

ISO 37160:2020-03 (E)

Smart community infrastructure - Electric power infrastructure - Measurement methods for the quality of thermal power infrastructure and requirements for plant operations and management

| Contents | Page |
|--|-------------|
| Foreword | iv |
| Introduction | v |
| 1 Scope | 1 |
| 2 Normative references | 1 |
| 3 Terms and definitions | 1 |
| 4 Evaluation indicators for the QTPI during the operational phase | 3 |
| 4.1 QTPI..... | 3 |
| 4.2 Elements of the QTPI..... | 4 |
| 4.2.1 General..... | 4 |
| 4.2.2 Initial operation capability..... | 4 |
| 4.2.3 Supply stability..... | 4 |
| 4.2.4 Reliability (reliable operation and fast recovery)..... | 4 |
| 4.2.5 Environmental and social considerations..... | 5 |
| 4.2.6 Safety..... | 5 |
| 4.2.7 LCC..... | 5 |
| 4.2.8 Performance indicators and evaluation of the QTPI..... | 5 |
| 4.3 Evaluation indicators..... | 5 |
| 4.3.1 Supply stability..... | 5 |
| 4.3.2 Reliability (reliable operation and fast recovery): Forced outage rate (FOR)..... | 7 |
| 4.3.3 Environmental and social considerations..... | 7 |
| 4.3.4 Safety: number of injuries caused by industrial safety accidents..... | 10 |
| 4.3.5 LCC (LCC considering the five other elements of QTPI)..... | 10 |
| 5 Operation of thermal power infrastructure | 11 |
| 5.1 General..... | 11 |
| 5.2 Measurement..... | 12 |
| 5.3 Data control..... | 12 |
| 5.4 Analysis..... | 13 |
| 5.5 Response to risks and opportunities..... | 13 |
| 5.6 Operation control..... | 14 |
| 5.7 Integrated management..... | 14 |
| Annex A (informative) Example of an LCC formula considering all five other elements of QTPI | 16 |
| Bibliography | 18 |