

DIE-MSG-517 Operation and Planning of Future Distribution Networks

Syllabus

Chapter 1. Introduction: conventional role of distribution companies and new challenges

- 1.1. Conventional operation and planning of distribution grids
- 1.2. New challenges and opportunities in grid planning and operation

Chapter 2. Innovative network components and grid-edge technologies

- 2.1. Innovative network components
- 2.2. Grid-edge technologies
- 2.3. Distribution operation systems

Chapter 3. Smart grid operation

- 3.1. Voltage control
- 3.2. Grid monitoring and automation
- 3.3. Islanded operation and microgrids
- 3.4. Smart metering
- 3.5. LV supervision and smart metering data applications
- 3.6. Operational planning under uncertainty

Chapter 4. Grid planning under high shares of DER

- 4.1. Impact of DER on network investments
- 4.2. Active network planning
- 4.3. Grid planning considering flexibility services