

## Use Case – Create EMS Production Model

### COPS.P01 ModelManageData\_UC\_CreateEMSProductionModel\_V0.3

**Name: Create the EMS Production Model**

**Summary:**

Create the current EMS Production Model for the AREVA Production system using the NMMS software, the selected NOMCRs and SAMRs as scheduled. The output is a CIM/XML file that is generated per the RDF specification plus the ERCOTCIM extensions. The Contingency File, Dynamic Ratings File, SPS, and RAP supporting information files should also be packaged and sent with this model.

**Acronyms:**

|              |   |
|--------------|---|
| <b>ERCOT</b> | <b>Electric Reliability Council of Texas</b>                        |
| <b>MC</b>    | <b>ERCOT Model Coordinator</b>                                      |
| <b>EMS</b>   | <b>Energy Management System</b>                                     |
| <b>MP</b>    | <b>Market Participant</b>   |
| <b>NMMS</b>  | <b>Network Model Management System</b>                              |
| <b>NOMCR</b> | <b>Network Operations Model Change Request (AKA: Project Files)</b> |
| <b>MT</b>    | <b>ERCOT Model Tester (NMMS)</b>                                    |
| <b>SAMR</b>  | <b>Special Action Model Request</b>                                 |
| <b>TSP</b>   | <b>Transmission Service Provider</b>                                |

**Actor(s):**

| <b>Name</b> | <b>Role description</b>  |
|-------------|--|
| MC at ERCOT | Selects from the list of Scheduled NOMCR's and SAMRs to be included in the current EMS Production Model and creates the EMS Model for specific day(s). Attaches the companion files as required. These files include the Contingency, SPS, RAP and other supporting files. |

**Participating Systems:**

| <b>System</b>                  | <b>Services or information provided</b>  |
|--------------------------------|--|
| Energy Management System (EMS) | Receives the Model after the Case Builder completes the EMS Production Model build   |
| NMMS at ERCOT                  | <p>The MC uses the Case Builder within NMMS to build the EMS Production Model using the selected NOMCRs and SAMRs. SPS definitions, RAP definitions, and the Contingency File are also pulled and sent to the EMS Production system.</p> <p>The EMS Production Model is generated based on the CIM/XML RDF format and delivered in a CIM/XML file. The EMS Production Model build contains ERCOT extensions to the CIM schema, which are included within the generated Model file.</p> |

**Pre-conditions:**

NONE

**Design Considerations:**

- None

**Known assumptions, limitations, constraints, or variations that may affect this use case:**

- This model is generated once a day and contains all the changes that are scheduled to be energized on that date.
- Still need to define what time of day this model will be generated.

**Normal Sequence:**

| Use Case Step | Description  | From - To                | Information Content  |
|---------------|--|--------------------------|--|
| Step 1        | Based on inputs from the MC, the NMMS software inserts the selected NOMCRs and SAMRs into the Network Operations Model | (from) NMMS to (to) NMMS |  |
| Step 2        | NMMS software creates the CIM model file with ERCOT CIM extensions and sends the CIM/XML RDF file to the EMS.          | (from) NMMS to (to) MMS  | The model is in the CIM/XML RDF format and contains ERCOT CIM extensions. The package should also contain the supporting files such as Contingency files, SPS and RAP information files. |

**Exceptions / Alternate Sequences:**

NONE

**Post-conditions:**

NONE

**References:**

Use Cases referenced by this use case, or other documentation that clarifies the requirements or activities described.

- COPS.P01.ModelManageData\_UC\_ProcessContingencyDefinition

The following Standards and other documents are referenced by this case:

- IEC 61970-552-4, CIM/XML Model Exchange Format Rev6 20050505 Standard (Incremental Change Specification)
- IEC 61970-501, CIM RDF Schema
- ERCOT Nodal Protocols
- ERCOT NMMS Requirements

**Issues:**

| <b>ID</b> | <b>Description</b>   | <b>Status</b> |
|-----------|--|---------------|
| 1.        | Description of the ERCOT CIM extensions to be included in the CIM XML output | In Work       |

**Revision History:**

| <b>No</b> | <b>Date</b> | <b>Author</b> | <b>Description</b>                    |
|-----------|-------------|---------------|---------------------------------------|
| 0         |             | J. Winkel     | Initial Version                       |
| 1         | 9/10/06     | M. Goodrich   | Added comments from Crews and Moseley |
| 2         | 9/11/06     | M. Goodrich   | Added edits from NMG                  |