





Special Issue Reprint

# Operation, Regulation and Planning of Power and Natural Gas Systems

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Worldwide, electricity systems are evolving to adapt to a low-carbon economy in which increasingly more renewable energy resources are being integrated. These changes, in turn, make the development of new methods, tools, and approaches to deal with the operation and planning of electricity systems necessary. On the other hand, new regulations must be developed in order to deal with a wide integration of renewable and distributed energy resources, both from a generation and a network (transmission and distribution) perspective. Furthermore, the natural gas sector is going through significant transformation related mainly to both technological advances and strategic policy decisions. While there is great uncertainty in the future of natural gas within the global energy matrix, it is clear that it will play a major role during the next years as a bridge fuel towards a decarbonized economy. In this context, natural gas systems are undergoing deep transformations, necessitating the development of new tools to operate and plan gas systems as well as new approaches to regulate them. This book, therefore, seeks to contribute to the energy transformation agenda through original contributions focused on both power and natural gas systems, addressing innovative operation and planning methods as well as regulation of both energy systems.





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