

SPECIAL ISSUE

ENERGY STORAGE—PART II: REALIZING THE VALUE

Edited by B. R. Chalamala, R. Guttromson, and R. D. Masiello

1052 Business Models for Deploying and Operating Energy Storage and Risk Mitigation Aspects

By R. D. Masiello, B. Roberts, and T. Sloan

|INVITED PAPER| This paper reviews the complexities of business and regulatory aspects of energy storage and discusses business models for investments to deploy and operate energy storage systems.

1065 Regulatory Policy and Markets for Energy Storage in North America

By M. Kintner-Meyer

|INVITED PAPER| This paper reviews the development of regulatory framework in the North American market for large-scale deployment of energy storage in the grid.

1073 Energy Storage Valuation Under Different Storage Forms and Functions in Transmission and Distribution Applications

By M. Kleinberg, N. S. Mirhosseini, F. Farzan, J. Hansell, A. Abrams, W. Katzenstein, J. Harrison, and M. A. Jafari

|INVITED PAPER| This paper reviews the valuation of energy storage based on economic benefits for functional applications at the transmission and distribution level.

1084 Integrating Energy Storage Devices Into Market Management Systems

By C. A. Silva-Monroy and J.-P. Watson

|INVITED PAPER| This paper presents a summary of advances in lead–acid batteries and the deployment of energy storage systems utilizing advanced lead–acid batteries for renewable energy and grid applications.

1094 Smart Grids Versus the Achilles’ Heel of Renewable Energy: Can the Needed Storage Infrastructure Be Constructed Before the Fossil Fuel Runs Out?

By W. F. Pickard

|CONTRIBUTED PAPER| This paper summarizes the need for large-scale investments in energy storage with a view on the long term wherein significant energy needs of the world are met by renewable energy sources.

1106 Corrections to “Multiband Spectrum Access: Great Promises for Future Cognitive Radio Networks”

By G. Hattab and M. Ibnkahla

DEPARTMENTS

1046 POINT OF VIEW

Nanoengineered Bioplatforms Based on DNA Origami
By J. O. Jensen, J. L. Jensen, and C. C. Chue

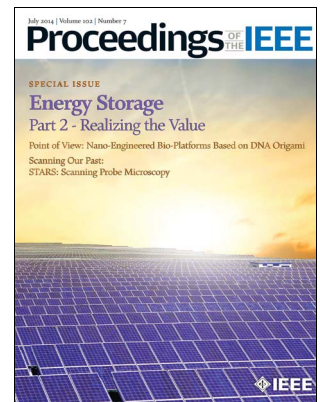
1050 SCANNING THE ISSUE

Energy Storage—Part II: Realizing the Value
By B. R. Chalamala, R. Guttromson, and R. D. Masiello

1107 SCANNING OUR PAST

STARS: Scanning Probe Microscopy
By C. C. M. Mody

1113 FUTURE SPECIAL ISSUES/SPECIAL SECTIONS



On the Cover: Our cover this month highlights a solar farm, which is a large-scale installation that uses sunlight to produce electric power.