STATE OF MINNESOTA

DISTRIBUTED GENERATION INTERCONNECTION REQUIREMENTS

TABLE OF CONTENTS

Foreword 2
1. Introduction 3
2. References 6
3. Types of Interconnections 7
4. Interconnection Issues and Technical Requirements 10
5. Generation Metering, Monitoring and Control 13
   Table 5A – Metering, Monitoring and Control Requirements 14
6. Protective Devices and Systems 17
   Table 6A – Relay Requirements 19
7. Agreements 20
8. Testing Requirements 21

Attachments: System Diagrams
   Figure 1 – Open Transition 25
   Figure 2 – Closed Transition 26
   Figure 3 – Soft Loading Transfer
              With Limited Parallel Operation 27
   Figure 4 – Soft Loading Transfer
              With Limited Parallel Operation 28
   Figure 5 – Extended Parallel
              With Transfer-Trip 29
Utility’s safety standards, required operating procedures for interconnected operations, and functions to be performed by any control and protective equipment are contained in the Technical Interconnection and Interoperability Requirements (TIIR) as adopted by the Minnesota Public Utilities Commission on November 14, 2019. As the TIIR constitutes a very large document, it is incorporated here by reference.