

## DAFTAR PUSTAKA

- [1] A. Goswami, P. Sadhu, U. Goswami, and P. K. Sadhu, "Floating solar power plant for sustainable development: A techno-economic analysis," *Environmental Progress and Sustainable Energy*, vol. 38, no. 6, 2019, doi: 10.1002/ep.13268.
- [2] H. Satria, E. Rizaldi, R. Pramudito, and Z. Sandi, "Cirata floating photovoltaic solar plant 192 MWp: A review of the biggest floating solar PV in Indonesia," in *2024 6th Global Power, Energy and Communication Conference (GPECOM)*, Budapest, Hungary: IEEE, Jun. 2024, pp. 838–845. doi: 10.1109/GPECOM61896.2024.10582760.
- [3] I. D. Budi, S. Widodo, N. S. Sitohang, H. D. Sulistyono, and D. Kaharudin, "Comparative Life Cycle Assessment of Floating and Ground-Mounted Utility PV System in Cirata, Indonesia," in *2024 International Conference on Technology and Policy in Energy and Electric Power (ICTPEP)*, Bali, Indonesia: IEEE, Sep. 2024, pp. 376–381. doi: 10.1109/ICTPEP63827.2024.10732896.
- [4] M. S. Pahwa and A. Rahman, "Design and estimation of reliability of an off grid solar photovoltaic (PV) power system in south east queensland," in *2017 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM)*, Singapore: IEEE, Dec. 2017, pp. 944–948. doi: 10.1109/IEEM.2017.8290031.
- [5] M. Rifansyah and D. F. Hakam, "RETScreen Techno-Economic Feasibility of Indonesia's Cirata 145 MW Floating Solar Photovoltaic Project: Incentives, Risk Management, and Strategic Implementation," in *2024 International Conference on Technology and Policy in Energy and Electric Power (ICTPEP)*, Bali, Indonesia: IEEE, Sep. 2024, pp. 352–357. doi: 10.1109/ICTPEP63827.2024.10733363.
- [6] H. G. Febrian, A. Supriyanto, and H. Purwanto, "Calculating the energy capacity and capacity factor of floating photovoltaic (FPV) power plant in the cirata reservoir using different types of solar panels," *Journal of Physics: Conference Series*, vol. 2498, no. 1, 2023, doi: 10.1088/1742-6596/2498/1/012007.
- [7] V. Boddapati and S. A. Daniel, "Performance analysis and investigations of grid-connected Solar Power Park in Kurnool, South India," *Energy for Sustainable Development*, vol. 55, no. 2020, pp. 161–169, 2020, doi: 10.1016/j.esd.2020.02.001.
- [8] B. Shiva Kumar and K. Sudhakar, "Performance evaluation of 10 MW grid connected solar photovoltaic power plant in India," *Energy Reports*, vol. 1, pp. 184–192, 2015, doi: 10.1016/j.egy.2015.10.001.
- [9] S. K. Yadav and U. Bajpai, "Performance evaluation of a rooftop solar photovoltaic power plant in Northern India," *Energy for Sustainable Development*, vol. 43, pp. 130–138, 2018, doi: 10.1016/j.esd.2018.01.006.
- [10] P. A. Sánchez-pérez and S. Kurtz, "Capacity Factor Analysis of U . S . PV System Reliability and Performance," vol. 10, no. 3, pp. 818–823, 2020, doi:

- 10.1109/JPHOTOV.2020.2968418.
- [11] O. A. Rozak, A. Triyanto, and H. Kusnadi, "Efficiency and performance ratio of photovoltaics on a 50 kWp Universitas Pamulang Viktor rooftop solar power plant," *Bulletin of Electrical Engineering and Informatics*, vol. 13, no. 1, pp. 50–57, 2024, doi: 10.11591/eei.v13i1.5557.
- [12] D. A. Rianjani *et al.*, "Performance Analysis and Comparison of a 93 . 6 kW Grid-Connected Rooftop Photovoltaic System in South Tangerang Performance Analysis and Comparison of a 93 . 6 kW Grid- Connected Rooftop Photovoltaic System in South Tangerang," vol. 10, no. 3, pp. 1916–1927, 2023.
- [13] M. H. Banda, K. Nyeinga, and D. Okello, "Performance evaluation of 830 kWp grid-connected photovoltaic power plant at Kamuzu International Airport-Malawi," *Energy for Sustainable Development*, vol. 51, pp. 50–55, 2019, doi: 10.1016/j.esd.2019.05.005.
- [14] L. D. Mensah, J. O. Yamoah, and M. S. Adaramola, "Performance evaluation of a utility-scale grid-tied solar photovoltaic (PV) installation in Ghana," *Energy for Sustainable Development*, vol. 48, pp. 82–87, 2019, doi: 10.1016/j.esd.2018.11.003.
- [15] I. Jamil, H. Lucheng, S. Habib, M. Aurangzeb, A. Ali, and E. M. Ahmed, "Performance Ratio Analysis Based on Energy Production for Large-Scale Solar Plant," *IEEE Access*, vol. 10, pp. 5715–5735, 2022, doi: 10.1109/ACCESS.2022.3141755.
- [16] A. Goswami and P. K. Sadhu, "Degradation analysis and the impacts on feasibility study of floating solar photovoltaic systems," *Sustainable Energy, Grids and Networks*, vol. 26, p. 100425, Jun. 2021, doi: 10.1016/j.segan.2020.100425.
- [17] S. Gorjian, H. Sharon, H. Ebadi, K. Kant, F. B. Scavo, and G. M. Tina, "Recent technical advancements, economics and environmental impacts of floating photovoltaic solar energy conversion systems," *Journal of Cleaner Production*, vol. 278, p. 124285, Jan. 2021, doi: 10.1016/j.jclepro.2020.124285.
- [18] Md. I. Islam *et al.*, "Techno-Economic and Carbon Emission Assessment of a Large-Scale Floating Solar PV System for Sustainable Energy Generation in Support of Malaysia's Renewable Energy Roadmap," *Energies*, vol. 16, no. 10, p. 4034, May 2023, doi: 10.3390/en16104034.
- [19] C. Brunet, Michel. A. Bouchard, P. Baptiste, O. Savadogo, and N. Merveille, "3 keys to ensure the sustainability of your solar power plant," in *2022 13th International Renewable Energy Congress (IREC)*, Hammamet, Tunisia: IEEE, Dec. 2022, pp. 1–5. doi: 10.1109/IREC56325.2022.10001933.
- [20] E. Solomin, E. Sirotkin, E. Cuce, S. P. Selvanathan, and S. Kumarasamy, "Hybrid Floating Solar Plant Designs: A Review," *Energies*, vol. 14, no. 10, p. 2751, May 2021, doi: 10.3390/en14102751.
- [21] L. C. A. Da Costa and G. D. P. Da Silva, "Save water and energy: A techno-economic analysis of a floating solar photovoltaic system to power a water integration project in the Brazilian semiarid," *Intl J of Energy Research*, vol. 45, no. 12, pp. 17924–17941, Oct. 2021, doi: 10.1002/er.6932.

- [22] PT. PJB, “Laporan Evaluasi PLTS PT. PLN (Persero),” 2013.
- [23] A. Kumar *et al.*, “RETRACTED: An assessment of photovoltaic module degradation for life expectancy: A comprehensive review,” *Engineering Failure Analysis*, vol. 156, p. 107863, Feb. 2024, doi: 10.1016/j.engfailanal.2023.107863.
- [24] A. P. Sukarso and K. N. Kim, “Cooling effect on the floating solar PV: Performance and economic analysis on the case of west Java province in Indonesia,” *Energies*, vol. 13, no. 9, 2020, doi: 10.3390/en13092126.
- [25] L. P. Truong, H. A. Quoc, H. L. Tsai, and D. van Dung, “A method to estimate and analyze the performance of a grid-connected photovoltaic power plant,” *Energies*, vol. 13, no. 10, 2020, doi: 10.3390/en13102583.
- [26] M. Adar, Y. Najih, M. Gouskir, A. Chebak, M. Mabrouki, and A. Bennouna, “Three PV plants performance analysis using the principal component analysis method,” *Energy*, vol. 207, p. 118315, 2020, doi: 10.1016/j.energy.2020.118315.
- [27] A. Nugroho and J. Santoso, “Environmental Impact Evaluation of Floating Solar Power Plant in Cirata Reservoir, West Java,” *WSNT*, vol. 2, no. 01, pp. 9–16, Mar. 2024, doi: 10.58812/wsnt.v2i04.770.
- [28] A. El Fathi, L. Nkhaili, A. Bennouna, and A. Outzourhit, “Performance parameters of a standalone PV plant,” *Energy Conversion and Management*, vol. 86, pp. 490–495, 2014, doi: 10.1016/j.enconman.2014.05.045.
- [29] A. Niccolai, F. Grimaccia, G. Di Lorenzo, R. Araneo, F. Ughi, and M. Polenghi, “A Review of Floating PV Systems With a Techno-Economic Analysis,” *IEEE Journal of Photovoltaics*, vol. 14, no. 1, pp. 23–34, 2024, doi: 10.1109/JPHOTOV.2023.3319601.
- [30] IEC, *Photovoltaic system performance monitoring – Guidelines for measurement, data exchange and analysis*, 61724, 1998.
- [31] S. Lindig *et al.*, “Best practice guidelines for the use of economic and technical KPIs,” SAND2024-16932R, 2516833, Dec. 2024. doi: 10.2172/2516833.
- [32] S. Gulkowski, “Specific Yield Analysis of the Rooftop PV Systems Located in,” *Energies*, 2022.
- [33] A. Mohd, I. Mitra, W. Warmuth, and V. Schacht, “Performance ratio – Crucial parameter for grid connected PV plants,” *Renewable and Sustainable Energy Reviews*, vol. 65, pp. 1139–1158, 2016, doi: 10.1016/j.rser.2016.07.066.
- [34] M. Ahmad, A. Khattak, A. K. Janjua, A. A. Alahmadi, M. S. Khan, and N. Ullah, “Techno-economic feasibility analyses of grid-connected solar photovoltaic power plants for small scale industries of Punjab, Pakistan,” no. November, pp. 1–22, 2022, doi: 10.3389/fenrg.2022.1028310.
- [35] L. Ren, S. Zhang, L. Li, X. Xu, Y. Zhang, and F. Wang, “Efficiency diagnosis and optimization in distributed solar plants,” *Energy for Sustainable Development*, vol. 63, pp. 24–32, 2021, doi: 10.1016/j.esd.2021.05.001.
- [36] A. Kumar *et al.*, “An assessment of photovoltaic module degradation for life expectancy: A comprehensive review,” *Engineering Failure Analysis*, vol. 156, p. 107863, 2024, doi: 10.1016/j.engfailanal.2023.107863.
- [37] C. Veliathur Chinnasamy Srinivasan, P. K. Soori, and F. A. Ghaith, “Techno-Economic Feasibility of the Use of Floating Solar PV Systems in Oil

- Platforms,” *Sustainability (Switzerland)*, vol. 16, no. 3, 2024, doi: 10.3390/su16031039.
- [38] S. Semeskandeh, M. Hojjat, and M. Hosseini Abardeh, “Techno-economic-environmental comparison of floating photovoltaic plant with conventional solar photovoltaic plant in northern Iran,” *Clean Energy*, vol. 6, no. 2, pp. 1118–1126, 2022, doi: 10.1093/ce/zkac019.
- [39] K. Kunaifi, A. Reinders, D. Kaharudin, A. Harmanto, and K. Mudiarto, “A Comparative Performance Analysis of a 1 MW CIS PV System and a 5 kW Crystalline-Si PV System under the Tropical Climate of Indonesia,” *IJTech*, vol. 10, no. 6, p. 1082, Nov. 2019, doi: 10.14716/ijtech.v10i6.3612.
- [40] M. Almadhhachi, I. Seres, and I. Farkas, “Comparison of the Efficiency of Polycrystalline and Thin-Film Photovoltaic Outdoors,” *EJENERGY*, vol. 2, no. 2, pp. 9–12, Mar. 2022, doi: 10.24018/ejenergy.2022.2.2.43.
- [41] O. Ayadi, R. Shadid, A. Bani-Abdullah, M. Alrbai, M. Abu-Mualla, and N. Balah, “Experimental comparison between Monocrystalline, Polycrystalline, and Thin-film solar systems under sunny climatic conditions,” *Energy Reports*, vol. 8, pp. 218–230, Nov. 2022, doi: 10.1016/j.egy.2022.06.121.
- [42] G. A. Thopil, C. E. Sachse, J. Lalk, and M. S. Thopil, “Techno-economic performance comparison of crystalline and thin film PV panels under varying meteorological conditions: A high solar resource southern hemisphere case,” *Applied Energy*, vol. 275, p. 115041, Oct. 2020, doi: 10.1016/j.apenergy.2020.115041.
- [43] L. A. Al-Essa, M. Muhammad, M. H. Tahir, B. Abba, J. Xiao, and F. Jamal, “A New Flexible Four Parameter Bathtub Curve Failure Rate Model, and Its Application to Right-Censored Data,” *IEEE Access*, vol. 11, no. May, pp. 50130–50144, 2023, doi: 10.1109/ACCESS.2023.3276904.
- [44] L. A. Al-Essa, M. Muhammad, M. H. Tahir, B. Abba, J. Xiao, and F. Jamal, “A New Flexible Four Parameter Bathtub Curve Failure Rate Model, and Its Application to Right-Censored Data,” *IEEE Access*, vol. 11, no. May, pp. 50130–50144, 2023, doi: 10.1109/ACCESS.2023.3276904.
- [45] J. SOLAR, “Tiger Neo N-type 72HL4-BDV 550-570 Watt,” 2018.
- [46] Task 13 Reliability and Performance of Photovoltaic Systems, “Guidelines for Operation and Maintenance of Photovoltaic Power Plants in Different Climates,” International Energy Agency Photovoltaic Power System Programme, 2022.
- [47] S. Gulkowski, “Long-Term Energy Yield Analysis of the Rooftop PV System in Climate Conditions of Poland,” 2024.
- [48] S. Gulkowski, “Specific Yield Analysis of the Rooftop PV Systems Located in South-Eastern Poland,” *Energies*, vol. 15, no. 10, p. 3666, May 2022, doi: 10.3390/en15103666.
- [49] O. Access, “Calculating the energy capacity and capacity factor of floating photovoltaic ( FPV ) power plant in the cirata reservoir using different types of solar panels Calculating the energy capacity and capacity factor of floating photovoltaic ( FPV ) power plant”, doi: 10.1088/1742-6596/2498/1/012007.
- [50] N. Manoj Kumar, S. Chakraborty, S. Kumar Yadav, J. Singh, and S. S. Chopra, “Advancing simulation tools specific to floating solar photovoltaic systems –

- Comparative analysis of field-measured and simulated energy performance,” *Sustainable Energy Technologies and Assessments*, vol. 52, p. 102168, Aug. 2022, doi: 10.1016/j.seta.2022.102168.
- [51] I. Jamil, H. Lucheng, S. Habib, M. Aurangzeb, A. Ali, and E. M. Ahmed, “Performance Ratio Analysis Based on Energy Production for Large-Scale Solar Plant,” *IEEE Access*, vol. 10, pp. 5715–5735, 2022, doi: 10.1109/ACCESS.2022.3141755.
- [52] S. Thotakura *et al.*, “Case Studies in Thermal Engineering Operational performance of megawatt-scale grid integrated rooftop solar PV system in tropical wet and dry climates of India,” *Case Studies in Thermal Engineering*, vol. 18, no. February, p. 100602, 2020, doi: 10.1016/j.csite.2020.100602.
- [53] B. S. Kumar and K. Sudhakar, “Performance evaluation of 10 MW grid connected solar photovoltaic power plant in India,” *Energy Reports*, vol. 1, pp. 184–192, 2015, doi: 10.1016/j.egy.2015.10.001.
- [54] IEC, *Photovoltaic (PV) module performance testing and energy rating. Part 1, Irradiance and temperature performance measurements and power rating*, Edition 1.0. in 61853-1. Geneva, Switzerland: IEC, 2011.
- [55] A. Goswami, P. Sadhu, U. Goswami, and P. K. Sadhu, “Floating solar power plant for sustainable development: A techno-economic analysis,” *Env Prog and Sustain Energy*, vol. 38, no. 6, p. e13268, Nov. 2019, doi: 10.1002/ep.13268.
- [56] Kementrian ESDM, “Faktor Emisi Gas Rumah Kaca (GRK) Sistem Interkoneksi Ketenagalistrikan.” Kementrian ESDM, 2019.
- [57] R. A. Rohde and Z. Hausfather, “The Berkeley Earth Land/Ocean Temperature Record,” *Earth Syst. Sci. Data*, vol. 12, no. 4, pp. 3469–3479, Dec. 2020, doi: 10.5194/essd-12-3469-2020.
- [58] H. Chu *et al.*, “The Land Wet-Bulb Temperature Increases Faster Than the Sea Surface Temperature,” *Geophysical Research Letters*, vol. 51, no. 2, p. e2023GL106617, Jan. 2024, doi: 10.1029/2023GL106617.
- [59] R. Hantoro, G. Nugroho, N. Laila Hamidah, E. Septyaningrum, C. Faisal Akbar, and E. Saktya Pratama, “Assessing the impact of tilt angle and height from the water surface on the thermal behavior of floating solar photovoltaics,” *IOP Conf. Ser.: Earth Environ. Sci.*, vol. 1489, no. 1, p. 012030, Apr. 2025, doi: 10.1088/1755-1315/1489/1/012030.
- [60] F. Navarro-Serrano *et al.*, “Elevation Effects on Air Temperature in a Topographically Complex Mountain Valley in the Spanish Pyrenees,” *Atmosphere*, vol. 11, no. 6, p. 656, Jun. 2020, doi: 10.3390/atmos11060656.
- [61] T. Phan, M. Kappas, and T. Tran, “Land Surface Temperature Variation Due to Changes in Elevation in Northwest Vietnam,” *Climate*, vol. 6, no. 2, p. 28, Apr. 2018, doi: 10.3390/cli6020028.
- [62] G. System, “PVsyst - Simulation report,” 2023.
- [63] Sungrow, “Sungrow Inverter SG3125HV-30 SG3400HV-30.” 2020.
- [64] PT. PLN, “Statistik PLN 2023,” 2023.
- [65] 99.co.id, “Harga Properti Tanah Sekitar Waduk Cirata.” Accessed: Apr. 15, 2025. [Online]. Available: <https://www.99.co.id/properti/tanah-di-bandung-barat-view-bendungan-cirata-cocok-untuk-resort-1008246493>

- [66] M. in China, “Surya Solar Ponte Modular HDPE untuk Pembangkit Listrik Tenaga Surya.” Accessed: Apr. 15, 2025. [Online]. Available: [https://id.made-in-china.com/co\\_hantian-tech/product\\_HDPE-Plastic-Modular-Solar-Floating-Pontoon-for-Solar-Power-Plant\\_euohrisgy.html](https://id.made-in-china.com/co_hantian-tech/product_HDPE-Plastic-Modular-Solar-Floating-Pontoon-for-Solar-Power-Plant_euohrisgy.html)