

## **1306 REPORTING EQUIPMENT CHANGES**

### **1. Purpose**

This OPP sets out the policy and responsibilities for the timely reporting of equipment and facilities changes to the Alberta Electric System Operator (AESO) in order to maintain accurate system models.

### **2. Background**

The AESO is responsible for the safe, reliable and economic operation of the Alberta Interconnected Electric System (AIES), ensuring a fair, efficient and openly competitive market and providing open and non-discriminatory access to Alberta's interconnected power grid. To aid in meeting these responsibilities, the AESO requires timely and current technical information regarding equipment and facilities connected to the AIES so that it can maintain accurate system data in the Transmission Administration System Model (TASMo) and the Energy Management System (EMS). Timely and current facility technical information and the system models that represent the information are important for reliable power system operation. The information is used in determining system planning and operating limits, system transfer capabilities and operating policies and procedures.

The transmission facility owners (TFOs), generation facility owners (GFOs), distribution facility owners (DFOs), industrial system designations (ISDs) and direct customers, collectively, are referred to as facility owners in this OPP.

### **3. Policy**

- All facility owners will report to the AESO, changes in rating, capability, settings, or characteristics arising from an addition, upgrade, replacement, retirement or modification of electrical equipment connected to the AIES, 90 days before making changes except for emergency replacements. Table 1 provides a list of major equipment.
- Any generating unit equipment change that triggers a test and revalidation as per the WECC's Generating Unit Model Validation Policy Statement will require submission of an updated model validation report within 180 days of the completion of the commissioning and testing of the new equipment.
- The AESO will conduct periodic review (no less than once in two years) of TASMo data with facility owners.
- The reporting of equipment changes does not:
  - Duplicate the current process of customer interconnection and customer projects available on the AESO website (<http://www.aeso.ca/transmission/8851.html>, or [www.aeso.ca](http://www.aeso.ca) > Transmission > Connecting to the Grid > Customer Interconnections).
  - Constitute the AESO's approval of the equipment changes, upgrades or modifications.

## 4. Responsibilities

### 4.1 Facility Owners

- All facility owners will report equipment changes, specified in Section 3, to the AESO by sending the Equipment Change Control Form (Figure 1) including the facilities behind the fence (that is, behind the point of interconnection with the AIES), that were not submitted to the AESO through the project approval process referenced in Section 3.
- All facility owners will participate in a periodic review of their data conducted by the AESO. Any differences will be explained and rectified.
- The facility owners will not change settings of equipment such as AVR, PSS, excitation limits, governor and remedial action scheme (RAS), under frequency load shedding (UFLS), under voltage load shedding (UVLS), or off-load tap position of transformers without first consulting or informing ISO.
- GFO's will be required to submit an updated model validation report within 180 days of the completion of the commissioning and testing of the new equipment.

### 4.2 ISO

The ISO will:

- Conduct periodic reviews (no less than once in two years) with facility owners to verify the quality, integrity, consistency and timeliness of data in TASM<sub>o</sub>. This review will include:
  - sending TASM<sub>o</sub> data to their respective facility owners and requesting verification, or
  - requesting a report from facility owners on all of their equipment changes, specified in Section 3, or
  - providing a change list from year to year if necessary.
- Assess the effect of changes in equipment electrical characteristics and incorporate changes in loss calculations, electrical system calculations, curtailment evaluations and other studies conducted by the AESO from time to time.
- Notify neighboring balancing authorities such as BCTC, SaskPower, etc., and the Vancouver Reliability Coordinator (VRC) of major upgrades and modifications in Alberta that may affect reliability of the overall interconnected transmission system.

## 5. System Controller Procedures

None specified.

## 6. Figures and Tables

**Figure 1** (see below)

Reporting  
1306 Reporting Equipment Changes

---

**Equipment Change Control Form**

Complete this form when submitting changes to equipment ratings, settings, capabilities or characteristics arising from an upgrade, replacement, retirement or modification. All information submitted in this process will be used by the AESO solely in support of its obligations under OPP 1306. All submitted information will be assigned the appropriate confidentiality level upon receipt. The form must be authenticated by an engineer licensed to practice in Alberta. Send completed form to [technical.services@aeso.ca](mailto:technical.services@aeso.ca)

**Date:** \_\_\_\_\_

**Part 1: General Information**

Equipment \_\_\_\_\_

Facility Code \_\_\_\_\_

MP ID \_\_\_\_\_

**Main Contact**

Company \_\_\_\_\_

Name \_\_\_\_\_

Telephone \_\_\_\_\_ Fax \_\_\_\_\_

E-mail \_\_\_\_\_

**Part 2: Change Description**

Equipment Description	Element Code <sup>1</sup>	Change Type <sup>2</sup>	Change Description <sup>3</sup>	Schedule	
				From	To
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

1. Must be the same as previously submitted to the AESO, as found in TASM0. Please refer to Transmission Modeling Data Requirements [http://www.aeso.ca/downloads/TMDR\\_r0d.pdf](http://www.aeso.ca/downloads/TMDR_r0d.pdf)

2. May be either addition, upgrade, replacement, modification or retirement.

3. May be change of rating, capability, settings or characteristics.

**Part 3: Additional Documents Attached:**

Attach supporting engineering documents as appropriate, which may include:

- New or amended single-line diagrams
- Name plate drawings and manufacturer's test reports for new or replacement turbines, alternators, transformers, capacitors, reactors
- Structure lists for new or altered transmission lines
- Engineering calculations of derived characteristics
- For new equipment, the appropriate data submission form from Transmission Modeling Data Requirements, or any equivalent report covering all the data requested on the form.

**Submitted By:**

Name \_\_\_\_\_ P.Eng

Reporting  
1306 Reporting Equipment Changes

**Table 1**

List of Equipment and Facility Owners

Equipment	Facility Owners
Generators (stator and rotor capabilities and ratings) greater than or equal to 5MVA	GFO
Excitation Systems including automatic voltage regulators, power system stabilizers, limiters	GFO
Turbines (hydraulic, steam, gas and wind)	GFO
Governors	GFO
Automatic Generator controls (e.g. ramp rate limits or constraints.)	GFO
Transmission Lines and Inter-tie Facilities	TFO
Transformers connected to connected to 25 KV or higher	TFO, DFO, GFO, ISD, Direct Connect
Shunt or series Capacitors	TFO, ISD, Direct Connect
Shunt or series Reactors	TFO, ISD, Direct Connect
Static VAR Compensators	TFO, GFO
Station Service Equipment	GFO, ISD
Transmission ircuit Breakers	TFO, DFO, GFO, ISD, Direct Connect
Station Bus Configuration (e.g., bus split)	TFO, DFO, GFO, ISD
Network Configuration ( e.g., change of transmission lines network behind the fence)	TFO, GFO, ISD
Operational Controls ( change of operator, or operator is different than Facility Owner)	TFO, DFO, GFO, ISD, Direct Connect
Data Monitoring Equipment	TFO, DFO, GFO, ISD, Direct Connect
Motors rated 10 MVA or more	ISD, Direct Connect
Protection Relays and RASs (Remedial Action Schemes)	TFO, DFO,GFO, ISD
UFLS (Under-frequency Load Shedding) Relaying	TFO, DFO, ISD, Direct Connect
UVLS (Under-voltage Load Shedding) Relaying	TFO, ISD

## 7. Revision History

Issued	Description
2009-	Supersedes 2009-02-19
2009-02-19	New issue