

DAFTAR PUSTAKA.

- Al Abri, R. S., Ehab F. El-Saadany, and Yasser M. Atwa. 2013. "Optimal Placement and Sizing Method to Improve the Voltage Stability Margin in a Distribution System Using Distributed Generation." *IEEE Transactions on Power Systems* 28(1): 326–34.
- Al-Betar, Mohammed Azmi. 2017. "β-Hill Climbing: An Exploratory Local Search." *Neural Computing and Applications* 28: 153–68.
- . 2019. "Island Flower Pollination Algorithm for Global Optimization." *Journal of Supercomputing* 75(8): 5280–5323.
- Alkareem Alyasseri, Zaid Abdi et al. 2021. "A Hybrid Flower Pollination with β-Hill Climbing Algorithm for Global Optimization." *Journal of King Saud University - Computer and Information Sciences* (xxxx).
<https://doi.org/10.1016/j.jksuci.2021.06.015>.
- Alomari, Osama Ahmad, Ahamad Tajudin Khader, Mohammed Azmi Al-Betar, and Mohammed A. Awadallah. 2018. "A Novel Gene Selection Method Using Modified MRMR and Hybrid Bat-Inspired Algorithm with β-Hill Climbing." *Applied Intelligence* 48(11): 4429–47.
- Alyasseri, Zaid Abdi Alkareem et al. 2018. "Variants of the Flower Pollination Algorithm: A Review." *Studies in Computational Intelligence* 744(January): 91–118.
- Bhat, M. Vittal, and N. Manjappa. 2018. "Flower Pollination Algorithm Based Sizing and Placement of DG and D-STATCOM Simultaneously in Radial Distribution Systems." *2018 20th National Power Systems Conference, NPSC 2018*: 1–5.
- Chang, R. W., N. Mithulananthan, and T. K. Saha. 2011. "Novel Mixed-Integer Method to Optimize Distributed Generation Mix in Primary Distribution Systems." *2011 21st Australasian Universities Power Engineering Conference, AUPEC 2011* (January).
- Devi, S., and M. Geethanjali. 2014. "Optimal Location and Sizing Determination of Distributed Generation and DSTATCOM Using Particle Swarm

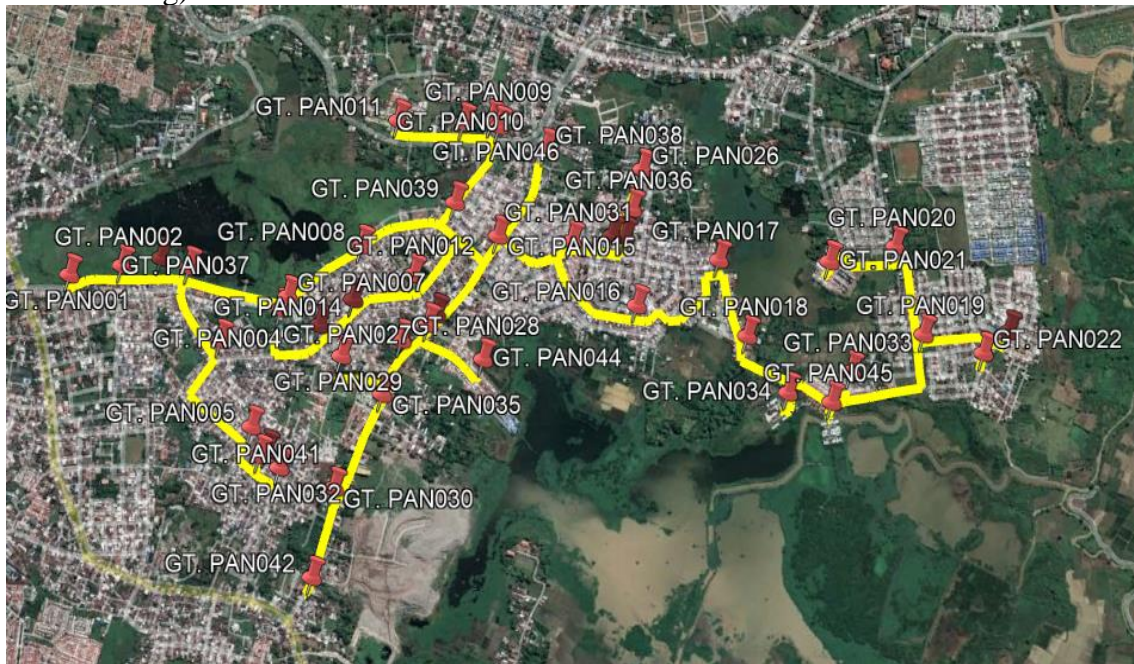
- Optimization Algorithm.” *International Journal of Electrical Power and Energy Systems* 62: 562–70. <http://dx.doi.org/10.1016/j.ijepes.2014.05.015>.
- Doagou-Mojarrad, Hasan, G. B. Gharehpetian, H. Rastegar, and Javad Olamaei. 2013. “Optimal Placement and Sizing of DG (Distributed Generation) Units in Distribution Networks by Novel Hybrid Evolutionary Algorithm.” *Energy* 54: 129–38. <http://dx.doi.org/10.1016/j.energy.2013.01.043>.
- Dolatabadi, Sarineh Hacobian, Maedeh Ghorbanian, Pierluigi Siano, and Nikos D. Hatziargyriou. 2021. “An Enhanced IEEE 33 Bus Benchmark Test System for Distribution System Studies.” *IEEE Transactions on Power Systems* 36(3): 2565–72.
- Erwin Prawira Santosa, Ontoseno Penangsang, and Ni Ketut Aryani. 2015. “Optimasi Penentuan Lokasi Kapasitor Dan Distributed Generation (DG) Dengan Rekonfigurasi Jaringan Untuk Meningkatkan Keluaran Daya Aktif DG Pada Sistem Distribusi Radial Menggunakan Genetic Algorithm (GA).” *Jurnal Teknik Its* 5(2).
- H, Ahmad Zakaria, Sjamsjul Anam, and Imam Robandi. 2012. “Penempatan Dan Penentuan Kapasitas Optimal Distributed Generator (DG) Menggunakan Artificial Bee Colony (ABC).” *JURNAL TEKNIK ITS Vol. 1, No. 1* 1(1): 16–21.
- Hasanah, Aas Wasri et al. 2015. “Perencanaan Pengembangan Sistem Pembangkit Listrik Di Pulau Jawa.” / *Jurnal Sutet* 5(1): 8–13. <https://stt-pln.e-journal.id/sutet/article/view/604>.
- Imran, Muhammad, Andik Bintoro, and Ezwarsyah. 2019. “Analisa Keandalan Sistem Distribusi Tenaga Listrik Untuk Wilayah Kota Lhokseumawe Di PT. PLN (Persero) Rayon Kota Lhokseumawe.” *Jurnal Energi Elektrik* 08(1): 42–47.
- Katyara, Sunny, Lukasz Staszewski, and Zbigniew Leonowicz. 2018. “Protection Coordination of Properly Sized and Placed Distributed Generations—Methods, Applications and Future Scope.” *Energies* 11(10).
- Liu, Wei, Fengming Luo, Yuanhong Liu, and Wei Ding. 2019. “Optimal Siting and Sizing of Distributed Generation Based on Improved Nondominated Sorting Genetic Algorithm II.” *Processes* 7(12): 1–10.

- Mahmoud, Karar. 2017. "Optimal Integration of DG and Capacitors in Distribution Systems." *2016 18th International Middle-East Power Systems Conference, MEPCON 2016 - Proceedings*: 651–55.
- Mishra, Sivkumar, Debapriya Das, and Subrata Paul. 2014. "A Simple Algorithm for Distribution System Load Flow with Distributed Generation." *International Conference on Recent Advances and Innovations in Engineering, ICRAIE 2014* (May).
- Mohamed, Amal Amin, Salah Kamel, and Mohamed M. Aly. 2018. "A Simple Analytical Technique for Optimal Capacitor Placement in Radial Distribution Systems." *2017 19th International Middle-East Power Systems Conference, MEPCON 2017 - Proceedings 2018-Febru(December)*: 928–33.
- Musa, 2019." 2002. *MATLAB® for Photomechanics- A Primer* 4(1): v.
- Pereira, Benvindo R., Geraldo R.Martins Martins Da Costa, Javier Contreras, and Jose R.Sanches Mantovani. 2016. "Optimal Distributed Generation and Reactive Power Allocation in Electrical Distribution Systems." *IEEE Transactions on Sustainable Energy* 7(3): 975–84.
- Pesaran H.A, Mahmoud, Phung Dang Huy, and Vigna K. Ramachandaramurthy. 2017. "A Review of the Optimal Allocation of Distributed Generation: Objectives, Constraints, Methods, and Algorithms." *Renewable and Sustainable Energy Reviews* 75(May): 293–312.
<http://dx.doi.org/10.1016/j.rser.2016.10.071>.
- Purchala, K et al. 2006. "Distributed Generation and the Grid Integration Issues." *Imperial College London*: 9.
- Putu Dedi Wiriastika, I et al. 2022. "Maret 2022 I Putu Dedi Wiriastika, I Nyoman Setiawan." 9(1): 44–53.
- Reddy, P. Dinakara Prasad, V.C. Veera Reddy, and T. Gowri Manohar. 2016. "Application of Flower Pollination Algorithm for Optimal Placement and Sizing of Distributed Generation in Distribution Systems." *Journal of Electrical Systems and Information Technology* 3(1): 14–22.
<http://dx.doi.org/10.1016/j.jesit.2015.10.002>.
- Rupa, J a Michline, and S Ganesh. 2014. "Power Flow Analysis for Radial

- Distribution System Using Backward / Forward Sweep Method.”
International Journal of Electrical, Computer, Energetic, Electronic and Communication Engineering 8(10): 1537–41.
- Sanjay, R. et al. 2017. “Optimal Allocation of Distributed Generation Using Hybrid Grey Wolf Optimizer.” *IEEE Access* 5(c): 14807–18.
- Tabarok, Dony Kurniyawan, Azmi Saleh, and Bambang Sri Kaloko. 2017. “Optimasi Penempatan Distributed Generation (DG) Dan Kapasitor Pada Sistem Distribusi Radial Menggunakan Metode Genetic Algorithm (GA) (Studi Kasus Pada Penyulang Watu Ulo Jember).” *Berkala Sainstek* 5(1): 35.
- Tahir, Muhammad Junaid, Muhammad Babar Rasheed, and Mohd Khairil Rahmat. 2022. “Optimal Placement of Capacitors in Radial Distribution Grids via Enhanced Modified Particle Swarm Optimization.” *Energies* 15(7): 1–27.
- Tan, Wen Shan, Mohammad Yusri Hassan, Md Shah Majid, and Hasimah Abdul Rahman. 2013. “Optimal Distributed Renewable Generation Planning: A Review of Different Approaches.” *Renewable and Sustainable Energy Reviews* 18: 626–45. <http://dx.doi.org/10.1016/j.rser.2012.10.039>.
- Yang, Xin She, Mehmet Karamanoglu, and Xingshi He. 2014. “Flower Pollination Algorithm: A Novel Approach for Multiobjective Optimization.” *Engineering Optimization* 46(9): 1222–37.

LAMPIRAN – LAMPIRAN

Lampiran 1. Gambar sistem distribusi penyulang Antang (Sumber: ULP Panakkukang)



Lampiran 2. Gambar lokasi trafo bus penyulang Antang



Lampiran 3. Gambar layout posisi penempatan DG pada bus 5 penyalang Antang



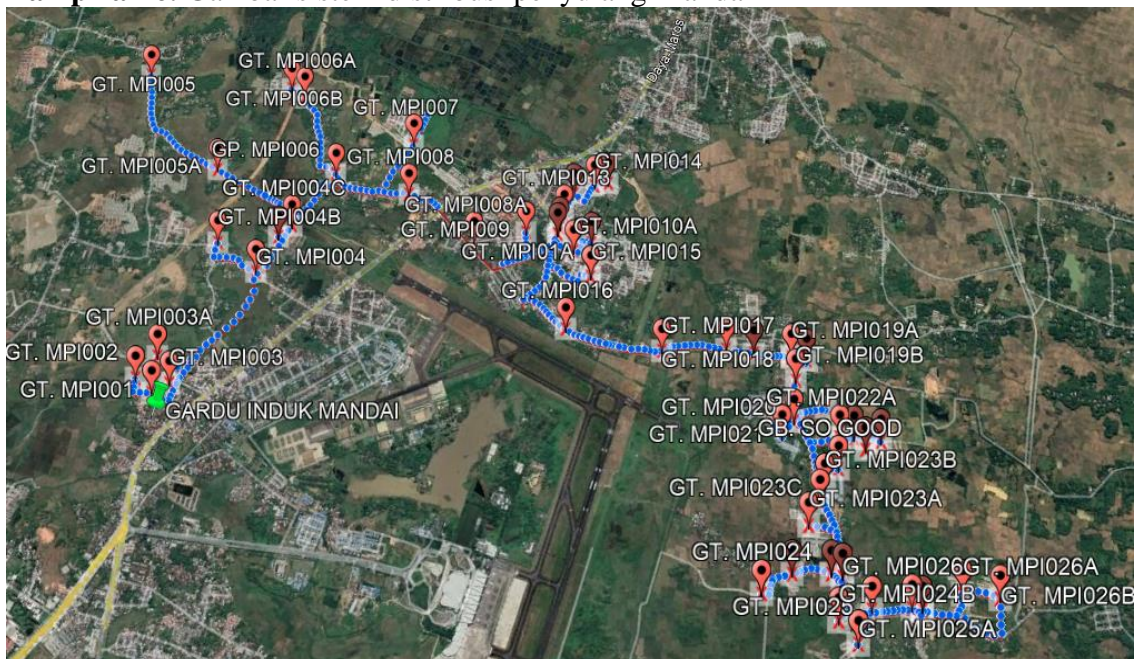
Lampiran 4. Gambar lokasi trafo bus 8 penyalang Antang



Lampiran 5. Gambar layout posisi penempatan DG pada bus 42 penyalang Antang



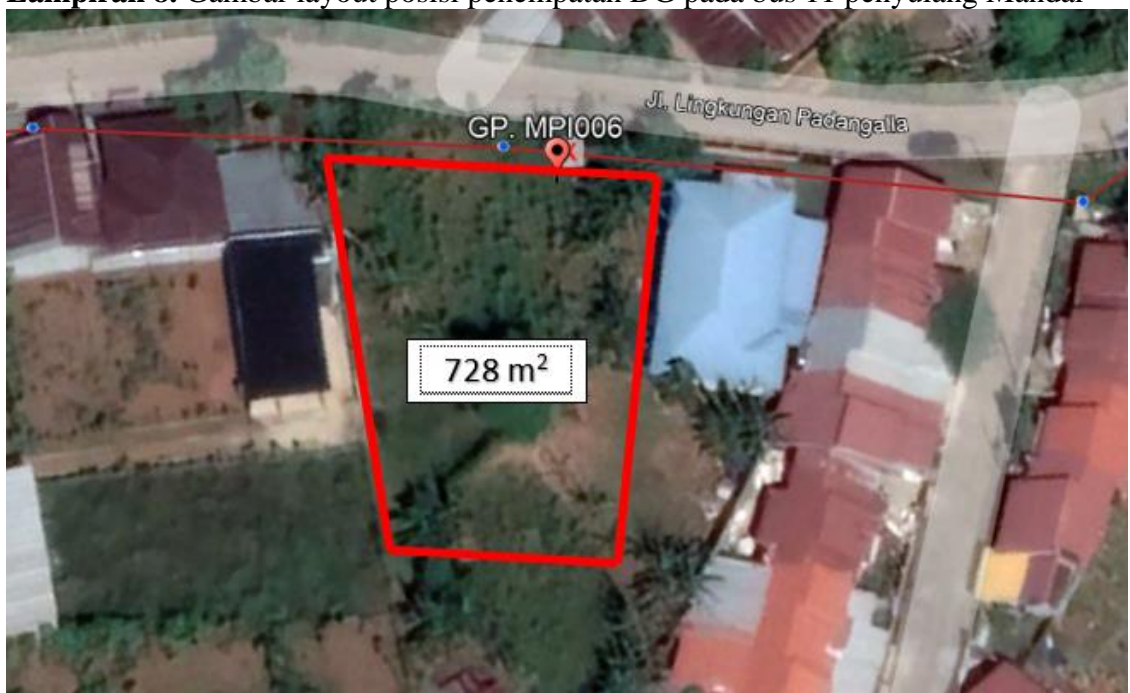
Lampiran 6. Gambar sistem distribusi penyalang Mandai



Lampiran 7. Gambar lokasi trafo bus 11 penyulang Mandai



Lampiran 8. Gambar layout posisi penempatan DG pada bus 11 penyulang Mandai



Lampiran 9. Gambar lokasi trafo bus 26 penyulang Mandai



Lampiran 10. Gambar layout posisi penempatan DG pada bus 26 penyulang Mandai



Lampiran 11. Gambar lokasi trafo bus 37 penyulang Mandai



Lampiran 12. Gambar layout posisi penempatan DG pada bus 37 penyulang Mandai



Lampiran 13. Gambar lokasi trafo bus 51 penyulang Mandai



Lampiran 14. Gambar layout posisi penempatan DG pada bus 51 penyulang Mandai



Lampiran 15. Gambar referensi ukuran lahan PLTS dengan kapasitas 86 kWp



