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| **NPRR Number** | [**1163**](http://www.ercot.com/mktrules/issues/NPRR1163) | **NPRR Title** | **Related to LPGRR070, Discontinuation of Interval Data Recorder (IDR) Meter Weather Sensitivity Process** |
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| **Date** | | March 28, 2023 | |
|  | |  | |
| **Submitter’s Information** | | | |
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| **E-mail Address** | | Randy.Roberts@ercot.com | |
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| **Cell Number** | |  | |
| **Market Segment** | | Not Applicable | |

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| **Comments** |

After further discussion of Nodal Protocol Revision Request (NPRR) 1163, Related to LPGRR070, Discontinuation of Inverval Data Recorder (IDR) Meter Weather Sensitivity Process and Load Profiling Guide Revision Request (LPGRR) 070, Discontinuation of Inverval Data Recorder (IDR) Meter Weather Sensitivity Process, it was discovered that the default weather sensitivity assignment for BUSLRG and BUSLRGDG profile types as dictated by the original language modifications sponsored by ERCOT, which are Non-Weather Sensitive (NWS), do not exist. The default assignment of NWS was chosen because analysis of the weather sensitivity classification for all competitive Interval Data Recorder (IDR) Meters showed that 83% were classified as NWS. Therefore, for any new competitive IDR Meter installations, the best option for estimation is the NWS proxy day method. This issue could be resolved by ERCOT adding the NWS weather sensitivity classification for BUSLRG and BUSLRGDG profile types but that would require all Transmission and/or Distribution Service Providers (TDSPs), Retail Electric Providers (REPs) and Qualified Scheduling Entities (QSEs) (and other parties, as applicable) to also add the NWS weather sensitivity classification. Due to the large number of entities that would be required to make this change, the cost would prove to be significant.

As an alternative option that results in the exact same outcome, ERCOT proposes these comments to the original NPRR and LPGRR. These comments specify that ERCOT shall use the NWS proxy day method for BUSLRG and BUSLRGDG profile types even though their weather sensitivity classification is set to Weather Sensitive (WS).

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| **Revised Cover Page Language** | |
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| Nodal Protocol Sections Requiring Revision | 2.2, ACRONYMS AND ABBREVIATIONS  11.4.3, Interval Consumption Data Estimation  11.4.3.1, Weather Responsiveness Determination  11.4.3.2, Weather Sensitive Proxy Day Method  11.4.3.3, Non-Weather Sensitive Proxy Day Method |
| Revision Description | This Nodal Protocol Revision Request (NPRR) discontinues the process of evaluating Interval Data Recorder (IDR) Meters to determine if they are Weather Sensitive (WS), in alignment with LPGRR070. |
| Business Case | The weather sensitivity classifications Non-Weather Sensitive(NWS) or WS are only used during IDR estimation if ERCOT has not received interval data for the Operating Day. The classification of Electric Service Indentifiers (ESI IDs) with IDRs into a WS group and a (NWS) group determines the proxy day method used for estimation purposes. Since the inception of the BUSLRG and BUSLRGDG profile type codes, which allow for daily submission of interval data, there has been a significant drop in the number of IDR Meters. By the end of this year, CenterPoint plans to begin their conversion of IDR Meters to BUSLRG/BUSLRGDG profile type codes which will lead to another significant drop. The Profiling Working Group (PWG) and other retail Market Participants have discussed the development of this NPRR which reflects the conclusion that the process of evaluating IDR Meters to determine if they are WS is no longer necessary. Discontinuation of this process will allow the Transmission and/or Distribution Service Providers (TDSPs) to focus their efforts on more important matters.  Additionally, this NPRR specifies that ERCOT shall use the NWS proxy day method for BUSLRG and BUSLRGDG profile types even though their weather sensitivity classification is set to WS. |

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| Revised Proposed Protocol Language |

## 2.2 ACRONYMS AND ABBREVIATIONS

**4-CP** 4-Coincident Peak

**AAA** American Arbitration Association

**AAN** Advance Action Notice

**AASP** Average Aggregated Set Point

**ACE** Area Control Error

**ACH** Automated Clearing House

**ACL** Available Credit Limit

**ADR** Alternative Dispute Resolution

**AEIC** Association of Edison Illuminating Companies

**AGC** Automatic Generation Control

**AGR** Aggregate Generation Resource

**AIL** Aggregate Incremental Liability

**ALA** Applicable Legal Authority

**ALR** Aggregate Load Resource

**AML** Adjusted Metered Load

**AMP** Automatic Mitigation Plan

**AMS** Advanced Metering System

**ANSI** **ASC X12** American National Standards Institute Accredited Standards Committee X12

**AREP** Affiliated Retail Electric Provider

**ARR** Adjusted RPS Requirement

**ASDC** Ancillary Service Demand Curve

**AVR** Automatic Voltage Regulator

**BLT** Block Load Transfer

**BSS** Black Start Service

**CAO** Control Area Operator

**CARD** CRR Auction Revenue Distribution

**CCD+** Cash Concentration and Disbursement Plus

**CCF** Capacity Conversion Factor

**CCN** Certificate of Convenience and Necessity

**CCT** Constraint Competitiveness Test

**CEO** Chief Executive Officer

**CFC** Constant Frequency Control

**CFE** Comision Federal de Electricidad

**CFTC** Commodity Futures Trading Commission

**CIM** Common Information Model

**CMLTD** Current Maturities of Long-Term Debt

**CMP** Constraint Management Plan

**CMZ** Congestion Management Zone

**COP** Current Operating Plan

**CPS** Control Performance Standard

**CPT** Central Prevailing Time

**CR** Competitive Retailer

**CRR** Congestion Revenue Right

**CRRBA** Congestion Revenue Right Balancing Account

**CSA** Continuous Service Agreement

**CSV** Comma Separated Value

**CTX** Corporate Trade Exchange

**DAM** Day-Ahead Market

**DAS** Data Aggregation System

**DASPP** Day-Ahead Settlement Point Price

**DASWCAP** Day-Ahead System-Wide Offer Cap

**DC** Direct Current

**DC Tie** Direct Current Tie

**DCAA** Digital Certificate Audit Attestation

**DCTO** Direct Current Tie Operator

**DESR** Distribution Energy Storage Resource

**DG** Distributed Generation

**DGR** Distribution Generation Resource

**DLC** Direct Load Control

**DLF** Distribution Loss Factor

**DME** Decision Making Entity

**DRG** Distributed Renewable Generation

**DRUC** Day-Ahead Reliability Unit Commitment

**DSC** Debt Service Coverage

**DSP** Distribution Service Provider

**DSR** Dynamically Scheduled Resource

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| [NPRR1000: Delete the acronym “DSR” above upon system implementation.] |

**DUNS** Data Universal Numbering System

**DUNS #** DUNS Number

**e-Tag** Electronic Tag

**EAF** Equivalent Availability Factor

**EAL** Estimated Aggregate Liability

**EC** Electric Cooperative

**ECEII** ERCOT Critical Energy Infrastructure Information

**ECI** Element Competitiveness Index

**ECRS** ERCOT Contingency Reserve Service

**EDI** Electronic Data Interchange

**EEA** Energy Emergency Alert

**EFT** Electronic Funds Transfer

**ELSE** External Load Serving Entity

**EMMS** Energy and Market Management System

**EMS** Energy Management System

**EPRI** Electric Power Research Institute

**EPS** ERCOT-Polled Settlement

**ERCOT** Electric Reliability Council of Texas, Inc.

**ERCOT Board** The Board of Directors of the Electric Reliability Council of Texas, Inc.

**ERS** Emergency Response Service

**ESI ID** Electric Service Identifier

**ESR** Energy Storage Resource

**ESREDP** Energy Storage Resource Energy Deployment Performance

**ESS** Energy Storage System

**F&A** Finance and Audit

**FASD** First Available Switch Date

**FCE** Future Credit Exposure

**Fed** Federal

**FERC** Federal Energy Regulatory Commission

**FFR** Fast Frequency Response

**FFSS** Firm Fuel Supply Service

**FFSSR** Firm Fuel Supply Service Resource

**FGR** Flowgate Right

**FIP** Fuel Index Price

**FIS** Full Interconnection Study

**FME** Frequency Measurable Event

**FOP** Fuel Oil Price

**FPA** Federal Power Act

**FRC** Frequency Responsive Capacity

**FRR** Final RPS Requirement

**FRRS** Fast Responding Regulation Service

**FRRS-Down** Fast Responding Regulation Down Service

**FRRS-Up** Fast Responding Regulation Up Service

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| [NPRR1013: Delete the acronyms “FRRS”,” FRRS-Down”, and “FRRS-Up” above upon system implementation of the Real-Time Co-Optimization (RTC) project.] |

**GADS** Generation Availability Data System

**GREDP** Generation Resource Energy Deployment Performance

**GSU** Generator Step-Up

**GTBD** Generation To Be Dispatched

**GTC** Generic Transmission Constraint

**GTL** Generic Transmission Limit

**HASL** High Ancillary Service Limit

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| [NPRR1013: Delete the acronym “HASL” above upon system implementation of the Real-Time Co-Optimization (RTC) project.] |

**HCAP** High System-Wide Offer Cap

**HDL** High Dispatch Limit

**HE** Hour Ending

**HEL** High Emergency Limit

**HIO** High Impact Outage

**HITE** High Impact Transmission Element

**HRL** High Reasonability Limit

**HRUC** Hourly Reliability Unit Commitment

**HSL** High Sustained Limit

**HWR** High Winter Ratio

**Hz** Hertz

**IBR** Inverter-Based Resource

**ICCP** Inter-Control Center Communications Protocol

**IDR** Interval Data Recorder

**IE** Interconnecting Entity

**IEL** Initial Estimated Liability

**IGE** Induction Generator Effects

**IHLF** Intra-Hour Load Forecast

**IHPPF** Intra-Hour PhotoVoltaic Power Forecast

**IHWPF** Intra-Hour Wind Power Forecast

**IMM** Independent Market Monitor

**IMRE** Independent Market Information System Registered Entity

**IOU** Investor Owned Utility

**IPM** Independent Power Marketer

**IROL** Interconnection Reliability Operating Limit

**IRR** Intermittent Renewable Resources

**kV** Kilovolt

**kVA** Kilovolt-Ampere

**kVAr** Kilovolt-Ampere reactive

**kVArh** Kilovolt-Ampere reactive hour

**kW** Kilowatt

**kWh** Kilowatt-Hour

**LASL** Low Ancillary Service Limit

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| [NPRR1013: Delete the acronym “LASL” above upon system implementation of the Real-Time Co-Optimization (RTC) project.] |

**LCAP** Low System-Wide Offer Cap

**LDL** Low Dispatch Limit

**LEL** Low Emergency Limit

**LFC** Load Frequency Control

**LMP** Locational Marginal Price

**LPC** Low Power Consumption

**LRL** Low Reasonability Limit

**LRS** Load Ratio Share

**LSE** Load Serving Entity

**LSL** Low Sustained Limit

**MCPC** Market Clearing Price for Capacity

**MDAS** Meter Data Acquisition System

**MIS** Market Information System

**MMBtu** Million British Thermal Units

**MOC** Mitigated Offer Cap

**MOU** Municipally Owned Utility

**MPC** Maximum Power Consumption

**MPT** Main Power Transformer

**MRA** Must-Run Alternative

**MRE** Meter Reading Entity

**MTLF** Mid-Term Load Forecast

**MVA** Megavolt Ampere

**MVAr** Mega Volt-Amperes reactive

**MW** Megawatt

**MWh** Megawatt Hour

**NCBI** Notice of Change of Banking Information

**NCI** Notice of Change of Information

**NERC** North American Electric Reliability Corporation

**NESC** National Electrical Safety Code

**NFRC** Non-Frequency Responsive Capacity

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| [NPRR1013: Delete the acronym “NFRC” above upon system implementation of the Real-Time Co-Optimization (RTC) project.] |

**NIST** National Institute of Standards and Technology

**NOIE** Non-Opt-In Entity

**NOMCR** Network Operations Model Change Request

**Non-Spin** Non-Spinning Reserve

**NSA** Network Security Analysis

**NSO** Notification of Suspension of Operations

**NWS** Non-Weather Sensitive

**NWSIDR** Non-Weather Sensitive IDR

**O&M** Operations and Maintenance

**OAE** Outage Adjustment Evaluation

**OCN** Operating Condition Notice

**ORDC** Operating Reserve Demand Curve

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| [NPRR1013: Delete the acronym “ORDC” above upon system implementation of the Real-Time Co-Optimization (RTC) project.] |

**OSA** Outage Schedule Adjustment

**PCAP** Pre-Contingency Action Plan

**PCRR** Pre-Assigned Congestion Revenue Right

**PMI** Private Microgrid Island

**PNM** Peaker Net Margin

**POLR** Provider of Last Resort

**POC** Peaking Operating Cost

**POCC** Point of Common Coupling

**POI** Point of Interconnection

**POIB** Point of Interconnection Bus

**POS** Power Operating System

**PRC** Physical Responsive Capability

**PRM** Planning Reserve Margin

**PRR** Protocol Revision Request

**PRS** Protocol Revision Subcommittee

**PSS** Power System Stabilizer

**PTB** Price-to-Beat

**PTP** Point-to-Point

**PUCT** Public Utility Commission of Texas

**PURA** Public Utility Regulatory Act, Title II, Texas Utility Code

**PURPA** Public Utility Regulatory Policy Act

**PV** PhotoVoltaic

**PVGR** PhotoVoltaic Generation Resource

**PVGRPP** PhotoVoltaic Generation Resource Production Potential

**PWG** Profiling Working Group

**QF** Qualifying Facility

**QSE** Qualified Scheduling Entity

**QSGR** Quick Start Generation Resource

**RAP** Remedial Action Plan

**RAS** Remedial Action Scheme

**RDF** Reserve Discount Factor

**REC** Renewable Energy Credit

**Reg-Down** Regulation Down

**Reg-Up** Regulation Up

**REP** Retail Electric Provider

**RID** Resource ID

**RIDR** Representative IDR

**RMR** Reliability Must-Run

**RMS** Retail Market Subcommittee

**ROS** Reliability and Operations Subcommittee

**RPG** Regional Planning Group

**RPP** Renewable Production Potential

**RPS** Renewable Portfolio Standard

**RRS** Responsive Reserve

**RSASM** Reconfiguration Supplemental Ancillary Services Market

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| [NPRR1013: Delete the acronym “RSASM” above upon system implementation of the Real-Time Co-Optimization (RTC) project.] |

**RTEP** Real-Time Energy Price

**RTM** Real-Time Market

**RTSWCAP** Real-Time System-Wide Offer Cap

**RUC** Reliability Unit Commitment

**RUCAC** Reliability Unit Commitment for Additional Capacity

**SASM** Supplemental Ancillary Services Market

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| [NPRR1013: Delete the acronym “SASM” above upon system implementation of the Real-Time Co-Optimization (RTC) project.] |

**SCADA** Supervisory Control and Data Acquisition

**SCED** Security-Constrained Economic Dispatch

**SCUC** Security-Constrained Unit Commitment

**SDRAMP** SCED Down Ramp Rate

**SFT** Simultaneous Feasibility Test

**SGIA** Standard Generation Interconnection Agreement

**SMOG** Settlement Metering Operating Guide

**SODESS** Settlement Only Distribution Energy Storage System

**SODG** Settlement Only Distribution Generator

**SOESS** Settlement Only Energy Storage System

**SOG** Settlement Only Generator

**SOTESS** Settlement Only Transmission Energy Storage System

**SOTG** Settlement Only Transmission Generator

**SOTSG** Settlement Only Transmission Self-Generator

**SRR** Statewide RPS Requirement

**SSCI** Subsynchronous Control Interaction

**SSO** Subsynchronous Oscillation

**SSR** Subsynchronous Resonance

**STEC** South Texas Electric Cooperative

**STLF** Short-Term Load Forecast

**STPPF** Short-Term PhotoVoltaic Power Forecast

**STWPF** Short-Term Wind Power Forecast

**SURAMP** SCED Up Ramp Rate

**SWCAP** System-Wide Offer Cap

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| [NPRR1013: Delete the acronym “SWCAP” above upon system implementation of the Real-Time Co-Optimization (RTC) project.] |

**SWGR** Switchable Generation Resource

**T&D** Transmission and Distribution

**TAC** Technical Advisory Committee

**TDSP** Transmission and/or Distribution Service Provider

**TDTWG** Texas Data Transport Working Group

**TEPPF** Total ERCOT PhotoVoltaic Power Forecast

**TEWPF** Total ERCOT Wind Power Forecast

**TIER** Times/Interest Earning Ratio

**TGR** Transmission Generation Resource

**TLF** Transmission Loss Factor

**TMTP** Texas Market Test Plan

**TO** Transmission Operator

**TOAP** Temporary Outage Action Plan

**TOU** Time Of Use

**TOUS** Time Of Use Schedule

**TPE** Total Potential Exposure

**TSP** Transmission Service Provider

**TTPT** Texas Test Plan Team

**TUO** Total Usable Offset

**TWC** Texas Water Code

**TX SET** Texas Standard Electronic Transaction

**UDSP** Updated Desired Set Point

**UFE** Unaccounted For Energy

**UFLS** Under-Frequency Load Shed

**URL** Unit Reactive Limit

**USA** User Security Administrator

**USD** United States Dollar or U.S. Dollar

**UVLS** Under-Voltage Load Shed

**VAr** Volt-Ampere reactive

**VDI** Verbal Dispatch Instruction

**VEE** Validation, Editing and Estimating

**VSS** Voltage Support Service

**WAN** Wide Area Network

**WGR** Wind-powered Generation Resource

**WGRPP** Wind-powered Generation Resource Production Potential

**WMS** Wholesale Market Subcommittee

**WRUC** Weekly Reliability Unit Commitment

**WS** Weather Sensitive

**WSIDR** Weather Sensitive IDR

**WSL** Wholesale Storage Load

XML Extensible Markup Language

11.4.3 Interval Consumption Data Estimation

(1) ERCOT will estimate all ESI IDs with Interval Data Recorders (IDRs) for which consumption data has not been received for the Operating Day. The method for estimating interval data for ESI IDs with IDR Meters is a “Weather Response Informed Proxy Day” technique. This approach seeks to increase estimation accuracy by segmenting ESI IDs with IDR Meters into two groups based on a known indicator of Load (i.e., weather). The classification of ESI IDs with IDR Meters into a Weather Sensitive (WS) group and a Non-Weather Sensitive (NWS) group determines the proxy day method used for estimation purposes. The proxy day estimation method for each group captures the factors that best predict the ESI ID-specific Load shape for the Operating Day.

(2) The NWS proxy day method will be used for estimating interval data for IDRs where the profile type code is BUSLRG or BUSLRGDG.



(3) The WS proxy day method will be used for estimating interval data for IDRs where the profile type code is not BUSIDRRQ, BUSLRG, or BUSLRGDG.

11.4.3.2 Weather Sensitive Proxy Day Method

(1) For ESI IDs estimated as Weather Sensitive IDR (WSIDR), ERCOT will use this WS proxy day method. ESI IDs within the same Weather Zone will be grouped together. The proxy days will be the same for all ESI IDs within each of the Weather Zones. This method incorporates the following:

(a) To determine eligible proxy days, select all days (of matching weekday/weekend day type and time period) within five degrees of the maximum temperature of the target Operating Day based on the previous 365 days and then limit the selection to those days that have their maximum temperatures occurring within two hours of the maximum temperature hour of occurrence of the Operating Day. The maximum temperature separation criterion provides initial assurance that the eligible day will have a similar diurnal temperature pattern as the target Settlement Operating Day.

(b) Perform two tests on each potential proxy day identified in item (a) above:

(i) Temperature magnitude test sums the squared differences between the hourly temperatures of the target Operating Day and the hourly temperatures of the potential proxy day; and

(ii) Temperature shape test calculates the incremental change in temperature from hour to hour during the day and sums the squared differences between the corresponding values of the target Operating Day and the potential proxy day.

(c) Each potential proxy day for each test described in item (b) above is ranked in ascending order based on the sum of squared differences.

(d) A final ranking is performed with the temperature magnitude test weighted more heavily than the shape test. The weighting factors are 70% and 30%.

(e) Select the top three ranked eligible days.

(f) For each ESI ID, do the following:

(i) Use the top ranked proxy day for the target Operating Day, if available;

(ii) If the top ranked proxy day data is not available, use the second ranked proxy day data as the estimate;

(iii) If the second ranked proxy day data is not available, use the third proxy day; and

(iv) If no data is available for any of the proxy days selected, then default to the NWS proxy day method.

11.4.3.3 Non-Weather Sensitive Proxy Day Method

(1) For ESI IDs estimated as Non-Weather Sensitive IDR (NWSIDR), ERCOT will use this NWS proxy day method. This method incorporates the following:

(a) Use the most recent proxy day for which data is available as the estimate for the target Operating Day. From historical ESI ID specific interval data, choose the most recent occurrence of the appropriate day of the week (Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday) corresponding to the day of the week of the Operating Day (holidays are treated as Sundays) within the most recent 12 months of the Operating Day; or

(b) If there is no historic interval data available according to item (a) above, the IDR data will be estimated using the default profile assigned to the ESI ID for the Operating Day. If non-interval consumption data with a meter read within 12 months of the Operating Day is available, and if the ESI ID was profiled with a non-interval meter data type code within 90 days of the Operating Day, the default profile shall be estimated and/or scaled in accordance with Section 11.4.2, Non-Interval Missing Consumption Data Estimation.