## Simulation models in terms of integration of the energy markets

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## **Abstract**

© Medwell Journals, 2017. Study considers to the modeling of wholesale energy markets in the context of implementation of the roadmap. We use a comprehensive simulation model to study the influence of structural factors on the development of national and regional energy. In addition, we evaluate the impact of the generating companies specifically its impact on prices, offers and sales of electric power on the market without a reaction from competitors. The results of the study are discussed in relation to the road map in energy. Our findings are also applicable to wholesale energy markets, the EU and Russia.

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## **Keywords**

Energy market, Financial instruments, Generating companies, Market strategy, Roadmap, Simulation model

## References

- [1] Ajupov, A. and T. Polteva, 2014. Handling depositary receipts for global financial markets. Life Sci. J., 11: 464-468
- [2] Ajupov, A.A., A.A. Kurilova and D.U. Ivanov, 2015. Hedging as an important component of the financial mechanism of enterprise management in the automotive cycles. Mediterr. J. Soc. Sci., 6: 45-49
- [3] Ajupov, A.A., A.A. Kurilova and I.A. Anisimova, 2015. Energy roadmap: Techno-economic content and implementation issues. Mediterr. J. Soc. Sci., 6: 30-34
- [4] Alexeev, M. and W. Pyle, 2003. A note on measuring the unofficial economy in the former Soviet republics. Econ. Transition., 11: 153-175
- [5] Borenstein, S., 2002. The trouble with electricity markets: Understanding California's restructuring disaster. J. Econ. Perspect., 16: 191-211
- [6] Capros, P. and R. Weijermars, 2012. Introduction to energy strategy reviews theme issue European energy system models. Energy Strategy Rev., 1: 71-72
- [7] Groenveld, P., 2007. Road mapping integrates business and technology. Res. Technol. Manage., 50: 49-58
- [8] Iliadis, N.A. and E. Gnansounou, 2016. Development of the methodology for the evaluation of a hydro-pumped storage power plant: Swiss case study. Energy Strategy Rev., 9: 8-17
- [9] Kahneman, D. and A. Tversky, 2000. Choices, Values and Frames. Cambridge University Press, New York, USA., Pages: 791
- [10] North, M., G. Conzelmann, V. Koritarov and C. Macal, 2002. E-laboratories: Agent-based modeling of electricity markets. Proceedings of the Conference on American Power, April 15-17, 2002, Argonne National Laboratory, Chicago, Illinois, USA., pp: 1-19

- [11] Phaal, R., L. Simonse and E.V. Ouden, 2008. Next generation road mapping for innovation planning. Intl. J. Technol. Intell. Plann., 4: 135-152
- [12] Roth, A. and I. Erev, 1995. Learning in extensive-form games: Experimental data and simple dynamic models in the intermediate term. Games Econ. Behav., 8: 164-212
- [13] Schneider, F., 2012. The shadow economy and work in the shadow: What do we not know?. Master Thesis, Johannes Kepler University Linz, Linz, Austria
- [14] Stoft, S., 2002. Power System Economics: Designing Markets for Electricity. Wiley, Hoboken, New Jersey, USA., ISBN:9780471150404, Pages: 496
- [15] Tesfatsion, L. and L.K. Judd, 2006. Handbook of Computational Economics. Vol. 2, Elsevier, North-Holland, Amsterdam, ISBN:978-0-444-51253-6
- [16] Tesfatsion, L., 2007. The AMES market package (Java): A free open-source test bed for the agent-based modeling of electricity systems. Electric Power Research Institute, Charlotte, North Carolina
- [17] Weijermars, R. and H.V. Dorssen, 2012. Energy strategy reviews: Perspective and ambition. Energy Strategy Rev., 1: 1-2
- [18] Weijermars, R., 2014. Introduction to energy strategy reviews themed issue sustainable energy system changes. Energy Strategy Rev., 2: 205-208