

## Use Case – Process Dynamic Ratings File COPS.P01ModelManageData\_UseCase\_ProcessDynamicRatings\_V0.3

**Name: Process Dynamic Rating**

**Summary:**

Send dynamic ratings to ERCOT Model Coordinator in Network Modeling Group

**Acronyms:**

<b>MC</b>	<b>ERCOT Model Coordinator</b>
<b>ERCOT</b>	<b>Electric Reliability Council of Texas</b>
<b>NOMCR</b>	<b>Network Operations Model Change Request (AKA: Project Files)</b>
<b>NMMS</b>	<b>Network Model Management System</b>
<b>NMG</b>	<b>Network Modeling Group</b>
<b>CIM</b>	<b>Common Information Model</b>
<b>MIS</b>	<b>Market Information System</b>
<b>MP</b>	<b>Market Participant</b>

**Actor(s):**

<b>Name</b>	<b>Role description</b>
ERCOT Model Coordinator (the receiving entity) – Network Modeling Group	NOMCRs containing dynamic ratings in CIM/XML format or Non-CIM file format are received by the MC and scheduled for daily build. Dynamic ratings may also be entered directly into NMMS using the graphic interface after logging into thin client. No verification is needed for dynamic ratings as they are already in verified state.
MP- TSP (the sending entity)	Send the dynamic rating NOMCR either in CIM/XML format or Non-CIM format or submit ratings directly by using the graphic interface after logging into the NMMS Thin Client.

**Participating Systems:**

<b>System</b>	<b>Services or information provided</b>
The EMS and Planning systems or third party tools at the MP.	Identify the dynamic ratings and send them to MC
The NMMS System at ERCOT	Receive Dynamic Ratings file and apply to model for daily build.

**Pre-conditions:**

The MP (TSP) can provide NOMCR – Dynamic Ratings to ERCOT using one of the following methods:

1. The MP (TSP) has access to an NMMS Thin Client and enters ratings directly into the ERCOT NMMS system.
2. The MP (TSP) can produce a CIM XML Incremental File for submission of dynamic ratings to ERCOT over a secure network connection.
3. The MP (TSP) submits the dynamic ratings in a Non-CIM file format (ERCOT specified format) over a secure network connection.

ERCOT has an existing power system model and can receive CIM XML Incremental files.

The NMMS full model has been processed such that the changes received for that model can be interpreted and inserted.

The CIM XML file produced complies with the IEC 61970-552-4 standard entitled CIM XML Model Exchange Format Rev6 20050505. This specification is located on the CIM User's Group Web Site.

### Design Considerations:

- Consistent naming conventions must be used in all descriptions of transmission elements and devices.
- Sufficient model data is provided to unequivocally identify the ratings.

### Example of a typical dynamic rating table for a line with temperatures and ratings:

Temp	Rating MVA		
	Continuous	2 hour	30 minute
0	230	255	270
5	230	255	270
10	228	248	268
15	226	244	266
20	224	242	262
25	222	240	259
30	220	238	258

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

- File format of Dynamic Rating: This is still undecided whether the MPs can submit dynamic rating in CIM/XML format or they should always use the option of logging into thin client and entering the data directly in NMMS using the graphic interface.
- Option of logging into NMMS and directly entering the ratings requires that a dynamic rating NOMCR cannot be mixed with a normal NOMCR that requires several levels of validation
- Non-CIM file format for dynamic rating may be allowed only if logging in thin client fails for some reasons. This is still under discussion
- Any Dynamic Ratings changes received via NOMCR or other request will be processed immediately and sent to the Production Model for immediate implementation.
- Currently, the number of tools that will import or export a CIM XML incremental file is limited.
- MPs capability to supply CIM XML incremental files
- CIM version used should be ERCOT CIM including its extensions

### Normal Sequence:

Use Case Step	Description	From - To	Information Content
Step 1	MP (TSP) prepares a NOMCR containing dynamic rating information  The NOMCR is sent to the MC for review, acceptance and processing.	(from) at MP (TSP) (to) MC	NOMCR for dynamic rating with Dynamic ratings file
Step 2	MC receives a NOMCR containing dynamic ratings and sends a Notification of Receipt to the sending MP (TSP) immediately	(from) MC (to) MP (TSP)	NOMCR for dynamic rating with Dynamic ratings file

Step 3	MC enters the NOMCR into the NMMS system and schedules it to be included in the daily build. No validation is needed for Dynamic Rating	MC	Dynamic rating NOMCR with Dynamic ratings file
Step 4	MC posts the NOMCR to MIS Web site within 1 Business Day of receipt of NOMCR	(from) MC (to) MIS Web-site	NOMCR containing dynamic rating file
Step 5	NMMS performs the scheduled approved build, finalizes, archives and generates report	NMMS system	Scheduled Approved Model with rating changes already applied

### Exceptions / Alternate Sequences:

None.

### Post-conditions:

Complete and error-free transfer. All dynamic ratings must be inserted into the model before the model will be used.

### References:

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

- None

The following Standards are referenced by this case:

- IEC 61970-552-4, CIM XML Model Exchange Format Rev6 20050505 Standard
- IEC 61970-501, CIM RDF Schema
- NMMS Protocols
- NMMS Requirements

### Issues:

ID	Description	Status
1.		

### Revision History:

No	Date	Author	Description
1	8/10/06	M. Sengupta	Initial version for dynamic ratings
2	8/25/06	M. Goodrich	Added Corrections and changes
3	8/25/06	M. Sengupta	Updated version, accepted changes
4	9/11/06	M. Goodrich	Added edits from NMG