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CONTENTS

Executive Summary .................................................................................................................................... 5

I. Purpose ..................................................................................................................................................... 9

II. Definition of Grid Modernization Investments ..................................................................................... 9

III. Common Cost-Effectiveness Assessment Mechanisms ...................................................................... 11

IV. Common Cost Recovery Mechanisms ................................................................................................. 12

V. Overview of Recent U.S. Grid Modernization Investments ................................................................ 13

VI. Summary Discussion of Case Studies .................................................................................................. 16

VII. Key Takeaways .................................................................................................................................... 23

Appendix A. Case Study: Ameren Illinois’s Advanced Metering Infrastructure (AMI) Plan .............. 24
  A. Background ........................................................................................................................................... 24
  B. AMI Plan .............................................................................................................................................. 24
  C. Regulatory History .............................................................................................................................. 26
  D. Cost Benefit Analysis ......................................................................................................................... 27
  E. Cost Recovery ..................................................................................................................................... 31
  F. Current Status .................................................................................................................................... 31

Appendix B. Case Study: Austin Energy’s Austin SHINES ....................................................................... 32
  A. Background ........................................................................................................................................... 32
  B. Austin SHINES Project ...................................................................................................................... 32
  C. Regulatory History .............................................................................................................................. 34
  D. Cost Benefit Analysis ......................................................................................................................... 34
  E. Cost Recovery ..................................................................................................................................... 35
  F. Current Status .................................................................................................................................... 35

Appendix C. Case Study: Central Maine Power’s Advanced Metering Infrastructure Project ............ 37
  A. Background ........................................................................................................................................... 37
  B. AMI Project ........................................................................................................................................ 37
  C. Regulatory History .............................................................................................................................. 38
  D. Cost Benefit Analysis ......................................................................................................................... 39
  E. Cost Recovery ..................................................................................................................................... 41
  F. Current Status .................................................................................................................................... 41

Appendix D. Case Study: Commonwealth Edison’s Smart Grid Advanced Metering Infrastructure Deployment Plan ................................................................................................................................. 43
  A. Background ........................................................................................................................................... 43
  B. AMI Plan .............................................................................................................................................. 43
  C. Regulatory History .............................................................................................................................. 45
  D. Cost Benefit Analysis ......................................................................................................................... 46
  E. Cost Recovery ..................................................................................................................................... 49
  F. Current Status .................................................................................................................................... 49

Appendix E. Case Study: Duke Energy Indiana’s IVVC Project ............................................................... 50
  A. Background ........................................................................................................................................... 50
  B. IVVC Project ........................................................................................................................................ 50
  C. Regulatory History .............................................................................................................................. 51
Executive Summary

**Study Highlights**

- There is now significant experience from grid modernization investments that can be used to develop best practices.
- We reviewed 21 grid modernization initiatives, of which 10 have achieved regulatory approvals based on quantified benefits and costs. This review showed:
  - While most grid modernization efforts were initiated in response to local or state policy requirements, some were based on utility initiatives.
  - In most cases regulatory approvals were based on standardized benefit-cost tests, such as the Total Resource Cost (TRC) test; some notable examples received approvals based on less standard approaches such as break-even analysis; proof of cost prudency and foundational nature of investments for other utility initiatives to move forward.
  - Obtaining regulatory approvals took 13 months on average. Significant delays were associated with presentations of incomplete benefit-cost analysis and strong stakeholder oppositions.
  - The majority of cost recovery utilizes general rate case filings, but a number of cost recovery mechanisms rely on formula rates and rate riders to address regulatory lag. Some jurisdictions also introduced performance-based rates and performance incentive mechanisms in combination with the cost recovery of grid modernization investments.