0114	0.276 06402 3	55.99 32370 5	0.244 87552 3	42.5886 081	40.914 22292	5.94	57.722	0.27186 6258	0.04485 0681
231	18- Agustus- 2024	147.085 6303	0.294 17126 1	63.57 94012 9	0.278 05213 5	41.8785 9036	40.063 37826	5.79	57.527	0.31259 5372	0.05636 6735
232	19- Agustus- 2024	136.173 5373	0.272 34707 5	54.49 55926 9	0.238 32586 7	42.7356 3169	41.090 85318	5.96	57.748	0.26333 5051	0.04262 6578
233	20- Agustus- 2024	142.713 6708	0.285 42734 2	59.85 59180 8	0.261 76820 6	42.2199 6101	40.472 01094	9.09	61.817	0.45372 815	0.07843 132
234	21- Agustus- 2024	151.273 985	0.302 54797	67.25 18813 1	0.294 11301 2	41.5548 8753	39.676 66292	8.94	61.622	0.51921 3414	0.09737 7326
235	22- Agustus- 2024	196.895 9304	0.393 79186 1	113.9 32970 9	0.498 26367 1	38.4023 6864	35.950 50657	5.93	57.709	0.68342 6096	0.18538 0901
236	23- Agustus- 2024	219.357 4706	0.438 71494 1	141.4 10221 2	0.618 43007 6	37.2192 9582	34.571 45748	10.68	63.884	1.63000 4904	0.51433 2901
237	24- Agustus- 2024	164.593 3946	0.329 18678 9	79.61 60719 6	0.348 18539 3	40.5544 0709	38.486 20328	8.04	60.452	0.58149 9888	0.12273 516
238	25- Agustus- 2024	190.783 0674	0.381 56613 5	106.9 68423 8	0.467 80558	38.7728 4456	36.384 55595	7.62	59.906	0.80905 8384	0.20997 9847
239	26- Agustus- 2024	213.058 5858	0.426 11717 2	133.4 05588 3	0.583 42337 2	37.5211 5782	34.922 29591	11.68	65.184	1.65257 6937	0.50061 3247
240	27- Agustus- 2024	245.982 7356	0.491 96547 1	177.8 21879 6	0.777 66937 6	36.2248 424	33.420 70675	10.57	63.741	2.17294 3122	0.80492 7621
241	28- Agustus- 2024	212.690 166	0.425 38033 2	132.9 44618 7	0.581 40741 1	37.5395 6058	34.943 70737	10.60	63.78	1.49303 6665	0.45118 9351
242	29- Agustus- 2024	223.394 7888	0.446 78957 8	146.6 63491 1	0.641 40422 9	37.0387 6176	34.361 97149	18.57	74.141	2.97182 4397	0.96198 2986
243	30- Agustus- 2024	248.081 8443	0.496 16368 9	180.8 69736 6	0.790 99858 6	36.1666 8355	33.353 6492	12.84	66.692	2.69856 77	1.01159 8756
244	31- Agustus- 2024	203.563 223	0.407 12644 6	121.7 79610 1	0.532 57942	38.0209 4245	35.504 72033	5.81	57.553	0.73015 6072	0.20750 8906

Tabel C.1 Perhitungan Unit 1 Bulan Januari – Agustus 2024 Lanjutan

NO	Tanggal	$\Delta\theta_h$ (°C)		V		L (Susut Umur)		n (Umur Transformator)	
		ONAN/ ONAF	ODAF	ONAN/ ONAF	ODAF	ONAN/ ONAF	ODAF	ONAN/ ONAF (Tahun)	ODAF (Tahun)
1	01-Januari-2024	71.08316511	65.72087614	0.044609902	0.024009058	0.044609902	0.024009058	20.96096634	20.97899207
2	02-Januari-2024	84.45177192	75.85160182	0.209030341	0.077391009	0.209030341	0.077391009	20.81709845	20.93228287
3	03-Januari-2024	80.56741346	74.1804367	0.133447135	0.063802658	0.133447135	0.063802658	20.88323376	20.94417267
4	04-Januari-2024	69.18403196	64.87971506	0.035821279	0.021785591	0.035821279	0.021785591	20.96865638	20.98093761
5	05-Januari-2024	74.12655031	66.90916035	0.063406676	0.027542161	0.063406676	0.027542161	20.94451916	20.97590061
6	06-Januari-2024	76.25228872	70.1024162	0.081057876	0.039831034	0.081057876	0.039831034	20.92907436	20.96514784
7	07-Januari-2024	74.4275904	68.04825371	0.065650775	0.031416132	0.065650775	0.031416132	20.94255557	20.97251088
8	08-Januari-2024	69.36421359	64.39872776	0.036574788	0.020607984	0.036574788	0.020607984	20.96799706	20.98196801
9	09-Januari-2024	71.08158124	65.5323855	0.044601739	0.023491864	0.044601739	0.023491864	20.96097348	20.97944462
10	10-Januari-2024	74.1654463	68.08941234	0.063692254	0.031565878	0.063692254	0.031565878	20.94426928	20.97237986
11	11-Januari-2024	73.40021213	67.13822567	0.058302949	0.028280788	0.058302949	0.028280788	20.94898492	20.97525431
12	12-Januari-2024	71.12676393	68.10148928	0.044835174	0.031609953	0.044835174	0.031609953	20.96076922	20.97234129
13	13-Januari-2024	70.50987199	66.32896216	0.041750909	0.025756462	0.041750909	0.025756462	20.96346796	20.9774631
14	14-Januari-2024	70.30133309	65.16977097	0.040757014	0.022528023	0.040757014	0.022528023	20.96433761	20.98028798
15	15-Januari-2024	75.21960642	69.33536752	0.071941543	0.036453098	0.071941543	0.036453098	20.93705115	20.96810354
16	16-Januari-2024	75.67136857	70.96715214	0.075796158	0.044015967	0.075796158	0.044015967	20.93367836	20.96148603
17	17-Januari-2024	71.4980638	66.47055372	0.046800346	0.026181267	0.046800346	0.026181267	20.9590497	20.97709139
18	18-Januari-2024	75.67991531	69.97307269	0.075871039	0.039240244	0.075871039	0.039240244	20.93361284	20.96566479
19	19-Januari-2024	68.26834434	62.78732018	0.032225221	0.017107327	0.032225221	0.017107327	20.97180293	20.98503109
20	20-Januari-2024	70.33887028	65.30171622	0.040934154	0.022874074	0.040934154	0.022874074	20.96418262	20.97998519
21	21-Januari-2024	81.90324649	77.18308354	0.15571681	0.090260643	0.15571681	0.090260643	20.86374779	20.92102194

22	22-Januari-2024	79.45779 28	75.0508 4181	0.117390 609	0.07055 2415	0.11739 0609	0.070552 415	20.89728 322	20.938266 64
23	23-Januari-2024	77.48957 116	73.5915 5159	0.093513 998	0.05960 6154	0.09351 3998	0.059606 154	20.91817 525	20.947844 62
24	24-Januari-2024	69.83669 232	64.5258 5223	0.038626 8	0.02091 289	0.03862 68	0.020912 89	20.96620 155	20.981701 22
25	25-Januari-2024	71.71342 651	67.4002 1793	0.047979 423	0.02914 9904	0.04797 9423	0.029149 904	20.95801 801	20.974493 83
26	26-Januari-2024	71.95465 314	68.2088 2498	0.049335 407	0.03200 4385	0.04933 5407	0.032004 385	20.95683 152	20.971996 16
27	27-Januari-2024	71.37842 024	65.5693 6164	0.046157 882	0.02359 2436	0.04615 7882	0.023592 436	20.95961 185	20.979356 62
28	28-Januari-2024	71.76730 265	66.2223 1467	0.048279 002	0.02544 1054	0.04827 9002	0.025441 054	20.95775 587	20.977739 08
29	29-Januari-2024	77.46179 384	71.8544 8021	0.093214 373	0.04876 7723	0.09321 4373	0.048767 723	20.91843 742	20.957328 24
30	30-Januari-2024	79.12047 507	73.0587 4862	0.112903 715	0.05604 7647	0.11290 3715	0.056047 647	20.90120 925	20.950958 31
31	31-Januari-2024	78.02947 729	71.8584 8553	0.099532 921	0.04879 0295	0.09953 2921	0.048790 295	20.91290 869	20.957308 49
32	01-Februari-2024	75.90159 835	70.9338 9396	0.077839 335	0.04384 7162	0.07783 9335	0.043847 162	20.93189 058	20.961633 73
33	02-Februari-2024	75.94986 954	70.3751 8564	0.078274 653	0.04110 626	0.07827 4653	0.041106 26	20.93150 968	20.964032 02
34	03-Februari-2024	76.15069 69	69.8870 1241	0.080112 039	0.03885 2017	0.08011 2039	0.038852 017	20.92990 197	20.966004 49
35	04-Februari-2024	71.23500 677	65.8320 9453	0.045399 39	0.02431 9552	0.04539 939	0.024319 552	20.96027 553	20.978720 39
36	05-Februari-2024	75.87568 477	69.5036 2105	0.077606 641	0.03716 864	0.07760 6641	0.037168 64	20.93209 419	20.967477 44
37	06-Februari-2024	70.19215 126	64.5068 2316	0.040246 127	0.02086 6964	0.04024 6127	0.020866 964	20.96478 464	20.981741 41
38	07-Februari-2024	76.77953 503	71.7450 9574	0.086148 977	0.04815 5294	0.08614 8977	0.048155 294	20.92461 964	20.957864 12
39	08-Februari-2024	70.79995 96	66.4540 053	0.043173 897	0.02613 1259	0.04317 3897	0.026131 259	20.96222 284	20.977135 15
40	09-Februari-2024	72.50202 886	69.0394 8546	0.052556 16	0.03522 8032	0.05255 616	0.035228 032	20.95401 336	20.969175 47
41	10-Februari-2024	72.08780 209	66.7818 7904	0.050100 21	0.02714 0109	0.05010 021	0.027140 109	20.95616 232	20.976252 4

42	11- Februari- 2024	72.13696 242	66.6934 1441	0.050385 572	0.02686 4133	0.05038 5572	0.026864 133	20.95591 262	20.976493 88
43	12- Februari- 2024	78.45635 443	72.5882 8454	0.104564 814	0.05308 2523	0.10456 4814	0.053082 523	20.90850 579	20.953552 79
44	13- Februari- 2024	78.97162 134	73.7644 0452	0.110978 642	0.06080 8473	0.11097 8642	0.060808 473	20.90289 369	20.946792 59
45	14- Februari- 2024	71.51002 721	66.3068 5394	0.046865 077	0.02569 0758	0.04686 5077	0.025690 758	20.95899 306	20.977520 59
46	15- Februari- 2024	75.99534 643	69.9231 3189	0.078686 999	0.03901 4486	0.07868 6999	0.039014 486	20.93114 888	20.965862 33
47	16- Februari- 2024	74.53166 732	68.9325 7263	0.066444 951	0.03479 5571	0.06644 4951	0.034795 571	20.94186 067	20.969553 88
48	17- Februari- 2024	70.88154 639	65.6052 377	0.043582 779	0.02369 0427	0.04358 2779	0.023690 427	20.96186 507	20.979270 88
49	18- Februari- 2024	71.26327 459	65.5276 793	0.045547 901	0.02347 9095	0.04554 7901	0.023479 095	20.96014 559	20.979455 79
50	19- Februari- 2024	74.22627 875	68.7023 4893	0.064141 472	0.03388 2258	0.06414 1472	0.033882 258	20.94387 621	20.970353 02
51	20- Februari- 2024	76.71397 386	71.4830 1298	0.085498 905	0.04671 9037	0.08549 8905	0.046719 037	20.92518 846	20.959120 84
52	21- Februari- 2024	77.39161 814	71.3043 2802	0.092461 679	0.04576 445	0.09246 1679	0.045764 45	20.91909 603	20.959956 11
53	22- Februari- 2024	73.79469 192	68.6927 1064	0.061021 628	0.03384 455	0.06102 1628	0.033844 55	20.94660 608	20.970386 02
54	23- Februari- 2024	76.38639 01	70.5385 8037	0.082323 502	0.04188 9617	0.08232 3502	0.041889 617	20.92796 694	20.963346 59
55	24- Februari- 2024	79.43859 648	74.3048 9703	0.117130 546	0.06472 6727	0.11713 0546	0.064726 727	20.89751 077	20.943364 11
56	25- Februari- 2024	73.33909 292	67.9918 9087	0.057892 703	0.03121 2221	0.05789 2703	0.031212 221	20.94934 388	20.972689 31
57	26- Februari- 2024	77.48337 361	71.2009 9804	0.093447 064	0.04522 1358	0.09344 7064	0.045221 358	20.91823 382	20.960431 31

58	27- Februari- 2024	72.01818 89	66.2347 6647	0.049698 886	0.02547 768	0.04969 8886	0.025477 68	20.95651 347	20.977707 03
59	28- Februari- 2024	73.87422 926	66.8680 5497	0.061584 954	0.02741 1672	0.06158 4954	0.027411 672	20.94611 316	20.976014 79
60	29- Februari- 2024	71.77180 637	65.4890 7	0.048304 13	0.02337 4596	0.04830 413	0.023374 596	20.95773 389	20.979547 23
61	01-Maret- 2024	75.86290 023	69.9330 9803	0.077492 097	0.03905 9434	0.07749 2097	0.039059 434	20.93219 442	20.965823
62	02-Maret- 2024	70.86343 667	64.8648 6704	0.043491 687	0.02174 8251	0.04349 1687	0.021748 251	20.96194 477	20.980970 28
63	03-Maret- 2024	71.00664 83	65.0854 7631	0.044217 276	0.02230 969	0.04421 7276	0.022309 69	20.96130 988	20.980479 02
64	04-Maret- 2024	74.35606 625	69.0192 9824	0.065110 509	0.03514 5965	0.06511 0509	0.035145 965	20.94302 83	20.969247 28
65	05-Maret- 2024	80.12761 959	73.1440 4099	0.126835 939	0.05660 2678	0.12683 5939	0.056602 678	20.88901 855	20.950472 66
66	06-Maret- 2024	81.04104 028	74.3164 9275	0.140952 821	0.06481 3499	0.14095 2821	0.064813 499	20.87666 628	20.943288 19
67	07-Maret- 2024	77.42788 439	71.5320 5834	0.092849 903	0.04698 4516	0.09284 9903	0.046984 516	20.91875 633	20.958888 55
68	08-Maret- 2024	72.25481 534	66.4616 0365	0.051076 312	0.02615 4208	0.05107 6312	0.026154 208	20.95530 823	20.977115 07
69	09-Maret- 2024	70.90409 237	64.3376 7913	0.043696 452	0.02046 3144	0.04369 6452	0.020463 144	20.96176 56	20.982094 75
70	10-Maret- 2024	72.46603 336	66.0802 2363	0.052338 049	0.02502 6816	0.05233 8049	0.025026 816	20.95420 421	20.978101 54
71	11-Maret- 2024	72.46732 524	66.4412 7461	0.052345 861	0.02609 2852	0.05234 5861	0.026092 852	20.95419 737	20.977168 75
72	12-Maret- 2024	71.05001 951	65.5484 1321	0.044439 398	0.02353 5406	0.04443 9398	0.023535 406	20.96111 553	20.979406 52
73	13-Maret- 2024	76.54466 758	69.5024 519	0.083842 749	0.03716 362	0.08384 2749	0.037163 62	20.92663 759	20.967481 83
74	14-Maret- 2024	75.27495 003	68.3264 6886	0.072403 015	0.03244 2352	0.07240 3015	0.032442 352	20.93664 736	20.971612 94
75	15-Maret- 2024	71.63508 671	65.3130 4703	0.047547 126	0.02290 4037	0.04754 7126	0.022904 037	20.95839 626	20.979958 97
76	16-Maret- 2024	71.37952 863	64.7094 819	0.046163 793	0.02136 1306	0.04616 3793	0.021361 306	20.95960 668	20.981308 86
77	17-Maret- 2024	71.37896 217	65.3774 4526	0.046160 772	0.02307 5083	0.04616 0772	0.023075 083	20.95960 932	20.979809 3
78	18-Maret- 2024	73.41620 504	66.9044 7227	0.058410 776	0.02752 7247	0.05841 0776	0.027527 247	20.94889 057	20.975913 66
79	19-Maret- 2024	73.63926 913	67.6675 7774	0.059935 669	0.03006 4367	0.05993 5669	0.030064 367	20.94755 629	20.973693 68
80	20-Maret- 2024	75.46234 091	70.4484 6038	0.073987 628	0.04145 573	0.07398 7628	0.041455 73	20.93526 083	20.963726 24

81	21-Maret-2024	76.83239 17	70.3306 5836	0.086676 675	0.04089 5336	0.08667 6675	0.040895 336	20.92415 791	20.964216 58
82	22-Maret-2024	79.59505 335	71.6605 6918	0.119267 053	0.04768 7315	0.11926 7053	0.047687 315	20.89564 133	20.958273 6
83	23-Maret-2024	74.42676 127	68.1092 1544	0.065644 487	0.03163 8181	0.06564 4487	0.031638 181	20.94256 107	20.972316 59
84	24-Maret-2024	73.76454 002	67.7704 024	0.060809 425	0.03042 3653	0.06080 9425	0.030423 653	20.94679 175	20.973379 3
85	25-Maret-2024	73.11738 331	68.7237 7369	0.056428 618	0.03396 623	0.05642 8618	0.033966 23	20.95062 496	20.970279 55
86	26-Maret-2024	77.70092 212	70.8216 6367	0.095825 543	0.04328 2294	0.09582 5543	0.043282 294	20.91615 265	20.962127 99
87	27-Maret-2024	78.46295 616	71.5916 489	0.104644 599	0.04730 9107	0.10464 4599	0.047309 107	20.90843 598	20.958604 53
88	28-Maret-2024	73.93124 905	68.3883 1366	0.061991 997	0.03267 4988	0.06199 1997	0.032674 988	20.94575 7	20.971409 39
89	29-Maret-2024	80.32069 064	74.2309 1712	0.129696 957	0.06417 5854	0.12969 6957	0.064175 854	20.88651 516	20.943846 13
90	30-Maret-2024	77.68779 844	70.9886 8475	0.095680 36	0.04412 5603	0.09568 036	0.044125 603	20.91627 968	20.961390 1
91	31-Maret-2024	74.07247 701	67.7600 4025	0.063011 791	0.03038 7252	0.06301 1791	0.030387 252	20.94486 468	20.973411 15
92	01-April-2024	71.45514 175	66.6320 4624	0.046568 84	0.02667 4337	0.04656 884	0.026674 337	20.95925 226	20.976659 95
93	02-April-2024	71.45587 525	65.8225 5254	0.046572 787	0.02429 2756	0.04657 2787	0.024292 756	20.95924 881	20.978743 84
94	03-April-2024	73.15668 174	67.1496 8256	0.056685 403	0.02831 8247	0.05668 5403	0.028318 247	20.95040 027	20.975221 53
95	04-April-2024	71.59410 529	66.5970 4069	0.047322 535	0.02656 6676	0.04732 2535	0.026566 676	20.95859 278	20.976754 16
96	05-April-2024	72.52077 862	66.8934 6646	0.052670 132	0.02749 2267	0.05267 0132	0.027492 267	20.95391 363	20.975944 27
97	06-April-2024	75.38979 845	68.9721 0362	0.073370 122	0.03495 4851	0.07337 0122	0.034954 851	20.93580 114	20.969414 51
98	07-April-2024	76.74958 702	70.4445 7356	0.085851 417	0.04143 7118	0.08585 1417	0.041437 118	20.92488 001	20.963742 52
99	08-April-2024	79.12356 858	72.3337 3286	0.112944 075	0.05154 4137	0.11294 4075	0.051544 137	20.90117 393	20.954898 88
100	09-April-2024	82.59997 293	82.5999 6606	0.168769 583	0.16876 9448	0.16876 9583	0.168769 448	20.85232 662	20.852326 73
101	10-April-2024	82.41997 072	82.4199 6327	0.165296 042	0.16529 59	0.16529 6042	0.165295 9	20.85536 596	20.855366 09
102	11-April-2024	81.29996 034	81.2999 5021	0.145232 979	0.14523 2809	0.14523 2979	0.145232 809	20.87292 114	20.872921 29
103	12-April-2024	80.02993 81	80.0299 2222	0.125412 579	0.12541 2349	0.12541 2579	0.125412 349	20.89026 399	20.890264 19
104	13-April-2024	80.88992 091	80.8899 0069	0.138513 233	0.13851 2909	0.13851 3233	0.138512 909	20.87880 092	20.878801 2

105	14-April-2024	81.8099358	81.80991936	0.154047118	0.154046825	0.154047118	0.154046825	20.86520877	20.86520903
106	15-April-2024	73.34897425	68.74219736	0.057958833	0.034038606	0.057958833	0.034038606	20.94928602	20.97021622
107	16-April-2024	73.992568	68.71646913	0.062432732	0.033937578	0.062432732	0.033937578	20.94537136	20.97030462
108	17-April-2024	72.46660383	67.30405516	0.052341499	0.02882784	0.052341499	0.02882784	20.95420119	20.97477564
109	18-April-2024	73.31286262	67.20830831	0.057717526	0.028510704	0.057717526	0.028510704	20.94949716	20.97505313
110	19-April-2024	72.87435836	66.59811607	0.054866276	0.026569977	0.054866276	0.026569977	20.95199201	20.97675127
111	20-April-2024	71.6587632	66.22191539	0.047677366	0.025439881	0.047677366	0.025439881	20.9582823	20.9777401
112	21-April-2024	71.19140816	65.96129285	0.045171283	0.024685287	0.045171283	0.024685287	20.96047513	20.97840037
113	22-April-2024	78.05261725	70.53196357	0.099799372	0.041857606	0.099799372	0.041857606	20.91267555	20.96337459
114	23-April-2024	78.82560171	71.09456354	0.109122116	0.044668687	0.109122116	0.044668687	20.90451815	20.9609149
115	24-April-2024	76.78927194	69.81751472	0.086245944	0.038541311	0.086245944	0.038541311	20.9245348	20.96627635
116	25-April-2024	78.78458486	71.19240075	0.108606229	0.045176463	0.108606229	0.045176463	20.90496955	20.96047059
117	26-April-2024	77.80308705	71.55566207	0.09696332	0.047112819	0.09696332	0.047112819	20.91515709	20.95877628
118	27-April-2024	73.17064007	66.51596029	0.056776891	0.026318974	0.056776891	0.026318974	20.95032022	20.9769709
119	28-April-2024	72.03283851	65.96190204	0.049783074	0.024687024	0.049783074	0.024687024	20.95643981	20.97839885
120	29-April-2024	75.74807164	70.73262651	0.076470832	0.04283934	0.076470832	0.04283934	20.93308802	20.96251558
121	30-April-2024	81.82207201	74.65335581	0.154263265	0.067385705	0.154263265	0.067385705	20.86501964	20.94103751
122	01-Mei-2024	85.30919252	78.56923375	0.230797412	0.105937412	0.230797412	0.105937412	20.79805226	20.90730476
123	02-Mei-2024	80.08588812	73.84620547	0.126225885	0.061385884	0.126225885	0.061385884	20.88955235	20.94628735
124	03-Mei-2024	83.93420854	77.64038591	0.19689753	0.095157681	0.19689753	0.095157681	20.82771466	20.91673703
125	04-Mei-2024	82.96304308	77.34756671	0.175999504	0.091992298	0.175999504	0.091992298	20.84600043	20.91950674
126	05-Mei-2024	80.64049606	75.19759262	0.134578666	0.071758804	0.134578666	0.071758804	20.88224367	20.93721105
127	06-Mei-2024	74.20256972	68.11663996	0.063966017	0.031665332	0.063966017	0.031665332	20.94402974	20.97229283
128	07-Mei-2024	72.2509815	66.88973772	0.051053694	0.027480426	0.051053694	0.027480426	20.95532802	20.97595463

129	08-Mei-2024	72.05251683	66.306473	0.049896385	0.025689627	0.049896385	0.025689627	20.95634066	20.97752158
130	09-Mei-2024	74.89545033	68.04930424	0.069297093	0.031419946	0.069297093	0.031419946	20.93936504	20.97250755
131	10-Mei-2024	75.3588847	68.93756504	0.073108542	0.034815646	0.073108542	0.034815646	20.93603003	20.96953631
132	11-Mei-2024	74.34339597	67.68562435	0.065015267	0.030127117	0.065015267	0.030127117	20.94311164	20.97363877
133	12-Mei-2024	71.2004673	65.79195045	0.045218586	0.024207019	0.045218586	0.024207019	20.96043374	20.97881886
134	13-Mei-2024	72.24000507	66.31855735	0.050988991	0.025725519	0.050988991	0.025725519	20.95538463	20.97749017
135	14-Mei-2024	81.58975651	76.02024157	0.150177872	0.078913646	0.150177872	0.078913646	20.86859436	20.93095056
136	15-Mei-2024	77.67565346	73.05097859	0.0955462	0.055997355	0.0955462	0.055997355	20.91639707	20.95100231
137	16-Mei-2024	83.76737115	78.09410613	0.193138609	0.100278895	0.193138609	0.100278895	20.83100372	20.91225597
138	17-Mei-2024	69.36818746	65.33809757	0.036591584	0.022970422	0.036591584	0.022970422	20.96798236	20.97990088
139	18-Mei-2024	83.29983043	77.43958023	0.182982668	0.092975452	0.182982668	0.092975452	20.83989017	20.91864648
140	19-Mei-2024	80.39458688	73.77988967	0.130808985	0.06091736	0.130808985	0.06091736	20.88554214	20.94669731
141	20-Mei-2024	78.14652944	72.46564436	0.100888093	0.052335697	0.100888093	0.052335697	20.91172292	20.95420627
142	21-Mei-2024	73.48358104	67.70421491	0.058867231	0.030191894	0.058867231	0.030191894	20.94849117	20.97358209
143	22-Mei-2024	76.35201981	70.01308114	0.08199725	0.039422045	0.08199725	0.039422045	20.92825241	20.96550571
144	23-Mei-2024	68.8779802	63.1778779	0.034576797	0.017896933	0.034576797	0.017896933	20.9697453	20.98434018
145	24-Mei-2024	73.55177873	66.73935513	0.059332886	0.027007099	0.059332886	0.027007099	20.94808373	20.97636879
146	25-Mei-2024	82.34588555	74.83911616	0.163887257	0.068847539	0.163887257	0.068847539	20.85659865	20.9397584
147	26-Mei-2024	75.30818605	69.14534578	0.072681568	0.035661531	0.072681568	0.035661531	20.93640363	20.96879616
148	27-Mei-2024	75.74560943	68.9859435	0.076449082	0.035010788	0.076449082	0.035010788	20.93310705	20.96936556
149	28-Mei-2024	75.14761938	68.87625162	0.071345692	0.034569892	0.071345692	0.034569892	20.93757252	20.96975134
150	29-Mei-2024	82.46024933	76.2134296	0.166067045	0.080694779	0.166067045	0.080694779	20.85469134	20.92939207
151	30-Mei-2024	83.06397197	77.02204609	0.17806379	0.088596847	0.17806379	0.088596847	20.84419418	20.92247776
152	31-Mei-2024	73.09053405	67.62416522	0.056253848	0.029913954	0.056253848	0.029913954	20.95077788	20.97382529

153	01-Juni-2024	77.1213244	69.45602419	0.089618902	0.036964809	0.089618902	0.036964809	20.92158346	20.96765579
154	02-Juni-2024	75.78131191	68.00997111	0.076765073	0.031277488	0.076765073	0.031277488	20.93283056	20.9726322
155	03-Juni-2024	73.03595902	66.03953528	0.055900269	0.024909444	0.055900269	0.024909444	20.95108726	20.97820424
156	04-Juni-2024	74.04690855	67.18164035	0.062825928	0.028422997	0.062825928	0.028422997	20.94502731	20.97512988
157	05-Juni-2024	77.74335402	71.81353399	0.096296463	0.048537564	0.096296463	0.048537564	20.91574059	20.95752963
158	06-Juni-2024	79.70111207	73.77549993	0.120737464	0.060886473	0.120737464	0.060886473	20.89435472	20.94672434
159	07-Juni-2024	91.52416403	86.99641201	0.473228563	0.280471159	0.473228563	0.280471159	20.58592501	20.75458774
160	08-Juni-2024	72.0143372	66.25773185	0.049676775	0.025545369	0.049676775	0.025545369	20.95653282	20.9776478
161	09-Juni-2024	74.05198326	66.7646637	0.062862774	0.027086183	0.062862774	0.027086183	20.94499507	20.97629959
162	10-Juni-2024	69.85598886	64.88594473	0.03871301	0.021801277	0.03871301	0.021801277	20.96612612	20.98092388
163	11-Juni-2024	80.12278675	73.28895552	0.126765139	0.057558326	0.126765139	0.057558326	20.8890805	20.94963646
164	12-Juni-2024	80.46302751	73.8784916	0.131847417	0.061615289	0.131847417	0.061615289	20.88463351	20.94608662
165	13-Juni-2024	78.14137469	72.10221676	0.100828027	0.050183715	0.100828027	0.050183715	20.91177548	20.95608925
166	14-Juni-2024	81.28442351	75.12212243	0.144972516	0.071135835	0.144972516	0.071135835	20.87314905	20.93775614
167	15-Juni-2024	80.59517639	74.45230288	0.133875861	0.065838484	0.133875861	0.065838484	20.88285862	20.94239133
168	16-Juni-2024	71.19203864	65.3640967	0.045174574	0.023039523	0.045174574	0.023039523	20.96047225	20.97984042
169	17-Juni-2024	68.37066527	64.97040645	0.032608432	0.022015058	0.032608432	0.022015058	20.97146762	20.98073682
170	18-Juni-2024	77.98080156	72.11353263	0.09897475	0.050249366	0.09897475	0.050249366	20.91339709	20.9560318
171	19-Juni-2024	80.75550793	74.1731186	0.136378846	0.063748736	0.136378846	0.063748736	20.88066851	20.94421986
172	20-Juni-2024	71.45871297	67.25957976	0.046588058	0.028680091	0.046588058	0.028680091	20.95923545	20.97490492
173	21-Juni-2024	77.98364216	72.17458287	0.099007237	0.050605046	0.099007237	0.050605046	20.91336867	20.95572058
174	22-Juni-2024	76.82510106	69.22696552	0.086603697	0.035999404	0.086603697	0.035999404	20.92422177	20.96850052
175	23-Juni-2024	76.74781008	69.90542534	0.085833794	0.038934755	0.085833794	0.038934755	20.92489543	20.96593209
176	24-Juni-2024	75.1986038	70.85287628	0.071767188	0.043438656	0.071767188	0.043438656	20.93720371	20.96199118

177	25-Juni-2024	83.29593303	75.51691812	0.182900293	0.074455631	0.182900293	0.074455631	20.83996224	20.93485132
178	26-Juni-2024	87.63299085	78.92265739	0.301876248	0.11035261	0.301876248	0.11035261	20.73585828	20.90344147
179	27-Juni-2024	74.30706725	68.8666354	0.064742958	0.034531506	0.064742958	0.034531506	20.94334991	20.96978493
180	28-Juni-2024	73.90483746	67.30778655	0.061803121	0.02884027	0.061803121	0.02884027	20.94592227	20.97476476
181	29-Juni-2024	77.18950419	71.74641327	0.090327623	0.048162625	0.090327623	0.048162625	20.92096333	20.9578577
182	30-Juni-2024	70.30151034	66.54873372	0.040757849	0.026418818	0.040757849	0.026418818	20.96433688	20.97688353
183	01-Juli-2024	71.74892534	65.77851931	0.048176605	0.024169485	0.048176605	0.024169485	20.95784547	20.9788517
184	02-Juli-2024	69.77805718	64.32338371	0.038366013	0.020429375	0.038366013	0.020429375	20.96642974	20.9821243
185	03-Juli-2024	69.97017699	66.89681706	0.039227118	0.027502912	0.039227118	0.027502912	20.96567627	20.97593495
186	04-Juli-2024	75.7399422	74.69414391	0.076399043	0.067704003	0.076399043	0.067704003	20.93315084	20.940759
187	05-Juli-2024	72.98458926	71.22263742	0.055569487	0.045334557	0.055569487	0.045334557	20.9513767	20.96033226
188	06-Juli-2024	67.92351533	62.04731621	0.030966626	0.015705508	0.030966626	0.015705508	20.9729042	20.98625768
189	07-Juli-2024	66.48265592	61.88945218	0.026217899	0.015421658	0.026217899	0.015421658	20.97705934	20.98650605
190	08-Juli-2024	67.49501491	63.84259328	0.029470915	0.019325517	0.029470915	0.019325517	20.97421295	20.98309017
191	09-Juli-2024	75.77631067	69.97937295	0.07672073	0.039268817	0.07672073	0.039268817	20.93286936	20.96563979
192	10-Juli-2024	81.0509102	74.13277031	0.141113642	0.063452258	0.141113642	0.063452258	20.87652556	20.94447927
193	11-Juli-2024	93.07522549	83.90756865	0.566104246	0.19629245	0.566104246	0.19629245	20.50465879	20.82824411
194	12-Juli-2024	78.95566912	71.40599782	0.110774294	0.046305182	0.110774294	0.046305182	20.90307249	20.95948297
195	13-Juli-2024	73.38857782	68.70538612	0.058224634	0.03389415	0.058224634	0.03389415	20.94905345	20.97034262
196	14-Juli-2024	69.38552944	64.25638458	0.036664972	0.020271849	0.036664972	0.020271849	20.96791815	20.98226213
197	15-Juli-2024	80.6957133	74.17595097	0.135439948	0.063769601	0.135439948	0.063769601	20.88149005	20.9442016
198	16-Juli-2024	77.43403343	71.51282387	0.092915889	0.046880222	0.092915889	0.046880222	20.9186986	20.95897981
199	17-Juli-2024	69.00938741	64.20983199	0.035105745	0.020163111	0.035105745	0.020163111	20.96928247	20.98235728
200	18-Juli-2024	70.88311762	67.99473764	0.043590692	0.031222489	0.043590692	0.031222489	20.96185814	20.97268032

201	19-Juli-2024	70.17606132	65.66405126	0.040171382	0.02385195	0.040171382	0.02385195	20.96485004	20.97912954
202	20-Juli-2024	71.700606	66.08984322	0.047908408	0.025054646	0.047908408	0.025054646	20.95808014	20.97807718
203	21-Juli-2024	68.95523547	64.39568971	0.034886796	0.020600752	0.034886796	0.020600752	20.96947405	20.98197434
204	22-Juli-2024	74.00831461	72.55781125	0.062546417	0.052895965	0.062546417	0.052895965	20.94527188	20.95371603
205	23-Juli-2024	69.23451612	64.84148409	0.036030822	0.021689577	0.036030822	0.021689577	20.96847303	20.98102162
206	24-Juli-2024	67.62962202	63.41370602	0.029932819	0.018391258	0.029932819	0.018391258	20.97380878	20.98390765
207	25-Juli-2024	71.00094373	68.78174342	0.044188144	0.034194481	0.044188144	0.034194481	20.96133537	20.97007983
208	26-Juli-2024	68.62142175	65.04746537	0.033566942	0.022211931	0.033566942	0.022211931	20.97062893	20.98056456
209	27-Juli-2024	75.04724892	68.70278505	0.070523134	0.033883966	0.070523134	0.033883966	20.93829226	20.97035153
210	28-Juli-2024	70.53481647	65.53924223	0.041871405	0.023510482	0.041871405	0.023510482	20.96336252	20.97942833
211	29-Juli-2024	69.68804642	64.76575307	0.037969102	0.021500632	0.037969102	0.021500632	20.96677704	20.98118695
212	30-Juli-2024	69.33354819	64.60537701	0.036445437	0.021105919	0.036445437	0.021105919	20.96811024	20.98153232
213	31-Juli-2024	68.55338229	65.05071002	0.033304112	0.022220259	0.033304112	0.022220259	20.9708589	20.98055727
214	01-Agustus-2024	70.22618636	67.55374717	0.040404695	0.029671572	0.040404695	0.029671572	20.96464589	20.97403737
215	02-Agustus-2024	69.67942794	66.17229722	0.037931314	0.025294462	0.037931314	0.025294462	20.9668101	20.97786735
216	03-Agustus-2024	70.71562875	67.38855031	0.042755294	0.029110636	0.042755294	0.029110636	20.96258912	20.97452819
217	04-Agustus-2024	72.80596583	70.6774962	0.054434451	0.042567346	0.054434451	0.042567346	20.95236986	20.96275357
218	05-Agustus-2024	67.65345761	63.53394344	0.030015362	0.018648522	0.030015362	0.018648522	20.97373656	20.98368254
219	06-Agustus-2024	69.59740789	65.26409849	0.037573572	0.022774876	0.037573572	0.022774876	20.96712312	20.98007198
220	07-Agustus-2024	68.49550106	65.02845427	0.033082143	0.022163198	0.033082143	0.022163198	20.97105313	20.9806072
221	08-Agustus-2024	69.87644913	66.7069913	0.03880463	0.026906305	0.03880463	0.026906305	20.96604595	20.97645698

222	09- Agustus- 2024	71.68148 881	66.3751 39	0.047802 711	0.02589 424	0.04780 2711	0.025894 24	20.95817 263	20.977342 54
223	10- Agustus- 2024	71.01329 925	65.8623 3481	0.044251 266	0.02440 4668	0.04425 1266	0.024404 668	20.96128 014	20.978645 92
224	11- Agustus- 2024	68.75422 565	65.5408 1027	0.034085 942	0.02351 4741	0.03408 5942	0.023514 741	20.97017 48	20.979424 6
225	12- Agustus- 2024	68.59895 531	63.9878 582	0.033479 928	0.01965 2594	0.03347 9928	0.019652 594	20.97070 506	20.982803 98
226	13- Agustus- 2024	70.03669 513	64.4545 954	0.039529 743	0.02074 143	0.03952 9743	0.020741 43	20.96541 147	20.981851 25
227	14- Agustus- 2024	67.95393 082	63.8621 315	0.031075 635	0.01936 919	0.03107 5635	0.019369 19	20.97280 882	20.983051 96
228	15- Agustus- 2024	69.56499 944	66.2881 1021	0.037433 15	0.02563 5184	0.03743 315	0.025635 184	20.96724 599	20.977569 21
229	16- Agustus- 2024	71.87691 651	69.5202 1543	0.048894 3	0.03723 9968	0.04889 43	0.037239 968	20.95721 749	20.967415 03
230	17- Agustus- 2024	73.11047 436	71.2090 736	0.056383 594	0.04526 357	0.05638 3594	0.045263 57	20.95066 436	20.960394 38
231	18- Agustus- 2024	72.41118 573	70.3397 4499	0.052007 445	0.04093 8291	0.05200 7445	0.040938 291	20.95449 349	20.964179
232	19- Agustus- 2024	73.48896 675	71.6234 7976	0.058903 872	0.04748 3408	0.05890 3872	0.047483 408	20.94845 911	20.958452 02
233	20- Agustus- 2024	72.94368 916	70.8204 4226	0.055307 522	0.04327 6187	0.05530 7522	0.043276 187	20.95160 592	20.962133 34
234	21- Agustus- 2024	72.61410 094	70.3140 4025	0.053241 087	0.04081 6894	0.05324 1087	0.040816 894	20.95341 405	20.964285 22
235	22- Agustus- 2024	70.66579 474	67.7158 8747	0.042509 838	0.03023 2638	0.04250 9838	0.030232 638	20.96280 389	20.973546 44
236	23- Agustus- 2024	69.43930 073	65.6757 9038	0.036893 458	0.02388 4322	0.03689 3458	0.023884 322	20.96771 822	20.979101 22
237	24- Agustus- 2024	71.60590 698	69.0789 3844	0.047387 103	0.03538 8973	0.04738 7103	0.035388 973	20.95853 628	20.969034 65

238	25- Agustus- 2024	70.08190 294	67.0945 3579	0.039736 748	0.02813 8396	0.03973 6748	0.028138 396	20.96523 035	20.975378 9
239	26- Agustus- 2024	69.22373 476	65.4729 0916	0.035985 969	0.02333 0993	0.03598 5969	0.023330 993	20.96851 228	20.979585 38
240	27- Agustus- 2024	69.06778 552	64.8956 3437	0.035343 402	0.02182 5696	0.03534 3402	0.021825 696	20.96907 452	20.980902 52
241	28- Agustus- 2024	69.71259 725	66.0748 9672	0.038076 952	0.02501 1418	0.03807 6952	0.025011 418	20.96668 267	20.978115 01
242	29- Agustus- 2024	71.22058 616	66.5339 5448	0.045323 814	0.02637 3746	0.04532 3814	0.026373 746	20.96034 166	20.976922 97
243	30- Agustus- 2024	69.47525 125	64.9752 4796	0.037047 013	0.02202 7376	0.03704 7013	0.022027 376	20.96758 386	20.980726 05
244	31- Agustus- 2024	69.57109 852	66.5322 2924	0.037459 536	0.02636 849	0.03745 9536	0.026368 49	20.96722 291	20.976927 57

Pada perhitungan berdasarkan standari IEC 60076-7 digunakan sebagai target dalam proses pelatihan dan pengujian pada jaringan syaraf tiruan *backpropagation*. Salah satu perhitungan yaitu tanggal 1 januari 2024, disajikan sebagai contoh menggambarkan proses perhitungan yang dilakukan selama periode 1 januari hingga 31 agustus 2024. Hasil perhitungan untuk unit dua pada tabel C.2.

1. Perhitungan daya semu dengan menggunakan persamaan (2.5)

$$S = \sqrt{P^2 + Q^2} = \sqrt{298.598542531331^2 + 13.2525152092179^2} \\ = 298.892486960121 \text{ MVA}$$

2. Perhitungan rasio pembebanan dengan menggunakan persamaan (2.5)

$$K = \frac{S}{S_r} = \frac{298.892486960121}{500} = 0.597784973920241$$

3. Perhitungan rugi tembaga dengan menggunakan persamaan (2.7)

$$Pt_2 = K^2 \times Pt_1 = 0.597784973920241^2 \times 735.310 = 262.760730689209 \text{ KW}$$

4. Perhitungan perbandingan rugi transformator dengan menggunakan persamaan (2.8)

$$d = \frac{\text{Rugi tembaga}}{\text{Rugi beban nol}} = \frac{262.760730689209}{228.92} = 1.14782775943216$$

5. Perhitungan kenaikan temperatur minyak atas pada saat sistem pendingin ONAN/ONAF dengan menggunakan persamaan (2.9.)

$$\Delta\theta_b = \Delta\theta_{br} \left(\frac{1 + dk^2}{1 + d} \right)^x$$

$$\Delta\theta_b = 50\text{ }^{\circ}\text{C} \left(\frac{1 + 1.14782775943216 \times 0.597784973920241^2}{1 + 1.14782775943216} \right)^{0.8}$$

$$= 35.7098706070888\text{ }^{\circ}\text{C}$$

6. Perhitungan kenaikan temperatur minyak atas pada saat sistem pendingin ODAF dengan menggunakan persamaan (2.9.)

$$\Delta\theta_b = \Delta\theta_{br} \left(\frac{1 + dk^2}{1 + d} \right)^x$$

$$\Delta\theta_b = 50\text{ }^{\circ}\text{C} \left(\frac{1 + 1.14782775943216 \times 0.597784973920241^2}{1 + 1.14782775943216} \right)^1$$

$$= 32.82788055816\text{ }^{\circ}\text{C}$$

7. Perhitungan selisih antara temperatur pada minyak dengan kumparan dengan menggunakan persamaan (2.10)

$$\Delta\theta_{wo} = \Delta\theta_k - \Delta\theta_m = 68.33^{\circ}\text{C} - 45.79^{\circ}\text{C} = 22.539053\text{ }^{\circ}\text{C}$$

8. Kenaikan *temperatur hotspot* dengan menggunakan persamaan (2.11)

$$\Delta\theta_{cr} = \Delta\theta_{br} + 1,3 \Delta\theta_{wo} = 50\text{ }^{\circ}\text{C} + 1,3 \times 22.539053 = 79.3007689\text{ }^{\circ}\text{C}$$

9. Perhitungan Selisih kenaikan *temperatur hotspot* spot dengan *top oil* pada saat sistem pendingin ONAN/ONAF dengan menggunakan persamaan (2.12)

$$\Delta\theta_{td} = (\Delta\theta_{cr} - \Delta\theta_{br})k^{2y} = (79.3007689\text{ }^{\circ}\text{C} - 50\text{ }^{\circ}\text{C})0.597784973920241^{2 \times 1.3}$$

$$= 7.68946283594978^{\circ}\text{C}$$

10. Perhitungan selisih kenaikan *temperatur hotspot* spot dengan *top oil* pada saat sistem pendingin ODAF dengan menggunakan persamaan (2.12)

$$\Delta\theta_{td} = (\Delta\theta_{cr} - \Delta\theta_{br})k^{2y} = (79.3007689\text{ }^{\circ}\text{C} - 50\text{ }^{\circ}\text{C})0.597784973920241^{2 \times 2}$$

$$= 3.74161410681715\text{ }^{\circ}\text{C}$$

11. Perhitungan *temperatur hotspot* pada saat sistem pendingin ONAN/ONAF dengan menggunakan persamaan (2.13)

$$\theta_c = \theta_a + \Delta\theta_b + \Delta\theta_{td} = 31.04\text{ }^{\circ}\text{C} + 35.7098706070888 + 7.68946283594978^{\circ}\text{C}$$

$$= 74.4393334430385^{\circ}\text{C}$$

12. Perhitungan *temperatur hotspot* pada saat sistem pendingin ODAF dengan menggunakan persamaan (2.13)

$$\theta_c = \theta_a + \Delta\theta_{ob} + \Delta\theta_{td} = 31.04\text{ }^{\circ}\text{C} + 32.82788055816 + 3.74161410681715\text{ }^{\circ}\text{C}$$

$$= 67.6094946649771^{\circ}\text{C}$$

13. Perhitungan laju penuaan thermal pada saat sistem pendingin ONAN/ONAF dengan menggunakan persamaan (2.14)

$$V = 10^{\theta_c - 98\text{ }^{\circ}\text{C}/19,93} = 10^{74.4393334430385^{\circ}\text{C} - 98\text{ }^{\circ}\text{C}/19,93} = 0.065739905266209$$

14. Perhitungan laju penuaan thermal pada sistem pendingin ODAF dengan menggunakan persamaan (2.14)

$$V = 10^{\theta_c - 98^\circ\text{C}/19,93} = 10^{67.6094946649771 - 98^\circ\text{C}/19,93} = 0.0298632943710178$$

15. Perhitungan laju umur relatif (susut Umur) pada saat sistem pendingin ONAN/ONAF dengan menggunakan persamaan (2.15)

$$L = \frac{1}{N} \sum_{n=1}^N V = \frac{1}{1} \sum_{n=1}^1 0.10923750056358 = 0.065739905266209$$

16. Perhitungan laju umur relatif (susut Umur) pada saat sistem pendingin ODAF dengan menggunakan persamaan (2.15)

$$L = \frac{1}{N} \sum_{n=1}^N V = \frac{1}{1} \sum_{n=1}^1 0.0690155118850602 = 0.0298632943710178$$

17. Perhitungan sisa umur trafomator pada saat sistem pendingin ONAN/ONAF dengan menggunakan persamaan (2.16)

$$\begin{aligned} n &= \frac{8760 - (Lx365)}{8760} \times (30 - \text{Lama masa pakai}) \\ &= \frac{8760 - (0.0446099015485345x365)}{8760} \times (30 - 9) = 20.94247758 \text{ tahun} \end{aligned}$$

18. Perhitungan sisa umur trafomator pada saat sistem pendingin ODAF dengan menggunakan persamaan (2.16)

$$\begin{aligned} n &= \frac{8760 - (Lx365)}{8760} \times (30 - \text{Lama masa pakai}) \\ &= \frac{8760 - (0.0240090579422558x365)}{8760} \times (30 - 9) = 20.97386962 \text{ tahun} \end{aligned}$$

Tabel C. 2 Perhitungan Unit 2 Bulan Januari – Agustus 2024

NO	Tanggal	S (MVA)	K	Pt ₂ (KW)	d	$\Delta\theta_b$ (°C)		$\Delta\theta_{wo}$ (°C)	$\Delta\theta_{cr}$ (°C)	$\Delta\theta_{td}$ (°C)	
						ONAN/ ONAF	ODAF	ONAN/ ONAF/ ODAF	ONAN/ ONAF/ ODAF	ONAN/ ONAF	ODAF
1	01- Januari- 2024	298.89 2487	0.597 7849 74	262.7 6073 07	1.147 8277 59	35.709 87061	32.827 88056	22.54	79.300 769	7.6894 62836	3.7416 14107
2	02- Januari- 2024	380.13 61704	0.760 2723 41	425.0 1949 81	1.856 6289 45	38.689 47086	36.286 78458	22.68	79.478 831	14.455 40111	9.8488 83817
3	03- Januari- 2024	373.31 53009	0.746 6306 02	409.9 0389 45	1.790 5988 75	38.275 43759	35.802 03433	25.15	82.695 731	15.295 58494	10.160 47919
4	04- Januari- 2024	269.63 85333	0.539 2770 67	213.8 4267 37	0.934 1371 38	35.750 2031	32.874 23389	21.79	78.3311 94	5.6882 14295	2.3961 42719

5	05- Januari- 2024	209.54 68306	0.419 0936 61	129.1 4947 85	0.564 1686 11	37.702 47393	35.133 37	28.91	87.577 604	3.9168 58921	1.1592 40267
6	06- Januari- 2024	344.77 87967	0.689 5575 93	349.6 3231 25	1.527 3122 16	36.857 005	34.151 32443	25.98	83.771 384	12.847 90372	7.6353 86692
7	07- Januari- 2024	282.90 54935	0.565 8109 87	235.4 0366 78	1.028 3228 54	35.656 20047	32.766 21884	22.55	79.310 568	6.6676 04297	3.0040 67902
8	08- Januari- 2024	242.58 89904	0.485 1779 81	173.0 9026 3	0.756 11682 3	36.327 87682	33.539 57224	20.62	76.806 749	4.0887 16233	1.4854 1733
9	09- Januari- 2024	250.35 10361	0.500 7020 72	184.3 4410 32	0.805 2774 03	36.109 81068	33.288 10044	25.65	83.349 141	5.5206 60701	2.0960 52714
10	10- Januari- 2024	332.87 08995	0.665 7417 99	325.8 9832 08	1.423 63411 1	36.4211 4103	33.647 23903	26.64	84.632 599	12.024 86567	6.8031 24032
11	11- Januari- 2024	334.39 94524	0.668 7989 05	328.8 9826 21	1.436 7388 7	36.471 79184	33.705 74063	27.03	85.140 742	12.347 50941	7.0306 12149
12	12- Januari- 2024	166.92 45518	0.333 8491 04	81.95 4140 76	0.358 0034 11	40.387 13346	38.287 87697	25.87	83.635 129	1.9409 91624	0.4178 24557
13	13- Januari- 2024	238.95 6902	0.477 9138 04	167.9 4598 35	0.733 6448 69	36.444 07615	33.673 72654	26.02	83.832 043	4.9617 75603	1.7649 26094
14	14- Januari- 2024	306.34 67131	0.612 6934 26	276.0 3039 93	1.205 7941 61	35.796 95487	32.927 98113	23.91	81.083 052	8.6967 30833	4.3802 26191
15	15- Januari- 2024	330.98 26826	0.661 9653 65	322.2 11477 8	1.407 5287 34	36.360 74786	33.577 5116	28.04	86.447 6	12.469 25863	6.9985 81218
16	16- Januari- 2024	353.99 34766	0.707 9869 53	368.5 7084 77	1.610 0421 44	37.258 34763	34.616 80543	25.53	83.185 363	13.5211 0663	8.3377 25525
17	17- Januari- 2024	277.90 62019	0.555 8124 04	227.1 5742 72	0.992 3004 86	35.676 86211	32.789 95429	22.97	79.856 174	6.4840 68117	2.8493 58515
18	18- Januari- 2024	317.85 34179	0.635 7068 36	297.1 5581 63	1.298 0771 29	36.008 01622	33.170 84182	25.40	83.024 143	10.169 49645	5.3933 55944
19	19- Januari- 2024	276.51 73515	0.553 0347 03	224.8 9263 9	0.982 4071 25	35.685 77224	32.800 19103	27.06	85.177 36	7.5408 35018	3.2905 8245
20	20- Januari- 2024	287.29 45859	0.574 5891 72	242.7 6459 39	1.060 4778 7	35.652 78393	32.762 29435	26.87	84.925 048	8.2692 54313	3.8068 58731

21	21- Januari- 2024	412.14 73986	0.824 2947 97	499.6 1513 9	2.182 4879 39	40.994 57732	39.009 06267	25.10	82.635 424	19.747 12642	15.066 74676
22	22- Januari- 2024	410.69 22322	0.821 3844 64	496.0 9339 06	2.167 1037 51	40.877 34024	38.869 66398	24.37	81.687 135	18.997 82305	14.423 44213
23	23- Januari- 2024	383.00 55422	0.766 01108 4	431.4 6004 09	1.884 7634 15	38.871 98327	36.500 88318	26.01	83.809 274	16.906 23805	11.640 61848
24	24- Januari- 2024	285.74 48616	0.571 4897 23	240.1 5261 64	1.049 0678 68	35.652 41857	32.761 87468	19.33	75.123 279	5.8654 08076	2.6798 47175
25	25- Januari- 2024	207.92 57477	0.415 8514 95	127.1 5897 18	0.555 4734 05	37.787 41651	35.232 34092	24.88	82.349 791	3.3045 39694	0.9674 41131
26	26- Januari- 2024	215.79 82342	0.431 5964 68	136.9 7024 64	0.598 3323 71	37.389 50638	34.769 19721	17.65	72.939 822	2.5810 26953	0.7959 78936
27	27- Januari- 2024	341.18 98971	0.682 3797 94	342.3 9135 4	1.495 6812 6	36.715 71836	33.987 75948	25.94	83.721 078	12.484 45124	7.3114 93186
28	28- Januari- 2024	334.56 18291	0.669 1236 58	329.2 1775 06	1.438 1345 04	36.477 26479	33.712 0631	24.60	81.980 814	11.2513 8853	6.4108 41823
29	29- Januari- 2024	364.52 62361	0.729 0524 72	390.8 3013 82	1.707 2782 55	37.783 82364	35.228 15356	25.41	83.036 367	14.526 63847	9.3331 32465
30	30- Januari- 2024	376.78 38093	0.753 5676 19	417.5 5619 25	1.824 0267 01	38.482 47077	36.044 26584	25.75	83.473 957	16.040 75642	10.794 33678
31	31- Januari- 2024	373.71 30708	0.747 4261 42	410.7 7787 05	1.794 4166 98	38.298 80937	35.829 36324	27.70	86.010 551	16.893 02038	11.238 35904
32	01- Februari- 2024	362.54 55608	0.725 09112 2	386.5 9447 86	1.688 7754 61	37.679 65709	35.106 79442	22.90	79.774 291	12.908 09522	8.2302 26411
33	02- Februari- 2024	321.39 84216	0.642 7968 43	303.8 21107 7	1.327 1933 76	36.091 5961	33.267 11271	21.71	78.228 879	8.9471 62756	4.8193 51102
34	03- Februari- 2024	345.81 20716	0.691 6241 43	351.7 3109 39	1.536 4804 03	36.899 25457	34.200 26647	24.31	81.603 188	12.1169 4873	7.2312 18317
35	04- Februari- 2024	274.75 46858	0.549 5093 72	222.0 34611 7	0.969 9222 95	35.699 0646	32.815 46365	22.30	78.984 985	6.11094 4688	2.6428 55983
36	05- Februari- 2024	313.65 57609	0.627 31152 2	289.3 5900 4	1.264 0180 15	35.920 311	33.069 87925	23.47	80.505 584	9.0747 74325	4.7240 27354

37	06- Februari- 2024	291.30 43025	0.582 6086 05	249.5 8832 23	1.090 2862 24	35.661 68486	32.772 5188	26.10	83.923 876	8.3269 39284	3.9085 26408
38	07- Februari- 2024	344.73 97564	0.689 4795 13	349.5 5313 73	1.526 9663 52	36.855 42242	34.149 49144	23.41	80.438 907	11.5766 952	6.8788 28968
39	08- Februari- 2024	311.665 8096	0.623 3316 19	285.6 9904 41	1.248 0300 72	35.883 02089	33.026 97109	25.13	82.675 156	9.5606 51357	4.9328 09024
40	09- Februari- 2024	344.24 06772	0.688 4813 54	348.5 4177 49	1.522 5483 79	36.835 27949	34.126 163	19.58	75.451 464	9.6434 50143	5.7184 9171
41	10- Februari- 2024	272.65 25065	0.545 3050 13	218.6 4998 53	0.955 1371 02	35.717 81744	32.837 01266	21.70	78.205 523	5.8290 37218	2.4939 75108
42	11- Februari- 2024	267.84 02715	0.535 6805 43	210.9 9988 41	0.921 7188 72	35.772 60783	32.899 98885	25.12	82.651 726	6.4426 03654	2.6886 21305
43	12- Februari- 2024	353.12 26634	0.706 2453 27	366.7 5973 19	1.602 1305 78	37.218 06622	34.570 02982	25.64	83.328 042	13.492 55908	8.2914 81775
44	13- Februari- 2024	374.26 99065	0.748 5398 13	412.0 0290 77	1.799 7680 75	38.331 68916	35.867 81707	22.98	79.871 369	14.067 40125	9.3780 97452
45	14- Februari- 2024	270.18 40014	0.540 3680 03	214.7 0873 94	0.937 9204 06	35.743 86215	32.866 9455	24.53	81.884 984	6.4354 54619	2.7185 96209
46	15- Februari- 2024	338.55 38191	0.677 1076 38	337.1 2107 11	1.472 6588 81	36.617 37292	33.873 99957	23.85	81.002 997	11.2489 9533	6.5168 0213
47	16- Februari- 2024	348.83 14983	0.697 6629 97	357.9 0012 51	1.563 4288 19	37.026 71951	34.348 00711	24.77	82.195 749	12.626 33534	7.6274 83628
48	17- Februari- 2024	303.28 08753	0.606 5617 51	270.5 3316 5	1.181 7803 82	35.756 38575	32.881 34064	21.75	78.274 911	7.7068 39228	3.8273 77752
49	18- Februari- 2024	275.35 02054	0.550 7004 11	222.9 9815 68	0.974 1313 86	35.694 32557	32.810 01845	25.73	83.445 203	7.09110 4446	3.0760 64537
50	19- Februari- 2024	350.62 68581	0.701 2537 16	361.5 9367 39	1.579 5634 89	37.105 32558	34.439 18039	30.00	88.998 773	15.499 81084	9.4308 67522
51	20- Februari- 2024	349.48 84605	0.698 9769 21	359.2 4947 74	1.569 3232 46	37.055 2404	34.381 08221	22.54	79.297 925	11.5462 3094	6.9933 97446
52	21- Februari- 2024	347.96 7554	0.695 9351 08	356.1 29511 8	1.555 6941 81	36.989 64042	34.305 01675	22.10	78.734 593	11.1965 3877	6.7403 1251

53	22- Februari- 2024	330.37 9837	0.660 7596 74	321.0 3880 68	1.402 40611 1	36.341 97409	33.555 84208	26.40	84.320 285	11.6859 5098	6.5422 17864
54	23- Februari- 2024	326.28 77224	0.652 5754 45	313.1 3522 77	1.367 8806 03	36.221 06193	33.416 34703	23.29	80.276 652	9.9803 95146	5.4907 38436
55	24- Februari- 2024	371.90 88352	0.743 8176 7	406.8 2108 62	1.777 1321 26	38.193 572	35.706 34075	25.00	82.499 799	15.055 44354	9.9482 48899
56	25- Februari- 2024	311.647 1774	0.623 2943 55	285.6 6488 55	1.247 8808 56	35.882 6848	33.026 58443	24.88	82.340 61	9.4612 93282	4.8811 3676
57	26- Februari- 2024	302.47 41287	0.604 9482 57	269.0 9580 8	1.175 5015 2	35.746 81258	32.870 33673	25.01	82.508 906	8.7997 38305	4.3538 6821
58	27- Februari- 2024	349.19 73881	0.698 3947 76	358.6 5132 27	1.566 7103 04	37.042 56937	34.366 38709	28.46	87.002 841	14.5511 6007	8.8031 6807
59	28- Februari- 2024	326.47 6938	0.652 9538 76	313.4 9850 98	1.369 4675 42	36.226 4013	33.422 50455	30.57	89.743 147	13.120 69269	7.2242 41732
60	29- Februari- 2024	281.22 15865	0.562 4431 73	232.6 0967 34	1.016 11774 2	35.6611 6488	32.771 92149	26.01	83.806 841	7.5719 73464	3.3831 33946
61	01- Maret- 2024	334.77 05744	0.669 54114 9	329.6 2870 06	1.439 9296 72	36.484 32664	33.720 22144	23.06	79.978 471	10.564 04841	6.0244 66104
62	02- Maret- 2024	302.46 65954	0.604 9331 91	269.0 8240 43	1.175 4429 68	35.746 72536	32.870 23647	25.97	83.757 258	9.1370 59178	4.5206 07662
63	03- Maret- 2024	301.58 89562	0.603 1779 12	267.5 2312 69	1.168 6315 17	35.736 83803	32.858 87223	27.31	85.497 579	9.5357 93812	4.6987 29606
64	04- Maret- 2024	335.63 94096	0.671 2788 19	331.3 4190 17	1.447 4135 14	36.514 03358	33.754 54531	17.99	73.381 706	8.2951 42394	4.7477 51364
65	05- Maret- 2024	341.58 33081	0.683 1666 16	343.1 8140 18	1.499 1324 56	36.730 79093	34.005 20122	26.66	84.655 661	12.868 95978	7.5488 48922
66	06- Maret- 2024	344.70 36716	0.689 4073 43	349.4 7996 39	1.526 6467 06	36.853 96054	34.147 79826	28.64	87.235 622	14.157 80645	8.4112 82859
67	07- Maret- 2024	343.36 71966	0.686 7343 93	346.7 7523 04	1.514 8315 15	36.800 42009	34.085 79826	22.13	78.768 732	10.828 582	6.3984 66598
68	08- Maret- 2024	255.73 34999	0.511 467	192.3 5598 71	0.840 2760 22	35.983 11766	33.142 17338	26.18	84.038 744	5.9552 4095	2.3293 99634

69	09-Maret-2024	291.68 54744	0.583 3709 49	250.2 4192 26	1.093 1413 71	35.663 12783	32.774 17639	28.31	86.802 774	9.0643 57523	4.2624 54381
70	10-Maret-2024	290.24 44521	0.580 4889 04	247.7 7547 54	1.082 3670 95	35.658 21704	32.768 53525	29.14	87.883 227	9.21109 2861	4.3015 26994
71	11-Maret-2024	262.63 89808	0.525 2779 62	202.8 8448 3	0.886 2680 54	35.850 34588	32.989 3825	29.92	88.895 618	7.2931 06279	2.9611 29457
72	12-Maret-2024	294.27 07708	0.588 5415 42	254.6 9752 06	1.112 6049 3	35.675 64643	32.788 55765	27.13	85.267 053	8.8877 06085	4.2313 37391
73	13-Maret-2024	323.14 07805	0.646 2815 61	307.1 2417 51	1.341 6222 92	36.135 85146	33.318 11051	26.51	84.457 005	11.0757 7479	6.0112 47202
74	14-Maret-2024	328.14 72174	0.656 2944 35	316.7 1447 71	1.383 5159 75	36.274 59319	33.478 09114	26.02	83.827 848	11.3169 9297	6.2758 02333
75	15-Maret-2024	299.58 3947	0.599 1678 94	263.9 7788 21	1.153 1446 88	35.716 29485	32.835 26294	25.96	83.751 272	8.9107 92577	4.3499 50169
76	16-Maret-2024	279.54 2449	0.559 0848 98	229.8 4020 21	1.004 0197 54	35.668 13324	32.779 92642	30.51	89.663 804	8.7465 45169	3.8753 00721
77	17-Maret-2024	285.80 9091	0.571 6181 82	240.2 6059 1	1.049 5395 38	35.652 39964	32.761 85294	27.99	86.382 304	8.4989 61948	3.8843 14025
78	18-Maret-2024	337.83 90344	0.675 6780 69	335.6 9905 43	1.466 4470 31	36.591 50289	33.844 0874	25.30	82.892 635	11.8692 2073	6.8557 97134
79	19-Maret-2024	329.78 7937	0.659 5758 74	319.8 8950 76	1.397 3855 83	36.323 78078	33.534 84524	24.50	81.851 022	10.794 72914	6.0281 27307
80	20-Maret-2024	362.24 60918	0.724 4921 84	385.9 5607 47	1.685 9866 97	37.664 12172	35.088 70214	18.78	74.4111 92	10.560 3088	6.7254 88025
81	21-Maret-2024	346.44 98493	0.692 8996 99	353.0 2967 84	1.542 1530 6	36.925 68201	34.230 88722	21.19	77.552 418	10.614 57703	6.3509 86864
82	22-Maret-2024	345.72 5368	0.691 4507 36	351.5 5474 07	1.535 7100 33	36.895 68243	34.196 12794	23.76	80.887 071	11.8346 6453	7.0602 76218
83	23-Maret-2024	335.27 03711	0.670 5407 42	330.6 1367 56	1.444 2323 76	36.501 35365	33.739 89386	21.76	78.282 803	10.005 24889	5.7177 23314
84	24-Maret-2024	240.65 73492	0.481 3146 98	170.3 4473 73	0.744 1234 38	36.388 56041	33.609 61922	22.80	79.644 913	4.4285 94419	1.5909 87188

85	25-Maret-2024	353.98 76498	0.707 9753	368.5 5871 43	1.609 9891 42	37.258 07648	34.616 49052	19.63	75.522 49	10.398 48609	6.4120 2879
86	26-Maret-2024	344.33 99666	0.688 6799 33	348.7 4286 38	1.523 4268 03	36.839 27378	34.130 78871	21.25	77.623 671	10.474 34088	6.2137 11762
87	27-Maret-2024	363.83 41426	0.727 6682 85	389.3 4747 84	1.700 8014 96	37.747 14618	35.185 41297	27.82	86.171 886	15.826 98215	10.141 56407
88	28-Maret-2024	344.34 23926	0.688 6847 85	348.7 4777 78	1.523 4482 69	36.839 37146	34.130 90183	22.34	79.043 778	11.0130 1865	6.5333 36968
89	29-Maret-2024	367.65 09002	0.735 3018	397.5 5912 96	1.736 6727 66	37.953 13237	35.425 58497	23.22	80.185 471	13.570 89817	8.8238 97872
90	30-Maret-2024	342.45 49328	0.684 9098 66	344.9 3504 17	1.506 7929 48	36.764 5498	34.044 27298	20.51	76.660 647	9.9659 24249	5.8668 41732
91	31-Maret-2024	302.53 85102	0.605 0770 2	269.2 1037 41	1.176 0019 83	35.747 55967	32.871 19545	25.80	83.538 224	9.0833 86179	4.4955 48651
92	01-April-2024	276.76 66375	0.553 5332 75	225.2 9831 24	0.984 1792 43	35.684 07148	32.798 23699	20.06	76.075 581	5.6028 33361	2.4479 86014
93	02-April-2024	244.91 65507	0.489 8331 01	176.4 2768 37	0.770 6958 05	36.258 13683	33.459 10758	23.75	80.875 315	4.8276 58472	1.7774 76718
94	03-April-2024	291.34 66871	0.582 6933 74	249.6 6095 76	1.090 6035 19	35.661 84019	32.772 69723	24.20	81.458 228	7.7246 43841	3.6265 57572
95	04-April-2024	262.29 28896	0.524 5857 79	202.3 5013 52	0.883 9338 42	35.856 19912	32.996 11531	23.40	80.424 793	5.6852 63106	2.3040 59481
96	05-April-2024	309.21 2228	0.618 4244 56	281.2 1843 28	1.228 4572 46	35.840 85457	32.978 46552	22.40	79.124 237	8.3483 34786	4.2599 17367
97	06-April-2024	311.282 6836	0.622 5653 67	284.9 9706 5	1.244 9635 9	35.876 15899	33.019 07661	25.52	83.173 935	9.6755 99391	4.9835 27042
98	07-April-2024	288.72 74088	0.577 4548 18	245.1 9210 96	1.071 0820 79	35.654 64735	32.764 43479	25.84	83.597 683	8.0585 36007	3.7357 80607
99	08-April-2024	276.20 27661	0.552 4055 32	224.3 8122 3	0.980 1730 87	35.687 98187	32.802 72975	22.11	78.744 138	6.1435 60391	2.6765 86965
100	09-April-2024	323.52 15463	0.647 0430 93	307.8 4838 74	1.344 7858 97	36.145 80061	33.329 5776	23.55	80.615 582	9.87117 4974	5.3663 04815

101	10-April-2024	318.74 5497	0.637 4909 94	298.8 2613 65	1.305 3736 52	36.028 23071	33.194 12062	19.78	75.714 127	7.9763 52163	4.2468 60499
102	11-April-2024	307.25 68823	0.614 5137 65	277.6 7303 2	1.212 9697 36	35.810 27332	32.943 29563	22.52	79.272 465	8.2535 63359	4.1743 20116
103	12-April-2024	289.23 48727	0.578 4697 45	246.0 5476 06	1.074 8504 31	35.655 65868	32.765 59649	26.76	84.788 202	8.3822 70403	3.8954 22571
104	13-April-2024	296.25 6389	0.592 5127 78	258.1 4630 54	1.127 6703 89	35.688 49072	32.803 31438	17.74	73.066 687	5.9156 0663	2.8429 95001
105	14-April-2024	297.38 19627	0.594 7639 25	260.1 11594	1.136 2554 34	35.697 01612	32.813 1099	23.12	80.061 679	7.7859 07566	3.7617 65423
106	15-April-2024	339.84 08536	0.679 6817 07	339.6 89118 9	1.483 8769 83	36.664 81219	33.928 86486	24.79	82.221 323	11.8069 5422	6.8764 72233
107	16-April-2024	335.41 92108	0.670 8384 22	330.9 0728 56	1.445 5149 64	36.506 45669	33.745 79019	21.32	77.714 336	9.8154 69814	5.6127 56372
108	17-April-2024	332.97 14389	0.665 9428 78	326.0 9521 73	1.424 4942 22	36.424 42419	33.651 03046	27.57	85.840 226	12.453 94323	7.0488 56214
109	18-April-2024	327.04 76586	0.654 0953 17	314.5 9553 33	1.374 2597 12	36.242 65416	33.441 24922	20.83	77.077 042	8.9798 25869	4.9563 88847
110	19-April-2024	336.60 73034	0.673 2146 07	333.2 5565 91	1.455 7734 54	36.547 7234	33.793 4795	25.94	83.727 823	12.055 56268	6.9279 13041
111	20-April-2024	288.32 46347	0.576 6492 69	244.5 0850 18	1.068 0958 49	35.653 97546	32.763 66302	17.13	72.265 999	5.3212 38495	2.4620 0635
112	21-April-2024	238.69 35951	0.477 3871 9	167.5 7606 76	0.732 0289 52	36.452 84728	33.683 85732	27.31	85.503 972	5.1920 74539	1.8439 96042
113	22-April-2024	365.25 86394	0.730 5172 79	392.4 0222 17	1.714 1456 48	37.822 96323	35.273 77473	19.92	75.898 804	11.4477 1982	7.3756 73462
114	23-April-2024	377.69 46042	0.755 3892 08	419.5 7733 94	1.832 8557 55	38.538 04199	36.109 34044	19.98	75.974 275	12.525 28024	8.4571 98775
115	24-April-2024	378.21 57985	0.756 4315 97	420.7 36117 9	1.837 9176 91	38.570 06679	36.146 85255	18.47	74.013 321	11.6212 632	7.8619 60611
116	25-April-2024	380.89 93567	0.761 7987 13	426.7 2780 52	1.864 0914 08	38.737 53646	36.343 14413	17.68	72.985 721	11.3303 3486	7.7413 92266

117	26-April-2024	357.69 59578	0.715 3919 16	376.3 2106 43	1.643 8977 12	37.435 03976	34.822 13319	15.73	70.452 56	8.5617 42251	5.3570 26424
118	27-April-2024	287.66 13089	0.575 3226 18	243.3 8475 29	1.063 1869 34	35.653 12132	32.762 68189	21.13	77.470 983	6.5259 53224	3.0096 77653
119	28-April-2024	279.84 91354	0.559 6982 71	230.3 4479 47	1.006 2239 85	35.666 71009	32.778 29153	24.34	81.636 262	6.9962 52564	3.1045 66953
120	29-April-2024	361.96 19414	0.723 9238 83	385.3 5081 47	1.683 3427 17	37.649 43316	35.071 59775	16.33	71.226 719	9.1639 85903	5.8298 11047
121	30-April-2024	372.611 8393	0.745 2236 79	408.3 6053 46	1.783 8569 57	38.234 34046	35.753 98905	20.85	77.100 91	12.616 21686	8.3585 40469
122	01-Mei-2024	385.56 4051	0.771 1281 02	437.2 4367 19	1.910 0282 71	39.038 83699	36.696 83319	24.66	82.058	16.310 42972	11.335 54866
123	02-Mei-2024	371.43 89672	0.742 8779 34	405.7 9378 35	1.772 6445 2	38.166 49211	35.674 69806	21.39	77.807	12.839 24628	8.4688 40853
124	03-Mei-2024	397.84 62349	0.795 6924 7	465.5 4425 15	2.033 6547 77	39.892 86125	37.703 04983	18.89	74.557	13.555 41928	9.8436 53146
125	04-Mei-2024	396.71 25549	0.793 42511	462.8 9485 47	2.022 0813 15	39.810 40663	37.605 66439	13.77	67.901	9.8082 77352	7.0941 61236
126	05-Mei-2024	386.86 45741	0.773 7291 48	440.1 9832 78	1.922 9352 08	39.125 12774	36.798 25373	19.27	75.051	12.857 49482	8.9780 26836
127	06-Mei-2024	317.12 40003	0.634 2480 01	295.7 9354 06	1.292 1262 48	35.991 89731	33.152 2818	24.55	81.915	9.7694 14276	5.1645 35606
128	07-Mei-2024	304.93 09772	0.609 8619 54	273.4 8502 72	1.194 67511 5	35.777 39749	32.905 49524	19.42	75.246	6.9790 22281	3.4923 57886
129	08-Mei-2024	245.53 05152	0.491 0610 3	177.3 1334 13	0.774 5646 57	36.240 35944	33.438 60257	21.11	77.443	4.3190 06022	1.5957 81657
130	09-Mei-2024	289.72 88141	0.579 4576 28	246.8 9587 91	1.078 5247 21	35.656 81953	32.766 92994	25.91	83.683	8.1520 55823	3.7974 97558
131	10-Mei-2024	275.70 14825	0.551 4029 65	223.5 6749 8	0.976 6184 6	35.691 64892	32.806 94303	22.71	79.523	6.2802 96373	2.7292 09504
132	11-Mei-2024	242.87 6479	0.485 7529 58	173.5 0075 95	0.757 9100 1	36.319 06244	33.529 40023	24.40	81.72	4.8530 34278	1.7660 17466

133	12-Mei-2024	242.12 49657	0.484 2499 31	172.4 2872 15	0.753 2269 85	36.342 2227	33.556 12903	22.77	79.601	4.4924 91451	1.6277 38569
134	13-Mei-2024	277.10 19739	0.554 2039 48	225.8 4459 56	0.986 5655 93	35.681 85366	32.795 68894	23.88	81.044	6.6914 25914	2.9285 73546
135	14-Mei-2024	403.49 65111	0.806 9930 22	478.8 6162 1	2.091 8295 52	40.314 60642	38.201 94978	27.80	86.14	20.694 24446	15.327 35676
136	15-Mei-2024	391.96 79744	0.783 9359 49	451.8 8885 75	1.974 0033 96	39.473 27205	37.208 00704	25.83	83.579	17.831 88551	12.682 06806
137	16-Mei-2024	403.47 08199	0.806 9416 4	478.8 0064 34	2.091 5631 81	40.312 64841	38.199 63054	28.14	86.582	20.943 87197	15.510 86263
138	17-Mei-2024	257.00 16019	0.514 0032 04	194.2 6838 25	0.848 6300 13	35.956 21918	33.111 2078	15.54	70.202	3.5801 85375	1.4101 25189
139	18-Mei-2024	393.98 09329	0.787 9618 66	456.5 4214 19	1.994 3305 17	39.614 73314	37.374 76041	24.75	82.175	17.315 38192	12.403 36017
140	19-Mei-2024	331.71 93682	0.663 4387 36	323.6 4740 02	1.413 8013 29	36.384 0236	33.604 38137	25.30	82.89	11.3173 8315	6.3718 7393
141	20-Mei-2024	367.51 92498	0.735 0385	397.2 7446 02	1.735 4292 34	37.945 87654	35.417 1194	24.55	81.915	14.335 11149	9.3161 22633
142	21-Mei-2024	298.16 50965	0.596 3301 93	261.4 8336 78	1.142 2478 06	35.703 47846	32.820 53539	16.58	71.554	5.6207 40763	2.7256 81295
143	22-Mei-2024	339.45 29963	0.678 9059 93	338.9 1419 31	1.480 4918 45	36.650 40002	33.912 19477	21.10	77.43	10.021 45723	5.8272 59737
144	23-Mei-2024	276.00 95915	0.552 0191 83	224.0 6747 1	0.978 8025 12	35.689 37375	32.804 32894	23.12	80.056	6.4122 73297	2.7909 23047
145	24-Mei-2024	344.07 2556	0.688 14511 2	348.2 0141 46	1.521 0615 7	36.828 53098	34.118 34794	30.94	90.222	15.220 59879	9.0195 2734
146	25-Mei-2024	375.38 56405	0.750 7712 81	414.4 6300 84	1.810 5146 27	38.398 13741	35.945 55528	34.17	94.421	21.081 826	14.112 98684
147	26-Mei-2024	317.43 35537	0.634 8671 07	296.3 7128 68	1.294 6500 38	35.998 69287	33.160 10625	24.79	82.227	9.8899 75794	5.2354 15882
148	27-Mei-2024	365.63 49869	0.731 2699 74	393.2 11268 7	1.717 6798 39	37.843 20535	35.297 37362	22.48	79.224	12.952 14767	8.3570 04297

149	28-Mei-2024	348.38 73853	0.696 7747 71	356.9 8938 81	1.559 4504 11	37.007 59818	34.325 83605	24.90	82.37	12.652 69338	7.6297 86185
150	29-Mei-2024	384.26 25139	0.768 5250 28	434.2 9667 35	1.897 1547 85	38.953 47427	36.596 55853	22.48	79.224	14.738 40543	10.194 63592
151	30-Mei-2024	388.41 45825	0.776 8291 65	443.7 3278 42	1.938 3749 09	39.229 26508	36.920 72445	26.60	84.58	17.933 75972	12.592 93837
152	31-Mei-2024	330.10 28695	0.660 2057 39	320.5 0075 94	1.400 0557 37	36.333 43133	33.545 98259	19.78	75.714	8.7364 66326	4.8852 50307
153	01-Juni-2024	311.962 7329	0.623 9254 66	286.2 4367 31	1.250 4091 96	35.888 40945	33.033 1708	25.11	82.643	9.5749 19162	4.9467 60825
154	02-Juni-2024	317.37 12705	0.634 7425 41	296.2 5499 71	1.294 1420 46	35.997 32025	33.158 52577	23.81	80.953	9.4941 59503	5.0245 03721
155	03-Juni-2024	329.811 3631	0.659 6227 26	319.9 3495 53	1.397 58411 4	36.324 49632	33.535 67099	23.13	80.069	10.192 6608	5.6924 78851
156	04-Juni-2024	324.95 14818	0.649 9029 64	310.5 7572 46	1.356 6998 28	36.184 05181	33.373 6721	21.28	77.664	9.0223 80137	4.9352 48731
157	05-Juni-2024	350.25 33951	0.700 5067 9	360.8 2379 58	1.576 2004 01	37.088 80197	34.420 01105	24.81	82.253	12.783 27774	7.7663 95694
158	06-Juni-2024	370.76 2802	0.741 5256 04	404.3 1771 94	1.766 1965 73	38.127 7602	35.629 4498	21.99	78.587	13.137 01135	8.6431 72623
159	07-Juni-2024	284.95 90017	0.569 9180 03	238.8 3349	1.043 3054 78	35.652 88879	32.762 4148	26.12	83.956	7.8709 78087	3.5823 33631
160	08-Juni-2024	295.77 6963	0.591 5539 26	257.3 11475	1.124 0235 67	35.685 13276	32.799 45632	29.48	88.324	9.7871 47155	4.6929 74514
161	09-Juni-2024	278.73 77108	0.557 4754 22	228.5 1879 31	0.998 2473 93	35.672 18717	32.784 58356	19.46	75.298	5.5369 815	2.4433 69155
162	10-Juni-2024	242.48 00603	0.484 9601 21	172.9 3485 19	0.755 4379 34	36.331 23135	33.543 4436	24.50	81.85	4.8522 71656	1.7617 06452
163	11-Juni-2024	378.98 48356	0.757 9696 71	422.4 4884 71	1.845 3994 72	38.617 61833	36.202 56621	23.40	80.42	14.799 73584	10.040 75855
164	12-Juni-2024	378.07 05879	0.756 14117 6	420.4 1310 85	1.836 5066 77	38.5611 279	36.136 38124	22.44	79.172	14.103 7212	9.5362 52857

165	13-Juni-2024	372.09 74137	0.744 1948 27	407.2 3375 28	1.778 9347 93	38.204 47834	35.719 08634	22.26	78.938	13.423 12995	8.8759 55181
166	14-Juni-2024	324.82 8425	0.649 6568 5	310.3 4054 34	1.355 6724 77	36.180 70491	33.369 81346	25.99	83.787	11.0084 9854	6.0184 6473
167	15-Juni-2024	357.56 6502	0.715 1330 04	376.0 4872 06	1.642 7080 23	37.428 71414	34.814 77822	30.90	90.17	16.799 9337	10.506 28356
168	16-Juni-2024	304.19 13221	0.608 3826 44	272.1 5987 99	1.188 8864 23	35.767 74146	32.894 39445	26.76	84.788	9.5562 8698	4.7658 10019
169	17-Juni-2024	302.08 26607	0.604 1653 21	268.3 9972 05	1.172 4607 75	35.742 33301	32.865 18792	27.96	86.348	9.8058 57607	4.8428 79837
170	18-Juni-2024	365.89 28047	0.731 7856 09	393.7 6598 9	1.720 1030 45	37.857 12319	35.313 60129	33.45	93.485	19.308 01034	12.470 24349
171	19-Juni-2024	366.40 09838	0.732 8019 68	394.8 6053 15	1.724 8843 77	37.884 67746	35.345 73293	23.10	80.03	13.381 98571	8.6596 79905
172	20-Juni-2024	252.34 15178	0.504 6830 36	187.2 8710 89	0.818 1334 48	36.060 603	33.231 40702	24.68	82.084	5.4217 20749	2.0814 37307
173	21-Juni-2024	371.85 63456	0.743 7126 91	406.7 0626 04	1.776 6305 28	38.190 54016	35.702 79779	27.18	85.334	16.362 37363	10.809 69836
174	22-Juni-2024	328.99 39018	0.657 9878 04	318.3 5095 68	1.390 6646 72	36.299 74777	33.507 11283	26.32	84.216	11.5237 9783	6.4135 81408
175	23-Juni-2024	349.29 94513	0.698 5989 03	358.8 6100 62	1.567 6262 72	37.047 00614	34.371 53245	28.73	87.349	14.698 44921	8.8959 1398
176	24-Juni-2024	378.18 30597	0.756 36611 9	420.6 6328 21	1.837 5995 2	38.568 05034	36.144 49036	27.42	85.646	17.247 02435	11.666 4593
177	25-Juni-2024	365.00 71707	0.730 0143 41	391.8 6209 54	1.711 7861 93	37.809 48702	35.258 06551	22.67	79.471	13.003 38711	8.3699 03304
178	26-Juni-2024	377.99 75609	0.755 9951 22	420.2 5071 26	1.835 7972 77	38.556 63729	36.131 12102	34.09	94.317	21.415 0817	14.475 92505
179	27-Juni-2024	396.41 90847	0.792 8381 69	462.2 1025 04	2.019 0907 32	39.789 1808	37.580 60316	21.14	77.482	15.028 9336	10.858 91756
180	28-Juni-2024	297.60 372	0.595 2074 4	260.4 9966 83	1.137 9506 74	35.698 80185	32.815 16175	27.82	86.166	9.3850 84582	4.5391 43186

181	29-Juni-2024	374.02 88264	0.748 0576 53	411.4 7230 82	1.797 4502 37	38.317 43082	35.851 14052	28.13	86.569	17.192 7072	11.451 26237
182	30-Juni-2024	283.74 89292	0.567 4978 58	236.8 0939 39	1.034 4635 41	35.654 47562	32.764 23753	25.83	83.579	7.6979 44021	3.4827 68969
183	01-Juli-2024	274.10 75195	0.548 2150 39	220.9 8986 81	0.965 3585 01	35.704 50172	32.821 71119	28.96	87.648	7.8888 6215	3.4005 22796
184	02-Juli-2024	268.74 42613	0.537 4885 23	212.4 2658 24	0.927 95117 2	35.761 05725	32.886 71058	26.47	84.411	6.8494 73665	2.8719 31473
185	03-Juli-2024	206.15 25081	0.412 3050 16	124.9 9933 7	0.546 0393 89	37.882 07882	35.342 70234	25.57	83.241	3.3207 98228	0.9606 1321
186	04-Juli-2024	117.055 9156	0.234 11183 1	40.30 11274 5	0.176 0489 58	44.255 3727	42.925 46437	20.04	76.052	0.5975 05367	0.0782 5904
187	05-Juli-2024	142.58 28101	0.285 1656 2	59.79 4990 79	0.261 2047 47	42.232 24106	40.486 72602	22.58	79.354	1.1243 97627	0.1941 13595
188	06-Juli-2024	265.90 11799	0.531 8023 6	207.9 5577 84	0.908 42118 8	35.799 3443	32.930 72856	21.58	78.054	5.4318 21238	2.2438 60394
189	07-Juli-2024	293.64 13646	0.587 2827 29	253.6 0915 72	1.107 8505 91	35.672 16042	32.784 55283	13.36	67.368	4.3526 38573	2.0660 40009
190	08-Juli-2024	225.98 58378	0.451 9716 76	150.2 0794 71	0.656 1591 26	36.930 97623	34.237 02215	11.30	64.69	1.8634 20914	0.6130 08748
191	09-Juli-2024	279.45 3254	0.558 9065 08	229.6 9355 29	1.003 3791 41	35.668 55976	32.780 4164	17.58	72.854	5.0355 16882	2.2300 72024
192	10-Juli-2024	300.14 36846	0.600 2873 69	264.9 6522 73	1.157 4577 46	35.721 74346	32.841 52443	17.76	73.088	6.1251 99632	2.9979 4137
193	11-Juli-2024	325.311 4925	0.650 6229 85	311.2 6427 36	1.359 7076 43	36.193 90292	33.385 02997	22.98	79.874	9.7712 4317	5.3531 69365
194	12-Juli-2024	268.20 99068	0.536 4198 14	211.5 8267 03	0.924 2646 79	35.767 81461	32.894 47855	17.42	72.646	4.4843 96564	1.8750 40904
195	13-Juli-2024	344.80 94793	0.689 6189 59	349.6 9454 45	1.527 5840 66	36.858 24948	34.152 76584	21.97	78.561	10.868 19218	6.4596 67718
196	14-Juli-2024	280.87 43849	0.561 7487 7	232.0 3565 93	1.013 6102 54	35.662 4405	32.773 38682	14.01	68.213	4.0662 21438	1.8136 35499

197	15-Juli-2024	308.82 17366	0.617 6434 73	280.5 0860 3	1.225 3564 69	35.834 53286	32.971 19463	15.36	69.968	5.7049 65138	2.9059 35657
198	16-Juli-2024	316.29 72625	0.632 5945 25	294.2 5329 19	1.285 3979 2	35.974 074	33.131 76166	17.09	72.217	6.7547 84998	3.5578 45875
199	17-Juli-2024	299.74 74305	0.599 4948 61	264.2 6606 72	1.154 4035 79	35.717 86329	32.837 06535	20.11	76.143	6.91190 2941	3.3767 37349
200	18-Juli-2024	159.09 28725	0.318 1857 45	74.44 4378 78	0.325 1982 3	40.963 77248	38.972 42505	13.97	68.161	0.9249 31622	0.1861 49826
201	19-Juli-2024	250.78 91036	0.501 5782 07	184.9 8980 31	0.808 0980 39	36.098 74446	33.275 34909	19.84	75.792	4.2890 93693	1.6324 49126
202	20-Juli-2024	283.43 1752	0.566 8635 04	236.2 8027 42	1.032 1521 68	35.655 06462	32.764 9141	18.71	74.323	5.5598 26407	2.5114 88117
203	21-Juli-2024	295.63 43839	0.591 2687 68	257.0 6346 11	1.122 9401 59	35.684 16564	32.798 34518	15.46	70.098	5.1261 78016	2.4563 63292
204	22-Juli-2024	154.82 53888	0.309 6507 78	70.50 4172 91	0.307 9860 78	41.285 63677	39.355 57238	13.82	67.966	0.8525 48413	0.1651 73395
205	23-Juli-2024	366.48 18238	0.732 9636 48	395.0 3478 89	1.725 6455 92	37.889 07554	35.350 86216	19.59	75.467	11.3551 3027	7.3503 41736
206	24-Juli-2024	289.98 2932	0.579 9658 64	247.3 2916 83	1.080 4174 75	35.657 48455	32.767 69385	18.21	73.673	5.7424 81732	2.6783 23474
207	25-Juli-2024	166.98 03537	0.333 9607 07	82.00 8943 47	0.358 2428 07	40.383 09695	38.283 09366	4.04	55.252	0.3033 42097	0.0653 2903
208	26-Juli-2024	266.13 00013	0.532 2600 03	208.3 1384 53	0.909 9853 46	35.796 05024	32.926 94098	16.67	71.671	4.2053 38069	1.7392 99127
209	27-Juli-2024	258.99 66749	0.517 9933 5	197.2 9625 45	0.861 8567 82	35.916 18851	33.065 13512	16.08	70.904	3.7798 30069	1.5049 64076
210	28-Juli-2024	297.37 16572	0.594 7433 14	260.0 9356 64	1.136 1766 84	35.696 93398	32.813 01552	14.24	68.512	4.7941 34569	2.3161 76317
211	29-Juli-2024	245.67 68325	0.491 3536 65	177.5 2473 45	0.775 4880 94	36.236 16102	33.433 76034	12.14	65.782	2.4876 36719	0.9198 96228
212	30-Juli-2024	276.28 3209	0.552 5664 18	224.5 11942 3	0.980 74411 3	35.687 41012	32.802 07284	12.02	65.626	3.3423 1584	1.4567 52491

213	31-Juli-2024	248.89 60913	0.497 7921 83	182.2 0765 41	0.795 9446 71	36.147 52043	33.331 55989	8.83	61.479	1.8716 68984	0.7048 49417
214	01-Agustus-2024	197.34 6192	0.394 6923 84	114.5 48119 7	0.500 3849 37	38.378 41772	35.922 48159	12.12	65.756	1.4051 37138	0.3823 67487
215	02-Agustus-2024	210.58 77257	0.421 1754 51	130.4 3572 98	0.569 7873 92	37.648 74493	35.070 79637	9.09	61.817	1.2477 02846	0.3718 42851
216	03-Agustus-2024	220.65 09423	0.441 3018 85	143.1 9967 64	0.625 5446 29	37.162 96943	34.506 0708	4.04	55.252	0.6260 91418	0.1991 90144
217	04-Agustus-2024	151.65 47344	0.303 3094 69	67.64 6044 87	0.295 5008 08	41.527 78963	39.644 32417	3.77	54.901	0.2203 88141	0.0414 79029
218	05-Agustus-2024	235.54 59598	0.471 0919 2	163.1 8558 12	0.712 8498 22	36.561 30911	33.809 1826	14.05	68.265	2.5804 43652	0.8995 8519
219	06-Agustus-2024	195.19 82821	0.390 3965 64	112.0 6821 27	0.489 5518 64	38.505 87182	36.071 6659	11.00	64.3	1.2395 14476	0.3321 69677
220	07-Agustus-2024	203.53 89192	0.407 0778 38	121.8 4996 03	0.532 2818 46	38.024 88169	35.509 31857	15.82	70.566	1.9875 18716	0.5647 54462
221	08-Agustus-2024	216.86 03043	0.433 7206 09	138.3 2178 65	0.604 2363 55	37.338 68297	34.710 13021	13.89	68.057	2.0577 45925	0.6389 77892
222	09-Agustus-2024	298.68 52245	0.597 3704 49	262.3 9644 21	1.146 2364 23	35.708 011	32.825 74366	17.78	73.114	6.0549 25717	2.9434 0517
223	10-Agustus-2024	266.77 01558	0.533 5403 12	209.3 1721 53	0.914 3684 05	35.787 03231	32.916 57238	14.33	68.629	3.6376 78905	1.5095 88208
224	11-Agustus-2024	224.26 94799	0.448 5389 6	147.9 3495 89	0.646 2299 45	37.003 63747	34.321 244	14.51	68.863	2.3458 01236	0.7635 04236
225	12-Agustus-2024	246.84 0672	0.493 6813 44	179.2 1068 67	0.782 8529 04	36.203 29035	33.395 85395	17.08	72.204	3.5431 75626	1.3189 1887
226	13-Agustus-2024	287.16 53775	0.574 3307 55	242.5 4628 02	1.059 5242 01	35.652 68793	32.762 18408	21.92	78.496	6.7391 52624	3.1005 03275
227	14-Agustus-2024	260.110 2582	0.520 2205 16	198.9 9649 35	0.869 2840 01	35.895 06389	33.040 82725	14.68	69.084	3.4894 48917	1.3977 17205
228	15-Agustus-2024	212.66 78713	0.425 3357 43	133.0 2529 53	0.581 0994 9	37.543 29585	34.948 05364	11.56	65.028	1.6278 11355	0.4918 45503

229	16- Agustus- 2024	168.69 68025	0.337 3936 05	83.70 3605 53	0.365 6456 65	40.259 46994	38.136 65207	13.18	67.134	1.0162 82773	0.2220 27183
230	17- Agustus- 2024	141.48 9599	0.282 9791 98	58.88 1585 44	0.257 2146 84	42.318 07379	40.589 60858	10.48	63.624	0.51152 4412	0.0873 62023
231	18- Agustus- 2024	143.00 57335	0.286 01146 7	60.15 0239 83	0.262 7565 95	42.199 08157	40.446 99373	7.79	60.127	0.3909 10889	0.0677 66428
232	19- Agustus- 2024	154.22 26452	0.308 4452 9	69.95 6288 39	0.305 5927 33	41.331 48277	39.410 20839	8.54	61.102	0.5215 12108	0.1004 87906
233	20- Agustus- 2024	153.30 31989	0.306 6063 98	69.12 4642 49	0.301 9598 22	41.401 59057	39.493 78719	9.95	62.935	0.5982 42946	0.1143 11858
234	21- Agustus- 2024	171.28 23321	0.342 5646 64	86.28 9032 27	0.376 9396 83	40.075 26115	37.918 65728	9.09	61.817	0.7291 85291	0.1627 33696
235	22- Agustus- 2024	207.20 41135	0.414 4082 27	126.2 7785 88	0.551 6244 05	37.825 72108	35.276 98973	11.84	65.392	1.5581 48382	0.4539 50532
236	23- Agustus- 2024	230.71 03234	0.461 4206 47	156.5 5412 66	0.683 8813 85	36.740 79756	34.016 78174	16.03	70.839	2.7895 17794	0.9446 37037
237	24- Agustus- 2024	218.38 11033	0.436 7622 07	140.2 6863 64	0.612 7408 55	37.267 11589	34.626 98898	14.39	68.707	2.1709 07305	0.6807 44831
238	25- Agustus- 2024	199.95 58571	0.399 91171 4	117.5 9767 18	0.513 7064 12	38.226 87719	35.745 26537	4.87	56.331	0.5842 23524	0.1619 30559
239	26- Agustus- 2024	228.45 68556	0.456 9137 11	153.5 1077 13	0.670 5869 79	36.829 69869	34.119 70018	10.20	63.26	1.7302 64191	0.5779 36717
240	27- Agustus- 2024	270.51 04473	0.541 0208 95	215.2 2789 03	0.940 1882 33	35.740 16867	32.862 7003	16.33	71.229	4.2981 94225	1.8188 03117
241	28- Agustus- 2024	229.911 5079	0.459 8230 16	155.4 7189 18	0.679 1538 17	36.771 93183	34.052 81797	11.90	65.47	2.0522 30547	0.6915 97055
242	29- Agustus- 2024	227.57 34536	0.455 1469 07	152.3 2586 89	0.665 4109 25	36.865 45216	34.161 10853	7.73	60.049	1.2981 2644	0.4312 50121
243	30- Agustus- 2024	252.08 14198	0.504 1628 4	186.9 0122	0.816 4477 55	36.066 87634	33.238 63362	12.48	66.224	2.7342 74428	1.0481 93025
244	31- Agustus- 2024	233.00 96921	0.466 0193 84	159.6 9026 28	0.697 5810 89	36.653 51981	33.915 80318	8.32	60.816	1.4856 51792	0.5101 32045

Tabel C. 2 Perhitungan Unit 2 Bulan Januari – Agustus 2024 Lanjutan

NO	Tanggal	$\Delta\theta h$ (°C)		V		L (Susut Umur)		n (Umur Transformator)	
		ONAN/ ONAF	ODAF	ONAN/ ONAF	ODAF	ONAN/ ONAF	ODAF	ONAN/ ONAF (Tahun)	ODAF (Tahun)
1	01-Januari-2024	74.43933 344	67.6094 9466	0.065739 905	0.02986 3294	0.06573 9905	0.029863 294	20.94247 758	20.973869 62
2	02-Januari-2024	84.93487 197	77.9256 684	0.221028 955	0.09834 6311	0.22102 8955	0.098346 311	20.80659 966	20.913946 98
3	03-Januari-2024	83.63102 254	76.0225 1352	0.190119 964	0.07893 4363	0.19011 9964	0.078934 363	20.83364 503	20.930932 43
4	04-Januari-2024	72.05841 74	65.8903 7661	0.049930 412	0.02448 3861	0.04993 0412	0.024483 861	20.95631 089	20.978576 62
5	05-Januari-2024	72.44933 285	67.1226 1026	0.052237 162	0.02822 9812	0.05223 7162	0.028229 812	20.95429 248	20.975298 91
6	06-Januari-2024	80.46490 871	72.5467 1112	0.131876 076	0.05282 8172	0.13187 6076	0.052828 172	20.88460 843	20.953775 35
7	07-Januari-2024	72.60380 477	66.0502 8674	0.053177 791	0.02494 0405	0.05317 7791	0.024940 405	20.95346 943	20.978177 15
8	08-Januari-2024	70.11659 306	64.7249 8957	0.039896 327	0.02139 9612	0.03989 6327	0.021399 612	20.96509 071	20.981275 34
9	09-Januari-2024	72.28047 138	66.0341 5316	0.051227 934	0.02489 396	0.05122 7934	0.024893 96	20.95517 556	20.978217 79
10	10-Januari-2024	80.83600 67	72.8403 6306	0.137653 128	0.05465 1206	0.13765 3128	0.054651 206	20.87955 351	20.952180 19
11	11-Januari-2024	79.35930 125	71.2763 5278	0.116062 383	0.04561 6775	0.11606 2383	0.045616 775	20.89844 542	20.960085 32
12	12-Januari-2024	70.49812 508	66.8757 0153	0.041694 284	0.02743 5899	0.04169 4284	0.027435 899	20.96351 75	20.975993 59
13	13-Januari-2024	71.93585 175	65.9686 5263	0.049228 357	0.02470 6286	0.04922 8357	0.024706 286	20.95692 519	20.978382
14	14-Januari-2024	75.06368 571	67.8782 0732	0.070657 185	0.03080 4952	0.07065 7185	0.030804 952	20.93817 496	20.973045 67
15	15-Januari-2024	79.18000 649	70.9260 9282	0.113682 93	0.04380 7661	0.11368 293	0.043807 661	20.90052 744	20.961668 3
16	16-Januari-2024	82.79945 426	74.9745 3095	0.172704 349	0.06993 3125	0.17270 4349	0.069933 125	20.84888 369	20.938808 52
17	17-Januari-2024	73.36093 023	66.8393 128	0.058038 948	0.02732 0797	0.05803 8948	0.027320 797	20.94921 592	20.976094 3
18	18-Januari-2024	77.67751 267	70.0641 9776	0.095566 726	0.03965 5548	0.09556 6726	0.039655 548	20.91637 911	20.965301 4
19	19-Januari-2024	71.22660 726	64.0907 7348	0.045355 354	0.01988 7661	0.04535 5354	0.019887 661	20.96031 407	20.982598 3
20	20-Januari-2024	74.76203 824	67.4091 5308	0.068237 167	0.02918 0011	0.06823 7167	0.029180 011	20.94029 248	20.974467 49
21	21-Januari-2024	92.74170 374	86.0758 0943	0.544705 491	0.25217 1736	0.54470 5491	0.252171 736	20.52338 27	20.779349 73

22	22-Januari-2024	91.18516329	84.60310611	0.455052369	0.212717203	0.455052369	0.212717203	20.60182918	20.81387245
23	23-Januari-2024	87.68822131	80.05150165	0.303808672	0.125725411	0.303808672	0.125725411	20.73416741	20.88999027
24	24-Januari-2024	71.36782665	65.29172186	0.046101423	0.022847676	0.046101423	0.022847676	20.95966125	20.98000828
25	25-Januari-2024	72.32195621	67.42978206	0.051474054	0.02924964	0.051474054	0.02924964	20.9549602	20.97440657
26	26-Januari-2024	70.53053333	66.12517615	0.04185069	0.025157132	0.04185069	0.025157132	20.96338065	20.97798751
27	27-Januari-2024	78.4001696	70.49925266	0.103888258	0.041699716	0.103888258	0.041699716	20.90909777	20.96351275
28	28-Januari-2024	77.29865332	69.69290492	0.091473902	0.037990421	0.091473902	0.037990421	20.91996034	20.96675838
29	29-Januari-2024	82.22046211	74.47128603	0.161529552	0.065983039	0.161529552	0.065983039	20.85866164	20.94226484
30	30-Januari-2024	83.89322719	76.20860261	0.195967478	0.08064979	0.195967478	0.08064979	20.82852846	20.92943143
31	31-Januari-2024	84.61182974	76.48772228	0.212931703	0.08329295	0.212931703	0.08329295	20.81368476	20.92711867
32	01-Februari-2024	81.51775231	74.26702084	0.148933739	0.064444103	0.148933739	0.064444103	20.86968298	20.94361141
33	02-Februari-2024	77.54875886	70.59646381	0.094155654	0.042170692	0.094155654	0.042170692	20.9176138	20.96310064
34	03-Februari-2024	78.5462033	70.96148478	0.10565591	0.043987156	0.10565591	0.043987156	20.90755108	20.96151124
35	04-Februari-2024	72.91000929	66.55831963	0.05509273	0.026448093	0.05509273	0.026448093	20.95179386	20.97685792
36	05-Februari-2024	74.79508533	67.5939066	0.068498197	0.029809561	0.068498197	0.029809561	20.94006408	20.97391663
37	06-Februari-2024	73.10862414	65.8010452	0.056371542	0.024232468	0.056371542	0.024232468	20.9506749	20.97879659
38	07-Februari-2024	79.08211762	71.67832041	0.112404481	0.047785215	0.112404481	0.047785215	20.90164608	20.95818794
39	08-Februari-2024	76.94367224	69.45978011	0.08779824	0.036980853	0.08779824	0.036980853	20.92317654	20.96764175
40	09-Februari-2024	79.70872964	73.07465471	0.12084377	0.056150739	0.12084377	0.056150739	20.8942617	20.9508681
41	10-Februari-2024	73.40685466	67.19098777	0.05834771	0.028453708	0.05834771	0.028453708	20.94894575	20.97510301

42	11- Februari- 2024	74.13521 149	67.5086 1016	0.063470 156	0.02951 7242	0.06347 0156	0.029517 242	20.94446 361	20.974172 41
43	12- Februari- 2024	82.27062 53	74.4215 116	0.162468 42	0.06560 4685	0.16246 842	0.065604 685	20.85784 013	20.942595 9
44	13- Februari- 2024	85.69909 041	78.5459 1452	0.241431 705	0.10565 2385	0.24143 1705	0.105652 385	20.78874 726	20.907554 16
45	14- Februari- 2024	73.90931 677	67.3155 4171	0.061835 113	0.02886 6122	0.06183 5113	0.028866 122	20.94589 428	20.974742 14
46	15- Februari- 2024	79.23636 826	71.7608 017	0.114425 612	0.04824 2755	0.11442 5612	0.048242 755	20.89987 759	20.957787 59
47	16- Februari- 2024	80.25305 486	72.5754 9074	0.128687 427	0.05300 4119	0.12868 7427	0.053004 119	20.88739 85	20.953621 4
48	17- Februari- 2024	74.16322 498	67.4087 1839	0.063675 91	0.02917 8546	0.06367 591	0.029178 546	20.94428 358	20.974468 77
49	18- Februari- 2024	73.29543 001	66.3960 8298	0.057601 397	0.02595 6973	0.05760 1397	0.025956 973	20.94959 878	20.977287 65
50	19- Februari- 2024	83.35513 642	74.6200 4791	0.184155 616	0.06712 6891	0.18415 5616	0.067126 891	20.83886 384	20.941263 97
51	20- Februari- 2024	80.89147 134	73.6644 7966	0.138538 046	0.06011 0496	0.13853 8046	0.060110 496	20.87877 921	20.947403 32
52	21- Februari- 2024	78.73617 919	71.5953 2926	0.108000 546	0.04732 9228	0.10800 0546	0.047329 228	20.90549 952	20.958586 93
53	22- Februari- 2024	79.06792 507	71.1380 5995	0.112220 32	0.04489 3726	0.11222 032	0.044893 726	20.90180 722	20.960717 99
54	23- Februari- 2024	78.36145 708	71.0670 8547	0.103424 645	0.04452 7105	0.10342 4645	0.044527 105	20.90950 344	20.961038 78
55	24- Februari- 2024	85.40901 554	77.8145 8965	0.233474 587	0.09709 2264	0.23347 4587	0.097092 264	20.79570 974	20.915044 27
56	25- Februari- 2024	76.58397 809	69.1477 2119	0.084224 402	0.03567 132	0.08422 4402	0.035671 32	20.92630 365	20.968787 6
57	26- Februari- 2024	75.97655 089	68.6542 0494	0.078516 314	0.03369 432	0.07851 6314	0.033694 32	20.93129 823	20.970517 47

58	27- Februari- 2024	82.77372 944	74.3495 5516	0.172191 82	0.06506 1548	0.17219 182	0.065061 548	20.84933 216	20.943071 15
59	28- Februari- 2024	78.33709 399	69.6367 4628	0.103133 939	0.03774 4729	0.10313 3939	0.037744 729	20.90975 78	20.966973 36
60	29- Februari- 2024	73.24313 835	66.1650 5543	0.057254 45	0.02527 3308	0.05725 445	0.025273 308	20.94990 236	20.977885 86
61	01-Maret- 2024	78.50837 505	71.2046 8754	0.105195 155	0.04524 0639	0.10519 5155	0.045240 639	20.90795 424	20.960414 44
62	02-Maret- 2024	74.57378 454	67.0808 4414	0.066769 057	0.02809 3921	0.06676 9057	0.028093 921	20.94157 708	20.975417 82
63	03-Maret- 2024	75.08263 184	67.3676 0183	0.070812 017	0.02904 0266	0.07081 2017	0.029040 266	20.93803 948	20.974589 77
64	04-Maret- 2024	76.34917 597	70.0422 9667	0.081970 314	0.03955 5334	0.08197 0314	0.039555 334	20.92827 598	20.965389 08
65	05-Maret- 2024	80.60975 071	72.5640 5014	0.134101 474	0.05293 4106	0.13410 1474	0.052934 106	20.88266 121	20.953682 66
66	06-Maret- 2024	83.58176 699	75.1290 8112	0.189041 127	0.07119 3048	0.18904 1127	0.071193 048	20.83458 901	20.937706 08
67	07-Maret- 2024	79.98900 208	72.8442 6486	0.124820 842	0.05467 5848	0.12482 0842	0.054675 848	20.89078 176	20.952158 63
68	08-Maret- 2024	73.36835 861	66.9015 7302	0.058088 78	0.02751 8028	0.05808 878	0.027518 028	20.94917 232	20.975921 73
69	09-Maret- 2024	73.13748 536	65.4466 3077	0.056559 824	0.02326 0267	0.05655 9824	0.023260 267	20.95051 015	20.979647 27
70	10-Maret- 2024	75.09930 99	67.3000 6225	0.070948 595	0.02881 4544	0.07094 8595	0.028814 544	20.93791 998	20.974787 27
71	11-Maret- 2024	74.37345 216	67.1805 1196	0.065241 425	0.02841 9291	0.06524 1425	0.028419 291	20.94291 375	20.975133 12
72	12-Maret- 2024	75.30335 251	67.7598 9504	0.072640 991	0.03038 6743	0.07264 0991	0.030386 743	20.93643 913	20.973411 6
73	13-Maret- 2024	78.01162 625	70.1293 5771	0.099327 856	0.03995 5208	0.09932 7856	0.039955 208	20.91308 813	20.965039 19
74	14-Maret- 2024	78.39158 616	70.5538 9347	0.103785 285	0.04196 3793	0.10378 5285	0.041963 793	20.90918 788	20.963281 68
75	15-Maret- 2024	74.27708 743	66.8352 1311	0.064519 097	0.02730 786	0.06451 9097	0.027307 86	20.94354 579	20.976105 62
76	16-Maret- 2024	73.29467 841	65.5352 2714	0.057596 395	0.02349 9578	0.05759 6395	0.023499 578	20.94960 315	20.979437 87
77	17-Maret- 2024	74.33136 159	66.8261 6696	0.064924 934	0.02727 9334	0.06492 4934	0.027279 334	20.94319 068	20.976130 58
78	18-Maret- 2024	78.98072 362	71.2198 8454	0.111095 41	0.04532 014	0.11109 541	0.045320 14	20.90279 152	20.960344 88
79	19-Maret- 2024	78.79850 992	71.2429 7255	0.108781 097	0.04544 1191	0.10878 1097	0.045441 191	20.90481 654	20.960238 96
80	20-Maret- 2024	80.27443 052	73.8641 9016	0.129005 628	0.06151 3566	0.12900 5628	0.061513 566	20.88712 008	20.946175 63

81	21-Maret-2024	79.90025904	72.94187408	0.123547617	0.055295925	0.123547617	0.055295925	20.89189584	20.95161607
82	22-Maret-2024	79.85034696	72.37640416	0.122837227	0.051798875	0.122837227	0.051798875	20.89251743	20.95467598
83	23-Maret-2024	78.24660253	71.19761717	0.102061311	0.045203698	0.102061311	0.045203698	20.91069635	20.96044676
84	24-Maret-2024	73.36715483	67.75060641	0.058080701	0.030354151	0.058080701	0.030354151	20.94917939	20.97344012
85	25-Maret-2024	79.75656257	73.12851931	0.121513439	0.056501265	0.121513439	0.056501265	20.89367574	20.95056139
86	26-Maret-2024	79.51361466	72.54450047	0.118150143	0.052814681	0.118150143	0.052814681	20.89661862	20.95378715
87	27-Maret-2024	83.24412834	74.99697704	0.181808871	0.070114717	0.181808871	0.070114717	20.84091724	20.93864962
88	28-Maret-2024	78.4723901	71.28423879	0.104758717	0.045658355	0.104758717	0.045658355	20.90833612	20.96004894
89	29-Maret-2024	83.52403054	76.24948285	0.187784324	0.081031603	0.187784324	0.081031603	20.83568872	20.92909735
90	30-Maret-2024	79.10047405	72.28111471	0.112643119	0.051231742	0.112643119	0.051231742	20.90143727	20.95517223
91	31-Maret-2024	76.32094585	68.8567441	0.081703401	0.034492067	0.081703401	0.034492067	20.92850952	20.96981944
92	01-April-2024	72.56690484	66.52622301	0.052951567	0.026350199	0.052951567	0.026350199	20.95366738	20.97694358
93	02-April-2024	71.8857953	66.0365843	0.04894481	0.024900953	0.04894481	0.024900953	20.95717358	20.97821167
94	03-April-2024	74.64648404	67.65925481	0.067332228	0.030035472	0.067332228	0.030035472	20.9410843	20.97371896
95	04-April-2024	73.72146223	67.48017479	0.060507533	0.02942043	0.060507533	0.02942043	20.94705591	20.97425712
96	05-April-2024	75.59918936	68.64838289	0.075166713	0.033671663	0.075166713	0.033671663	20.93422913	20.97053729
97	06-April-2024	77.41175838	69.86260365	0.092677076	0.038742607	0.092677076	0.038742607	20.91890756	20.96610022
98	07-April-2024	76.00318335	68.7902154	0.078758277	0.034227967	0.078758277	0.034227967	20.93108651	20.97005053
99	08-April-2024	74.27154226	67.91931671	0.064477776	0.030951609	0.064477776	0.030951609	20.94358195	20.97291734
100	09-April-2024	78.61697558	71.29588241	0.106523355	0.045719817	0.106523355	0.045719817	20.90679206	20.95999516
101	10-April-2024	76.42458287	69.86098112	0.082687561	0.038735345	0.082687561	0.038735345	20.92764838	20.96610657
102	11-April-2024	75.36383668	68.41761575	0.073150381	0.032785793	0.073150381	0.032785793	20.93599342	20.97131243
103	12-April-2024	74.06792909	66.69101907	0.062978691	0.026856699	0.062978691	0.026856699	20.94489365	20.97650039
104	13-April-2024	72.49409735	66.53630938	0.052508022	0.026380923	0.052508022	0.026380923	20.95405548	20.97691669

105	14-April-2024	75.29292368	68.38487532	0.07255352	0.032662011	0.07255352	0.032662011	20.93651567	20.97142074
106	15-April-2024	80.32176641	72.65533709	0.129713078	0.053495341	0.129713078	0.053495341	20.88650106	20.95319158
107	16-April-2024	79.31192651	72.34854656	0.115428865	0.051632429	0.115428865	0.051632429	20.89899974	20.95482162
108	17-April-2024	80.74836743	72.56988668	0.136266384	0.052969812	0.136266384	0.052969812	20.88076691	20.95365141
109	18-April-2024	76.12248003	69.29763807	0.0798513	0.036294544	0.0798513	0.036294544	20.93013011	20.96824227
110	19-April-2024	78.68328607	70.80139255	0.107342574	0.043181046	0.107342574	0.043181046	20.90607525	20.96221659
111	20-April-2024	72.43521396	66.68566937	0.052152021	0.026840105	0.052152021	0.026840105	20.95436698	20.97651491
112	21-April-2024	72.70492182	66.58785336	0.053802679	0.026538492	0.053802679	0.026538492	20.95292266	20.97677882
113	22-April-2024	80.70068305	74.07944819	0.135517736	0.063062562	0.135517736	0.063062562	20.88142198	20.94482026
114	23-April-2024	82.76332223	76.26653922	0.171984904	0.08119144	0.171984904	0.08119144	20.84951321	20.92895749
115	24-April-2024	81.43132999	75.24881316	0.147454082	0.07218471	0.147454082	0.07218471	20.87097768	20.93683838
116	25-April-2024	80.92787132	74.9445364	0.139121884	0.0696912	0.139121884	0.0696912	20.87826835	20.9390202
117	26-April-2024	77.56678201	71.74915961	0.094351917	0.048177909	0.094351917	0.048177909	20.91744207	20.95784433
118	27-April-2024	72.14907454	65.74235955	0.050456129	0.024068724	0.050456129	0.024068724	20.95585089	20.97893987
119	28-April-2024	73.28296265	66.50285849	0.057518488	0.026279165	0.057518488	0.026279165	20.94967132	20.97700573
120	29-April-2024	79.39341906	73.48140879	0.116520775	0.058852459	0.116520775	0.058852459	20.89804432	20.9485041
121	30-April-2024	82.56055732	75.82252951	0.168002782	0.077131502	0.168002782	0.077131502	20.85299757	20.93250994
122	01-Mei-2024	86.4092667	79.09238185	0.262076351	0.112537856	0.262076351	0.112537856	20.77068319	20.90152938
123	02-Mei-2024	81.52573839	74.66353892	0.149071217	0.067465031	0.149071217	0.067465031	20.86956268	20.9409681
124	03-Mei-2024	84.46828053	78.56670297	0.209429405	0.105906442	0.209429405	0.105906442	20.81674927	20.90733186
125	04-Mei-2024	81.42868399	76.50982563	0.147409011	0.083505925	0.147409011	0.083505925	20.87101712	20.92693232
126	05-Mei-2024	83.51262256	77.30628056	0.187536986	0.091554545	0.187536986	0.091554545	20.83590514	20.91988977
127	06-Mei-2024	77.55131159	70.1068174	0.094183427	0.039851293	0.094183427	0.039851293	20.9175895	20.96513012
128	07-Mei-2024	74.55641977	68.19785313	0.066635238	0.031963841	0.066635238	0.031963841	20.94169417	20.97203164

129	08-Mei-2024	71.59936547	66.07438423	0.047351303	0.025009937	0.047351303	0.025009937	20.95856761	20.9781163
130	09-Mei-2024	74.81887535	67.5744275	0.068686727	0.02974255	0.068686727	0.02974255	20.93989911	20.97397527
131	10-Mei-2024	74.27194529	67.83615253	0.064480778	0.030655642	0.064480778	0.030655642	20.94357932	20.97317631
132	11-Mei-2024	72.53209671	66.6554177	0.05273905	0.02674646	0.05273905	0.02674646	20.95385333	20.97659685
133	12-Mei-2024	71.63471415	65.9838676	0.047545079	0.024749754	0.047545079	0.024749754	20.95839806	20.97834397
134	13-Mei-2024	73.48327957	66.83426248	0.058865181	0.027304861	0.058865181	0.027304861	20.94849297	20.97610825
135	14-Mei-2024	91.53885088	84.05930654	0.47403231	0.199763959	0.47403231	0.199763959	20.5852218	20.82520654
136	15-Mei-2024	88.62515756	81.21007509	0.338541192	0.143732572	0.338541192	0.143732572	20.70377646	20.874234
137	16-Mei-2024	92.75652038	85.21049316	0.545638727	0.228180556	0.545638727	0.228180556	20.52256611	20.80034201
138	17-Mei-2024	70.91640455	65.90133299	0.043758654	0.024514873	0.043758654	0.024514873	20.96171118	20.97854949
139	18-Mei-2024	88.18011506	81.02812057	0.321574229	0.140742583	0.321574229	0.140742583	20.71862255	20.87685024
140	19-Mei-2024	78.88140675	71.1562553	0.109827939	0.044988199	0.109827939	0.044988199	20.90390055	20.96063533
141	20-Mei-2024	84.27098803	76.72324204	0.204709683	0.085590506	0.204709683	0.085590506	20.82087903	20.92510831
142	21-Mei-2024	73.56421922	67.78621668	0.059418226	0.03047929	0.059418226	0.03047929	20.94800905	20.97333062
143	22-Mei-2024	77.99185725	71.0594545	0.099101252	0.044487866	0.099101252	0.044487866	20.9132864	20.96107312
144	23-Mei-2024	70.29164704	63.78525199	0.04071143	0.019197912	0.04071143	0.019197912	20.9643775	20.98320183
145	24-Mei-2024	81.23912976	72.32787528	0.144215863	0.051509266	0.144215863	0.051509266	20.87381112	20.95492939
146	25-Mei-2024	88.07996341	78.65854212	0.317874776	0.107036146	0.317874776	0.107036146	20.72185957	20.90634337
147	26-Mei-2024	76.57866867	69.08552214	0.084172753	0.035415901	0.084172753	0.035415901	20.92634884	20.96901109
148	27-Mei-2024	82.34535302	75.20437791	0.163877174	0.07181508	0.163877174	0.07181508	20.85660747	20.9371618
149	28-Mei-2024	81.16029156	73.45562223	0.142908243	0.058677386	0.142908243	0.058677386	20.87495529	20.94865729
150	29-Mei-2024	85.8918797	78.99119445	0.246869605	0.111229887	0.246869605	0.111229887	20.7839891	20.90267385
151	30-Mei-2024	88.5630248	80.91366282	0.336119701	0.138893694	0.336119701	0.138893694	20.70589526	20.87846802
152	31-Mei-2024	76.40989766	69.77123289	0.08254739	0.038335776	0.08254739	0.038335776	20.92777103	20.9664562

153	01-Juni-2024	76.53332862	69.04993162	0.083732984	0.035270574	0.083732984	0.035270574	20.92673364	20.96913825
154	02-Juni-2024	76.66147975	69.35302949	0.084981938	0.036527559	0.084981938	0.036527559	20.9256408	20.96803839
155	03-Juni-2024	76.38715712	69.09814984	0.082330798	0.035467608	0.082330798	0.035467608	20.92796055	20.96896584
156	04-Juni-2024	76.07643195	69.17892084	0.079427611	0.035800133	0.079427611	0.035800133	20.93050084	20.96867488
157	05-Juni-2024	80.77207971	73.08640674	0.136640207	0.05622703	0.136640207	0.05622703	20.88043982	20.95080135
158	06-Juni-2024	83.23477155	76.24262242	0.181612437	0.080967402	0.181612437	0.080967402	20.84108912	20.92915352
159	07-Juni-2024	74.22386688	67.04474843	0.064123602	0.027977005	0.064123602	0.027977005	20.94389185	20.97552012
160	08-Juni-2024	76.19227992	68.21243083	0.080497843	0.03201772	0.080497843	0.03201772	20.92956439	20.97198449
161	09-Juni-2024	71.61916867	65.63795272	0.047459764	0.023780139	0.047459764	0.023780139	20.95847271	20.97919238
162	10-Juni-2024	70.983503	65.10515005	0.044099195	0.022360457	0.044099195	0.022360457	20.9614132	20.9804346
163	11-Juni-2024	82.10735417	74.93332475	0.159432453	0.069600986	0.159432453	0.069600986	20.8604966	20.93909914
164	12-Juni-2024	83.0048491	76.0126341	0.176851638	0.078844318	0.176851638	0.078844318	20.84525482	20.93101122
165	13-Juni-2024	82.4876083	75.45504152	0.166592794	0.073925258	0.166592794	0.073925258	20.85423131	20.9353154
166	14-Juni-2024	78.70920344	70.90827819	0.107664475	0.043717589	0.107664475	0.043717589	20.90579358	20.96174711
167	15-Juni-2024	82.68864784	73.78106178	0.170507503	0.06092561	0.170507503	0.06092561	20.85080593	20.94669009
168	16-Juni-2024	74.62402844	66.96020447	0.067157769	0.027705065	0.067157769	0.027705065	20.94123695	20.97575807
169	17-Juni-2024	76.09819061	68.25806776	0.079627531	0.032186983	0.079627531	0.032186983	20.93032591	20.97183639
170	18-Juni-2024	87.18513353	77.80384478	0.286653618	0.096971809	0.286653618	0.096971809	20.74917808	20.91514967
171	19-Juni-2024	81.93666317	74.67541283	0.156319156	0.067557645	0.156319156	0.067557645	20.86322074	20.94088706
172	20-Juni-2024	73.00232375	66.83284432	0.055683462	0.027300387	0.055683462	0.027300387	20.95127697	20.97611216
173	21-Juni-2024	85.7929138	77.75249615	0.244063001	0.096398228	0.244063001	0.096398228	20.78644487	20.91565155
174	22-Juni-2024	78.4535456	70.55069424	0.104530887	0.041948285	0.104530887	0.041948285	20.90853547	20.96329525
175	23-Juni-2024	82.72545535	74.24744643	0.171234131	0.064298527	0.171234131	0.064298527	20.85017014	20.94373879
176	24-Juni-2024	86.51507469	78.51094966	0.265299733	0.10522645	0.265299733	0.10522645	20.76786273	20.90792686

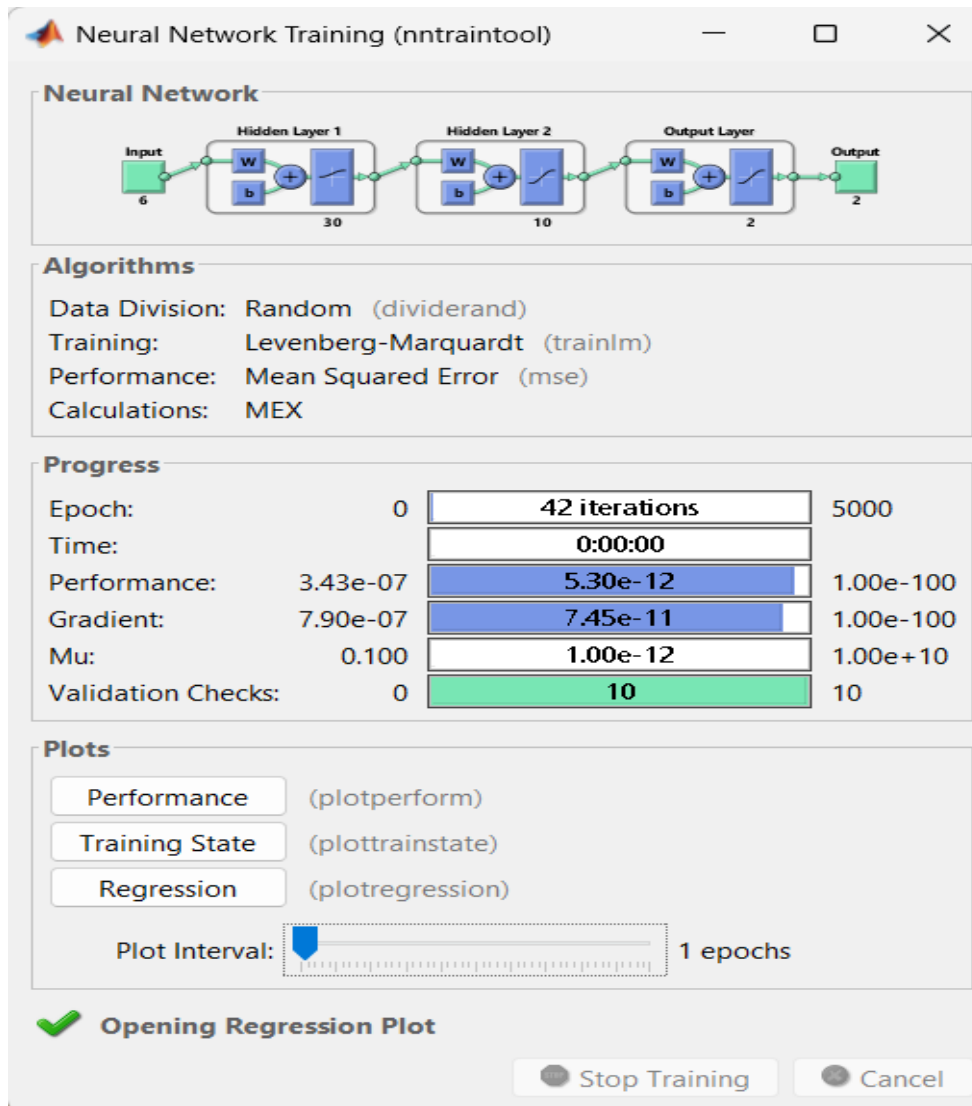
177	25-Juni-2024	79.81287413	72.62796881	0.122306568	0.053326458	0.122306568	0.053326458	20.89298175	20.95333935
178	26-Juni-2024	90.25171899	80.88704607	0.408531208	0.138467234	0.408531208	0.138467234	20.64253519	20.87884117
179	27-Juni-2024	86.5281144	80.14952072	0.265699715	0.12715728	0.265699715	0.12715728	20.76751275	20.88873738
180	28-Juni-2024	76.61388643	68.88430493	0.084515936	0.034602072	0.084515936	0.034602072	20.92604856	20.96972319
181	29-Juni-2024	85.48013802	77.2724029	0.23540096	0.0911969	0.23540096	0.0911969	20.79402416	20.92020271
182	30-Juni-2024	73.11241964	66.0070065	0.056396267	0.024816006	0.056396267	0.024816006	20.95065327	20.97828599
183	01-Juli-2024	74.11336387	66.74223399	0.063310151	0.027016083	0.063310151	0.027016083	20.94460362	20.97636093
184	02-Juli-2024	72.08053091	65.22864205	0.05005814	0.022681772	0.05005814	0.022681772	20.95619913	20.98015345
185	03-Juli-2024	71.58287704	66.68331555	0.04726186	0.026832807	0.04726186	0.026832807	20.95864646	20.97652129
186	04-Juli-2024	74.95287806	73.10372341	0.069758397	0.056339634	0.069758397	0.056339634	20.9389614	20.95070282
187	05-Juli-2024	72.08663868	69.41083962	0.050093476	0.036772343	0.050093476	0.036772343	20.95616821	20.9678242
188	06-Juli-2024	68.23116554	62.17458896	0.032087097	0.015938153	0.032087097	0.015938153	20.97192379	20.98605412
189	07-Juli-2024	67.60479899	62.43059284	0.029847098	0.016416597	0.029847098	0.016416597	20.97388379	20.98563548
190	08-Juli-2024	68.76439715	64.8200309	0.034126021	0.021635885	0.034126021	0.021635885	20.97013973	20.9810686
191	09-Juli-2024	69.66407665	63.97048842	0.037864099	0.019613195	0.037864099	0.019613195	20.96686891	20.98283845
192	10-Juli-2024	72.64694309	66.6394658	0.053443487	0.026697213	0.053443487	0.026697213	20.95323695	20.97663994
193	11-Juli-2024	75.78514609	68.55819933	0.076799086	0.033322652	0.076799086	0.033322652	20.9328008	20.97084268
194	12-Juli-2024	70.02221118	64.53951946	0.03946365	0.020945938	0.03946365	0.020945938	20.96546931	20.9816723
195	13-Juli-2024	76.57644166	69.46243356	0.084151099	0.036992192	0.084151099	0.036992192	20.92636779	20.96763183
196	14-Juli-2024	68.40866193	63.26702232	0.032751894	0.018082209	0.032751894	0.018082209	20.97134209	20.98417807
197	15-Juli-2024	70.969498	65.30713029	0.044027898	0.022888386	0.044027898	0.022888386	20.96147559	20.97997266
198	16-Juli-2024	72.538859	66.49960753	0.052780269	0.026269297	0.052780269	0.026269297	20.95381726	20.97701437
199	17-Juli-2024	72.48976623	66.0738027	0.052481754	0.025008257	0.052481754	0.025008257	20.95407847	20.97811777
200	18-Juli-2024	71.5687041	68.83857488	0.047183862	0.034419739	0.047183862	0.034419739	20.95871412	20.96988273

201	19-Juli-2024	71.52783 816	66.0477 9822	0.046961 613	0.02493 3235	0.04696 1613	0.024933 235	20.95890 859	20.978183 42
202	20-Juli-2024	72.25489 102	66.3164 0222	0.051076 759	0.02571 9114	0.05107 6759	0.025719 114	20.95530 784	20.977495 78
203	21-Juli-2024	71.09034 365	65.5347 0847	0.044646 915	0.02349 817	0.04464 6915	0.023498 17	20.96093 395	20.979439 1
204	22-Juli-2024	72.49818 518	69.8807 4578	0.052532 826	0.03882 3898	0.05253 2826	0.038823 898	20.95403 378	20.966029 09
205	23-Juli-2024	78.60420 581	72.0612 039	0.106366 313	0.04994 6489	0.10636 6313	0.049946 489	20.90692 948	20.956296 82
206	24-Juli-2024	70.82996 628	64.8760 1732	0.043323 832	0.02177 6286	0.04332 3832	0.021776 286	20.96209 165	20.980945 75
207	25-Juli-2024	69.71643 905	67.3784 2269	0.038093 857	0.02907 6594	0.03809 3857	0.029076 594	20.96666 788	20.974557 98
208	26-Juli-2024	69.73138 831	64.3962 401	0.038159 707	0.02060 2062	0.03815 9707	0.020602 062	20.96661 026	20.981973 2
209	27-Juli-2024	70.22601 858	65.1000 992	0.040403 911	0.02234 7413	0.04040 3911	0.022347 413	20.96464 658	20.980446 01
210	28-Juli-2024	71.56106 855	66.1991 9184	0.047142 256	0.02537 318	0.04714 2256	0.025373 18	20.95875 053	20.977798 47
211	29-Juli-2024	69.11379 774	64.7436 5657	0.035531 787	0.02144 5814	0.03553 1787	0.021445 814	20.96890 969	20.981234 91
212	30-Juli-2024	69.41972 596	64.6488 2533	0.036810 116	0.02121 2132	0.03681 0116	0.021212 132	20.96779 115	20.981439 38
213	31-Juli-2024	68.10918 941	64.1264 093	0.031638 086	0.01996 971	0.03163 8086	0.019969 71	20.97231 667	20.982526 5
214	01-Agustus-2024	70.01355 486	66.5348 4907	0.039424 202	0.02637 6472	0.03942 4202	0.026376 472	20.96550 382	20.976920 59
215	02-Agustus-2024	69.58644 778	66.1326 3922	0.037526 024	0.02517 8832	0.03752 6024	0.025178 832	20.96716 473	20.977968 52
216	03-Agustus-2024	69.00906 085	65.9252 6094	0.035104 421	0.02458 2738	0.03510 4421	0.024582 738	20.96928 363	20.978490 1
217	04-Agustus-2024	72.72817 777	70.6658 032	0.053947 433	0.04250 988	0.05394 7433	0.042509 88	20.95279 6	20.962803 86
218	05-Agustus-2024	67.99175 277	63.5587 6779	0.031211 723	0.01870 2084	0.03121 1723	0.018702 084	20.97268 974	20.983635 68
219	06-Agustus-2024	69.59538 629	66.2538 3558	0.037564 797	0.02553 3873	0.03756 4797	0.025533 873	20.96713 08	20.977657 86
220	07-Agustus-2024	70.24240 04	66.3040 7303	0.040480 454	0.02568 2505	0.04048 0454	0.025682 505	20.96457 96	20.977527 81
221	08-Agustus-2024	70.30642 889	66.2591 081	0.040781 017	0.02554 9431	0.04078 1017	0.025549 431	20.96431 661	20.977644 25

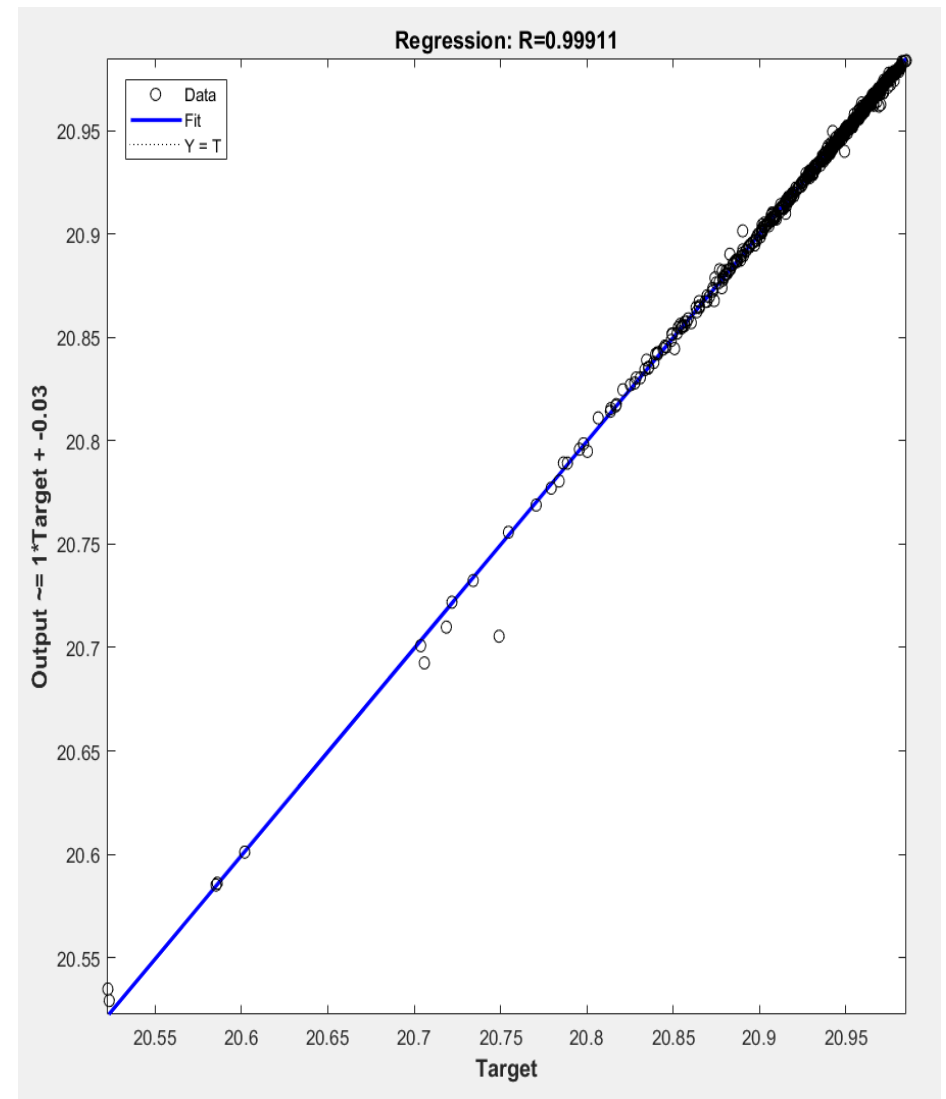
222	09- Agustus- 2024	73.00293 671	67.0091 4883	0.055687 406	0.02786 2174	0.05568 7406	0.027862 174	20.95127 352	20.975620 6
223	10- Agustus- 2024	70.74471 121	65.7461 6059	0.042899 194	0.02407 9296	0.04289 9194	0.024079 296	20.96246 321	20.978930 62
224	11- Agustus- 2024	70.29943 871	66.0347 4824	0.040748 095	0.02489 5672	0.04074 8095	0.024895 672	20.96434 542	20.978216 29
225	12- Agustus- 2024	69.33646 597	64.3047 7282	0.036457 725	0.02038 5495	0.03645 7725	0.020385 495	20.96809 949	20.982162 69
226	13- Agustus- 2024	71.93184 056	65.4026 8736	0.049205 548	0.02314 2475	0.04920 5548	0.023142 475	20.95694 515	20.979750 33
227	14- Agustus- 2024	68.99451 281	64.0485 4445	0.035045 467	0.01979 0868	0.03504 5467	0.019790 868	20.96933 522	20.982682 99
228	15- Agustus- 2024	69.29110 72	65.5598 9914	0.036267 169	0.02356 6658	0.03626 7169	0.023566 658	20.96826 623	20.979379 17
229	16- Agustus- 2024	71.88575 271	68.9686 7925	0.048944 24	0.03494 1025	0.04894 424	0.034941 025	20.95717 379	20.969426 6
230	17- Agustus- 2024	73.07959 82	70.9269 7061	0.056182 819	0.04381 2104	0.05618 2819	0.043812 104	20.95084 003	20.961664 41
231	18- Agustus- 2024	72.80999 246	70.7347 6016	0.054459 781	0.04284 9902	0.05445 9781	0.042849 902	20.95234 769	20.962506 34
232	19- Agustus- 2024	72.34299 488	70.0006 9629	0.051599 322	0.03936 5677	0.05159 9322	0.039365 677	20.95485 059	20.965555 03
233	20- Agustus- 2024	72.26983 352	69.8780 9905	0.051165 012	0.03881 2028	0.05116 5012	0.038812 028	20.95523 061	20.966039 48
234	21- Agustus- 2024	71.34444 644	68.6213 9098	0.045977 062	0.03356 6823	0.04597 7062	0.033566 823	20.95977 007	20.970629 03
235	22- Agustus- 2024	70.96386 946	67.3109 4026	0.043999 276	0.02885 078	0.04399 9276	0.028850 78	20.96150 063	20.974755 57
236	23- Agustus- 2024	70.12031 536	65.5514 1878	0.039913 488	0.02354 358	0.03991 3488	0.023543 58	20.96507 57	20.979399 37
237	24- Agustus- 2024	69.90802 319	65.7777 3381	0.038946 443	0.02416 7292	0.03894 6443	0.024167 292	20.96592 186	20.978853 62

238	25- Agustus- 2024	69.31110 071	66.4071 9593	0.036351 04	0.02599 0321	0.03635 104	0.025990 321	20.96819 284	20.977258 47
239	26- Agustus- 2024	68.60996 289	64.7476 369	0.033522 533	0.02145 5678	0.03352 2533	0.021455 678	20.97066 778	20.981226 28
240	27- Agustus- 2024	70.70836 29	65.3515 0341	0.042719 419	0.02300 6027	0.04271 9419	0.023006 027	20.96262 051	20.979869 73
241	28- Agustus- 2024	69.50416 238	65.4244 1502	0.037170 965	0.02320 0642	0.03717 0965	0.023200 642	20.96747 541	20.979699 44
242	29- Agustus- 2024	69.37357 86	65.8023 5865	0.036614 382	0.02423 6146	0.03661 4382	0.024236 146	20.96796 242	20.978793 37
243	30- Agustus- 2024	69.41115 077	64.8968 2665	0.036773 665	0.02182 8703	0.03677 3665	0.021828 703	20.96782 304	20.980899 88
244	31- Agustus- 2024	68.95917 16	65.2459 3522	0.034902 665	0.02272 7134	0.03490 2665	0.022727 134	20.96946 017	20.980113 76

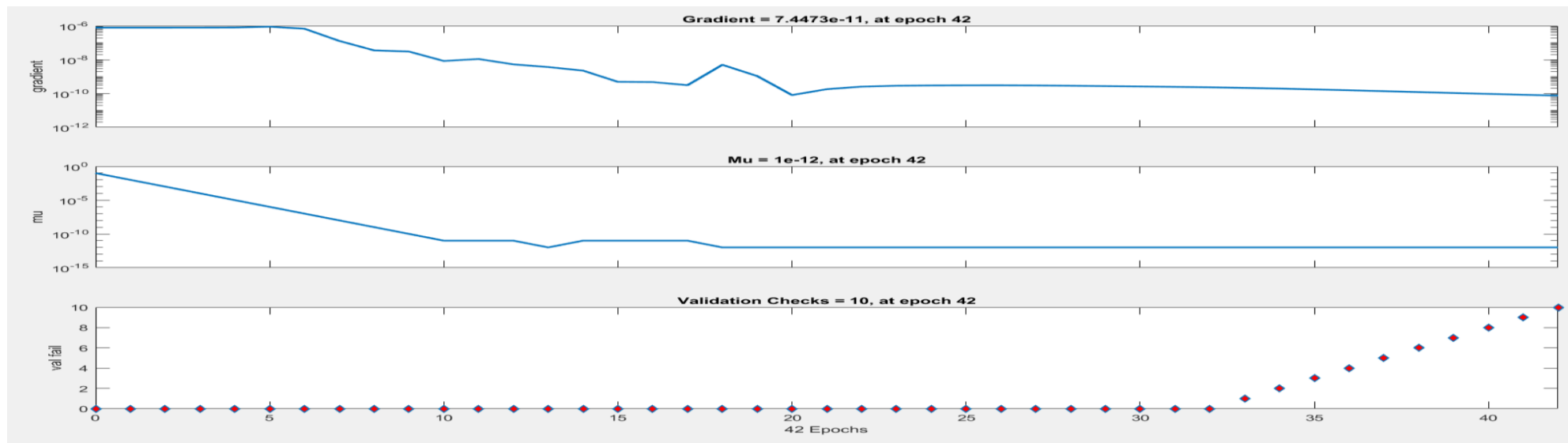
D Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation*



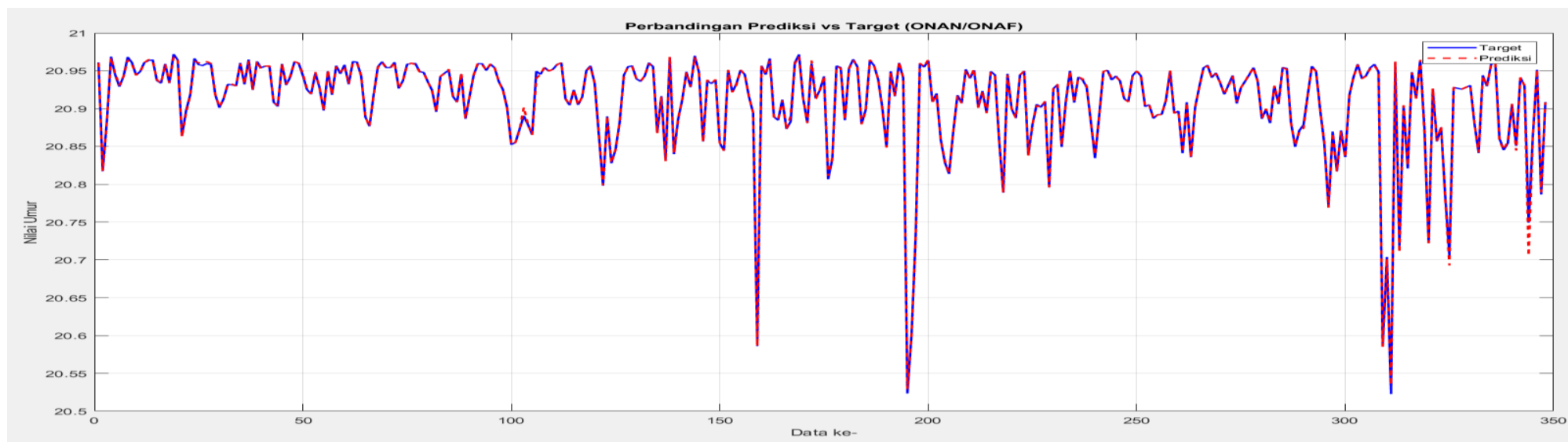
Gambar D. 1 Arsitektur Jaringan Syaraf Tiruan *Backpropagation*



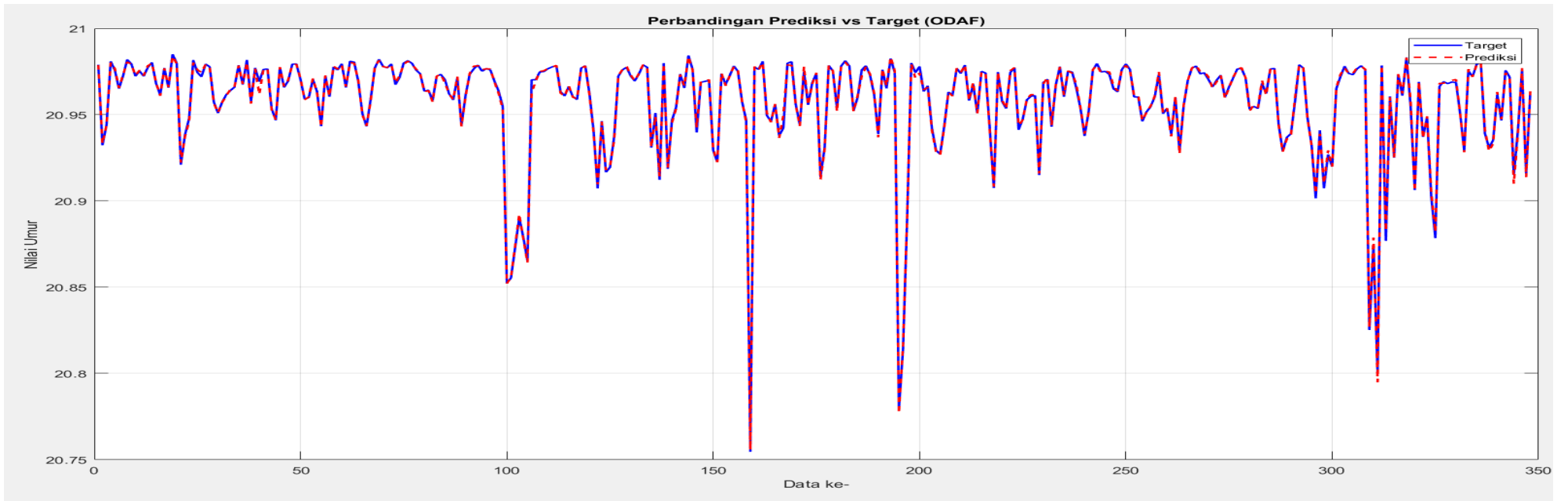
Gambar D. 2 Regresi keseluruhan Pelatihan Jaringan Syaraf tiruan



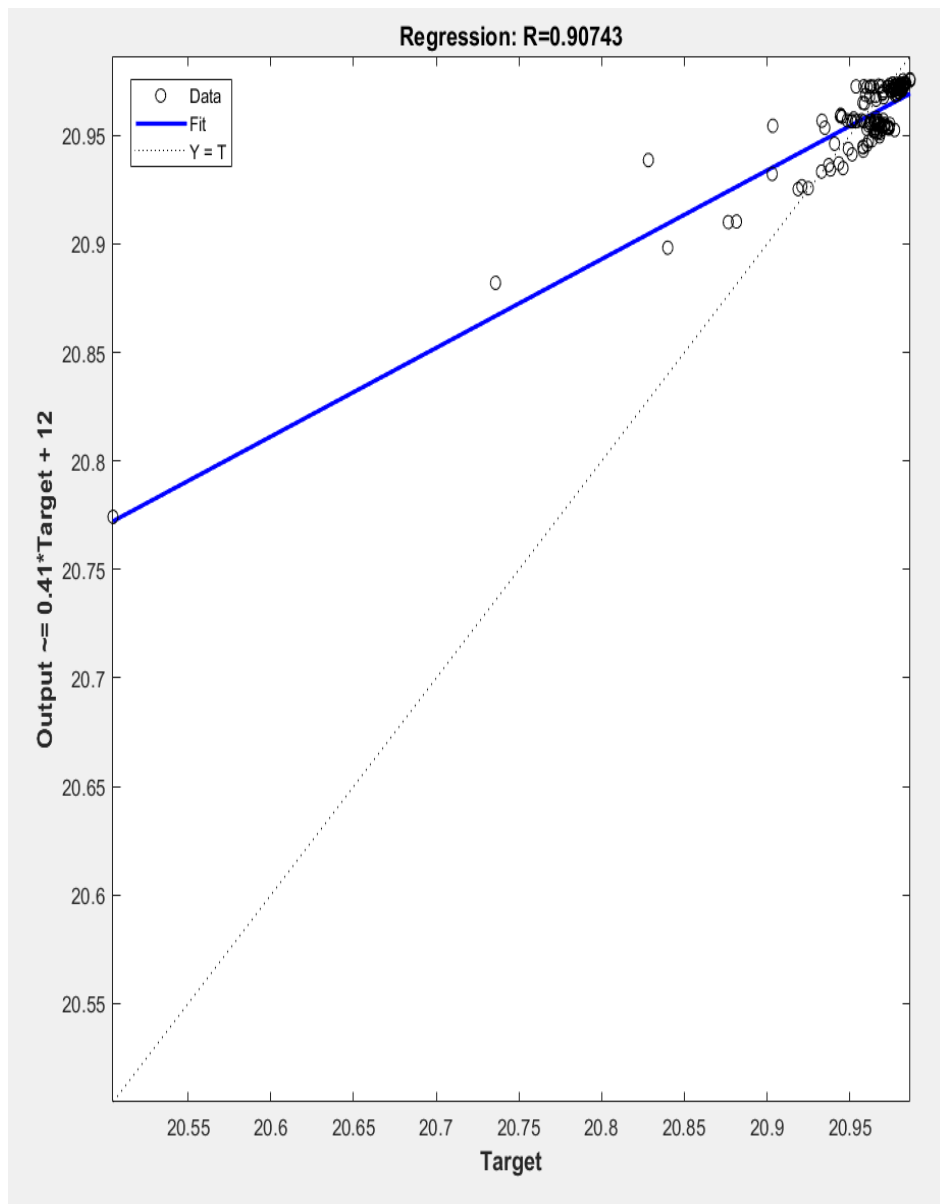
Gambar D. 3 Grafik Traning State Pelatihan Jaringan JST



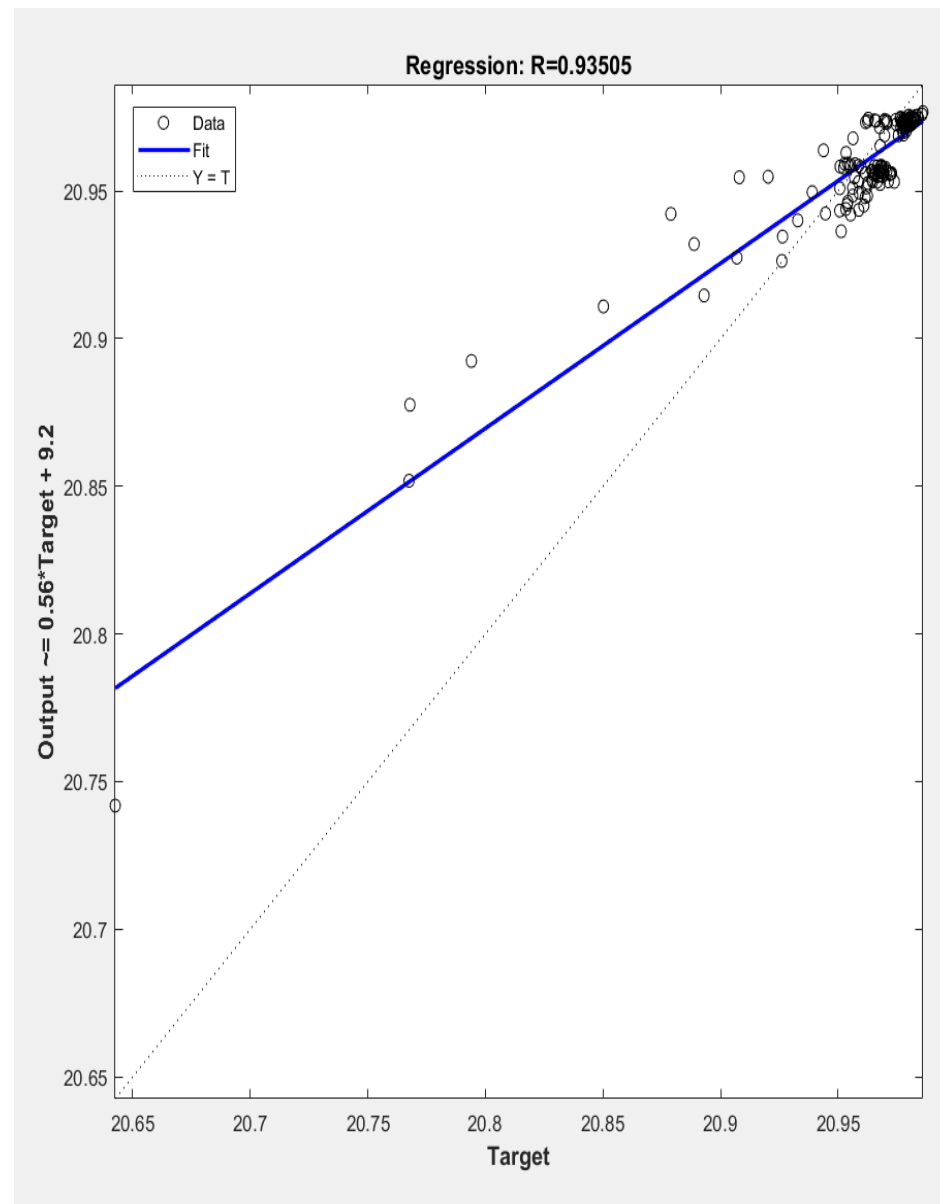
Gambar D. 4 Grafik Pelatihan ONAN/ONAF Lanvenberg-Marquart



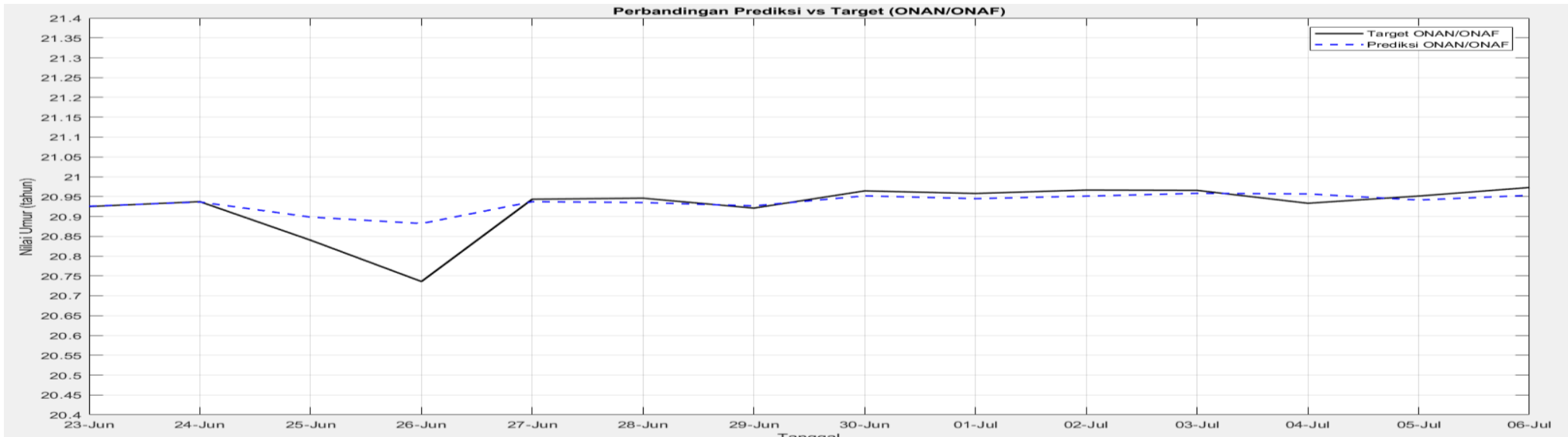
Gambar D. 5 Grafik Pelatihan ODAF lanvenberg-Manquart



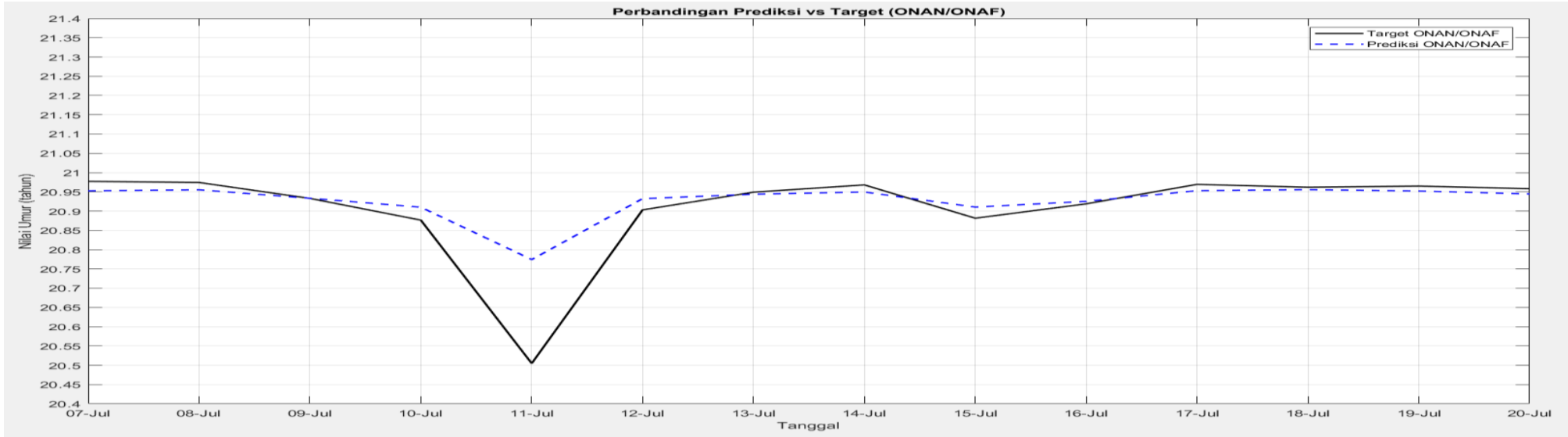
Gambar D. 6 Regresi Pengujian Unit 1 Lenverberg-Marquart



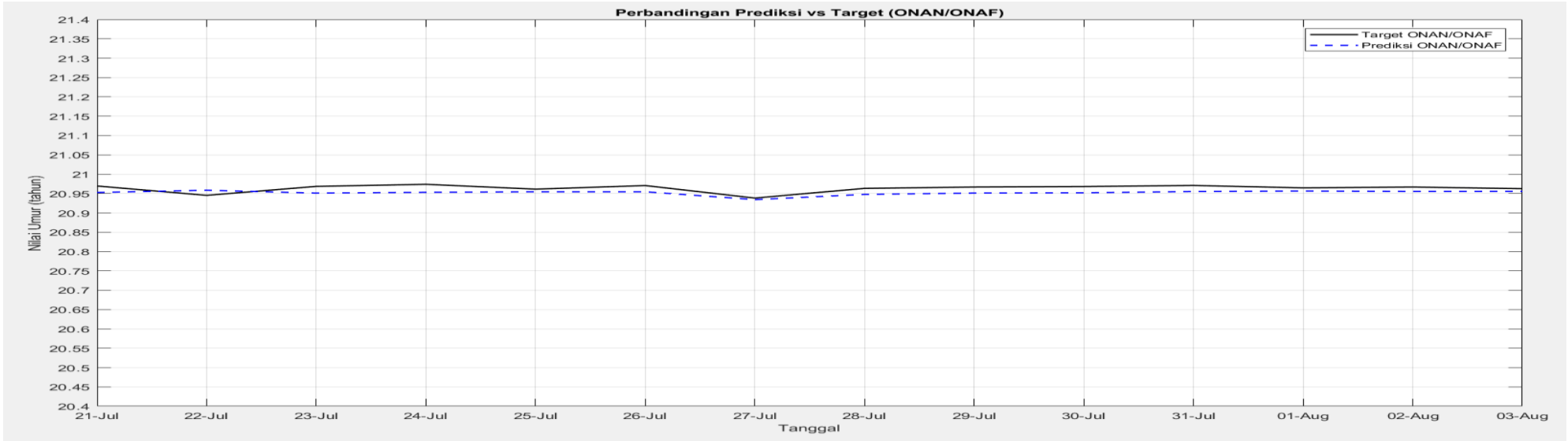
Gambar D. 7 Regresi Pengujian Unit 2 Lenverberg-Marquart



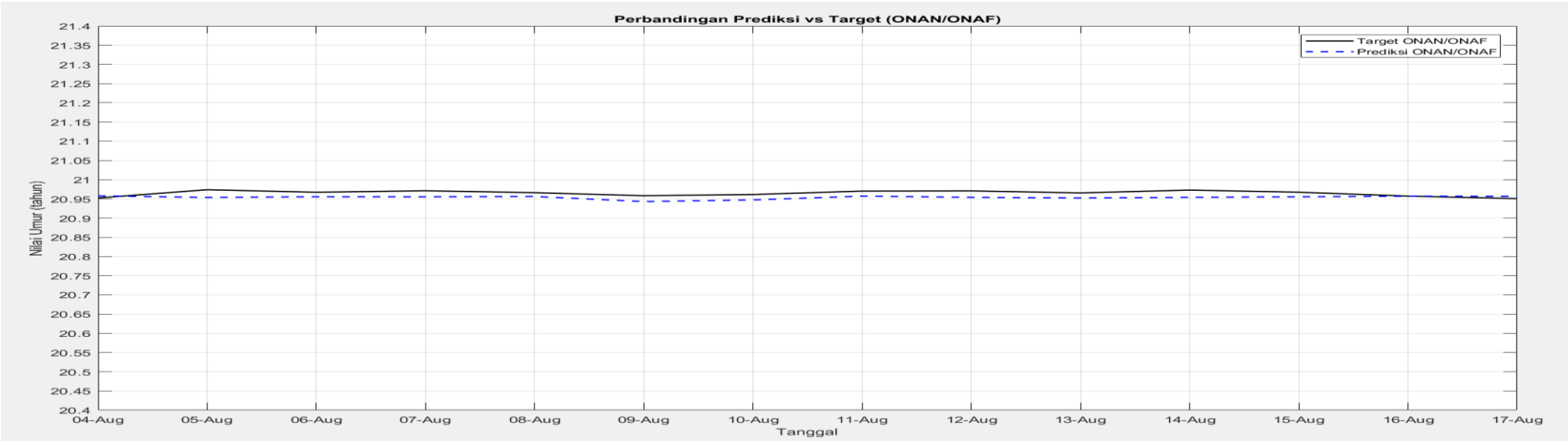
Gambar D. 8 Grafik Predksi 23 Juni Sampai 6 Juli 2024 ONAN/ONAF Unit Satu



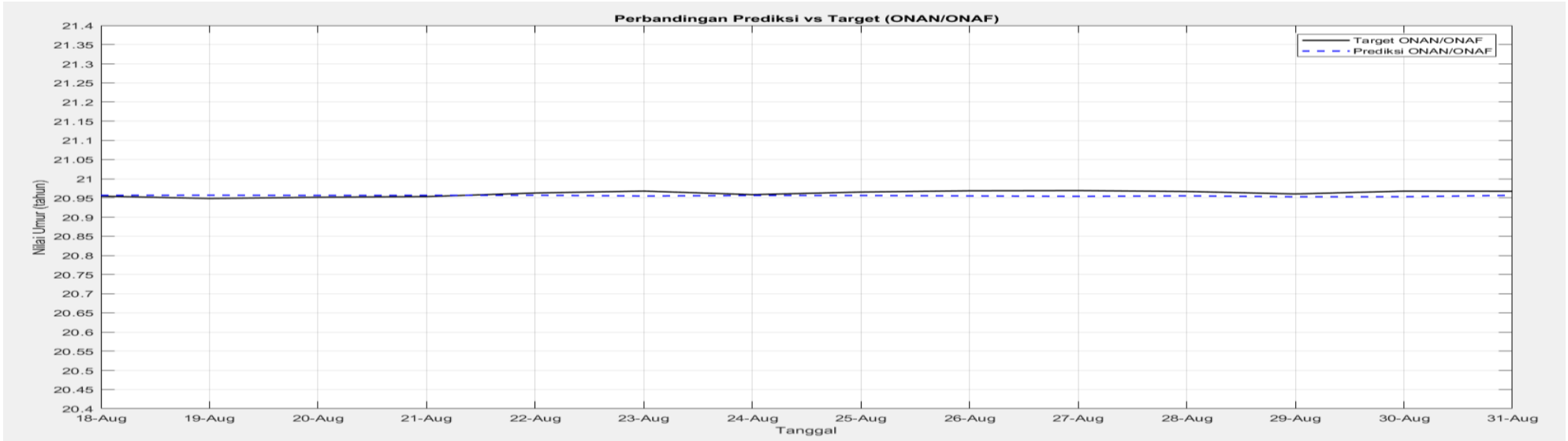
Gambar D. 9 Grafik Predksi 7 Juli Sampai 20 Juli 2024 ONAN/ONAF Unit Satu



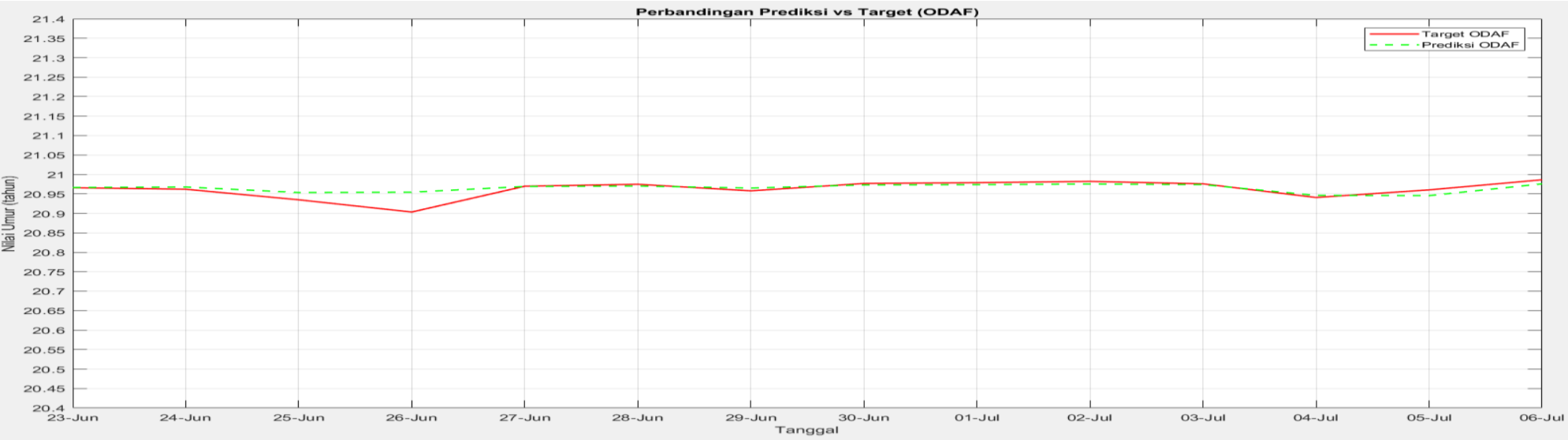
Gambar D. 10 Grafik Predksi 21 Juli Sampai 3 Agustus 2024 Satu



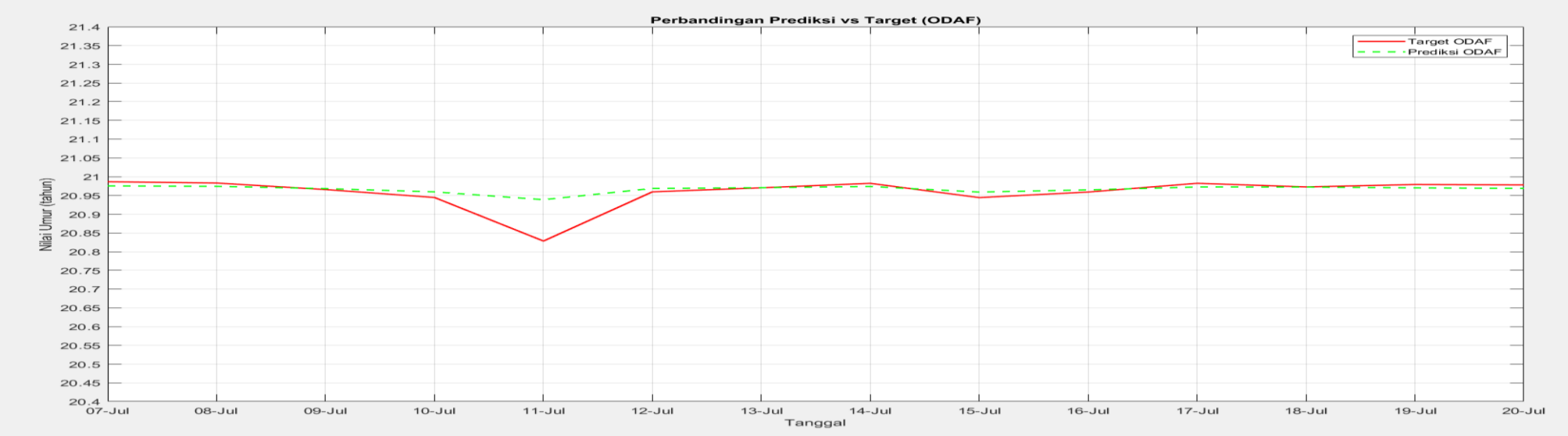
Gambar D. 11 Grafik Predksi 4 Agustus sampai 17 Agustus Unit Satu



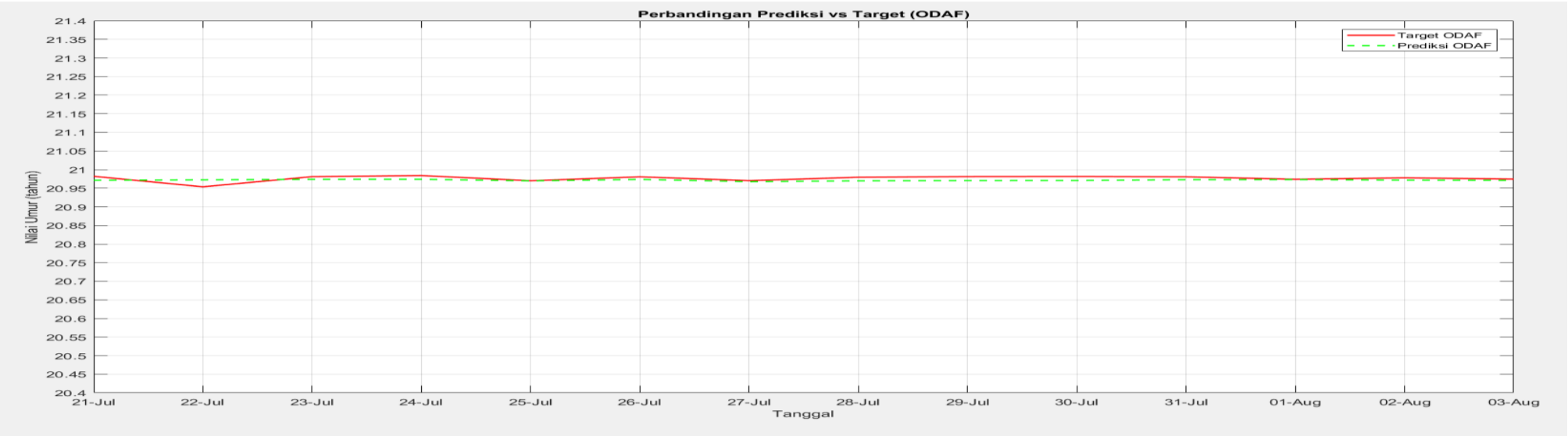
Gambar D. 12 Grafik Prediksi ONAN/ONAF Unit Satu



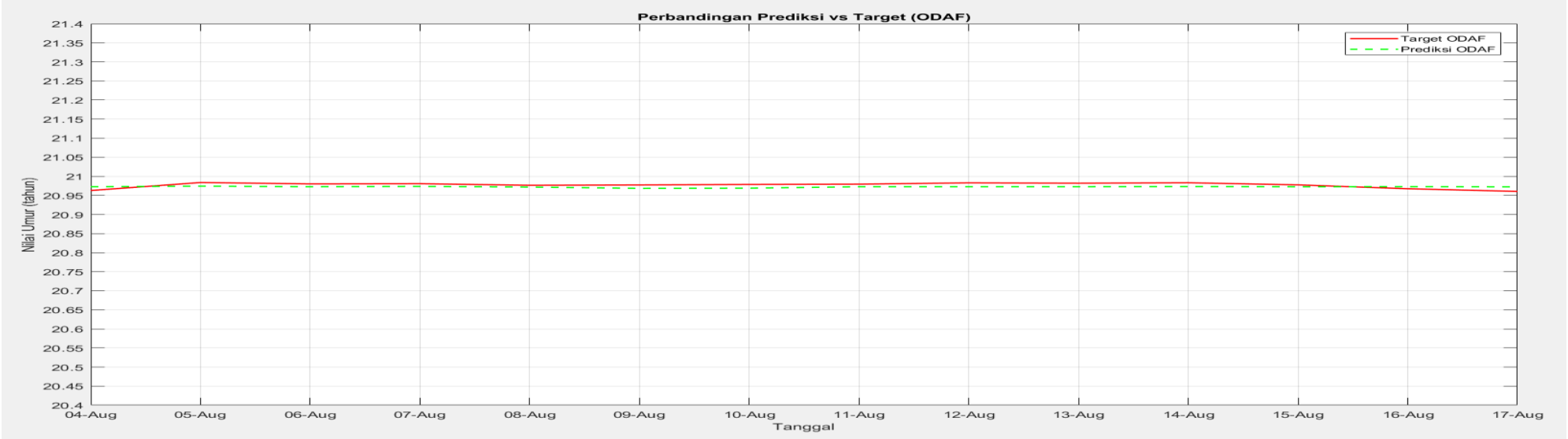
Gambar D. 13 Grafik Predksi 23 Juni sampai 6 juli 2024 ODAF Unit Satu



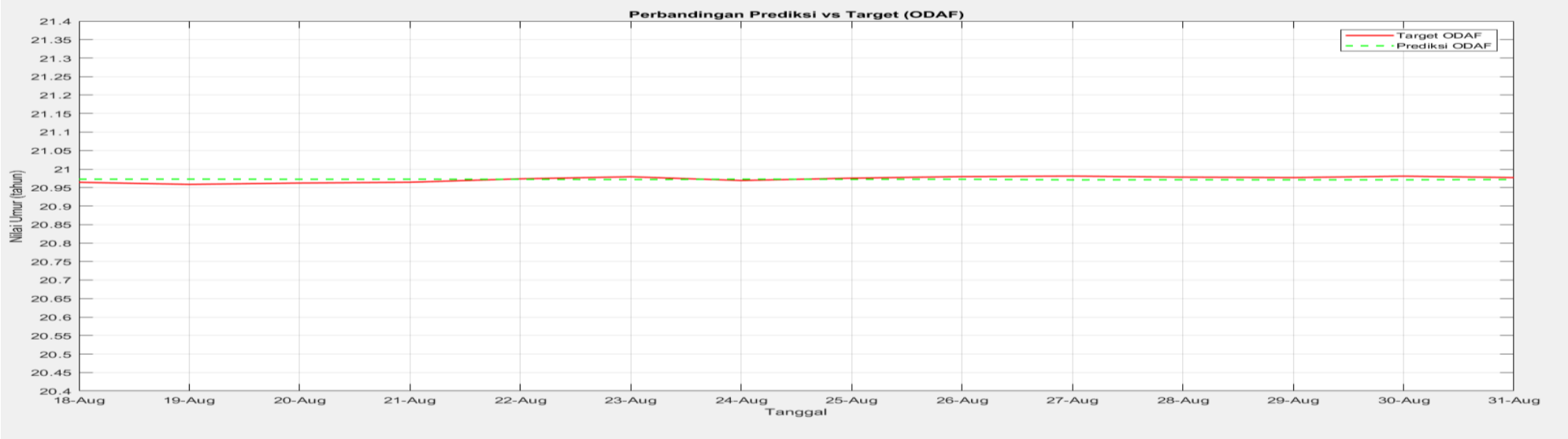
Gambar D. 14 Grafik Predksi 07 Juli Sampai 20 Juli 2024 ODAF Unit Satu



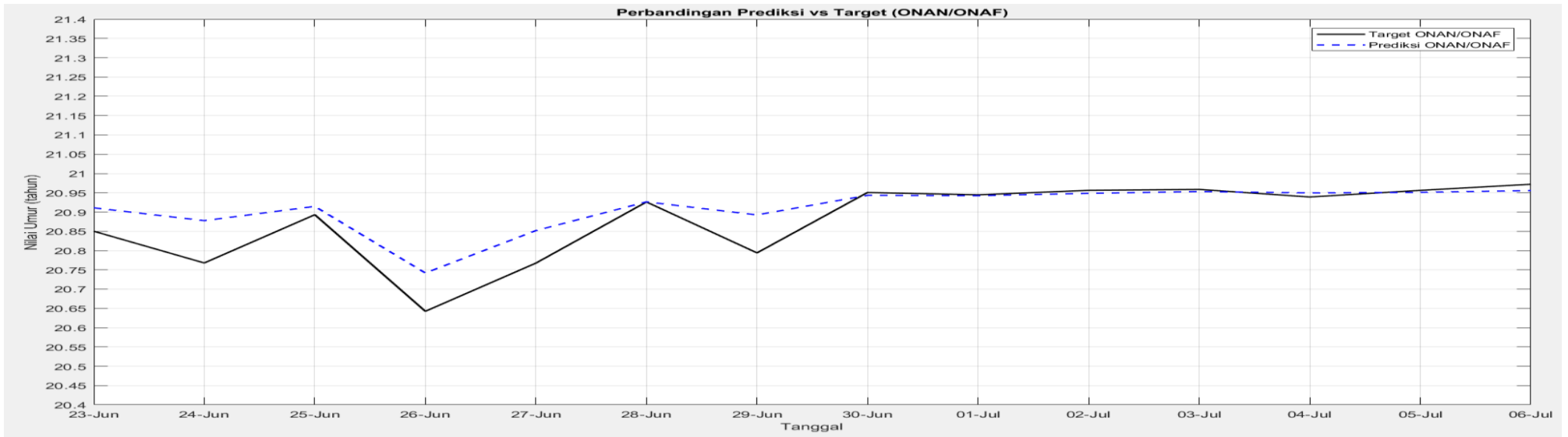
Gambar D. 15 Grafik Predksi 21 Juli sampai 3 Agustus 2024 ODAF Unit Satu



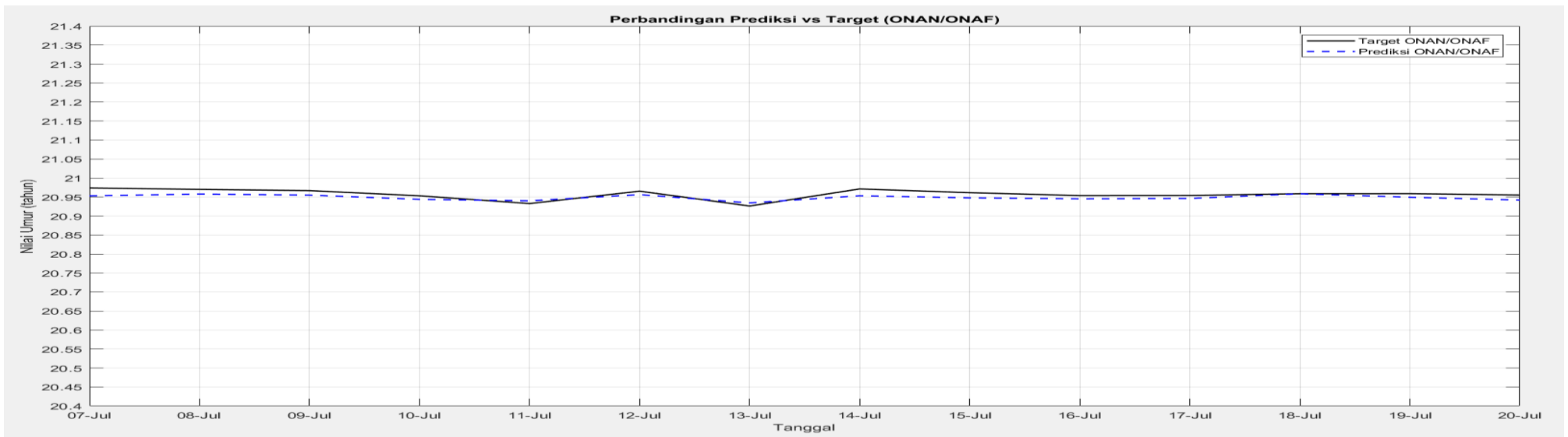
Gambar D. 16 Grafik Predksi 04 Agustus Sampai 17 Agustus 2024 ODAF Unit Satu



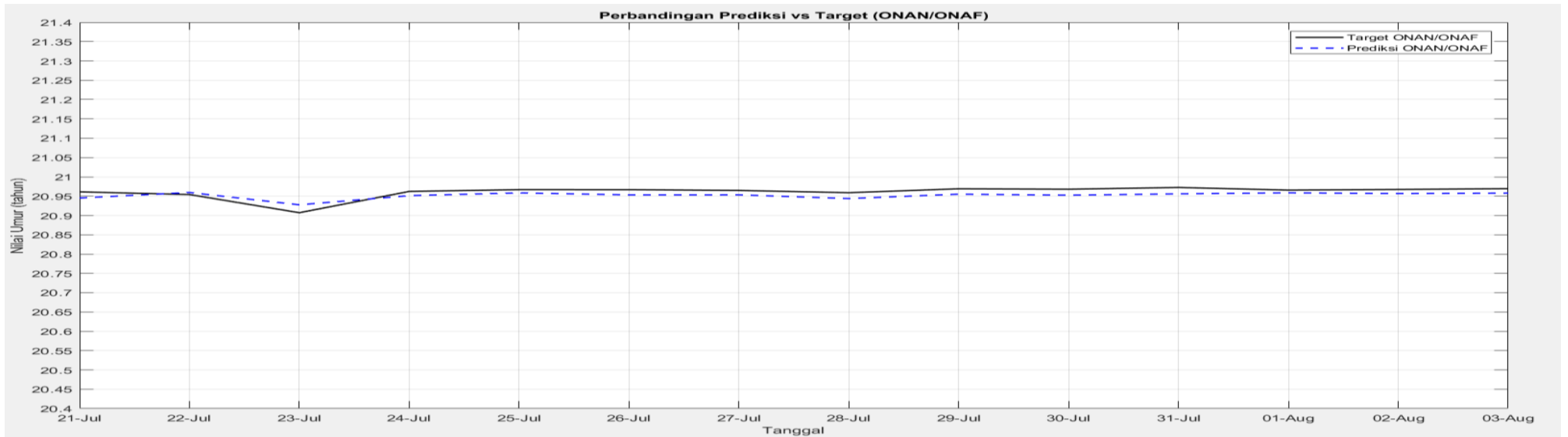
Gambar D. 17 Grafik Prediksi 18 Agustus sampai 31 Agustus ODAF Unit Satu



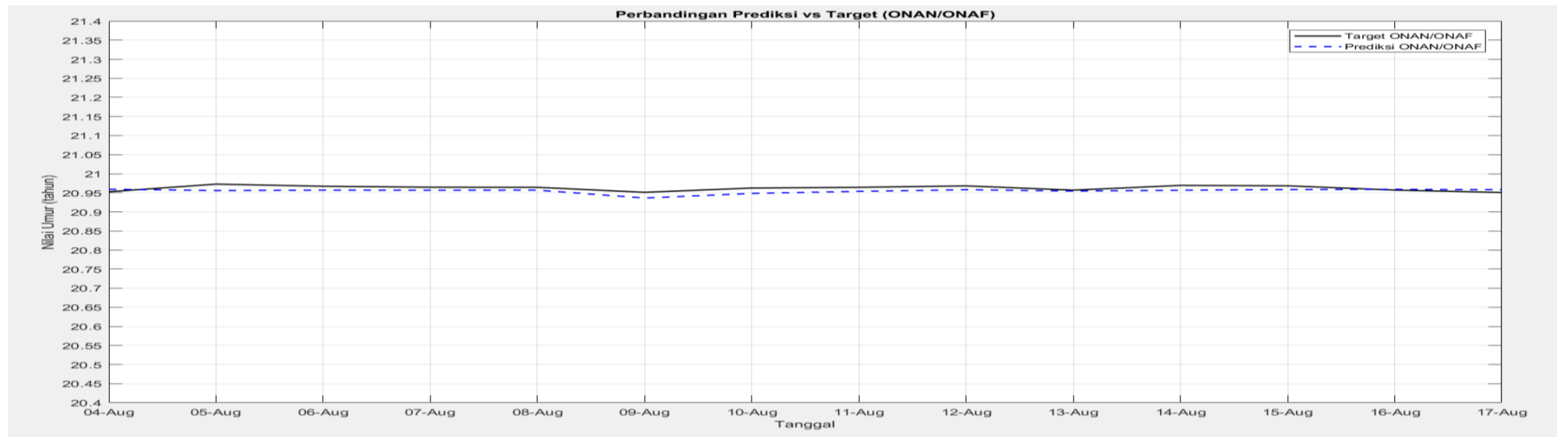
Gambar D. 18 Grafik Prediksi 23 Juni - 31 Agustus ONAN/ONAF Unit Dua



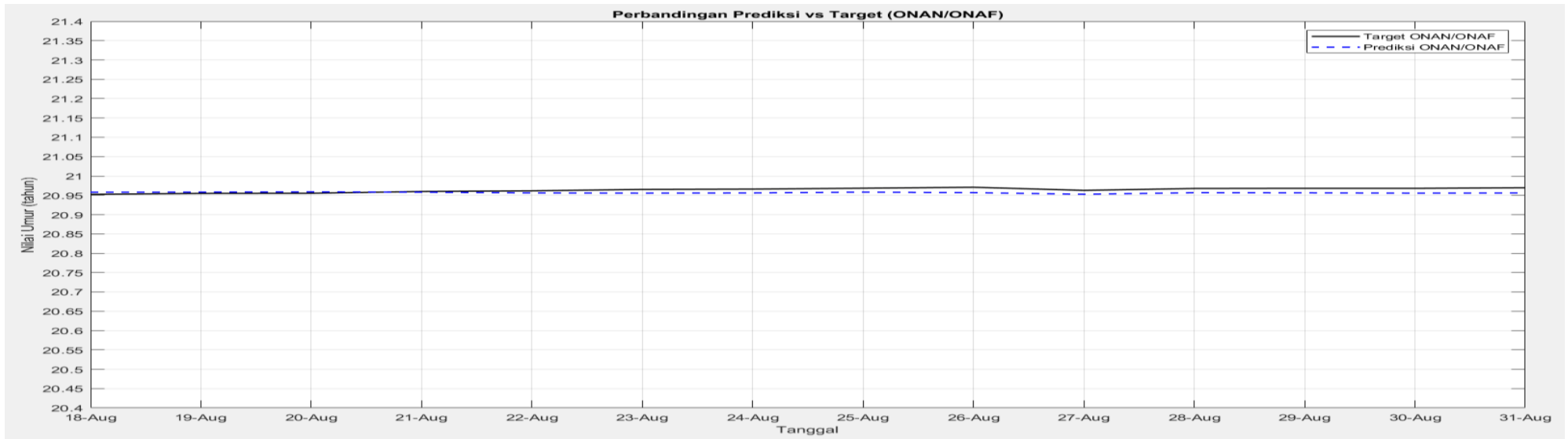
Gambar D. 19 Grafik Prediksi 7 Juli Sampai 20 Juli 2024 ONAN/ONAF Unit Dua



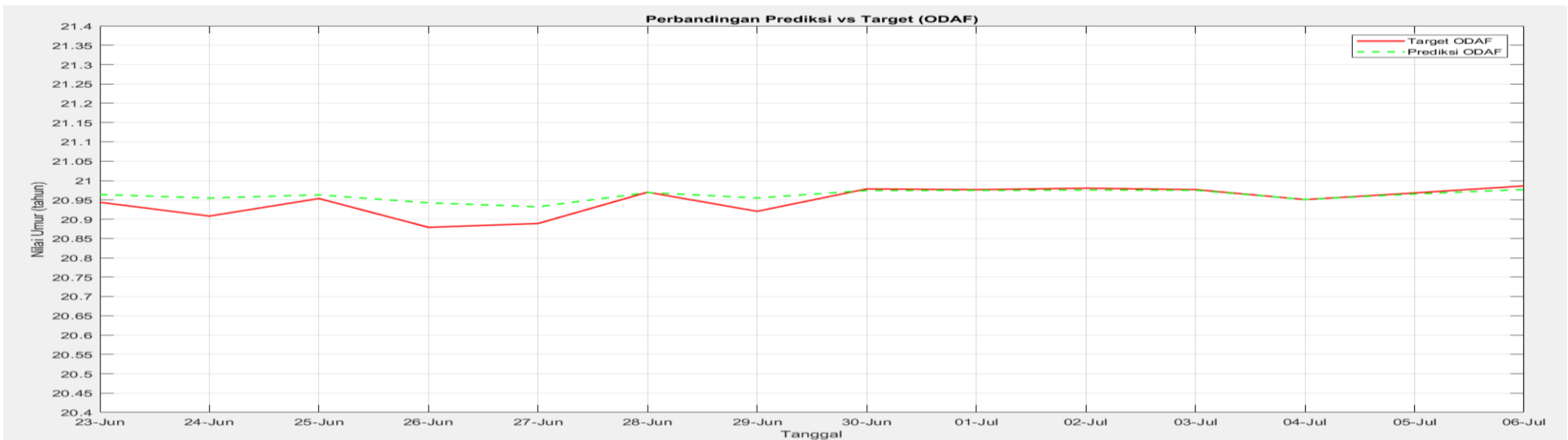
Gambar D. 20 Grafik Prediksi 21 Juli Sampai 3 Agustus 2024 ONAN/ONAF Unit Dua



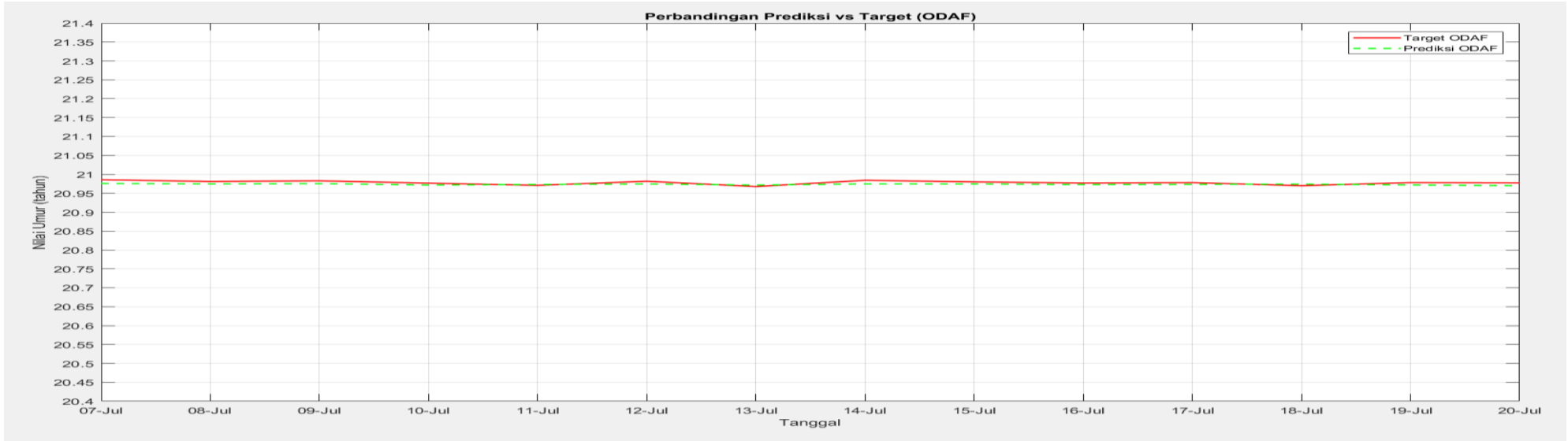
Gambar D. 21 Grafik Prediksi 4 Agustus Sampai 17 Agustus ONAN/ONAF Unit Dua



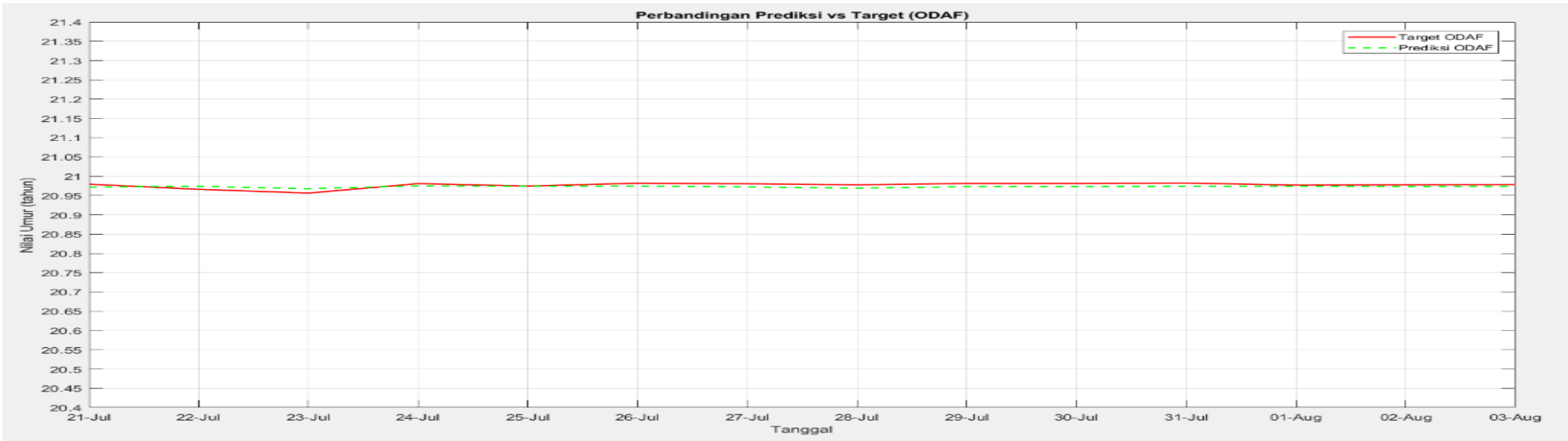
Gambar D. 22 Grafik Prediksi 18 Agustus Sampai 31 Agustus 2024 Unit Dua



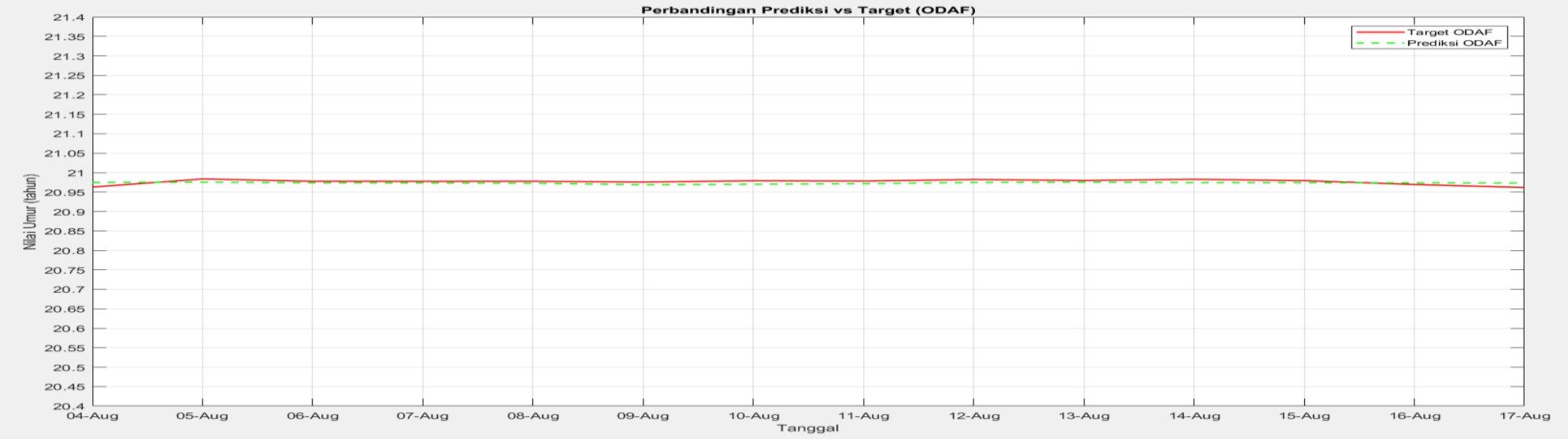
Gambar D. 23 Grafik Prediksi 23 Juni Sampai 6 Juli 2024 ODAF Unit Dua



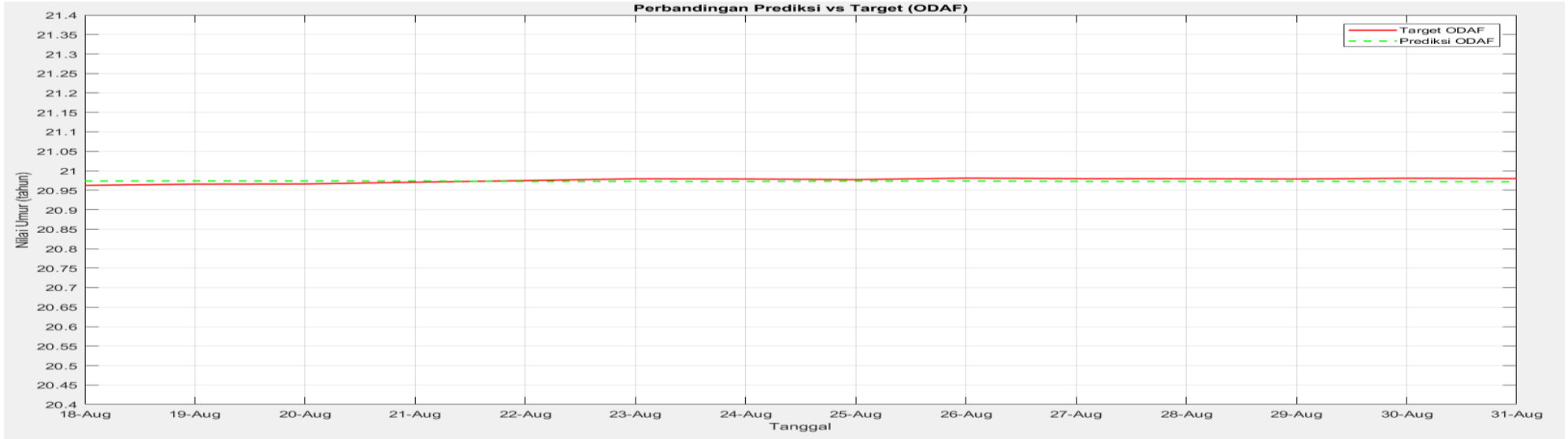
Gambar D. 24 Grafik Prediksi 7 Juli Sampai 20 Juli 2024 ODAF Unit Dua



Gambar D. 25 Grafik Prediksi 21 Juli Sampai 3 Agustus 2024 ODAF Unit Dua



Gambar D. 26 Grafik Prediksi 04 Agustus Sampai 17 Agustus 2024 ODAF Unit Dua



Gambar D. 27 Grafik Prediksi 18 Agustus Sampai 31 Agustus 2024 ODAF Unit Dua

Tabel D. 1 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 1 ONAN/ONAF 23 Juni Sampai 6 Juli 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Eror abs(eror Absolut)
1	23-Juni- 2024	20.92489 543	20.925665 15	99.996321 63	0.0036785 06	0.0000005 92	0.0007697 24
2	24-Juni- 2024	20.93720 371	20.936298 3	99.995675 41	0.0043243 99	0.0000008 2	0.0009054 08
3	25-Juni- 2024	20.83996 224	20.898248 68	99.721094 14	0.2796859 21	0.0033973 09	0.0582864 4
4	26-Juni- 2024	20.73585 828	20.882053 11	99.299902 04	0.7050338 88	0.0213729 28	0.1461948 28
5	27-Juni- 2024	20.94334 991	20.937094 2	99.970121 41	0.0298696 65	0.0000391	0.0062557 09
6	28-Juni- 2024	20.94592 227	20.934928 21	99.947484 6	0.0524878 36	0.0001208 69	0.0109940 61
7	29-Juni- 2024	20.92096 333	20.926588 97	99.973117 24	0.0268899 85	0.0000316	0.0056256 44
8	30-Juni- 2024	20.96433 688	20.951861 65	99.940457 63	0.0595069 36	0.0001556 31	0.0124752 35
9	01-Juli- 2024	20.95784 547	20.944750 47	99.937478 38	0.0624825 53	0.0001714 79	0.0130949 97
10	02-Juli- 2024	20.96642 974	20.951196 53	99.927291 93	0.0726552 4	0.0002320 51	0.0152332 1
11	03-Juli- 2024	20.96567 627	20.958168 05	99.964175 19	0.0358119 8	0.0000564	0.0075082 24
12	04-Juli- 2024	20.93315 084	20.956743 18	99.887423 62	0.1127032 58	0.0005565 99	0.0235923 43
13	05-Juli- 2024	20.95137 67	20.941250 92	99.951646 75	0.0483298 84	0.0001025 31	0.0101257 76
14	06-Juli- 2024	20.97290 42	20.953244 78	99.906174 81	0.0937372 44	0.0003864 93	0.0196594 22
Rata -Rata		20.92570 538	20.925705 38	20.935578 02	99.887026 06	0.1133712 35	0.0019017 43

Tabel D. 2 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 1 ONAN/ONAF 07 Juli Sampai 20 Juli 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Eror abs(eror Absolut)
1	07-Juli- 2024	20.97705 934	20.952463 9	99.882613 13	0.1172492 35	0.0006049 36	0.0245954 42
2	08-Juli- 2024	20.97421 295	20.955214 05	99.909335 69	0.0905821 85	0.0003609 58	0.0189989
3	09-Juli- 2024	20.93286 936	20.933286 8	99.998005 87	0.0019941 71	0.0000001 74	0.0004174 37

4	10-Juli-2024	20.87652556	20.91002786	99.83977879	0.160478332	0.001122404	0.0335023
5	11-Juli-2024	20.50465879	20.77422674	98.70239236	1.314666856	0.072666881	0.269567953
6	12-Juli-2024	20.90307249	20.93222525	99.86072785	0.139466392	0.000849883	0.029152761
7	13-Juli-2024	20.94905345	20.94379525	99.97489376	0.025099938	0.0000276	0.005258199
8	14-Juli-2024	20.96791815	20.94952146	99.91218562	0.087737338	0.000338438	0.018396693
9	15-Juli-2024	20.88149005	20.91032059	99.86212287	0.138067489	0.000831201	0.028830549
10	16-Juli-2024	20.9186986	20.9252223	99.96882372	0.031186004	0.0000426	0.006523706
11	17-Juli-2024	20.96928247	20.9528992	99.92180902	0.078129886	0.000268412	0.016383277
12	18-Juli-2024	20.96185814	20.95561949	99.9702292	0.029761935	0.0000389	0.006238655
13	19-Juli-2024	20.96485004	20.95205366	99.9389254	0.061037318	0.000163747	0.012796382
14	20-Juli-2024	20.95808014	20.94449333	99.93512944	0.064828502	0.000184601	0.013586809
Rata -Rata		20.90997354	20.92795499	99.83406948	0.167163256	0.005535767	0.034589219

Tabel D. 3 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 1 ONAN/ONAF 21 Juli Sampai 3 Agustus 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	21-Juli-2024	20.96947405	20.95272183	99.92004749	0.079888642	0.000280637	0.016752228
2	22-Juli-2024	20.94527188	20.95855795	99.93660792	0.063432288	0.00017652	0.013286065
3	23-Juli-2024	20.96847303	20.95109657	99.91706181	0.082869459	0.000301941	0.01737646
4	24-Juli-2024	20.97380878	20.9531452	99.90138196	0.098520883	0.000426984	0.020663582
5	25-Juli-2024	20.96133537	20.95451297	99.96744183	0.032547575	0.0000465	0.006822406
6	26-Juli-2024	20.97062893	20.95452233	99.92313547	0.076805491	0.000259422	0.016106595
7	27-Juli-2024	20.93829226	20.93428159	99.98084163	0.0191547	0.0000161	0.004010667
8	28-Juli-2024	20.96336252	20.94776316	99.92553208	0.074412503	0.00024334	0.015599363
9	29-Juli-2024	20.96677704	20.95117326	99.92552315	0.074421422	0.000243478	0.015603774

10	30-Juli-2024	20.96811024	20.9518878	99.92257288	0.077367218	0.000263168	0.016222444
11	31-Juli-2024	20.9708589	20.95521506	99.92534631	0.074597995	0.00024473	0.01564384
12	01-Agustus-2024	20.96464589	20.95655984	99.96141516	0.038569956	0.0000654	0.008086055
13	02-Agustus-2024	20.9668101	20.9554349	99.94571717	0.054253376	0.000129395	0.011375202
14	03-Agustus-2024	20.96258912	20.95560968	99.96669416	0.033294751	0.0000487	0.006979442
Rata -Rata		20.96360272	20.95232015	99.93709422	0.062866876	0.000196165	0.01318058

Tabel D. 4 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 1 ONAN/ONAF 4 Agustus Sampai 17 Agustus 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	04-Agustus-2024	20.95236986	20.95780059	99.97408731	0.025919408	0.0000295	0.00543073
2	05-Agustus-2024	20.97373656	20.95377944	99.90475645	0.095152922	0.000398287	0.019957123
3	06-Agustus-2024	20.96712312	20.95551999	99.94462971	0.055339644	0.000134633	0.011603131
4	07-Agustus-2024	20.97105313	20.95534019	99.92501705	0.074926763	0.000246896	0.015712931
5	08-Agustus-2024	20.96604595	20.95624914	99.95325114	0.046727015	0.000096	0.009796807
6	09-Agustus-2024	20.95817263	20.94291364	99.92714011	0.072806848	0.000232837	0.015258985
7	10-Agustus-2024	20.96128014	20.94723375	99.93294395	0.067011114	0.000197301	0.014046387
8	11-Agustus-2024	20.9701748	20.95710841	99.93765175	0.062309399	0.000170731	0.01306639
9	12-Agustus-2024	20.97070506	20.9540132	99.9203405	0.079596096	0.000278618	0.016691863

10	13- Agustus- 2024	20.96541 147	20.952290 92	99.937378 88	0.0625819 31	0.0001721 49	0.0131205 59
11	14- Agustus- 2024	20.97280 882	20.953994 46	99.910211 13	0.0897083 24	0.0003539 8	0.0188143 55
12	15- Agustus- 2024	20.96724 599	20.955427 64	99.943602 44	0.0563657 69	0.0001396 73	0.0118183 49
13	16- Agustus- 2024	20.95721 749	20.956938 33	99.998667 93	0.0013320 53	7.79E-08	0.0002791 61
14	17- Agustus- 2024	20.95066 436	20.956535 58	99.971983 79	0.0280240 57	0.0000345	0.0058712 26
Rata -Rata		20.96457 21	20.953938 95	99.941547 3	0.0584143 82	0.0001775 13	0.0122477 14

Tabel D. 5 Hasil Prediksi Jaringan Syaraf Tiruan Backpropagation Unit 1 ONAN/ONAF 18 Agustus Sampai 31 Agustus 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Eror abs(eror Absolut)
1	18- Agustus- 2024	20.95449 349	20.956621 67	99.989844 8	0.0101562 28	0.0000045 3	0.0021281 86
2	19- Agustus- 2024	20.94845 911	20.956966 12	99.959407 25	0.0406092 31	0.0000724	0.0085070 08
3	20- Agustus- 2024	20.95160 592	20.956446 51	99.976901 66	0.0231036 73	0.0000234	0.0048405 9
4	21- Agustus- 2024	20.95341 405	20.956572 25	99.984929 79	0.0150724 83	0.0000099 7	0.0031582
5	22- Agustus- 2024	20.96280 389	20.956926 46	99.971954 69	0.0280374 51	0.0000345	0.0058774 36
6	23- Agustus- 2024	20.96771 822	20.954904 22	99.938849 63	0.0611129 99	0.0001641 99	0.0128140 01
7	24- Agustus- 2024	20.95853 628	20.956392 74	99.989771 39	0.0102275 65	0.0000045 9	0.0021435 48
8	25- Agustus- 2024	20.96523 035	20.956349 62	99.957622 76	0.0423592 92	0.0000789	0.0088807 23
9	26- Agustus- 2024	20.96851 228	20.955174 34	99.936350 15	0.0636093 61	0.0001779 01	0.0133379 37

10	27- Agustus- 2024	20.96907 452	20.954063 69	99.928363 15	0.0715855 73	0.0002253 25	0.0150108 32
11	28- Agustus- 2024	20.96668 267	20.955399 37	99.946155 66	0.0538153 65	0.0001273 13	0.0112832 97
12	29- Agustus- 2024	20.96034 166	20.952915 92	99.964559 88	0.0354275 65	0.0000551	0.0074257 39
13	30- Agustus- 2024	20.96758 386	20.953100 24	99.930875 99	0.0690762 66	0.0002097 75	0.0144836 24
14	31- Agustus- 2024	20.96722 291	20.956708 85	99.949829 65	0.0501451 96	0.0001105 45	0.0105140 55
Rata -Rata		20.96154 852	20.955610 14	99.958958 32	0.0410241 61	9.27463E- 05	0.0086003 7

Tabel D. 6 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 1 ODAF 23 Juni Sampai 6 Juli 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	23-Juni- 2024	20.96593 209	20.966436 02	99.997596 47	0.0024035 91	0.0000002 54	0.0005039 35
2	24-Juni- 2024	20.96199 118	20.967800 65	99.972293 35	0.0277143 3	0.0000338	0.0058094 75
3	25-Juni- 2024	20.93485 132	20.953505 87	99.910971 71	0.0891076 16	0.0003479 92	0.0186545 47
4	26-Juni- 2024	20.90344 147	20.954383 33	99.756891 61	0.2437008 44	0.0025950 73	0.0509418 63
5	27-Juni- 2024	20.96978 493	20.969167 22	99.997054 21	0.0029457 02	0.0000003 82	0.0006177 07
6	28-Juni- 2024	20.97476 476	20.970276 68	99.978597 88	0.0213975 36	0.0000201	0.0044880 83
7	29-Juni- 2024	20.95785 77	20.965033 17	99.965774 13	0.0342375 86	0.0000515	0.0071754 65
8	30-Juni- 2024	20.97688 353	20.973106 9	99.981992 95	0.0180038 12	0.0000143	0.0037766 39
9	01-Juli- 2024	20.97885 17	20.973804 54	99.975935 9	0.0240583 07	0.0000255	0.0050471 56
10	02-Juli- 2024	20.98212 43	20.975399 91	99.967941 57	0.0320481 6	0.0000452	0.0067243 85
11	03-Juli- 2024	20.97593 495	20.973911 85	99.990354 19	0.0096448 77	0.0000040 9	0.0020231 03
12	04-Juli- 2024	20.94075 9	20.946170 33	99.974165 52	0.0258411 6	0.0000293	0.0054113 35
13	05-Juli- 2024	20.96033 226	20.945588 17	99.929607 66	0.0703428 29	0.0002173 88	0.0147440 91

14	06-Juli-2024	20.98625768	20.97586631	99.95046037	0.049515098	0.00010798	0.010391366
Rata -Rata		20.96212621	20.96503221	99.95354554	0.046497246	0.00024949	0.009736368

Tabel D. 7 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 1 ODAF 7 Juli Sampai 20 Juli 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	07-Juli-2024	20.98650605	20.97534147	99.94677284	0.053198839	0.000124648	0.011164578
2	08-Juli-2024	20.98309017	20.97424817	99.95784353	0.042138702	0.0000782	0.008842002
3	09-Juli-2024	20.96563979	20.96815878	99.98798657	0.012014877	0.00000635	0.002518996
4	10-Juli-2024	20.94447927	20.95946473	99.92850269	0.071548468	0.000224564	0.014985454
5	11-Juli-2024	20.82824411	20.93862408	99.47284039	0.529953315	0.012183738	0.11037997
6	12-Juli-2024	20.95948297	20.96865919	99.95623841	0.043780753	0.0000842	0.009176219
7	13-Juli-2024	20.97034262	20.97062071	99.9986739	0.001326114	7.73E-08	0.000278091
8	14-Juli-2024	20.98226213	20.97390157	99.96013828	0.039845839	0.0000699	0.008360558
9	15-Juli-2024	20.9442016	20.9589037	99.92985274	0.0701965	0.000216152	0.014702097
10	16-Juli-2024	20.95897981	20.96478568	99.97230653	0.027701145	0.0000337	0.005805877
11	17-Juli-2024	20.98235728	20.97248686	99.95293636	0.047041505	0.0000974	0.009870417
12	18-Juli-2024	20.97268032	20.97237165	99.99852822	0.001471762	9.53E-08	0.000308668
13	19-Juli-2024	20.97912954	20.97017337	99.9572909	0.042690864	0.0000802	0.008956172
14	20-Juli-2024	20.97807718	20.96885866	99.95603708	0.043943604	0.000085	0.009218523
Rata -Rata		20.95967663	20.9668999	99.92685346	0.073346592	0.000948873	0.015326259

Tabel D. 8 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 1 ODAF Bulan 21 Juli Sampai 3 Agustus 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	21-Juli-2024	20.98197434	20.97138662	99.94951351	0.050461014	0.0001121	0.010587717
2	22-Juli-2024	20.95371603	20.9725566	99.91016562	0.089915156	0.000354967	0.018840566

3	23-Juli-2024	20.98102162	20.97387181	99.96591086	0.03407752	0.0000511	0.007149812
4	24-Juli-2024	20.98390765	20.97404868	99.95299444	0.046983472	0.0000972	0.009858968
5	25-Juli-2024	20.97007983	20.96966174	99.99800622	0.001993735	0.000000175	0.000418088
6	26-Juli-2024	20.98056456	20.97368877	99.96721705	0.032772209	0.0000473	0.006875794
7	27-Juli-2024	20.97035153	20.96757901	99.9867771	0.013221152	0.00000769	0.002772522
8	28-Juli-2024	20.97942833	20.96972821	99.95374226	0.046236348	0.0000941	0.009700121
9	29-Juli-2024	20.98118695	20.97053678	99.94921366	0.050760561	0.000113426	0.010650168
10	30-Juli-2024	20.98153232	20.97073161	99.94849624	0.051477244	0.000116655	0.010800715
11	31-Juli-2024	20.98055727	20.97296264	99.96378845	0.03619844	0.0000577	0.007594634
12	01-Agustus-2024	20.97403737	20.97327628	99.9963711	0.003628767	0.000000579	0.000761099
13	02-Agustus-2024	20.97786735	20.97173851	99.97077574	0.029215722	0.0000376	0.006128835
14	03-Agustus-2024	20.97452819	20.97098512	99.98310487	0.016892273	0.0000126	0.003543075
Rata -Rata		20.97648238	20.97162517	99.96400551	0.035988115	7.87994E-05	0.007548723

Tabel D. 9 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 1 ODAF 4 Sampai 17 Agustus 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	04-Agustus-2024	20.96275357	20.9726555	99.95278648	0.047235823	0.000098	0.009901929
2	05-Agustus-2024	20.98368254	20.97422957	99.95493054	0.045049162	0.0000894	0.009452973
3	06-Agustus-2024	20.98007198	20.97266629	99.96468884	0.035298693	0.0000548	0.007405691
4	07-Agustus-2024	20.9806072	20.97355177	99.96636033	0.03362836	0.0000498	0.007055434
5	08-Agustus-2024	20.97645698	20.97184541	99.97801066	0.021984503	0.0000213	0.00461157

6	09- Agustus- 2024	20.97734 254	20.968430 63	99.957498 46	0.0424834 86	0.0000794	0.0089119 06
7	10- Agustus- 2024	20.97864 592	20.968887 91	99.953464 35	0.0465140 08	0.0000952	0.0097580 09
8	11- Agustus- 2024	20.97942 46	20.972657 31	99.967732 77	0.0322568 18	0.0000458	0.0067672 95
9	12- Agustus- 2024	20.98280 398	20.972617 04	99.951427 44	0.0485489 81	0.0001037 74	0.0101869 38
10	13- Agustus- 2024	20.98185 125	20.972691 83	99.956326 93	0.0436540 01	0.0000839	0.0091594 18
11	14- Agustus- 2024	20.98305 196	20.973234 65	99.953191 25	0.0467868 51	0.0000964	0.0098173 09
12	15- Agustus- 2024	20.97756 921	20.972555 79	99.976095 3	0.0238989 84	0.0000251	0.0050134 26
13	16- Agustus- 2024	20.96741 503	20.972920 82	99.973748 07	0.0262588 19	0.0000303	0.0055057 95
14	17- Agustus- 2024	20.96039 438	20.972263 73	99.943404 52	0.0566275 3	0.0001408 82	0.0118693 54
Rata -Rata		20.97657 651	20.972229 16	99.960690 42	0.0393018 58	7.24326E- 05	0.0082440 75

Tabel D. 10 Hasil Prediksi Jaringan Syaraf Tiruan Backpropagation Unit 1 ODAF 4 Sampai 17 Agustus 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Eror abs(eror Absolut)
1	18- Agustus- 2024	20.96417 9	20.972477 35	99.960432 17	0.0395834 91	0.0000689	0.0082983 54
2	19- Agustus- 2024	20.95845 202	20.972661 47	99.932247 74	0.0677981 93	0.0002019 09	0.0142094 52
3	20- Agustus- 2024	20.96213 334	20.972355 03	99.951261 09	0.0487626 79	0.0001044 83	0.0102216 98
4	21- Agustus- 2024	20.96428 522	20.972477 98	99.960935 66	0.0390796 06	0.0000671	0.0081927 6
5	22- Agustus- 2024	20.97354 644	20.972304 95	99.994080 33	0.0059193 23	0.0000015 4	0.0012414 92

6	23- Agustus- 2024	20.97910 122	20.971598 47	99.964224 25	0.0357629 53	0.0000563	0.0075027 46
7	24- Agustus- 2024	20.96903 465	20.972596 26	99.983017 76	0.0169851 2	0.0000127	0.0035616 16
8	25- Agustus- 2024	20.97537 89	20.972254 01	99.985099 85	0.0148979 32	0.0000097 6	0.0031248 98
9	26- Agustus- 2024	20.97958 538	20.972378 76	99.965637 57	0.0343506 22	0.0000519	0.0072066 18
10	27- Agustus- 2024	20.98090 252	20.970723 73	99.951461 93	0.0485145 22	0.0001036 08	0.0101787 85
11	28- Agustus- 2024	20.97811 501	20.971110 25	99.966598 08	0.0333907 71	0.0000491	0.0070047 54
12	29- Agustus- 2024	20.97692 297	20.970790 57	99.970757 4	0.0292340 47	0.0000376	0.0061324 04
13	30- Agustus- 2024	20.98072 605	20.970824 92	99.952786 17	0.0471915 54	0.000098	0.0099011 31
14	31- Agustus- 2024	20.97692 757	20.971790 51	99.975504 92	0.0244890 79	0.0000264	0.0051370 56
Rata -Rata		20.97280 645	20.971881 73	99.965288 92	0.0347114 21	6.35214E- 05	0.0072795 54

Tabel D. 11 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 2 ONAN/ONAF 23 Juni Sampai 6 Juli 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Eror abs(eror Absolut)
1	23-Juni- 2024	20.85017 014	20.910896 48	99.709594 73	0.2912510 81	0.0036876 89	0.0607263 46
2	24-Juni- 2024	20.76786 273	20.877585 72	99.474446	0.5283306 65	0.0120391 34	0.1097229 87
3	25-Juni- 2024	20.89298 175	20.914597 52	99.896647 45	0.1034594 8	0.0004672 42	0.0216157 7
4	26-Juni- 2024	20.64253 519	20.741825 69	99.521303	0.4809995 3	0.0098586 03	0.0992904 97
5	27-Juni- 2024	20.76751 275	20.851837 16	99.595602 01	0.4060400 04	0.0071106 06	0.0843244 1
6	28-Juni- 2024	20.92604 856	20.926321 63	99.998695 07	0.0013049 43	7.45689E- 08	0.0002730 73
7	29-Juni- 2024	20.79402 416	20.892424 24	99.529015 52	0.4732132 43	0.0096825 75	0.0984000 76

8	30-Juni-2024	20.95065327	20.94334201	99.96509029	0.034897524	5.34545E-05	0.007311259
9	01-Juli-2024	20.94460362	20.94236429	99.98930719	0.010691665	5.01458E-06	0.002239327
10	02-Juli-2024	20.95619913	20.9484502	99.96300956	0.036976764	6.00458E-05	0.007748924
11	03-Juli-2024	20.95864646	20.95303394	99.9732138	0.026779031	3.15004E-05	0.005612522
12	04-Juli-2024	20.9389614	20.94960921	99.94917421	0.050851639	0.000113376	0.010647805
13	05-Juli-2024	20.95616821	20.95100522	99.97535686	0.024637071	2.66564E-05	0.005162986
14	06-Juli-2024	20.97192379	20.95564031	99.92229549	0.077644179	0.000265152	0.016283478
Rata -Rata		0.698598903	20.9113524	99.81876794	0.181934059	0.00310008	0.03781139

Tabel D. 12 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 2 ONAN/ONAF 7 Juli Sampai 20 Juli 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	07-Juli-2024	20.97388379	20.95309522	99.90078521	0.099116447	0.000432165	0.020788568
2	08-Juli-2024	20.97013973	20.95782074	99.94122007	0.0587454	0.000151758	0.012318992
3	09-Juli-2024	20.96686891	20.95505531	99.9436241	0.056344136	0.000139561	0.011813601
4	10-Juli-2024	20.95323695	20.94386375	99.95524608	0.044733899	8.78569E-05	0.0093732
5	11-Juli-2024	20.9328008	20.94001586	99.96554417	0.034467702	5.2057E-05	0.007215055
6	12-Juli-2024	20.96546931	20.95633955	99.9564344	0.043546624	8.33524E-05	0.009129754
7	13-Juli-2024	20.92636779	20.934542	99.96095345	0.039061798	6.68178E-05	0.008174216
8	14-Juli-2024	20.97134209	20.95327006	99.91375077	0.086174902	0.000326598	0.018072033
9	15-Juli-2024	20.96147559	20.94787022	99.93505132	0.064906529	0.000185106	0.013605366
10	16-Juli-2024	20.95381726	20.945362	99.95963181	0.040351903	7.14915E-05	0.008455264
11	17-Juli-2024	20.95407847	20.94630271	99.96287765	0.037108577	6.04624E-05	0.00777576
12	18-Juli-2024	20.95871412	20.95854815	99.99920809	0.0007919	2.75467E-08	0.000165972
13	19-Juli-2024	20.95890859	20.94944864	99.95484391	0.045135713	8.94907E-05	0.009459953

14	20-Juli-2024	20.95530784	20.94200155	99.93646123	0.063498424	0.000177057	0.01330629
Rata -Rata		20.95731509	20.94882398	99.94897373	0.050998854	0.000137414	0.010689573

Tabel D. 13 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 2 ONAN/ONAF 21 Juli Sampai 3 Agustus 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	21-Juli-2024	20.96093395	20.94504324	99.9241314	0.075811083	0.000252515	0.015890711
2	22-Juli-2024	20.95403378	20.95930402	99.97485487	0.025151459	2.77755E-05	0.005270245
3	23-Juli-2024	20.90692948	20.92743043	99.90203788	0.098058183	0.000420289	0.020500955
4	24-Juli-2024	20.96209165	20.9512005	99.94801661	0.051956377	0.000118617	0.010891143
5	25-Juli-2024	20.96666788	20.95827303	99.95994496	0.040039002	7.04734E-05	0.008394845
6	26-Juli-2024	20.96661026	20.95317285	99.93586933	0.064089567	0.000180564	0.01343741
7	27-Juli-2024	20.96464658	20.95323768	99.94555069	0.054419678	0.000130163	0.011408893
8	28-Juli-2024	20.95875053	20.94358192	99.92757398	0.072373599	0.000230086	0.015168602
9	29-Juli-2024	20.96890969	20.95502064	99.93371972	0.066236382	0.000192906	0.013889047
10	30-Juli-2024	20.96779115	20.95233515	99.92623256	0.07371306	0.000238888	0.015456001
11	31-Juli-2024	20.97231667	20.95581814	99.92126993	0.078668133	0.000272201	0.01649853
12	01-Agustus-2024	20.96550382	20.95845726	99.96637844	0.033610258	4.9654E-05	0.00704656
13	02-Agustus-2024	20.96716473	20.956532	99.94926294	0.050711334	0.000113055	0.010632729
14	03-Agustus-2024	20.96928363	20.95772879	99.94486597	0.055103652	0.000133514	0.011554841
Rata -Rata		20.96083098	20.95193826	99.93997923	0.059995841	0.000173622	0.012574322

Tabel D. 14 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 2 ONAN/ONAF 4 Agustus Sampai
17 Agustus 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	04- Agustus- 2024	20.95279 6	20.959246 25	99.969224 78	0.0307846 93	4.16058E- 05	0.0064502 54
2	05- Agustus- 2024	20.97268 974	20.956026 83	99.920486 31	0.0794505 13	0.0002776 53	0.0166629 1
3	06- Agustus- 2024	20.96713 08	20.956943 95	99.951391 54	0.0485848 43	0.0001037 72	0.0101868 48
4	07- Agustus- 2024	20.96457 96	20.956774 63	99.962756 79	0.0372293 47	6.09177E- 05	0.0078049 76
5	08- Agustus- 2024	20.96431 661	20.956914 52	99.964679 48	0.0353080 46	5.47909E- 05	0.0074020 91
6	09- Agustus- 2024	20.95127 352	20.936339 61	99.928669 93	0.0712792 25	0.0002230 22	0.0149339 05
7	10- Agustus- 2024	20.96246 321	20.948383 52	99.932788 69	0.0671661 67	0.0001982 37	0.0140796 83
8	11- Agustus- 2024	20.96434 542	20.953861 55	99.949966 89	0.0500080 91	0.0001099 12	0.0104838 69
9	12- Agustus- 2024	20.96809 949	20.958037 61	99.951990 33	0.0479866 36	0.0001012 42	0.0100618 86
10	13- Agustus- 2024	20.95694 515	20.954605 13	99.988832 95	0.0111658 07	5.47566E- 06	0.0023400 12
11	14- Agustus- 2024	20.96933 522	20.956772 98	99.940056 42	0.0599076 69	0.0001578 1	0.0125622 4
12	15- Agustus- 2024	20.96826 623	20.958569 88	99.953735 64	0.0462429 63	9.40192E- 05	0.0096963 48
13	16- Agustus- 2024	20.95717 379	20.959056 94	99.991015 08	0.0089857 24	3.54627E- 06	0.0018831 54
14	17- Agustus- 2024	20.95084 003	20.958249 48	99.964646 62	0.0353658 79	5.48999E- 05	0.0074094 49
Rata -Rata		20.96216 106	20.954984 49	99.955017 25	0.0449618 29	0.0001062 07	0.0094255 44

Tabel D. 15 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 2 ONAN/ONAF 18 Agustus
Sampai 31 Agustus 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	18- Agustus- 2024	20.95234 769	20.957870 69	99.973647 12	0.0263598 22	3.05035E- 05	0.0055230 02
2	19- Agustus- 2024	20.95485 059	20.958126 37	99.984369 91	0.0156325 33	1.07307E- 05	0.0032757 74
3	20- Agustus- 2024	20.95523 061	20.958764 82	99.983137 36	0.0168654 88	1.24906E- 05	0.0035342 02
4	21- Agustus- 2024	20.95977 007	20.957928 81	99.991214 49	0.0087847 34	3.39024E- 06	0.0018412 6
5	22- Agustus- 2024	20.96150 063	20.956037 53	99.973930 63	0.0260625 78	2.98455E- 05	0.0054631 08
6	23- Agustus- 2024	20.96507 57	20.955513 04	99.954366 88	0.0456123 06	9.14444E- 05	0.0095626 54
7	24- Agustus- 2024	20.96592 186	20.955988 89	99.952600 78	0.0473767 67	9.8664E- 05	0.0099329 76
8	25- Agustus- 2024	20.96819 284	20.958201 84	99.952328 95	0.0476483 38	9.982E-05	0.0099909 95
9	26- Agustus- 2024	20.97066 778	20.956709 67	99.933395 51	0.0665601 59	0.0001948 29	0.0139581 1
10	27- Agustus- 2024	20.96262 051	20.952685 83	99.952585 2	0.0473923 28	9.86977E- 05	0.0099346 74
11	28- Agustus- 2024	20.96747 541	20.956584 13	99.948029 33	0.0519436 72	0.0001186 2	0.0108912 77
12	29- Agustus- 2024	20.96796 242	20.956269 97	99.944205 52	0.0557633 71	0.0001367 13	0.0116924 43
13	30- Agustus- 2024	20.96782 304	20.955470 7	99.941054 31	0.0589109 62	0.0001525 8	0.0123523 46
14	31- Agustus- 2024	20.96946 017	20.955950 07	99.935530 97	0.0644274 91	0.0001825 23	0.0135100 97
Rata -Rata		20.96349 281	20.956578 74	99.958599 78	0.0413814 68	9.00608E- 05	0.0086759 23

Tabel D. 16 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 2 ODAF 23 Juni Sampai 6 Juli 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Eror abs(eror Absolut)
1	23-Juni- 2024	20.94373 879	20.963773 15	99.904433 44	0.0956579 75	0.0004013 75	0.0200343 56
2	24-Juni- 2024	20.90792 686	20.954635 44	99.777096 63	0.2234013 35	0.0021816 92	0.0467085 88
3	25-Juni- 2024	20.95333 935	20.962908 94	99.954349 91	0.0456709 4	9.1577E- 05	0.0095695 87
4	26-Juni- 2024	20.87884 117	20.942242 76	99.697255	0.3036643 24	0.0040197 62	0.0634015 92
5	27-Juni- 2024	20.88873 738	20.932020 97	99.793218 28	0.2072101 89	0.0018734 69	0.0432835 92
6	28-Juni- 2024	20.96972 319	20.968829 69	99.995738 94	0.0042608 81	7.98333E- 07	0.0008934 95
7	29-Juni- 2024	20.92020 271	20.954825 52	99.834774 08	0.1654993 66	0.0011987 38	0.0346228 03
8	30-Juni- 2024	20.97828 599	20.974261 39	99.980811 68	0.0191846 43	1.61975E- 05	0.0040246 09
9	01-Juli- 2024	20.97636 093	20.974519 56	99.991220 93	0.0087783 01	3.39064E- 06	0.0018413 68
10	02-Juli- 2024	20.98015 345	20.975513 39	99.977878 69	0.0221164 18	2.15301E- 05	0.0046400 59
11	03-Juli- 2024	20.97652 129	20.974834 14	99.991956 31	0.0080430 47	2.84648E- 06	0.0016871 52
12	04-Juli- 2024	20.95070 282	20.950904 64	99.999036 69	0.0009633 19	4.07322E- 08	0.0002018 22
13	05-Juli- 2024	20.96782 42	20.965281 48	99.987871 77	0.0121267 62	6.46542E- 06	0.0025427 18
14	06-Juli- 2024	20.98605 412	20.976694 71	99.955381 86	0.0445982 42	8.75986E- 05	0.0093594 11
Rata -Rata		20.94845 802	20.962231 84	99.917216 01	0.0829411 25	0.0007075 34	0.0173436 54

Tabel D. 17 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 2 ODAF 7 Juli Sampai 20 Juli 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Eror abs(eror Absolut)
1	07-Juli- 2024	20.98563 548	20.975923 95	99.953701 55	0.0462770 24	9.43138E- 05	0.0097115 27
2	08-Juli- 2024	20.98106 86	20.974567 36	99.969004 17	0.0309862 29	4.22661E- 05	0.0065012 42
3	09-Juli- 2024	20.98283 845	20.975394 36	99.964510 34	0.0354770 65	5.54146E- 05	0.0074440 95

4	10-Juli-2024	20.97663994	20.97166129	99.97626009	0.023734272	2.4787E-05	0.004978653
5	11-Juli-2024	20.97084268	20.97312311	99.9891269	0.010874277	5.20035E-06	0.002280428
6	12-Juli-2024	20.9816723	20.97451017	99.96585317	0.034135177	5.12961E-05	0.007162131
7	13-Juli-2024	20.96763183	20.97153529	99.98138689	0.018616572	1.5237E-05	0.003903454
8	14-Juli-2024	20.98417807	20.97465202	99.95458304	0.045396338	9.07456E-05	0.009526048
9	15-Juli-2024	20.97997266	20.97450195	99.97391732	0.026075874	2.99287E-05	0.005470711
10	16-Juli-2024	20.97701437	20.97295431	99.98064149	0.019354766	1.6484E-05	0.004060052
11	17-Juli-2024	20.97811777	20.9735132	99.97804578	0.021949399	2.12021E-05	0.004604571
12	18-Juli-2024	20.96988273	20.97409062	99.97993766	0.020066365	1.77064E-05	0.004207893
13	19-Juli-2024	20.97818342	20.97185365	99.96981779	0.030173106	4.0066E-05	0.00632977
14	20-Juli-2024	20.97749578	20.96991045	99.96382757	0.036159353	5.75372E-05	0.007585327
Rata -Rata		20.97794101	20.97344227	99.97147241	0.028519701	4.01561E-05	0.005983279

Tabel D. 18 Hasil Prediksi Jaringan Syaraf Tiruan *Backpropagation* Unit 2 ODAF 21 Juli Sampai 3 Agustus 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	21-Juli-2024	20.9794391	20.97200617	99.96455783	0.035429609	5.52485E-05	0.007432933
2	22-Juli-2024	20.96602909	20.97369863	99.96343256	0.036580816	5.88219E-05	0.007669544
3	23-Juli-2024	20.95629682	20.96782761	99.94500725	0.055023004	0.000132959	0.011530784
4	24-Juli-2024	20.98094575	20.97506732	99.97197419	0.028017957	3.4556E-05	0.005878432
5	25-Juli-2024	20.97455798	20.97408427	99.99774147	0.002258476	2.24397E-07	0.000473705
6	26-Juli-2024	20.9819732	20.97455261	99.96462101	0.035366477	5.50651E-05	0.007420585
7	27-Juli-2024	20.98044601	20.9723709	99.96149643	0.03848875	6.52074E-05	0.008075111
8	28-Juli-2024	20.97779847	20.96909347	99.95848655	0.041496222	7.57769E-05	0.008704994
9	29-Juli-2024	20.98123491	20.97308491	99.96114064	0.038844262	6.64226E-05	0.008150006

10	30-Juli-2024	20.98143938	20.97281307	99.95886905	0.041114037	7.44133E-05	0.008626317
11	31-Juli-2024	20.9825265	20.9739253	99.95899098	0.040992208	7.39807E-05	0.008601201
12	01-Agustus-2024	20.97692059	20.97400054	99.98607778	0.013920281	8.52667E-06	0.002920046
13	02-Agustus-2024	20.97796852	20.97332637	99.9778664	0.022128706	2.15496E-05	0.004642153
14	03-Agustus-2024	20.9784901	20.97377022	99.97749627	0.022498671	2.22773E-05	0.004719881
Rata -Rata		20.97686189	20.9728301	99.96769703	0.032297105	5.32164E-05	0.006774692

Tabel D. 19 Hasil Prediksi Jaringan Syaraf Tiruan Backpropagation Unit 2 ODAF 4 Agustus Sampai 17 Agustus 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	04-Agustus-2024	20.96280386	20.97447493	99.94435581	0.055675166	0.000136214	0.011671076
2	05-Agustus-2024	20.98363568	20.97552717	99.96134302	0.038642042	6.57479E-05	0.008108505
3	06-Agustus-2024	20.97765786	20.9737411	99.98132542	0.018671095	1.5341E-05	0.003916758
4	07-Agustus-2024	20.97752781	20.97348039	99.9807022	0.019294079	1.63816E-05	0.004047421
5	08-Agustus-2024	20.97764425	20.97271172	99.97648123	0.023513242	2.43298E-05	0.004932524
6	09-Agustus-2024	20.9756206	20.96882356	99.96758502	0.03240448	4.61998E-05	0.006797041
7	10-Agustus-2024	20.97893062	20.97024536	99.95858293	0.041399923	7.54338E-05	0.008685261
8	11-Agustus-2024	20.97821629	20.97152535	99.96809515	0.031894671	4.47686E-05	0.006690933
9	12-Agustus-2024	20.98216269	20.97483168	99.96504853	0.034939255	5.37437E-05	0.007331011

10	13- Agustus- 2024	20.97975 033	20.975393 82	99.979230 33	0.0207653 53	1.89793E- 05	0.0043565 19
11	14- Agustus- 2024	20.98268 299	20.974533 32	99.961144 94	0.0388399 7	6.64171E- 05	0.0081496 68
12	15- Agustus- 2024	20.97937 917	20.974241 81	99.975506 33	0.0244876 76	2.63925E- 05	0.0051373 62
13	16- Agustus- 2024	20.96942 66	20.97355	99.980340 01	0.0196638 59	1.70024E- 05	0.0041233 99
14	17- Agustus- 2024	20.96166 441	20.973245 95	99.944779 46	0.0552510 47	0.0001341 32	0.0115815 39
Rata -Rata		20.97622 165	20.973309 01	99.967465 74	0.0325315 61	5.29345E- 05	0.0068235 01

Tabel D. 20 Prediksi Jaringan Syaraf Tiruan Backpropagation Unit 2 ODAF 18 Agustus Sampai 31 Agustus 2024

NO	Tanggal	Target (Tahun)	Prediksi (Tahun)	Akurasi (%)	MAPE (%)	MSE	Error abs(eror Absolut)
1	18- Agustus- 2024	20.96250 634	20.973641 29	99.946909 75	0.0531184 52	0.0001239 87	0.0111349 59
2	19- Agustus- 2024	20.96555 503	20.973929 18	99.960073 52	0.0399424 26	7.01264E- 05	0.0083741 51
3	20- Agustus- 2024	20.96603 948	20.973805 55	99.962972 49	0.0370412 25	6.0312E- 05	0.0077660 78
4	21- Agustus- 2024	20.97062 903	20.973718 43	99.985270 13	0.0147320 4	9.5444E- 06	0.0030894 01
5	22- Agustus- 2024	20.97475 557	20.972578 17	99.989617 86	0.0103810 6	4.74108E- 06	0.0021774 02
6	23- Agustus- 2024	20.97939 937	20.972815 95	99.968609 76	0.0313803 86	4.33414E- 05	0.0065834 17
7	24- Agustus- 2024	20.97885 362	20.972628 39	99.970317 37	0.0296738 23	3.87535E- 05	0.0062252 28
8	25- Agustus- 2024	20.97725 847	20.973407 59	99.981639 23	0.0183574 02	1.48293E- 05	0.0038508 8

9	26- Agustus- 2024	20.98122 628	20.973642 93	99.963843 43	0.0361434 99	5.75072E- 05	0.0075833 49
10	27- Agustus- 2024	20.97986 973	20.972778 05	99.966186 29	0.0338022 85	5.02919E- 05	0.0070916 75
11	28- Agustus- 2024	20.97969 944	20.972612 74	99.966209 77	0.0337788 21	5.02212E- 05	0.0070866 95
12	29- Agustus- 2024	20.97879 337	20.973003 15	99.972392 01	0.0276003 66	3.35267E- 05	0.0057902 24
13	30- Agustus- 2024	20.98089 988	20.972378 45	99.959368 3	0.0406152	7.26148E- 05	0.0085214 34
14	31- Agustus- 2024	20.98011 376	20.972030 32	99.961456 12	0.0385290 32	6.53419E- 05	0.0080834 35
Rata -Rata		20.97539 995	20.973069 3	99.968204 72	0.0317925 73	4.96528E- 05	0.0066684 52

Tabel D. 21 Pengaruh Pembeban Terhadap *Temperatur Hospot* Sistem Pendingin ONAN/ONAF Unit 1

Sistem Pendingin ONAN/ONAF Unit 1						
Rasio Pembebanan Terendah Pada Setiap Bulannya						
Tanggal	Suhu Lingkungan (°C)	Rasio pembebanan	Temperatur Hospot (°C)	Target (tahun)	Prediksi (Tahun)	Akurasi (%)
04-Juli-2024	30.1	0.198716407	75.739942 2	20.93315084	20.95674318	99.88742362
18-Juli-2024	29.68	0.338159079	70.8831176 2	20.97705934	20.95561949	99.9702292
22-Juli-2024	30.36	0.24921074	74.008314 61	20.94527188	20.95855795	99.93660792
17-Agustus- 2024	30.25	0.276064023	73.1104743 6	20.95066436	20.95653558	99.97198379
19-Agustus- 2024	30.49	0.272347075	73.488966 75	20.94845911	20.95662167	99.9898448
Rasio Pembebanan Tertinggi Pada Setiap Bulannya						
24-Juni-2024	30.7	0.756252464	75.198603 8	20.93720371	20.9362983	99.99567541
11-Juli-2024	29.82	0.783211853	93.075225 49	20.50465879	20.77422674	98.70239236
27-Juli-2024	30.53	0.662934088	75.047248 92	20.93829226	20.93428159	99.98084163
09-Agustus- 2024	31.24	0.598540878	71.681488 81	20.95817263	20.94291364	99.92714011
30-Agustus- 2024	30.61	0.496163689	69.475251 25	20.96758386	20.95310024	99.93087599

Tabel D. 22 Pengaruh Pembeban Terhadap *Temperatur Hospot* Sistem Pendingin ODAF Unit 1

Sistem Pendingin ODAF Unit 1						
Rasio Pembebanan Terendah Pada Setiap Bulannya						
Tanggal	Suhu Lingkungan (°C)	Rasio pembebanan	Temperatur Hospot (°C)	Target (tahun)	Prediksi (Tahun)	Akurasi (%)
04-Juli-2024	30.1	0.198716407	74.694143 91	20.940759	20.94617033	99.97416552
18-Juli-2024	29.68	0.338159079	67.994737 64	20.98650605	20.97237165	99.99852822
22-Juli-2024	30.36	0.24921074	72.5578112 5	20.95371603	20.9725566	99.91016562
17-Agustus-2024	30.25	0.276064023	71.209073 6	20.96039438	20.97226373	99.94340452
18-Agustus-2024	30.22	0.286011467	70.734760 16		20.97247735	99.96043217
Rasio Pembebanan Tertinggi Pada Setiap Bulannya						
24-Juni-2024	30.7	0.756252464	70.852876 28	20.96199118	20.96780065	99.97229335
11-Juli-2024	29.82	0.783211853	83.907568 65	20.82824411	20.93862408	99.47284039
27-Juli-2024	30.53	0.662934088	68.702785 05	20.97035153	20.96757901	99.9867771
09-Agustus-2024	31.24	0.598540878	66.375139	20.97734254	20.96843063	99.95749846
30-Agustus-2024	30.61	0.496163689	64.975247 96	20.98072605	20.97082492	99.95278617

Tabel D. 23 Pengaruh Pembeban Terhadap *Temperatur Hospot* Sistem Pendingin ONAN/ONAF Unit 2

Sistem Pendingin ONAN/ONAF Unit 2						
Rasio Pembebanan Terendah Pada Setiap Bulannya						
Tanggal	Suhu Lingkungan (°C)	Rasio pembebanan	Temperatur Hospot (°C)	Target (tahun)	Prediksi (Tahun)	Akurasi (%)
04-Juli-2024	30.1	0.234111831	74.952878 06	20.9389614	20.94960921	99.9491742 1
18-Juli-2024	29.68	0.318185745	71.568704 1	20.95871412	20.95854815	99.9992080 9
22-Juli-2024	30.36	0.309650778	72.498185 18	20.95403378	20.95930402	99.9748548 7
17-Agustus-2024	30.25	0.282979198	73.079598 2	20.95084003	20.95824948	99.9646466 2
18-Agustus-2024	30.22	0.286011467	72.809992 46	20.95234769	20.95787069	99.9736471 2
Rasio Pembebanan Tertinggi Pada Setiap Bulannya						
27-Juni-2024	31.71	0.792838169	86.5281144	20.76751275	20.85183716	99.5956020 1

13-Juli-2024	28.85	0.689618959	76.576441 66	20.92636779	20.934542	99.9609534 5
23-Juli-2024	29.36	0.732963648	78.604205 81	20.90692948	20.92743043	99.9020378 8
09-Agustus- 2024	31.24	0.597370449	73.002936 71	20.95127352	20.93633961	99.9286699 3
27-Agustus- 2024	30.67	0.541020895	70.708362 9	20.96262051	20.95268583	99.9525852

Tabel D. 24 Pengaruh Pembeban Terhadap *Temperatur Hospot* Sistem Pendingin ODAF Unit 2

Sistem Pendingin ODAF Unit 2						
Rasio Pembebanan Terendah Pada Setiap Bulannya						
Tanggal	Suhu Lingkungan (°C)	Rasio pembebanan	Temperatur Hospot (°C)	Target (tahun)	Prediksi (Tahun)	Akurasi (%)
04-Juli-2024	30.1	0.234111831	73.103723 41	20.95070282	20.95090464	99.99903669
18-Juli-2024	29.68	0.318185745	68.838574 88	20.96988273	20.97409062	99.97993766
22-Juli-2024	30.36	0.309650778	69.880745 78	20.96602909	20.97369863	99.96343256
17-Agustus- 2024	30.25	0.282979198	70.926970 61	20.96166441	20.97324595	99.94477946
18-Agustus- 2024	30.22	0.286011467	70.734760 16	20.96250634	20.97364129	99.94690975
Rasio Pembebanan Tertinggi Pada Setiap Bulannya						
27-Juni-2024	31.71	0.792838169	80.149520 72	20.88873738	20.93202097	99.79321828
13-Juli-2024	28.85	0.689618959	69.462433 56	20.96763183	20.97153529	99.98138689
23-Juli-2024	29.36	0.732963648	72.061203 9	20.95629682	20.96782761	99.94500725
09-Agustus- 2024	31.24	0.597370449	67.009148 83	20.9756206	20.96882356	99.96758502
27-Agustus- 2024	30.67	0.541020895	65.351503 41	20.97986973	20.97277805	99.96618629