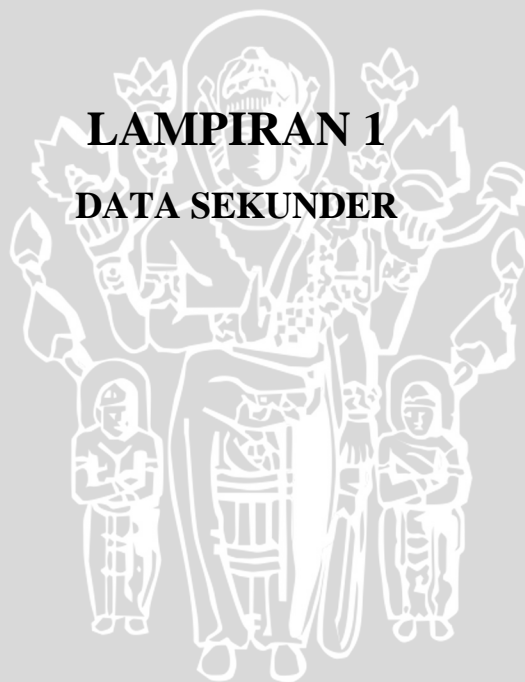


UNIVERSITAS BRAWIJAYA



**LAMPIRAN 1**  
**DATA SEKUNDER**



Tabel L1.1 Produk Domestik Regional Bruto (PDRB) Daerah Istimewa Yogyakarta Tahun 2003-2014 Atas Dasar Harga Konstan Tahun 2000  
Menurut Lapangan Usaha  
(Sumber: BPS D.I Yogyakarta)

NO	LAPANGAN USAHA	SINGKATAN	PDRB Atas Harga Konstan 2000 menurut Lapangan Usaha (JUTA Rp) TAHUN-						
			2003	2004	2005	2006	2007	2008	
1	Pertanian	PDRBP	2948400.09	3052934.59	3185770.00	3306930.00	3333380.00	3524000.00	
2	Pertambangan	PDRBT	119433.37	120440.91	122331.84	126140.00	138360.00	138000.00	
3	Industri Pengolahan	PDRBO	2325236.08	2400775.62	2463230.00	2481170.00	2528020.00	2563000.00	
4	Listrik, Gas dan Air Bersih	PDRBL	135378.66	144844.79	153000.00	152860.00	165770.00	175000.00	
5	Konstruksi	PDRBB	1178023.66	1284471.39	1395079.42	1580310.00	1732940.00	1838000.00	
6	Perdagangan, Hotel dan Restoran	PDRBD	3097880.16	3279424.20	3444830.00	3569620.00	3750360.00	3948000.00	
7	Pengangkutan dan Komunikasi	PDRBK	1437072.30	1582194.18	1673352.22	1761670.00	1875310.00	2009000.00	
8	Keuangan, Real Estat dan Jasa Perusahaan	PDRBS	1408893.53	1500542.31	1623210.10	1591890.00	1695160.00	1794000.00	
9	Jasa-jasa	PDRBJ	2710090.99	2780795.43	2849960.00	2965160.00	3072200.00	3224000.00	
<b>TOTAL</b>			<b>PDRBTOT</b>	<b>15360408.84</b>	<b>16146423.42</b>	<b>16910763.58</b>	<b>17535750.00</b>	<b>18291500.00</b>	<b>19213000.00</b>

Tabel L1.2 Produk Domestik Regional Bruto (PDRB) Daerah Istimewa Yogyakarta Tahun 2003-2014 Atas Dasar Harga Konstan Tahun 2000  
Menurut Lapangan Usaha  
(Sumber: BPS D.I Yogyakarta)

NO	LAPANGAN USAHA	SINGKATAN	PDRB Atas Harga Konstan 2000 menurut Lapangan Usaha (JUTA Rp) TAHUN-						
			2009	2010	2011	2012	2013	2014	
1	Pertanian	PDRBP	3643000.00	3633000.00	3810377.00	3799624.01	4223302.24	4456065.37	
2	Pertambangan	PDRBT	139000.00	140000.00	147218.00	154779.68	172506.09	182508.35	
3	Industri Pengolahan	PDRBO	2611000.00	2794000.00	2930709.00	2922780.36	3249065.94	3428536.06	
4	Listrik, Gas dan Air Bersih	PDRBL	186000.00	193000.00	202994.00	203004.44	226290.71	239450.52	
5	Konstruksi	PDRBB	1924000.00	2040000.00	2151726.00	2158041.60	2412523.32	2560183.41	
6	Perdagangan, Hotel dan Restoran	PDRBD	4162000.00	4384000.00	4615139.00	4619676.40	5154388.96	5459220.95	
7	Pengangkutan dan Komunikasi	PDRBK	2129000.00	2251000.00	2371969.00	2376588.98	2654226.68	2813907.36	
8	Keuangan, Real Estat dan Jasa Perusahaan	PDRBS	1903000.00	2024000.00	2130048.00	2131428.30	2377337.97	2517091.36	
9	Jasa-jasa	PDRBJ	3369000.00	3586000.00	3768238.00	3764930.57	4192899.78	4432613.28	
<b>TOTAL</b>			<b>PDRBTOT</b>	<b>20066000.00</b>	<b>21045000.00</b>	<b>22128418.00</b>	<b>22130854.34</b>	<b>24662541.69</b>	<b>26089576.66</b>

Tabel L1.3 Produk Domestik Regional Bruto (PDRB) Daerah Istimewa Yogyakarta  
Tahun 2003-2014 Per Jenis Pelanggan  
(Sumber: BPS D.I Yogyakarta)

NO	TAHUN	PDRBRT (JUTA Rp)	PDRBKOM (JUTA Rp)	PDRBPUB (JUTA Rp)	PDRBIND (JUTA Rp)
1	2003	15360408.84	7121869.650	2710090.99	2580048.110
2	2004	16146423.42	7646632.080	2780795.43	2666061.320
3	2005	16910763.58	8136471.740	2849960.00	2798561.840
4	2006	17535750.00	8503490.000	2965760.00	2760170.000
5	2007	18291500.00	9053770.000	3072200.00	2832150.000
6	2008	19213000.00	9589000.000	3224000.00	2876000.000
7	2009	20066000.00	10118000.000	3369000.00	2936000.000
8	2010	21045000.00	10699000.000	3586000.00	3127000.000
9	2011	22133580.00	11268882.000	3768238.00	3280921.000
10	2012	23311086.46	11285795.278	3764930.57	3280564.481
11	2013	24665460.58	12598476.934	4192899.78	3647862.736
12	2014	26098576.66	13350403.078	4432613.28	3850494.927

Tabel L1.4 Jumlah Pelanggan Listrik Daerah Istimewa Yogyakarta Tahun 2003-2014  
Per Jenis Pelanggan  
(Sumber: PT PLN (Persero) APJ D.I Yogyakarta)

NO	TAHUN	PLRT	PLKOM	PLPUB	PLIND
1	2003	596695	20820	17369	454
2	2004	626368	21856	18261	451
3	2005	644167	25641	20329	448
4	2006	627512	25814	20368	440
5	2007	695437	27301	22363	456
6	2008	717270	28844	23719	460
7	2009	738689	30530	24800	474
8	2010	760554	32863	25895	473
9	2011	788976	35096	26975	480
10	2012	825014	37981	28320	501
11	2013	864833	40482	29993	513
12	2014	890623	51232	36443	523

Tabel L1.5 Tarif Tenaga Listrik Daerah Istimewa Yogyakarta Tahun 2003-2014 Per Jenis Pelanggan

(Sumber: PT PLN (Persero) APJ D.I Yogyakarta)

NO	TAHUN	HNRT (Rp/kWh)	HNKOM (Rp/kWh)	HNPUB (Rp/kWh)	HNIND (Rp/kWh)
1	2003	472.180	690.610	620.593	518.21
2	2004	487.430	720.620	648.803	560.48
3	2005	533.000	691.700	656.500	606.26
4	2006	534.000	755.000	692.000	665.00
5	2007	557.000	762.000	689.000	652.00
6	2008	570.900	832.400	723.200	654.10
7	2009	579.500	896.300	744.300	660.20
8	2010	597.000	948.000	823.000	695.00
9	2011	609.000	992.000	897.000	756.00
10	2012	614.762	1013.466	779.482	763.14
11	2013	664.734	1156.255	878.576	846.80
12	2014	714.324	1242.512	944.117	909.97

Tabel L1.6 Konsumsi Energi Listrik Daerah Istimewa Yogyakarta Tahun 2003-2014 Per Jenis Pelanggan

(Sumber: PT PLN (Persero) APJ D.I Yogyakarta)

NO	TAHUN	SRT (GWh)	SKOM (GWh)	SPUB (GWh)	SIND (GWh)
1	2003	657.3828	210.4604	112.880	159.1020
2	2004	661.7800	219.9597	134.494	164.7380
3	2005	776.6803	247.3573	156.137	163.1450
4	2006	775.5466	262.8274	152.250	160.7107
5	2007	828.9645	304.6545	173.055	174.9014
6	2008	867.1350	333.7540	184.356	193.2080
7	2009	932.6210	364.7890	202.400	189.0470
8	2010	1000.5040	388.0340	222.807	197.6570
9	2011	1051.5440	395.7760	228.593	193.8560
10	2012	1144.0000	442.0000	248.000	210.0000
11	2013	1230.1355	484.8728	265.618	225.6171
12	2014	1321.9036	521.0443	285.433	241.9688

Tabel L1.7 Transformasi Data Variabel dalam Bentuk Logaritmik Pelanggan Rumah  
Tangga

(Sumber: penulis)

NO	TAHUN	SRT	PDRBRT	PLRT	HNRT
1	2003	6.488266	16.54730	13.29916	6.15736
2	2004	6.494933	16.59721	13.34769	6.18915
3	2005	6.655029	16.64346	13.37571	6.27852
4	2006	6.653568	16.67975	13.34952	6.28040
5	2007	6.720177	16.72195	13.45230	6.32257
6	2008	6.765195	16.77110	13.48321	6.34721
7	2009	6.837999	16.81454	13.51263	6.36217
8	2010	6.908259	16.86217	13.54180	6.39192
9	2011	6.958015	16.91261	13.57849	6.41182
10	2012	7.042286	16.96444	13.62316	6.42124
11	2013	7.114880	17.02091	13.67029	6.49939
12	2014	7.186828	17.07739	13.69968	6.57134

Tabel L1.8 Transformasi Data Variabel dalam Bentuk Logaritmik Pelanggan Komersial

(Sumber: PT PLN (Persero) APJ D.I Yogyakarta)

NO	TAHUN	SKOM	PDRBKOM	PLKOM	HNKOM
1	2003	5.34930	15.77868	9.94367	6.53758
2	2004	5.39344	15.84978	9.99223	6.58011
3	2005	5.51083	15.91187	10.15195	6.53915
4	2006	5.57150	15.95599	10.15867	6.62672
5	2007	5.71918	16.01869	10.21468	6.63595
6	2008	5.81040	16.07613	10.26966	6.72431
7	2009	5.89932	16.12983	10.32647	6.79828
8	2010	5.96109	16.18566	10.40010	6.85435
9	2011	5.98085	16.23756	10.46584	6.89972
10	2012	6.09131	16.23906	10.54484	6.92113
11	2013	6.18389	16.34909	10.60861	7.05294
12	2014	6.25584	16.40706	10.84412	7.12489

Tabel L1.9 Transformasi Data Variabel dalam Bentuk Logaritmik Pelanggan Publik  
(Sumber: PT PLN (Persero) APJ D.I Yogyakarta)

NO	TAHUN	SPUB	PDRBPUB	PLPUB	HNPUB
1	2003	7.60240	14.81249	9.76244	6.43068
2	2004	7.60290	14.83825	9.81252	6.47513
3	2005	7.60340	14.86282	9.91980	6.48692
4	2006	7.60390	14.90264	9.92172	6.53959
5	2007	7.60440	14.93790	10.01516	6.53524
6	2008	7.60489	14.98613	10.07403	6.58369
7	2009	7.60539	15.03013	10.11860	6.61244
8	2010	7.60589	15.09255	10.16181	6.71296
9	2011	7.60639	15.14212	10.20267	6.79906
10	2012	7.60688	15.14124	10.25132	6.65863
11	2013	7.60738	15.24890	10.30872	6.77830
12	2014	7.60788	15.30450	10.50350	6.85025

Tabel L1.10 Transformasi Data Variabel dalam Bentuk Logaritmik Pelanggan Industri  
(Sumber: PT PLN (Persero) APJ D.I Yogyakarta)

NO	TAHUN	SIND	PDRBIND	PLIND	HNIND
1	2003	5.06955	14.76332	6.11810	6.250381
2	2004	5.10436	14.79611	6.11147	6.328794
3	2005	5.09464	14.84462	6.10479	6.407309
4	2006	5.07961	14.83080	6.08677	6.499787
5	2007	5.16422	14.85655	6.12249	6.480045
6	2008	5.26377	14.87191	6.13123	6.48326
7	2009	5.24200	14.89256	6.16121	6.492543
8	2010	5.28653	14.95558	6.15910	6.543912
9	2011	5.26712	15.00363	6.17379	6.628041
10	2012	5.34711	15.00353	6.21661	6.637445
11	2013	5.41884	15.10965	6.24028	6.741465
12	2014	5.48881	15.16371	6.25958	6.813413



**LAMPIRAN 2**  
**HASIL PERHITUNGAN**

Tabel L2.1 Prediksi Produk Domestik Regional Bruto (PDRB) Daerah Istimewa Yogyakarta Tahun 2015-2025 Per Jenis Pelanggan

(Sumber:penulis)

NO	TAHUN	PDRBRT (JUTA Rp)	PDRBKOM (JUTA Rp)	PDRBPUB (JUTA Rp)	PDRBIND (JUTA Rp)
1	2015	27586195.53	13793097.76	4689653.24	4137929.33
2	2016	29235850.02	14617925.01	4970094.50	4385377.50
3	2017	31092326.50	15546163.25	5285695.50	4663848.97
4	2018	33125764.65	16562882.32	5631379.99	4968864.70
5	2019	35322002.85	17661001.42	6004740.48	5298300.43
6	2020	37600272.03	18800136.01	6392046.24	5640040.80
7	2021	40025489.57	20012744.79	6804333.23	6003823.44
8	2022	42607133.65	21303566.83	7243212.72	6391070.05
9	2023	45355293.77	22677646.89	7710399.94	6803294.07
10	2024	48280710.22	24140355.11	8207720.74	7242106.53
11	2025	51418956.39	25709478.19	8741222.59	7712843.46

Tabel L2.2 Prediksi Jumlah Pelanggan Energi Listrik Daerah Istimewa Yogyakarta Tahun 2015-2025 Per Jenis Pelanggan

(Sumber:penulis)

NO	TAHUN	PLRT	PLKOM	PLPUB	PLIND
1	2015	3738610	54818	38630	531
2	2016	3778987	58656	40947	539
3	2017	3819800	62761	43404	547
4	2018	3861053	67155	46008	555
5	2019	3902753	71856	48769	563
6	2020	3944903	76885	51695	572
7	2021	3981196	82267	54797	580
8	2022	4017823	88026	58085	589
9	2023	4054787	94188	61570	598
10	2024	4092091	100781	65264	607
11	2025	4129738	107836	69180	616



Tabel L2.3 Prediksi Tarif Tenaga Listrik Daerah Istimewa Yogyakarta Tahun 2015-2025 Per Jenis Pelanggan

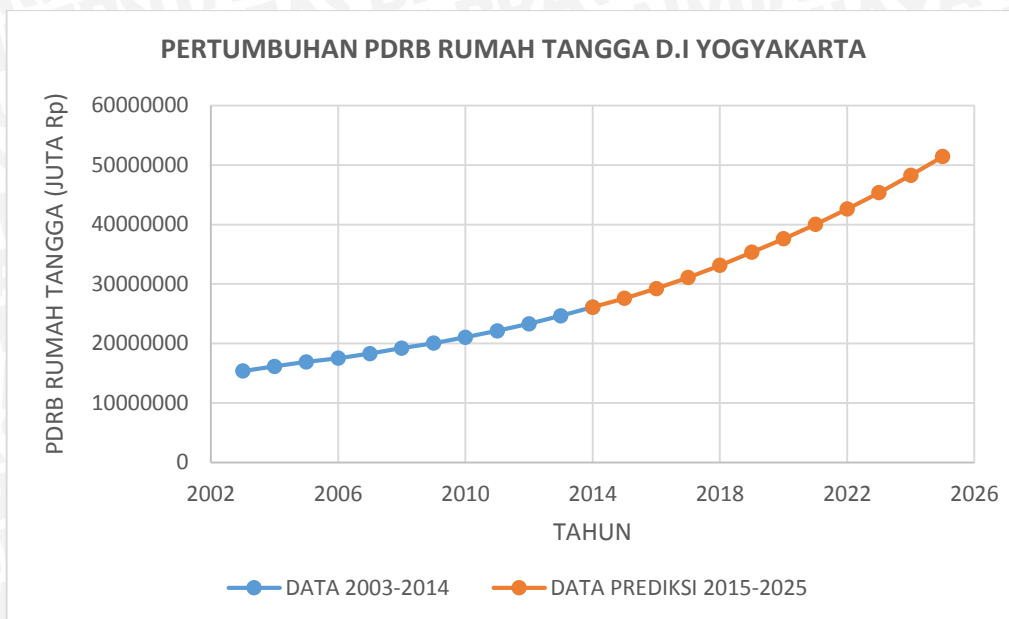
(Sumber: penulis)

NO	TAHUN	HNRT (Rp/kWh)	HNKOM (Rp/kWh)	HNPUK (Rp/kWh)	HNIND (Rp/kWh)
1	2015	735.754	1292.212	991.323	946.370
2	2016	757.826	1343.901	1040.889	984.225
3	2017	780.561	1397.657	1092.933	1023.594
4	2018	803.978	1453.563	1147.580	1064.537
5	2019	828.097	1511.705	1204.959	1107.119
6	2020	852.940	1572.174	1265.207	1151.404
7	2021	878.528	1635.061	1328.467	1197.460
8	2022	904.884	1700.463	1394.891	1245.358
9	2023	932.031	1768.482	1464.635	1295.172
10	2024	959.992	1839.221	1537.867	1346.979
11	2025	988.791	1912.790	1614.760	1400.859

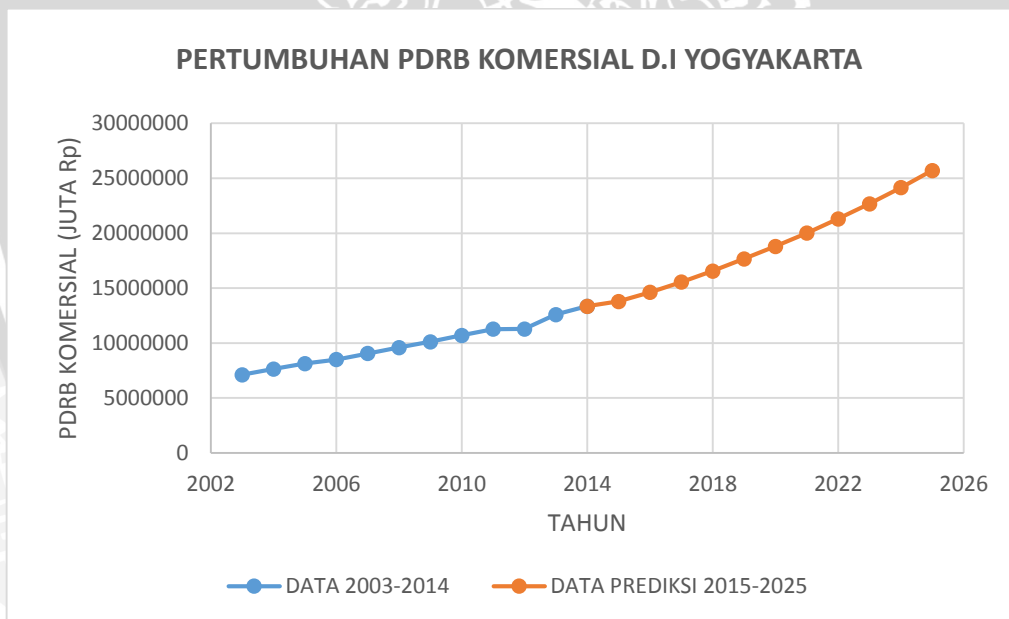
Tabel L2.4 Prediksi Konsumsi Energi Listrik Daerah istimewa Yogyakarta Tahun 2015-2025 Per Jenis Pelanggan

(Sumber: penulis)

NO	TAHUN	SRT (GWh)	SKOM (GWh)	SPUB (GWh)	SIND (GWh)
1	2015	1617.6019	617.2042	349.5687	245.8447
2	2016	1640.5716	670.0819	379.5931	273.5816
3	2017	1834.2666	743.1516	412.7739	304.4479
4	2018	1957.2584	822.4601	449.1244	338.7627
5	2019	2134.7397	908.2321	488.8717	376.9830
6	2020	2301.0021	1002.7485	531.7641	419.4734
7	2021	2494.8902	1107.2115	578.4199	466.7996
8	2022	2697.2823	1222.4349	629.1691	519.4133
9	2023	2920.1784	1349.7842	684.4393	578.0151
10	2024	3160.8618	1491.4439	744.4904	643.1642
11	2025	3422.7514	1648.1356	809.9723	715.7279

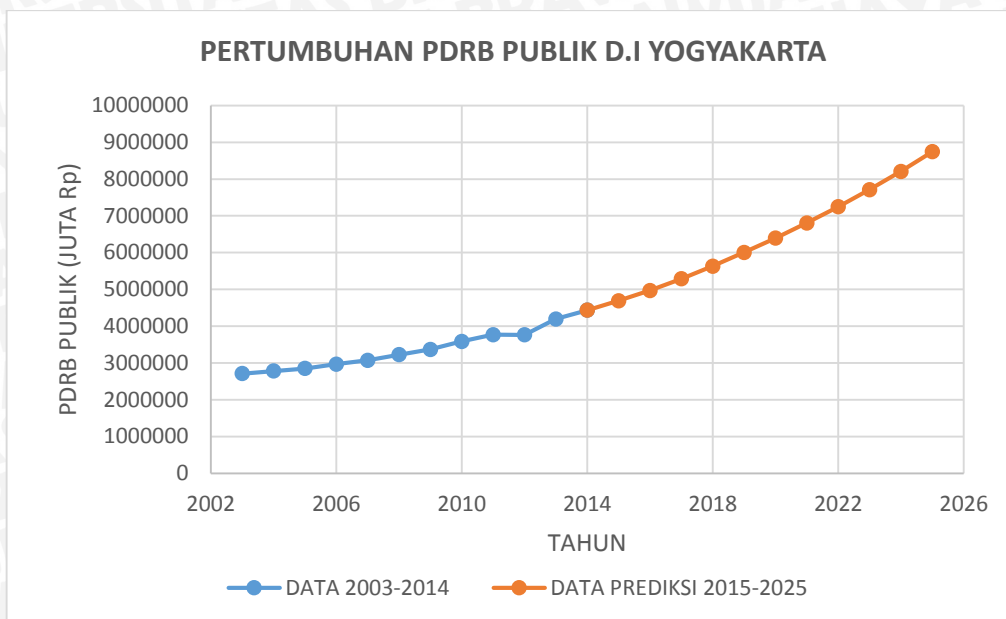


Gambar L2.1 Grafik Pertumbuhan PDRB Pelanggan Rumah Tangga D.I Yogyakarta (Sumber:penulis)

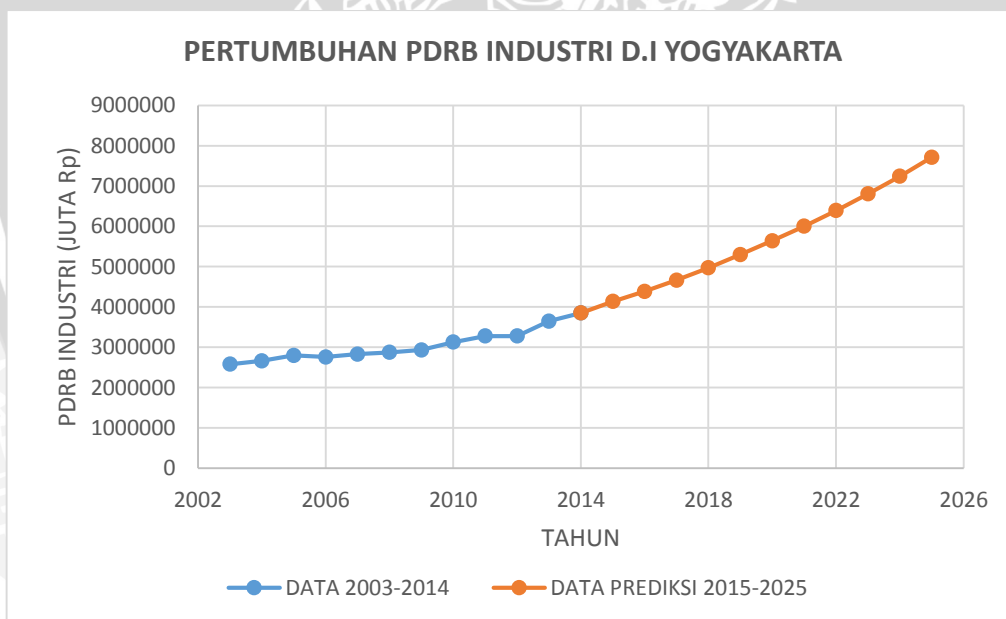


Gambar L2.2 Grafik Pertumbuhan PDRB Pelanggan Komersial D.I Yogyakarta (Sumber:penulis)

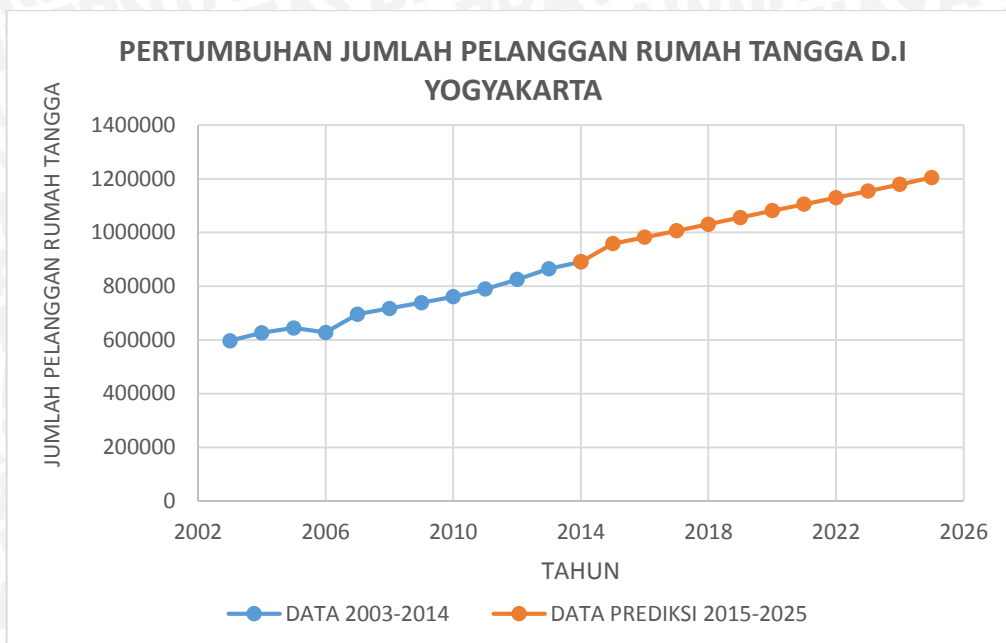




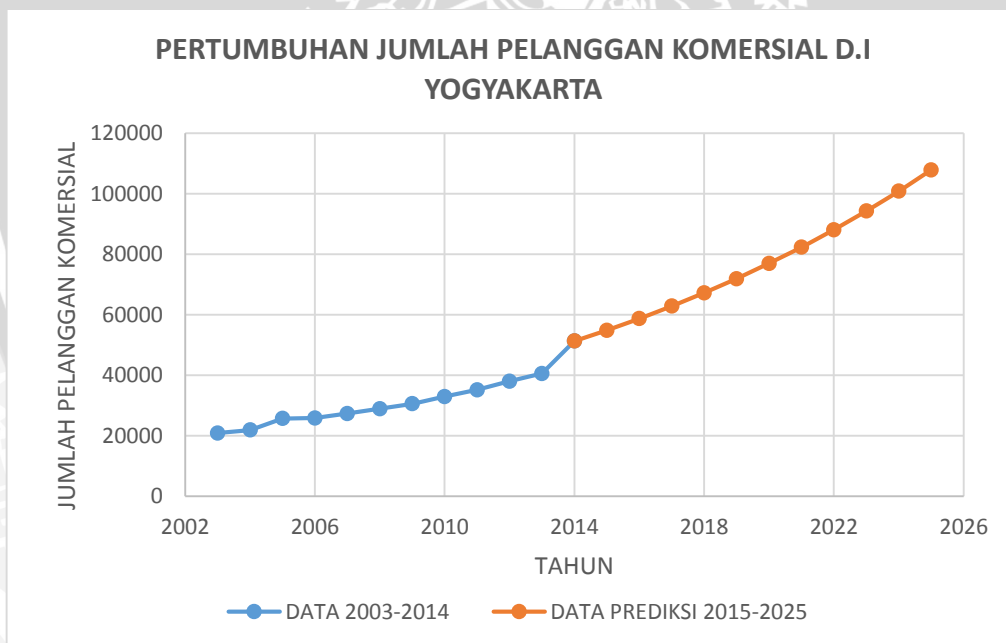
Gambar L2.3 Grafik Pertumbuhan PDRB Pelanggan Publik D.I Yogyakarta  
(Sumber:penulis)



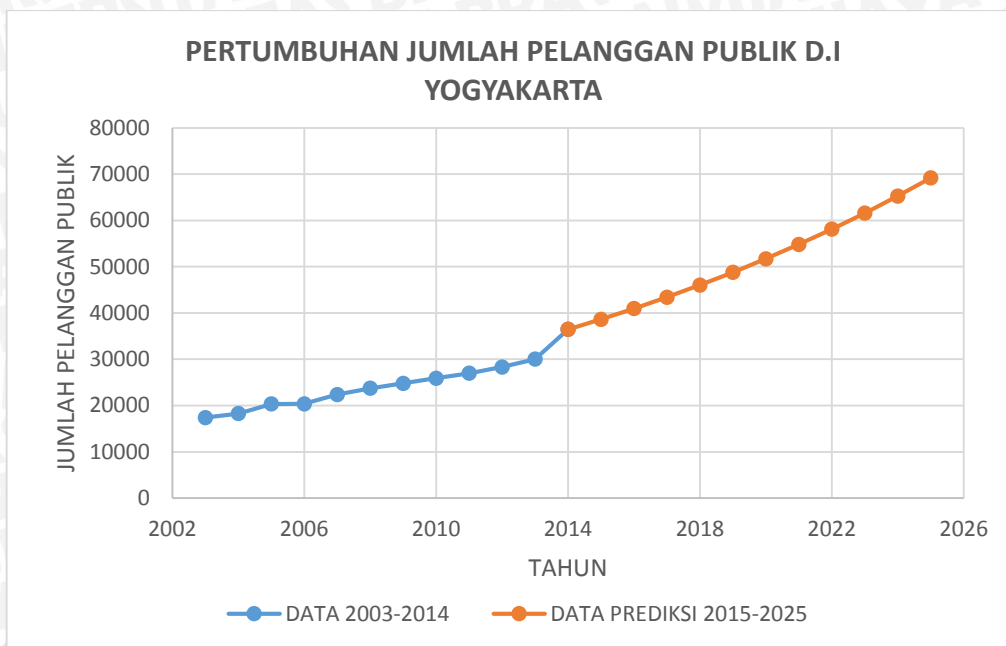
Gambar L2.4 Grafik Pertumbuhan PDRB Pelanggan Industri D.I Yogyakarta  
(Sumber:penulis)



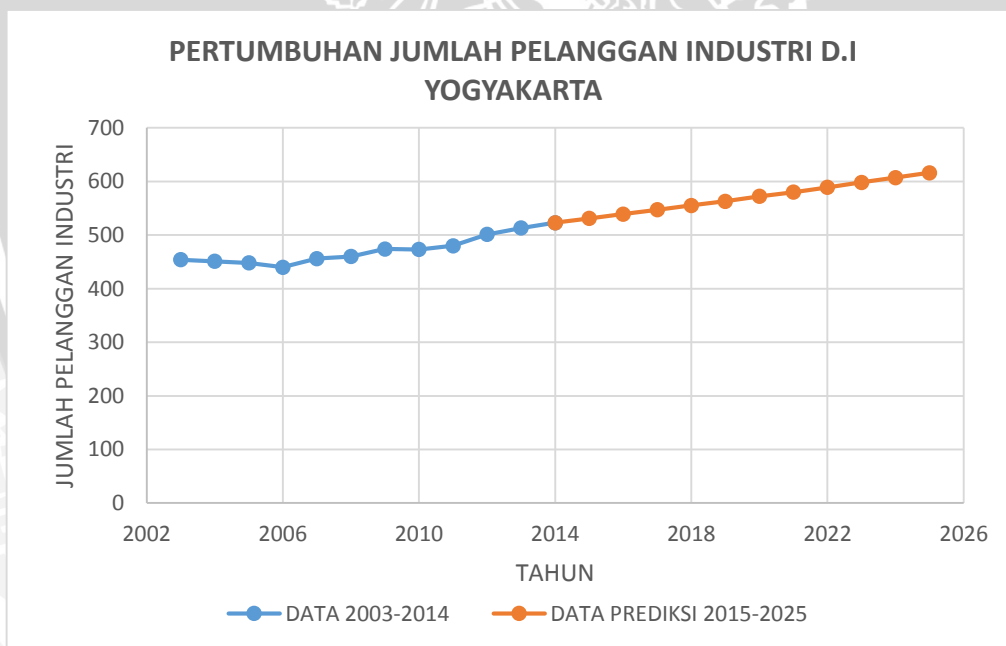
Gambar L2.5 Grafik Pertumbuhan Jumlah Pelanggan Rumah Tangga D.I Yogyakarta (Sumber:penulis)



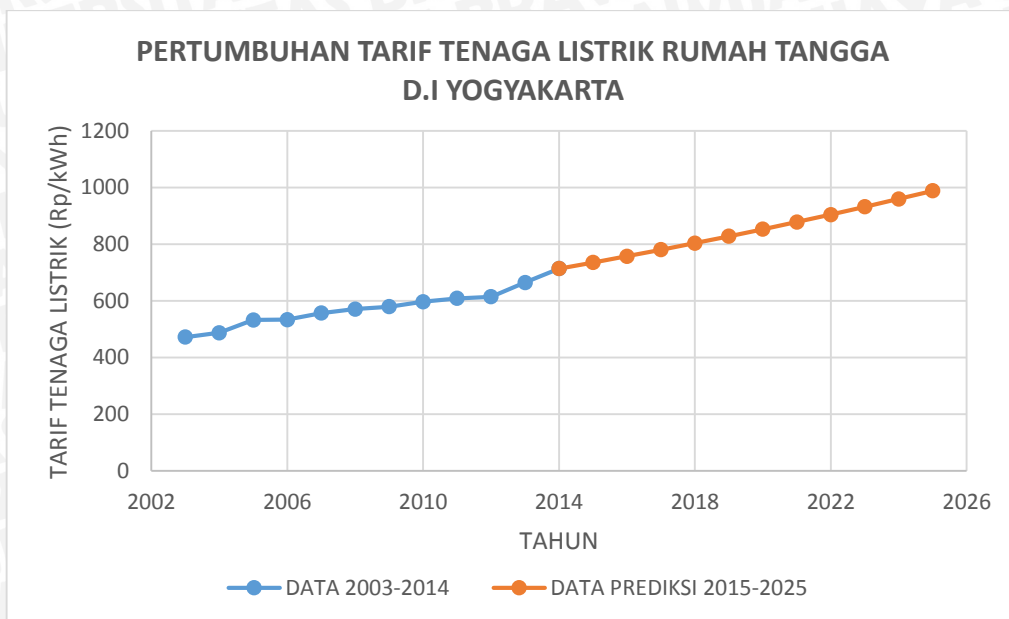
Gambar L2.6 Grafik Pertumbuhan Jumlah Pelanggan Komersial D.I Yogyakarta (Sumber:penulis)



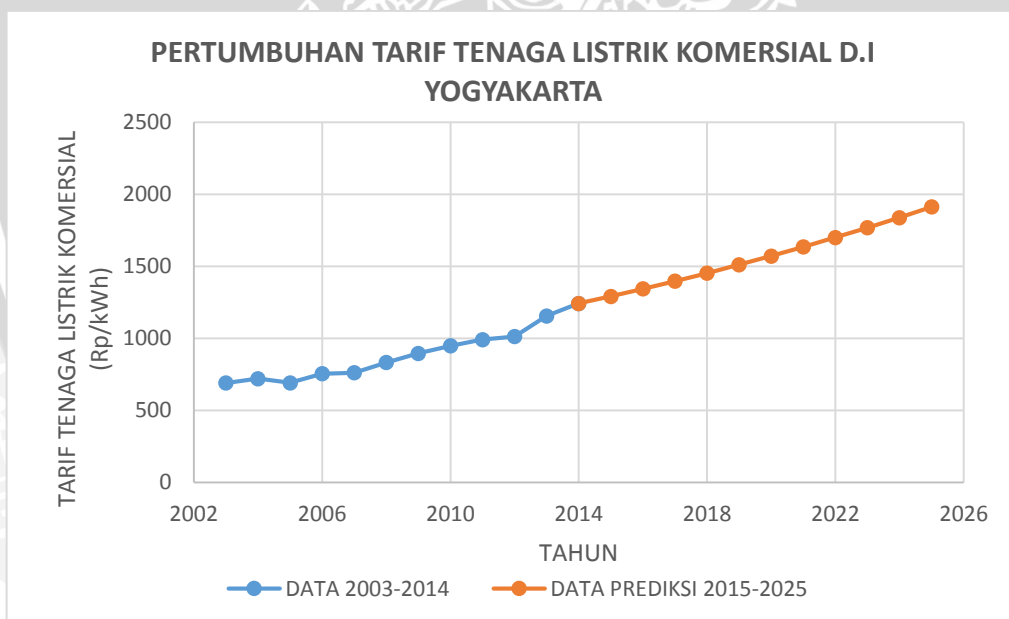
Gambar L2.7 Grafik Pertumbuhan Jumlah Pelanggan Publik D.I Yogyakarta  
(Sumber:penulis)



Gambar L2.8 Grafik Pertumbuhan Jumlah Pelanggan Industri D.I Yogyakarta  
(Sumber:penulis)

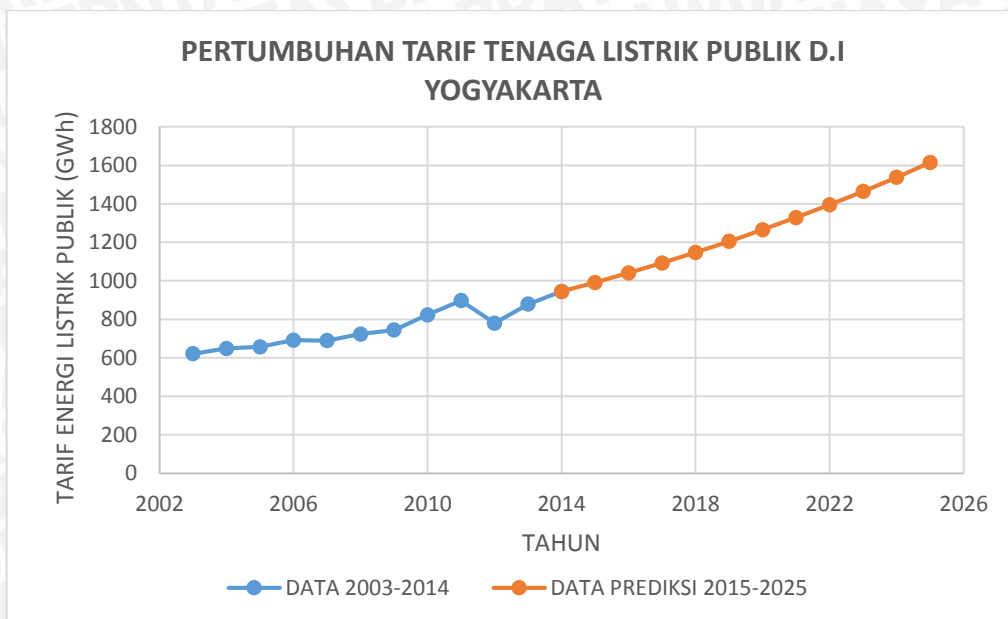


Gambar L2.9 Grafik Pertumbuhan Tarif Tenaga Listrik Pelanggan Rumah Tangga D.I Yogyakarta (Sumber:penulis)

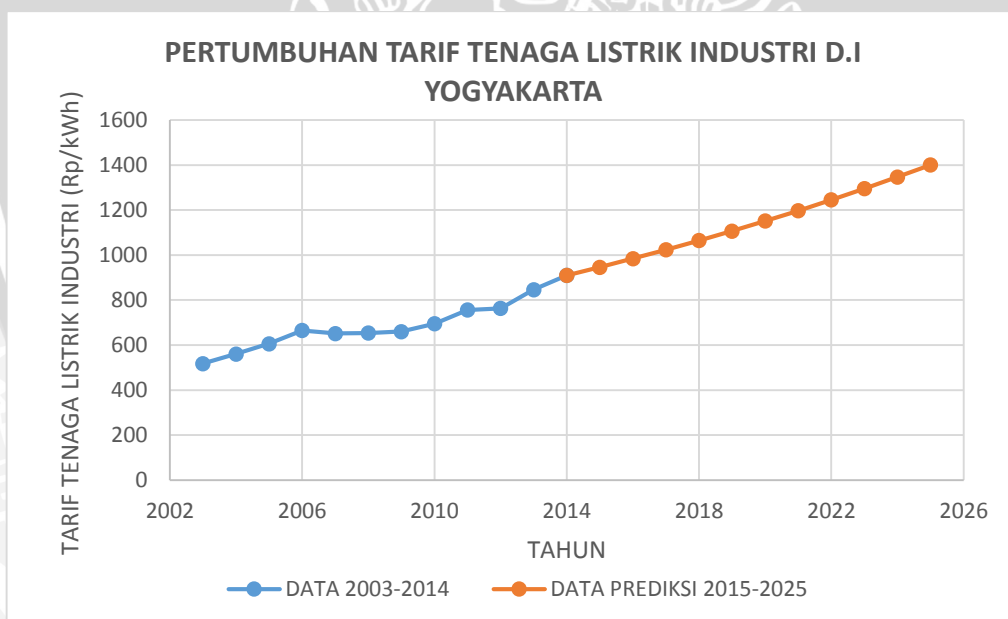


Gambar L2.10 Grafik Pertumbuhan Tarif Tenaga Listrik Pelanggan Komersial D.I Yogyakarta (Sumber:penulis)

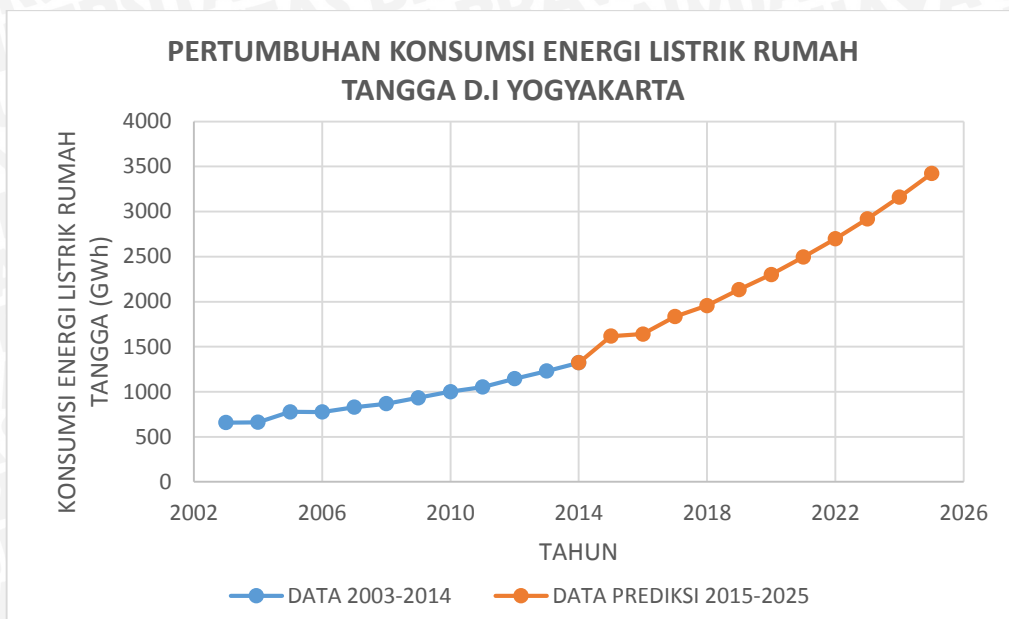




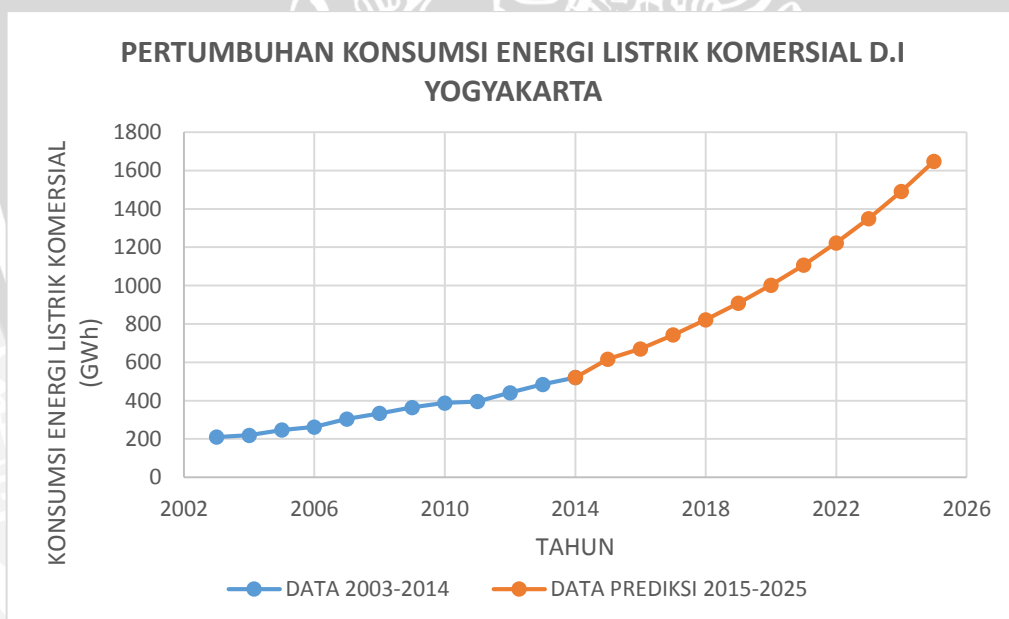
Gambar L2.11 Grafik Pertumbuhan Tarif Tenaga Listrik Pelanggan Publik D.I Yogyakarta  
(Sumber:penulis)



Gambar L2.12 Grafik Pertumbuhan Tarif Tenaga Listrik Pelanggan Industri D.I Yogyakarta  
(Sumber:penulis)

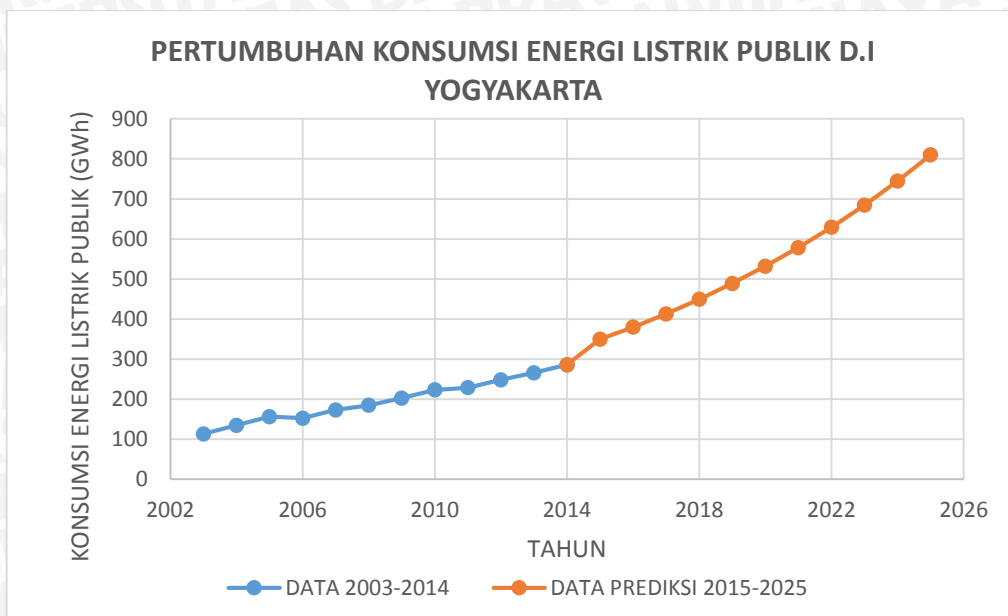


Gambar L2.13 Grafik Pertumbuhan Konsumsi Energi Listrik Pelanggan Rumah Tangga D.I Yogyakarta  
(Sumber:penulis)

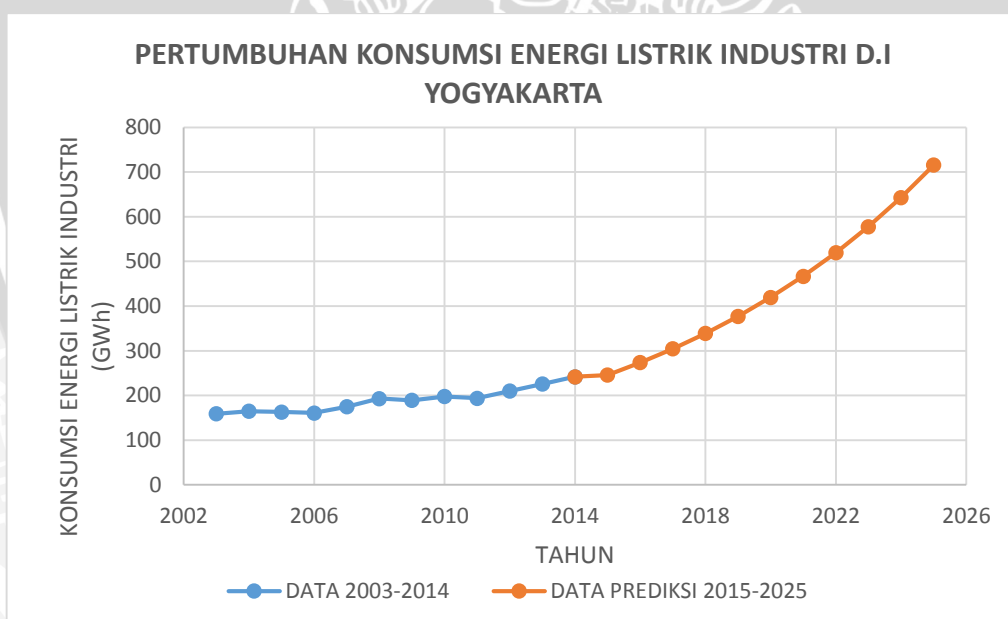


Gambar L2.14 Grafik Pertumbuhan Konsumsi Energi Listrik Pelanggan Komersial D.I Yogyakarta  
(Sumber:penulis)





Gambar L2.15 Grafik Pertumbuhan Konsumsi Energi Listrik Pelanggan Publik D.I Yogyakarta  
(Sumber:penulis)



Gambar L2.16 Grafik Pertumbuhan Konsumsi Energi Listrik Pelanggan Industri D.I Yogyakarta  
(Sumber:penulis)



**LAMPIRAN 3**  
**PROGRAM MATLAB**



### Lampiran 3.1 Listing Program Matlab Pelanggan Rumah Tangga

```

HNRT13=6.499386960;
HNRT14=6.571336640;

SRT=[0 0 SRT03 SRT04 SRT05 SRT06
      SRT07 SRT08 SRT09 SRT10 SRT11
      SRT12 SRT13 SRT14];

%%%%%JUMLAH OBSERVASI%%%%%
N=12;
%%

%%%% D A T A V A R I A B E L %%%
SRT03=6.488266497;
SRT04=6.494933174;
SRT05=6.655028811;
SRT06=6.653568071;
SRT07=6.720177332;
SRT08=6.765194674;
SRT09=6.837998902;
SRT10=6.908259152;
SRT11=6.958014839;
SRT12=7.042286172;
SRT13=7.114879605;
SRT14=7.186828098;

PDRBRT03=16.54730390;
PDRBRT04=16.59720912;
PDRBRT05=16.64346088;
PDRBRT06=16.67975220;
PDRBRT07=16.72194703;
PDRBRT08=16.77109769;
PDRBRT09=16.81453740;
PDRBRT10=16.86217356;
PDRBRT11=16.91260650;
PDRBRT12=16.96443960;
PDRBRT13=17.02091450;
PDRBRT14=17.07739130;

PLRT04=13.34769334;
PLRT05=13.37571329;
PLRT06=13.34951807;
PLRT07=13.45229570;
PLRT08=13.48320762;
PLRT09=13.51263227;
PLRT10=13.54180239;
PLRT11=13.57849118;
PLRT12=13.62315563;
PLRT13=13.67029170;
PLRT14=13.69967650;
PLRT03=13.29916137;

HNRT03=6.157360269;
HNRT04=6.189146690;
HNRT05=6.278521424;
HNRT06=6.280395839;
HNRT07=6.322565240;
HNRT08=6.347214063;
HNRT09=6.362165663;
HNRT10=6.391917113;
HNRT11=6.411818268;
HNRT12=6.421235200;

HNRT13=6.499386960;
HNRT14=6.571336640;

SRT=[0 0 SRT03 SRT04 SRT05 SRT06
      SRT07 SRT08 SRT09 SRT10 SRT11
      SRT12 SRT13 SRT14];

PDRBRT=[0 0 PDRBRT03 PDRBRT04
          PDRBRT05 PDRBRT06 PDRBRT07
          PDRBRT08 PDRBRT09 PDRBRT10
          PDRBRT11 PDRBRT12 PDRBRT13
          PDRBRT14];

PLRT=[0 0 PLRT03 PLRT04 PLRT05
       PLRT06 PLRT07 PLRT08 PLRT09
       PLRT10 PLRT11 PLRT12 PLRT13
       PLRT14];

HNRT=[0 0 HNRT03 HNRT04 HNRT05
       HNRT06 HNRT07 HNRT08 HNRT09
       HNRT10 HNRT11 HNRT12 HNRT13
       HNRT14];

%%
%%%%% PENJUMLAHAN MASING-MASING
VARIABEL %%%
for n=3:14;
    SRT(1,1)=SRT(1,1)+SRT(1,n);
    PDRBRT(1,1)=PDRBRT(1,1)+PDRBRT
        (1,n);
    PLRT(1,1)=PLRT(1,1)+PLRT(1,n);
    HNRT(1,1)=HNRT(1,1)+HNRT(1,n);
end
%%
%%%%% PENJUMLAHAN KUADRAT VARIABEL
BEBAS %%%
for n=3:14;
    SRT(1,2)=SRT(1,2)+(SRT(1,n)^2)
    PDRBRT(1,2)=PDRBRT(1,2)+
        (PDRBRT(1,n)^2);
    PLRT(1,2)=PLRT(1,2)+
        (PLRT(1,n)^2);
    HNRT(1,2)=HNRT(1,2)+
        (HNRT(1,n)^2);
end
%%
%%%%% PENJUMLAHAN PERKALIAN ANTAR
VARIABEL BEBAS %%%
PDRBPLRT=0;PDRBHNRT=0;PLHNRT=0;
for n=3:14;
    PDRBPLRT=PDRBPLRT+(PDRBRT(1,n)
        *PLRT(1,n));
    PDRBHNRT=PDRBHNRT+
        (PDRBRT(1,n)*HNRT(1,n))
    PLHNRT=PLHNRT+(PLRT(1,n)*HNRT(1,n));
end

```

```

PLPDRBRT=PDRBPLRT;
HNPDRBRT=PDRBHNRT;
HNPLRT=PLHNRT;
%%

%%%% MENCARI KOEFISIEN MODEL REGRESI
%%%%
XX=[N PDRBRT(1,1) PLRT(1,1)
HNRT(1,1);PDRBRT(1,1) PDRBRT(1,2)
PDRBPLRT PDRBHNRT;PLRT(1,1) PLPDRBRT
PLRT(1,2) PLHNRT; HNRT(1,1) HNPDRBRT
HNPLRT HNRT(1,2)];

Y=SRT(1,3:14);
Y=Y';
X=[ones(1,12);
PDRBRT(1,3:14);
PLRT(1,3:14);
HNRT(1,3:14)];

XXI=inv(XX);
A=X*Y;
B=XXI*A
%%

%%%%%%%% MENCARI KOEFISIEN
DETERMINASI R2 %%%%%%%%%
SRTP=zeros(1,14);
for n=3:14;
SRTP(1,n)=(B(1,1)+(B(2,1)
*PDRBRT(1,n))+(B(3,1)
*PLRT(1,n))+(B(4,1)*HNRT(1,n)))
end

SRTr=SRT(1,1)/12;

SRTR=zeros(1,14);SRTRA=zeros(1,14)
for n=3:14;
SRTR(1,n)=(SRTP(1,n)-SRTr)^2;
SRTRA(1,n)=(SRT(1,n)-SRTr)^2;
end

JUM1=0;JUM2=0;
for n=3:14;
JUM1=JUM1+SRTR(1,n);
JUM2=JUM2+SRTRA(1,n);
end

R=JUM1/JUM2
%%

%%%%%%%% U J I F %%%%%%%%%
k=3; T=N;
F=(R/k)/((1-R)/(T-k))
%%

%%%% UJI MULTIKOLINIERITAS I %%%
XXM=[N PLRT(1,1) HNRT(1,1);
PLRT(1,1) PLRT(1,2) PLHNRT;
HNRT(1,1) HNPLRT HNRT(1,2)];

ymul=PDRBRT(1,3:14);
ymul=ymul';

xmul=[ones(1,12);
PLRT(1,3:14);
HNRT(1,3:14)];

XXMI=inv(XXM);
AM=xmul*ymul;
BM=XXMI*AM

YMUL=zeros(1,14);
for n=3:14;
YMUL(1,n)=(BM(1,1)+(BM(2,1)
*PLRT(1,n))+(BM(3,1)*
HNRT(1,n)));
end

Ym=0;
for n=3:14;
Ym=Ym+PDRBRT(1,n);
end
Ym=Ym/12;

Ymr=zeros(1,14);Yma=zeros(1,14);
for n=3:14;
Ymr(1,n)=(YMUL(1,n)-Ym)^2;
Yma(1,n)=(PDRBRT(1,n)-Ym)^2;
end

JUMM1=0;JUMM2=0;
for n=3:14;
JUMM1=JUMM1+Ymr(1,n);
JUMM2=JUMM2+Yma(1,n);
end

RM=JUMM1/JUMM2
VIF1=(1/(1-RM))
%%

%%%%%%%% UJI AUTOKORELASI %%%%%%%%%
e=zeros(1,14);
for n=3:14;
e(1,n)=SRTP(1,n)-SRT(1,n);
end

ed=0;
for n=3:13;
ed=ed+((e(1,n+1)-e(1,n))^2);
end

ew=0;
for n=3:14;
ew=ew+(e(1,n)^2);
end

```

```

dw=ed/ew
dL=0.6577;      dU=1.8640;
disp('TABEL DW dL=0.6577 &
dU=1.8640')

if(dw<dL)
    p=1-(dw/2)
    srt=zeros(1,13);
    for n=3:13;
        srt(1,n)=SRT(1,n+1)
            -(p*SRT(1,n));
    end

    pPDRBRT=zeros(1,13);
    for n=3:13;
        pPDRBRT(1,n)=PDRBRT(1,n+1)
            -(p*PDRBRT(1,n));
    end

    pPLRT=zeros(1,13);
    for n=3:13;
        pPLRT(1,n)=PLRT(1,n+1)
            -(p*PLRT(1,n));
    end

    PLRT02(1,2)=0;PLRT01(1,1)=0;
    for n=3:13;
        PLRT02(1,2)=PLRT(1,2)
            +(p*PLRT(1,n)^2);
        PLRT01(1,1)=PLRT(1,1)
            +p*PLRT(1,n);
    end

    pHNRT=zeros(1,13);
    for n=3:13;
        pHNRT(1,n)=HNRT(1,n+1)
            -(p*HNRT(1,n));
    end

    HNRT02(1,2)=0;HNRT01(1,1)=0;
    PLHNRT01=0;
    for n=3:13;
        HNRT02(1,2)=HNRT02(1,2)
            +(p*HNRT(1,n)^2);
        HNRT01(1,1)=HNRT01(1,1)
            +p*HNRT(1,n);
        PLHNRT01=PLHNRT01
            +(p*PLRT(1,n)*p*HNRT(1,n))
    end

    b10=B(1,1)*(1-p);
    b100=zeros(1,13);
    b200=zeros(1,13);
    b300=zeros(1,13);

    for n=3:13;
        b100(1,n)=B(2,1)*pPDRBRT(1,n);
        b200(1,n)=B(3,1)*pPLRT(1,n);
        b300(1,n)=B(4,1)*pHNRT(1,n);
    end

end

YN=zeros(1,13);
for n=3:13;
    YN(1,n)=b10+b100(1,n)
        +b200(1,n)+b300(1,n);
end

ea=zeros(1,11);
for n=1:11;
    ea(1,n)=YN(1,n+2)-srt(1,n+2);
end

ed1=0;ew1=0;
for n=1:10;
    ed1=ed1+((ea(1,n+1)
        -ea(1,n))^2);
end
for n=1:11;
    ew1=ew1+(ea(1,n)^2);
end

dw1=ed1/ew1
else if(dL<=dw<=dU)
    p=1-(dw/2)
    srt=zeros(1,13);
    for n=3:13;
        srt(1,n)=SRT(1,n+1)
            -(p*SRT(1,n));
    end

    pPDRBRT=zeros(1,13);
    for n=3:13;
        pPDRBRT(1,n)=PDRBRT(1,n+1)
            -(p*PDRBRT(1,n));
    end

    pPLRT=zeros(1,13);
    for n=3:13;
        pPLRT(1,n)=PLRT(1,n+1)
            -(p*PLRT(1,n));
    end

    PLRT02(1,2)=0;PLRT01(1,1)=0;
    for n=3:13;
        PLRT02(1,2)=PLRT02(1,2)
            +(p*PLRT(1,n)^2);
        PLRT01(1,1)=PLRT01(1,1)
            +p*PLRT(1,n);
    end

    pHNRT=zeros(1,13);
    for n=3:13;
        pHNRT(1,n)=HNRT(1,n+1)
            -(p*HNRT(1,n));
    end

    HNRT02(1,2)=0;HNRT01(1,1)=0;
    PLHNRT01=0;
    for n=3:13;
        HNRT02(1,2)=HNRT02(1,2)
            +(p*HNRT(1,n)^2);
        HNRT01(1,1)=HNRT01(1,1)
            +p*HNRT(1,n);
        PLHNRT01=PLHNRT01
            +(p*PLRT(1,n)*p*HNRT(1,n))
    end

    b10=B(1,1)*(1-p);
    b100=zeros(1,13);
    b200=zeros(1,13);
    b300=zeros(1,13);

    for n=3:13;
        b100(1,n)=B(2,1)*pPDRBRT(1,n);
        b200(1,n)=B(3,1)*pPLRT(1,n);
        b300(1,n)=B(4,1)*pHNRT(1,n);
    end

end

```

```

+ (pHNRT (1, n) ^2);
HNRT01 (1, 1)=HNRT01 (1, 1)
+pHNRT (1, n);
PLHNRT01=PLHNRT01
+ (pPLRT (1, n) *pHNRT (1, n))
end

b10=B (1, 1) * (1-p);
b100=zeros (1, 13);
b200=zeros (1, 13);
b300=zeros (1, 13);
for n=3:13;

    b100 (1, n)=B (2, 1) *pPDRBRT (1, n);
    b200 (1, n)=B (3, 1) *pPLRT (1, n);
    b300 (1, n)=B (4, 1) *pHNRT (1, n);
end

YN=zeros (1, 13);
for n=3:13;
    YN (1, n)=YN (1, n)+b10+b100 (1, n)
        +b200 (1, n)+b300 (1, n);
end

ea=zeros (1, 11);
for n=1:11;
    ea (1, n)=YN (1, n+2) -srt (1, n+2);
end

ed1=0;
for n=1:10;
    ed1=ed1+ ((ea (1, n+1)
        -ea (1, n) ) ^2);
end

ew1=0;
for n=1:11;
    ew1=ew1+ (ea (1, n) ^2);
end

dw1=ed1/ew1
else if (4-dU<=dw<=4-dL)
p=1- (dw/2)
srt=zeros (1, 13);
for n=3:13;
    srt (1, n)=SRT (1, n+1)
        - (p*SRT (1, n));
end

pPDRBRT=zeros (1, 13);
for n=3:13;
    pPDRBRT (1, n)=PDRBRT (1, n+1)
        - (p*PDRBRT (1, n));
end

pPLRT=zeros (1, 13);
for n=3:13;
    pPLRT (1, n)=PLRT (1, n+1)
        - (p*PLRT (1, n));
end

end

PLRT02 (1, 2)=0; PLRT01 (1, 1)=0;
for n=3:13;

    PLRT02 (1, 2)=PLRT02 (1, 2)
        + (pPLRT (1, n) ^2);
    PLRT01 (1, 1)=PLRT01 (1, 1)
        +pPLRT (1, n);
end

pHNRT=zeros (1, 13);
for n=3:13;
    pHNRT (1, n)=HNRT (1, n+1)
        - (p*HNRT (1, n));
end

HNRT02 (1, 2)=0; HNRT01 (1, 1)=0;
PLHNRT01=0;
for n=3:13;
    HNRT02 (1, 2)=HNRT02 (1, 2)
        + (pHNRT (1, n) ^2);
    HNRT01 (1, 1)=HNRT01 (1, 1)
        +pHNRT (1, n);
    PLHNRT01=PLHNRT01
        + (pPLRT (1, n) *pHNRT (1, n));
end

b10=B (1, 1) * (1-p);
b100=zeros (1, 13);
b200=zeros (1, 13);
b300=zeros (1, 13);
for n=3:13;
    b100 (1, n)=B (2, 1) *pPDRBRT (1, n);
    b200 (1, n)=B (3, 1) *pPLRT (1, n);
    b300 (1, n)=B (4, 1) *pHNRT (1, n);
end

YN=zeros (1, 13);
for n=3:13;
    YN (1, n)=YN (1, n)+b10+b100 (1, n)
        +b200 (1, n)+b300 (1, n);
end

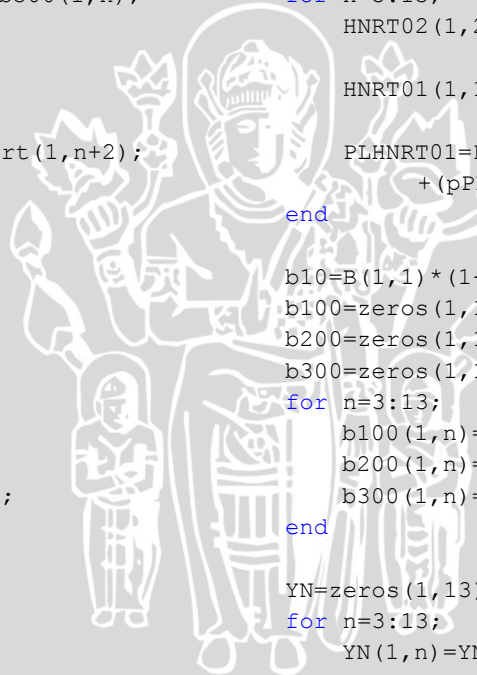
ea=zeros (1, 11);
for n=1:11;
    ea (1, n)=YN (1, n+2) -srt (1, n+2);
end

ed1=0;
for n=1:10;
    ed1=ed1+ ((ea (1, n+1)
        -ea (1, n) ) ^2);
end

ew1=0;
for n=1:11;
    ew1=ew1+ (ea (1, n) ^2);
end

dw1=ed1/ew1
end

```





```
%%% UJI MULTIKOLINIERITAS II %%%
```

```
XXM2=[11 PLRT01(1,1) HNRT01(1,1);
      PLRT01(1,1) PLRT02(1,2)
      PLHNRT01;HNRT01(1,1) PLHNRT01
      HNRT02(1,2)];
```

```
ymul2=pPDRBRT(1,3:13);
ymul2=ymul2';
```

```
xmul2=[ones(1,11); pPLRT(1,3:13);
      pHNRT(1,3:13)];
```

```
XXMI2=inv(XXM2);
AM2=xmul2*ymul2;
BM2=XXMI2*AM2
```

```
YMUL2=zeros(1,13);
for n=3:13;
    YMUL2(1,n)=(BM2(1,1)+(BM2(2,1)*p
    PLRT(1,n)+(BM2(3,1)*pHNRT(1,n)
    ));
end
```

```
Yms=0;
for n=3:13;
    Yms=Yms+pPDRBRT(1,n);
End
```

```
Yms=Yms/11;
Ymz=zeros(1,13);Ymb=zeros(1,13);
for n=3:13;
    Ymz(1,n)=(YMUL2(1,n)-Yms)^2;
    Ymb(1,n)=(pPDRBRT(1,n)-Yms)^2;
end
```

```
JUMM01=0;JUMM02=0;
for n=3:13;
    JUMM01=JUMM01+Ymz(1,n);
    JUMM02=JUMM02+Ymb(1,n);
end
```

```
RM2=JUMM01/JUMM02
VIF2=(1/(1-RM2))
%%
```

```
%%%%%%%%% S I M U L A S I %%%%%%%%%
```

```
PDRBRT15=17.1328260;
PDRBRT16=17.1909063;
PDRBRT17=17.2524716;
PDRBRT18=17.3158219;
PDRBRT19=17.3800166;
PDRBRT20=17.4425218;
PDRBRT21=17.5050270;
PDRBRT22=17.5675323;
PDRBRT23=17.6300375;
PDRBRT24=17.6925427;
PDRBRT25=17.7555175;
PDRBRT26=17.8184923;
```

```
PLRT15=13.773254;
PLRT16=13.797667;
PLRT17=13.821895;
PLRT18=13.845944;
PLRT19=13.869818;
PLRT20=13.893522;
PLRT21=13.915476;
PLRT22=13.937269;
PLRT23=13.958903;
PLRT24=13.980384;
PLRT25=14.001715;
PLRT26=14.017908;
```

```
HNRT15=6.600895;
HNRT16=6.630454;
HNRT17=6.660013;
HNRT18=6.689572;
HNRT19=6.719131;
HNRT20=6.748689;
HNRT21=6.778248;
HNRT22=6.807807;
HNRT23=6.837366;
HNRT24=6.866925;
HNRT25=6.896483;
HNRT26=6.926042;
```

```
PDRBRT = [0 0 PDRBRT03 PDRBRT04
PDRBRT05 PDRBRT06 PDRBRT07 PDRBRT08
PDRBRT09 PDRBRT10 PDRBRT11 PDRBRT12
PDRBRT13 PDRBRT14 PDRBRT15 PDRBRT16
PDRBRT17 PDRBRT18 PDRBRT19 PDRBRT20
PDRBRT21 PDRBRT22 PDRBRT23 PDRBRT24
PDRBRT25 PDRBRT26];
```

```
PLRT = [0 0 PLRT03 PLRT04 PLRT05
PLRT06 PLRT07 PLRT08 PLRT09 PLRT10
PLRT11 PLRT12 PLRT13 PLRT14 PLRT15
PLRT16 PLRT17 PLRT18 PLRT19 PLRT20
PLRT21 PLRT22 PLRT23 PLRT24 PLRT25
PLRT26];
```

```
HNRT = [0 0 HNRT03 HNRT04 HNRT05
HNRT06 HNRT07 HNRT08 HNRT09 HNRT10
HNRT11 HNRT12 HNRT13 HNRT14 HNRT15
HNRT16 HNRT17 HNRT18 HNRT19 HNRT20
HNRT21 HNRT22 HNRT23 HNRT24 HNRT25
HNRT26];
```

```
p=1-(dw/2);
xb10=B(1,1)*(1-p);
```

```
pPDRBRT(1,25)=0;pPLRT(1,25)=0;
pHNRT(1,25)=0;
```

```
for n=14:25;
    pPDRBRT(1,n)=PDRBRT(1,n+1)
        -(p*PDRBRT(1,n));
    pPLRT(1,n)=PLRT(1,n+1)
        -(p*PLRT(1,n));
```



```

pHNRT(1,n)=HNRT(1,n+1)
            -(p*HNRT(1,n));
end

b100(1,25)=0;
b100(3,25)=0;
b100(3,25)=0;
for n=14:25;
    b100(1,n)=B(2,1)*pPDRBRT(1,n);
    b200(1,n)=B(3,1)*pPLRT(1,n);
    b300(1,n)=B(4,1)*pHNRT(1,n);
end

srt(1,24)=0;
for n=14:24;
    srt(1,n)=srt(1,n)+xb10
            +b100(1,n+1)+b200(1,n+1)
            +b300(1,n+1);
end

SRT(1,25)=0;
for n=15:25;
    SRT(1,n)=srt(1,n+1)
            +(p*SRT(1,n-1));
end

SRT(1,3:25);

A=[3 SRT(1,3);4 SRT(1,4);5
   SRT(1,5);6 SRT(1,6);7 SRT(1,7);
   8 SRT(1,8);9 SRT(1,9);10
   SRT(1,10);11 SRT(1,11);12
   SRT(1,12);13SRT(1,13);14SRT(1,14);
   15 SRT(1,15);16 SRT(1,16);17
   SRT(1,17);18 SRT(1,18);19
   SRT(1,19);20 SRT(1,20);21
   SRT(1,21);22 SRT(1,22); 23
   SRT(1,23);24 SRT(1,24);25
   SRT(1,25)

```

