DAFTAR PUSTAKA

Abdulameer Abbood Al-Khazzar, A., & Talib Hashim, E. (2016). *Temperature Effect on Power Drop of Different Photovoltaic Modules*. https://www.researchgate.net/publication/284970252

Abo-Khalil, A. G., Sayed, K., Radwan, A., & El-Sharkawy, I. I. A. (2023). Analysis of the PV system sizing and economic feasibility study in a grid-connected PV system. *Case Studies in Thermal Engineering*, *45*. https://doi.org/10.1016/j.csite.2023.102903

Ace Tech. (2023, Juli 28). *BESS 101: Revolutionizing the Energy Landscape with Battery Energy Storage Systems*. ACE Battery.

Al-Najjar, H., Pfeifer, C., Al Afif, R., & El-Khozondar, H. J. (2022). Performance Evaluation of a Hybrid Grid-Connected Photovoltaic Biogas-Generator Power System. *Energies*, *15*(9). https://doi.org/10.3390/en15093151

Asian Development Bank. (2018). *Handbook on Battery Energy Storage System*. https://doi.org/10.22617/TCS189791-2

Aydın, Ü., & Gezegin, C. (2024). Feasibility Study and Economic Analysis for Hydroelectric-PV Hybrid System Performed with PVsyst Software. *International Journal of Pioneering Technology and Engineering*, *3*(02), 80–85. https://doi.org/10.56158/jpte.2024.108.3.02

Azahra, A., Syahindra, K. D., Aryani, D. R., Jufri, F. H., & Ardita, I. M. (2020). Optimized configuration of photovoltaic and battery energy storage system (BESS) in an isolated grid: A case study of Eastern Indonesia. *IOP Conference Series: Earth and Environmental Science*, *599*(1). https://doi.org/10.1088/1755-1315/599/1/012017

Beaty, H. Wayne. (2001). *Handbook of Electric Power Calculations*. McGraw-Hill.

Bellini, E. (2022, Maret 29). Designs for solar+storage+hydrogen systems in buildings. *PV Magazine*. https://www.pv-magazine.com/2022/03/29/designs-for-solarstoragehydrogen-systems-in-buildings/

Bhatia, A. (2022). *Design and Sizing of Solar Photovoltaic Systems Credit: 8 PDH*. www.cedengineering.com

Borah, P., Micheli, L., & Sarmah, N. (2023). Analysis of Soiling Loss in Photovoltaic Modules: A Review of the Impact of Atmospheric Parameters, Soil Properties, and Mitigation Approaches. Dalam *Sustainability (Switzerland)* (Vol. 15, Nomor 24). Multidisciplinary Digital Publishing Institute (MDPI). https://doi.org/10.3390/su152416669

Chen, H., Cong, T. N., Yang, W., Tan, C., Li, Y., & Ding, Y. (2009). Progress in electrical energy storage system: A critical review. Dalam *Progress in Natural Science* (Vol. 19, Nomor 3, hlm. 291–312). Science Press. https://doi.org/10.1016/j.pnsc.2008.07.014

Cole, W., & Frazier, A. W. (2019). *Cost Projections for Utility-Scale Battery Storage*. https://www.nrel.gov/docs/fy19osti/73222.pdf

Correa-Guamán, A., Moreno-Salazar, A., Paccha-Soto, D., & Jaramillo-Fierro, X. (2025). Impact of Azimuth Angle on Photovoltaic Energy Production: Experimental Analysis in Loja, Ecuador. *Energies*, *18*(8). https://doi.org/10.3390/en18081998

De Vries, H., Nguyen, T. T., & Op Het Veld, B. (2015). Increasing the cycle life of lithium ion cells by partial state of charge cycling. *Microelectronics Reliability*, *55*(11), 2247–2253. https://doi.org/10.1016/j.microrel.2015.08.014

Dierauf, T., Growitz, A., Kurtz, S., Becerra, J. L., Fichtner, C., Riley, E., & Hansen, C. (2013). *Weather-Corrected Performance Ratio*. http://www.osti.gov/bridge

Divya, K. C., & Østergaard, J. (2009). Battery energy storage technology for power systems-An overview. Dalam *Electric Power Systems Research* (Vol. 79, Nomor 4, hlm. 511–520). https://doi.org/10.1016/j.epsr.2008.09.017

Doan, N. Q., Shahid, S. M., Duong, T. M., Choi, S. J., & Kwon, S. (2024). Extending the BESS Lifetime: A Cooperative Multi-Agent Deep Q Network Framework for a Parallel-Series Connected Battery Pack. *Energies*, *17*(18). https://doi.org/10.3390/en17184604

Dolatabadi, M., Seyednouri, S., Hasselström, A., Safari, A., & Farrokhifar, M. (2024). Energy storage device sizing and energy management in building-applied photovoltaic systems considering battery degradation. *IET Renewable Power Generation*, *18*(1), 30–47. https://doi.org/10.1049/rpg2.12894

Dubey, S., Sarvaiya, J. N., & Seshadri, B. (2013). Temperature dependent photovoltaic (PV) efficiency and its effect on PV production in the world - A review. *Energy Procedia*, *33*, 311–321. https://doi.org/10.1016/j.egypro.2013.05.072

Duffie, J. A. ., & Beckman, W. A. . (2013). *Solar engineering of thermal processes* (4th Edition). Wiley.

Eurek, K., Murphy, C., Cole, W., Frazier, W., Brown, P., & Schleifer, A. (2021). *Representing DC-Coupled PV+Battery Hybrids in a Capacity Expansion Model*. www.nrel.gov/publications.

European Union. (2024). DIRECTIVES Journal (EU) - The Promotion of the Use of Energy From Renewable Sources. *European Union*. https://eur-lex.europa.eu/eli/dir/2018/2001/oj

Feldman, D., Ramasamy, V., Fu, R., Ramdas, A., Desai, J., & Margolis, R. (2020). *U.S. Solar Photovoltaic System and Energy Storage Cost Benchmark: Q1 2020*. www.nrel.gov/publications.

Fitri Dwi Kartikasari, Elieser Tarigan, Fenny Irawati, Maya Hilda Lestari Louk, Susana Limanto, & Endah Asmawati. (2023). Optimal solar panel tilt angle calculation and simulation in Indonesia: A Liu and Jordan sky isotropic model-based approach. *International Journal of Science and Research Archive*, *9*(2), 116–121. https://doi.org/10.30574/ijsra.2023.9.2.0517

Gholami, M., Marzouk, E. R., & Muyeen, S. M. (2025). Towards a self-powering greenhouse using semi-transparent PV: Utilizing hybrid BESS-hydrogen energy storage system. *Journal of Energy Storage*, *106*, 114904. https://doi.org/10.1016/j.est.2024.114904

Ghosh, A. (2025). Solar-Powered Green Hydrogen from Electrolyzer (PV-H $_2$): A Review. *Solar RRL*, *9*(14). https://doi.org/10.1002/solr.202500150

Global Solar Atlas. (2025). *GSA_Report_-07.16455°, 112.660592°-2*. https://www.globalsolaratlas.info/detail?c=-7.163916,112.660332,11&s=-7.164544,112.66061&m=site&pv=ground,0,12,1000

Goel, S., & Sharma, R. (2021). Analysis of measured and simulated performance of a grid-connected PV system in eastern India. *Environment, Development and Sustainability*, *23*(1), 451–476. https://doi.org/10.1007/s10668-020-00591-7

Green, M. A. . (1982). *Solar cells : operating principles, technology, and system applications*. Prentice-Hall.

Grigoriev, S. A., Fateev, V. N., Bessarabov, D. G., & Millet, P. (2020). Current status, research trends, and challenges in water electrolysis science and technology. *International Journal of Hydrogen Energy*, *45*(49), 26036–26058. https://doi.org/10.1016/j.ijhydene.2020.03.109

Guerrero, I., Del Cañizo, C., & Yu, Y. (2025). Accuracy of PVSyst Simulations in the Reproduction of the Yield Performance of Multicrystalline, Monocrsytalline and Monocasting Modules in Outdoor Conditions. *SiliconPV Conference Proceedings*, *2*. https://doi.org/10.52825/siliconpv.v2i.1299

Gursoy, M., & Dincer, I. (2025). A novel solar energy-based hydrogen generator integrated with battery storage. *Energy*, *330*. https://doi.org/10.1016/j.energy.2025.136824

Hasan, M., & Serra Altinoluk, H. (2023). Current and future prospective for battery controllers of solar PV integrated battery energy storage systems. Dalam *Frontiers in Energy Research* (Vol. 11). Frontiers Media S.A. https://doi.org/10.3389/fenrg.2023.1139255

IEA. (2022). *Global Hydrogen Review 2022*. https://www.iea.org/reports/global-hydrogen-review-2022/executive-summary

International Energy Agency. (2022). *World Energy Outlook 2022*. https://www.iea.org/reports/world-energy-outlook-2022?language=es

International Energy Agency. (2023). *Global Hydrogen Review 2023*. www.iea.org

International Energy Agency. (2024). *Renewables 2024*. https://www.iea.org/reports/renewables-2024

IRENA. (2020). *Green Hydrogen : A Guide to Policy Making* (IRENA, Ed.). International Renewable Energy Agency. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2020/Nov/IRENA_Green_hydrogen_policy_2020.pdf

Ishii, T. (2024). Annual degradation rates and soiling losses of photovoltaic systems composed of recent crystalline silicon technologies in temperate climate. *Engineering Reports*, *6*(11). https://doi.org/10.1002/eng2.12937

Jahn, U., Herteleer, B., Tjengdrawira, C., & Tsanakas, I. (2022). *Guidelines for Operation and Maintenance of Photovoltaic Power Plants in Different Climates 2022 PVPS Task 13 Reliability and Performance of Photovoltaic Systems* (U. Jahn, Ed.). IEA. https://iea-pvps.org/research-tasks/performance-operation-and-reliability-of-photovoltaic-systems/.

Kementrian ESDM. (2020). *Laporan Statistik EBTKE 2020*. https://www.esdm.go.id/assets/media/content/content-laporan-kinerja-ditjen-ebtke-2020.pdf

Kementrian ESDM. (2021). Peta Jalan Energi Surya Indonesia. *Direktorat Jenderal Energi Baru Terbarukan dan Konservasi Energi*.

KESDM. (2019). *Faktor Emisi GRK Sistem Ketenagalistrikan Tahun 2019*. https://gatrik.esdm.go.id/frontend/download_index/?kode_category=emisi_pl

Kesküla, A., Grjaznov, K., Sepp, T., & Allik, A. (2025). Optimal Sizing of Residential PV and Battery Systems Under Grid Export Constraints: An Estonian Case Study. *Energies*, *18*(16). https://doi.org/10.3390/en18164405

Komrit, S., & Zabihian, F. (2023). Comparative analyses of solar photovoltaic, wind turbine, and solar photovoltaic and wind turbine hybrid systems: Case study of Thailand. *Energy Conversion and Management*, *293*. https://doi.org/10.1016/j.enconman.2023.117479

Lillo-Bravo, I., González-Martínez, P., Larrañeta, M., & Guasumba-Codena, J. (2018). Impact of energy losses due to failures on photovoltaic plant energy balance. *Energies*, *11*(2). https://doi.org/10.3390/en11020363

Lubis, F. B. (2025). *ANALISIS FEASIBILITY KOMBINASI SOLAR PANEL - ITB* [Institut Teknologi Bandung]. https://digilib.itb.ac.id/gdl/view_data/analisis-feasibility-kombinasi-solar-panel-dan-hydrogen-sebagai-sumber-energi-terbarukan/Franciska?rows=4&per_page=5

Lyckstrom, A. (2023). *Siemens AG Hydrogen-in-gas-turbines*. https://p3.aprimocdn.net/siemensenergy/7edc8872-2941-4d04-bf81-b0dc00e171a3/026_027mps0523_Hydrogen-in-gas-turbines-pdf_Original%20file.pdf

Menezes, A. V., Vieira Filho, J. de A. A., & Macedo, W. N. (2025). Challenges and Opportunities in ILR Selection for Photovoltaic System: Evaluation in Brazilian Cities. *Energies*, *18*(9). https://doi.org/10.3390/en18092203

Merei, G., Moshövel, J., Magnor, D., & Sauer, D. U. (2016). Optimization of self-consumption and techno-economic analysis of PV-battery systems in commercial applications. *Applied Energy*, *168*, 171–178. https://doi.org/10.1016/j.apenergy.2016.01.083

Messenger, R. A., & Abtahi, A. (2018). *Photovoltaic Systems Engineering*. CRC Press. https://doi.org/10.1201/9781315218397

Meteonorm. (2025). *Meteonorm*. https://meteonorm.com/climate/

Ngoy, K. R., Lukong, V. T., Yoro, K. O., Makambo, J. B., Chukwuati, N. C., Ibegbulam, C., Eterigho-Ikelegbe, O., Ukoba, K., & Jen, T. C. (2025). Lithium-ion batteries and the future of sustainable energy: A comprehensive review. Dalam *Renewable and Sustainable Energy Reviews* (Vol. 223). Elsevier Ltd. https://doi.org/10.1016/j.rser.2025.115971

Nurjanah, S., Dewi, T., & Rusdianasari. (2021). Dusting and Soiling Effect on PV Panel Performance: Case Study Open-pit Mining in South Sumatra, Indonesia. *Proceedings - IEIT 2021: 1st International Conference on Electrical and Information Technology*, 251–256. https://doi.org/10.1109/IEIT53149.2021.9587351

Ollas, P., Thiringer, T., Persson, M., & Markusson, C. (2023). Battery loss prediction using various loss models: A case study for a residential building. *Journal of Energy Storage*, *70*. https://doi.org/10.1016/j.est.2023.108048

Ong, S., Campbell, C., Denholm, P., Margolis, R., & Heath, G. (2013). *Land-Use Requirements for Solar Power Plants in the United States*. www.nrel.gov/publications.

Philipps, S., & Warmuth, W. (2025). *Photovoltaics Report*.

PVsyst. (2025). *PVsyst Help Documentation*. PVsyst SA. https://www.pvsyst.com/help/

Reda, I., & Andreas, A. (2004). Solar position algorithm for solar radiation applications. *Solar Energy*, *76*(5), 577–589. https://doi.org/10.1016/j.solener.2003.12.003

Rendroyoko, I., Sinisuka, N. I., Debusschere, V., Koesrindartoto, D. P., & Yasirroni, M. (2024). Integration of Solar Photovoltaic Plant in the Eastern Sumba Microgrid Using Unit Commitment Optimization. *Sustainability (Switzerland)*, *16*(1). https://doi.org/10.3390/su16010336

Reza, M. S., Fattah, I. M. R., Wang, J., Hannan, M. A., Zainal, B. S., Ong, H. C., & Mahlia, T. M. I. (2026). Hydrogen-based hybrid energy system: A review of technologies, optimization approaches, objectives, constraints, applications, and outstanding issues. Dalam *Renewable and Sustainable Energy Reviews* (Vol. 226). Elsevier Ltd. https://doi.org/10.1016/j.rser.2025.116192

Rianto, H., & Wahyu Adi, T. (2024). ANALISA KEEKONOMIAN DAN OPTIMALISASI SISTEM PEMBANGKIT LISTRIK HYBRID TENAGA DIESEL, TENAGA SURYA DAN TENAGA HYDROGEN PADA PULAU SEBESI PROPINSI LAMPUNG. *Action Research Literate*, *8*(11). https://arl.ridwaninstitute.co.id/index.php/arl

Sangster, A. J. (2014). *International Journal of Renewable and Sustainable Energy 2014; X(X): XX-XX Engineering the early demise of fossil fuels*. https://doi.org/10.11648/j.ijrse.20140306.11

Skoplaki, E., & Palyvos, J. A. (2009). On the temperature dependence of photovoltaic module electrical performance: A review of efficiency/power correlations. *Solar Energy*, *83*(5), 614–624. https://doi.org/10.1016/j.solener.2008.10.008

Sukumaran, S., Sudhakar, K., Yusop, A. F., Kirpichnikova, I., & Cuce, E. (2022). Solar farm: siting, design and land footprint analysis. *International Journal of Low-Carbon Technologies*, *17*, 1478–1491. https://doi.org/10.1093/ijlct/ctac107

Syahputra, E., Fajarin, R. A., & Setiawan, E. A. (2018). Characteristic analysis of photovoltaic on-grid system in tropical region for weather-corrected performance ratio calculation method implementation. *E3S Web of Conferences*, *67*. https://doi.org/10.1051/e3sconf/20186701025

Tejero-Gómez, J. A., & Bayod-Rújula, Á. A. (2024). Sizing of Battery Energy Storage Systems for Firming PV Power including Aging Analysis. *Energies*, *17*(6). https://doi.org/10.3390/en17061485

Trina Solar. (2022). *Vertex Backsheet Monocrystalline Module - Datasheet*. www.trinasolar.com

Walichnowska, P., Kruszelnicka, W., Tomporowski, A., & Mroziński, A. (2025). The Impact of Energy Storage on the Efficiency of Photovoltaic Systems and Determining the Carbon Footprint of Households with Different Electricity Sources. *Sustainability (Switzerland)*, *17*(6). https://doi.org/10.3390/su17062765

Yang, T., Yan, X., Cai, W., Luo, H., Xu, N., Tong, L., Yan, F., Chahine, R., & Xiao, J. (2024). Parametric Study and Optimization of Hydrogen Production Systems Based on Solar/Wind Hybrid Renewable Energies: A Case Study in Kuqa, China. *Sustainability (Switzerland)*, *16*(2). https://doi.org/10.3390/su16020896

Zhang, W., Gong, T., Ma, S., Zhou, J., & Zhao, Y. (2021). Study on the influence of mounting dimensions of pv array on module temperature in open-joint photovoltaic ventilated double-skin façades. *Sustainability (Switzerland)*, *13*(9). https://doi.org/10.3390/su13095027