

DAFTAR PUSTAKA

- [1] Kementerian Energi dan Sumber Daya Mineral, *Rencana Usaha Penyediaan Tenaga Listrik PT. PLN (Persero) Tahun 2018 s.d. 2027*. Jakarta: Kementerian Energi dan Sumber Daya Mineral, 2018.
- [2] S. Kumar, "Assessment of renewables for energy security and carbon mitigation in Southeast Asia: The case of Indonesia and Thailand," *Appl. Energy*, vol. 163, pp. 63–70, 2016, doi: 10.1016/j.apenergy.2015.11.019.
- [3] W. W. Purwanto *et al.*, "Multi-objective optimization model for sustainable Indonesian electricity system: Analysis of economic, environment, and adequacy of energy sources," *Renew. Energy*, vol. 81, pp. 308–318, 2015, doi: 10.1016/j.renene.2015.03.046.
- [4] H. Lund, "Renewable energy strategies for sustainable development," *Energy*, vol. 32, no. 6, pp. 912–919, 2007, doi: 10.1016/j.energy.2006.10.017.
- [5] K. I. Muttaqien, "Perencanaan Pengembangan Pembangkit Sistem Jawa-Bali Menggunakan Model Optimasi OSeMOSYS," Universitas Gadjah Mada, Yogyakarta, 2017.
- [6] A. Z. Khan, S. Yingyun, and A. Ashfaq, "Generation expansion planning considering externalities for large scale integration of renewable energy," *2014 IEEE Int. Conf. Intell. Energy Power Syst. IEPS 2014 - Conf. Proc.*, pp. 135–140, 2014, doi: 10.1109/IEPS.2014.6874165.
- [7] N. E. Koltsaklis and A. S. Dagoumas, "State-of-the-art generation expansion planning: A review," *Appl. Energy*, vol. 230, no. September, pp. 563–589, 2018, doi: 10.1016/j.apenergy.2018.08.087.
- [8] Secretariat General National Energy Council, *Indonesia Energy Outlook 2019*. Jakarta: Ministry of Energy and Mineral Source, 2019.
- [9] Q. Chen, C. Kang, Q. Xia, and J. Zhong, "Power generation expansion planning model towards low-carbon economy and its application in china," *IEEE Trans. Power Syst.*, vol. 25, no. 2, pp. 1117–1125, 2010, doi: 10.1109/TPWRS.2009.2036925.
- [10] K. Handayani, Y. Krozer, and T. Filatova, "Trade-offs between electrification and climate change mitigation: An analysis of the Java-Bali power system in Indonesia," *Appl. Energy*, vol. 208, no. August, pp. 1020–1037, 2017, doi: 10.1016/j.apenergy.2017.09.048.
- [11] The World Bank, "Indonesia and Climate Change: Current Status and Policies," 2007.

- [12] Presiden Republik Indonesia, *Peraturan Presiden Republik Indonesia No. 61 Tahun 2011 Tentang Rencana Aksi Nasional Penurunan Emisi Gas Rumah Kaca*. Indonesia, 2011.
- [13] Kementerian Hukum dan Hak Asasi Manusia, *UU No.16 Tahun 2016 Tentang Pengesahaan Paris Agreement to The United Nations Framework Convention on Climate Change*. Indonesia, 2016.
- [14] Y. Zhan, Q. P. Zheng, J. Wang, and P. Pinson, "Generation Expansion Planning With Large Amounts of Wind Power via Decision-Dependent Stochastic Programming," *IEEE Trans. Power Syst.*, vol. 32, no. 4, pp. 3015–3026, Jul. 2017, doi: 10.1109/TPWRS.2016.2626958.
- [15] S. Pereira, P. Ferreira, and A. I. F. Vaz, "Generation expansion planning with high share of renewables of variable output," *Appl. Energy*, vol. 190, pp. 1275–1288, 2017, doi: 10.1016/j.apenergy.2017.01.025.
- [16] Presiden Republik Indonesia, *Peraturan Pemerintah Republik Indonesia No. 79 Tahun 2014 Tentang Kebijakan Energi Nasional*. 2014.
- [17] Lembaga Kerjasama Fakultas Teknik Universitas Gadjah Mada, "Penyusunan Kajian Masterplan Kelistrikan Sulawesi," Yogyakarta, 2018.
- [18] Sekretariat Jendral Dewan Energi Nasional, *Outlook Energi Indonesia 2016*. Jakarta: Dewan Energi Nasional, 2016.
- [19] L. JAPAN INTERNATIONAL COOPERATION AGENCY NIPPON KOEI CO., "Project for the Master Plan Study of Hydropower Development in Indonesia," vol. II, no. August, 2011.
- [20] W. Shengyu, C. Lu, Y. Xiaoqing, and Y. Bo, "Long-term generation expansion planning under uncertainties and fluctuations of multi-type renewables," *Int. Conf. Power Eng. Energy Electr. Drives*, vol. 2015-Sept, pp. 612–616, 2015, doi: 10.1109/PowerEng.2015.7266387.
- [21] T. I. Putrisia, "Perencanaan Sistem Pembangkitan untuk Wilayah Sulawesi dengan Menggunakan OSeMOSYS," Universitas Gadjah Mada, 2017.
- [22] T. Luz, P. Moura, and A. de Almeida, "Multi-objective power generation expansion planning with high penetration of renewables," *Renew. Sustain. Energy Rev.*, vol. 81, no. November 2016, pp. 2637–2643, 2018, doi: 10.1016/j.rser.2017.06.069.
- [23] E. Y. Pramono and S. Isnandar, "Criteria for integration of intermittent renewable energy to the Java Bali Grid," in *2017 International Conference on High Voltage Engineering and Power Systems (ICHVEPS)*, Oct. 2017, pp. 91–94, doi: 10.1109/ICHVEPS.2017.8225919.

- [24] M. A. Rosyied, "Evaluasi Penetrasi Pembangkit Energi Baru Terbarukan Intermittent pada Sistem Kelistrikan Jawa-Bali," Universitas Gadjah Mada, 2018.
- [25] B. S. Palmintier and M. D. Webster, "Impact of Operational Flexibility on Electricity Generation Planning with Renewable and Carbon Targets," *IEEE Trans. Sustain. Energy*, vol. 7, no. 2, pp. 672–684, 2016, doi: 10.1109/TSTE.2015.2498640.
- [26] J. Wu *et al.*, "Study on medium and long-term generation expansion planning method considering the requirements of green low-carbon development," *Asia-Pacific Power Energy Eng. Conf. APPEEC*, vol. 2018-Octob, pp. 689–694, 2018, doi: 10.1109/APPEEC.2018.8566580.
- [27] Y. Wang *et al.*, "Planning and operation method of the regional integrated energy system considering economy and environment," *Energy*, vol. 171, pp. 731–750, 2019, doi: 10.1016/j.energy.2019.01.036.
- [28] R. F. S. Budi and Suparman, "Studi Perencanaan Pengembangan Pembangkit Wilayah Bangka Belitung dengan Opsi Nuklir," *Pros. Semin. Nas. Pengemb. Energi Nukl. IV*, vol. IV, pp. 11–14, 2011, doi: 10.4103/1110.
- [29] H. Saboori and R. Hemmati, "Considering carbon capture and storage in electricity generation expansion planning," *IEEE Trans. Sustain. Energy*, vol. 7, no. 4, pp. 1371–1378, 2016, doi: 10.1109/TSTE.2016.2547911.
- [30] R. F. S. Budi, "Optimasi Pengembangan Pembangkit Sistem Kelistrikan Jawa-Madura-Bali Menggunakan Game Theory : Multi-Period Framework, Bi-Level, dan Multi-Objective Optimization Method," Universitas Gadjah Mada, Yogyakarta, 2017.
- [31] J. Aghaei, M. A. Akbari, A. Roosta, and A. Baharvandi, "Multiobjective generation expansion planning considering power system adequacy," *Electr. Power Syst. Res.*, vol. 102, pp. 8–19, 2013, doi: 10.1016/j.epsr.2013.04.001.
- [32] N. Becker, D. Soloveitchik, and M. Olshansky, "Incorporating environmental externalities into the capacity expansion planning: An Israeli case study," *Energy Convers. Manag.*, vol. 52, no. 7, pp. 2489–2494, 2011, doi: 10.1016/j.enconman.2011.02.011.
- [33] V. Oree, S. Z. Sayed Hassen, and P. J. Fleming, "Generation expansion planning optimisation with renewable energy integration: A review," *Renew. Sustain. Energy Rev.*, vol. 69, no. December 2016, pp. 790–803, 2017, doi: 10.1016/j.rser.2016.11.120.
- [34] B. Canizes, J. Soares, F. Lezama, C. Silva, Z. Vale, and J. M. Corchado, "Optimal expansion planning considering storage investment and seasonal

- effect of demand and renewable generation,” *Renew. Energy*, vol. 138, pp. 937–954, 2019, doi: 10.1016/j.renene.2019.02.006.
- [35] R. Billinton and R. N. Allan, *Reliability Evaluation of Power Systems*, Second Edi. New York: Plenum Press, 1996.
- [36] P. Denholm, E. Ela, B. Kirby, and M. Milligan, “The role of energy storage with renewable electricity generation,” *Energy Storage Issues Appl.*, no. January, pp. 1–58, 2011.
- [37] A. Castillo and D. F. Gayme, “Grid-scale energy storage applications in renewable energy integration: A survey,” *Energy Convers. Manag.*, vol. 87, pp. 885–894, 2014, doi: 10.1016/j.enconman.2014.07.063.
- [38] D. O. Akinyele and R. K. Rayudu, “Review of energy storage technologies for sustainable power networks,” *Sustain. Energy Technol. Assessments*, vol. 8, pp. 74–91, 2014, doi: 10.1016/j.seta.2014.07.004.
- [39] H. L. Ferreira, R. Garde, G. Fulli, W. Kling, and J. P. Lopes, “Characterisation of electrical energy storage technologies,” *Energy*, vol. 53, pp. 288–298, 2013, doi: 10.1016/j.energy.2013.02.037.
- [40] P. R. Mara, Sarjiya, L. M. Putranto, and M. Yasirroni, “Determination of maximum grid-connected photovoltaic penetration level based on unit commitment solution,” *International Journal on Electrical Engineering and Informatics*, vol. 11, no. 3, pp. 610–621, 2019, doi: 10.15676/ijeei.2019.11.3.11.
- [41] S. Sen and D. P. Kothari, “Optimal thermal generating unit commitment: a review,” *Int. J. Electr. Power Energy Syst.*, vol. 20, no. 7, pp. 443–451, Oct. 1998, doi: 10.1016/S0142-0615(98)00013-1.
- [42] Kementerian Energi dan Sumber Daya Mineral Republik Indonesia, *Rencana Usaha Penyediaan Tenaga Listrik PT. PLN (Persero) 2018-2027*. Jakarta, 2018.
- [43] Kementerian Energi dan Sumber Daya Mineral, “Indonesia Energy Outlook 2010,” p. 176, 2010.
- [44] Sekretariat Perusahaan PT PLN (Persero), “Statistik PLN 2017,” p. 104, 2018.
- [45] R. Z. Aldover and B. Prasetyo, “Indonesia : Microturbine Cogeneration Technology Application Project (MCTAP),” *Termin. Eval. Rep.*, no. July, 2014.
- [46] K. Mongird *et al.*, “Energy Storage Technology and Cost Characterization Report,” *Pnnl*, no. July, 2019, [Online]. Available:

[https://www.energy.gov/sites/prod/files/2019/07/f65/Storage Cost and Performance Characterization Report_Final.pdf](https://www.energy.gov/sites/prod/files/2019/07/f65/Storage_Cost_and_Performance_Characterization_Report_Final.pdf).

- [47] NEC, “Technology Data for the Indonesian Power Sector - Catalogue for Generation and Storage of Electricity,” no. December, pp. 1–140, 2017, [Online]. Available: http://www.ea-energianalyse.dk/reports/1724_technology_data_indonesian_power_ector_dec2017.pdf.
- [48] S. R. Thangavelu, A. M. Khambadkone, and I. A. Karimi, “Long-term optimal energy mix planning towards high energy security and low GHG emission,” *Appl. Energy*, vol. 154, pp. 959–969, 2015, doi: 10.1016/j.apenergy.2015.05.087.
- [49] M. Karatayev, S. Hall, Y. Kalyuzhnova, and M. L. Clarke, “Renewable energy technology uptake in Kazakhstan: Policy drivers and barriers in a transitional economy,” *Renew. Sustain. Energy Rev.*, vol. 66, pp. 120–136, 2016, doi: 10.1016/j.rser.2016.07.057.