

513 LBC SO GENERATOR UTILIZATION FOR TRANSMISSION RELIABILITY

1. Purpose

The purpose of this OPP is to set out the criteria for utilization of the Location Based Credits Standing Offer (LBC SO) generation units to support transmission reliability, as well as the requirements for scheduling and coordination of maintenance for these units.

2. Background

The former Transmission Administrator has developed two approaches in order to incent generation to develop in areas that are subject to transmission constraints, and where generation was unlikely to be developed without incentives. The first process resulted in the IBOC plants being constructed in the Calgary area.

The second approach, set out by the former TA in a September 29, 2000 filing with the AEUB (Alberta Energy and Utilities Board) proposed the Location Based Credits Standing Offer (LBC SO) process. The former TA launched Standing Offers to incent generation in the southern Alberta and Grande Prairie areas.

Southern Alberta was divided into two zones, Southwest Alberta (Zone 1) and Southeast Alberta (Zone 2). The total required LBC SO capacity, for both zones, was 100 MW in 2002 and a further 100 MW in 2004.

In the Grande Prairie area (Zone 3), the required LBC SO capacity was 90 MW.

The LBC SO process resulted in accepted LBC SO generation offers as indicated in the following table:

Area	Plant Description	Date Required	LBC SO Generation (MW)
Zone 1	Calpine Calgary Energy Centre	Dec. 1, 2002	100
Zone 3	TransCanada Energy Bear Creek	Dec. 1, 2002	50
Zone 3	ATCO Power Valleyview	Dec. 1, 2002	40
Zone 1	Calpine Calgary Energy Centre	Dec. 1, 2004	25
Zone 2	EnCana Medicine Hat	Dec. 1, 2004	75

The operation of the LBC SO generation units is governed by the contracts for the units, as approved by the AEUB in Decision 2001-18, dated March 2, 2001. The contracts include specific conditions relating to the dispatch of these units, which are set out, together with other operating requirements related to the LBC SO units, in this OPP. To the extent of any discrepancy or inconsistency between the provisions of the contracts and this OPP, the provisions of the contract will govern.

3. Policy

3.1 Basic principles for TMR dispatch of LBC SO generators

- To maintain transmission reliability, the LBC SO generation will be utilized for the following reasons:
 - To maintain acceptable transmission voltage levels.
 - To maintain the loading of transmission elements within specified operating limits (thermal and stability).
- In the event of a credible single contingency, either starting with the system normal resulting in an N-1 condition or starting with an element out of service for maintenance resulting in an N-1-1 condition, the voltage and transmission element loading will be maintained.
- Transmission maintenance will be scheduled, insofar as reasonably possible, to avoid the requirement for TMR dispatch of LBC SO generation.
- LBC SO generation will not be TMR dispatched to facilitate non-firm exports. (Note that, at present, all exports are non firm, as per the TA's approved 2002 tariff.)
- LBC SO generation will not be TMR dispatched to supply Demand Opportunity Service (DOS) loads.
- LBC SO generation will not be TMR dispatched for loss reduction.
- If a given LBC SO unit is unavailable when required, the following steps are to be taken (in the order given):
 - Dispatch alternate units contracted to provide LBC SO or Transmission Must Run (TMR) service.
 - Direct other units on.

3.2 Performance requirements of LBC SO generators

- The GFO will ensure that each LBC SO facility has a power factor capability of at least 0.85 lagging and 0.95 leading and must be able to respond to a voltage/VAr dispatch from the SC within that range.
- The GFO will accept each TMR dispatch issued by the SC.
- Upon receiving a TMR dispatch, the GFO will use reasonable commercial efforts to have the plant at the requested level of generation output (up to the LBC SO contracted level) by the time specified in the TMR dispatch, but in no event will the time required to have the plant at the full LBC SO generation output exceed the applicable Maximum Time to Full LBC SO Output as set out in [Table 1](#). TMR dispatches cannot be issued for a given generating plant that would cause the total generation output to exceed the LBC SO output value. For example, if the Calpine plant is operating at an output level of 100 MW (in 2003) the SC can issue a TMR dispatch for 100 MW, which will refer to the existing plant output, not an increase in output above the 100 MW level.

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- TMR dispatches for a given generator will be for the full LBC SO Generation value, as shown in the table in Section 2. For example, the TMR dispatch for TransCanada Energy Bear Creek will be 50 MW.
- If the generation output from the facility is within 10% of the TMR dispatch volume, (as shown in the table of Section 2), the GFO will be deemed to have met the TMR dispatch requirement.
- The requirements of the above second and third bullets are subject to permitted unavailability or forced outages.

3.3 Obtaining approval for and coordinating outages

- All planned outages for the facility will be reported to, scheduled and coordinated with the ISO and the SC in accordance with the applicable requirements of [OPP 601](#), with additional requirements as described in this OPP. In the event of any discrepancy or inconsistency between the provisions of this OPP and the requirements of [OPP 601](#), the provisions of this OPP will govern.
- The GFO will not permit approved outages to exceed the approved outage hours cap, as per the LBC SO contract. The approved outage hours cap is 5% of the total number of hours in any consecutive 12 month rolling period or such other greater percentage as may be agreed to by the ISO once every six years to account for a major facility overhaul.
- The GFO will provide the ISO and the SC with a copy of the maintenance schedule for each operating year (and each week of the operating year). Any amendments to the maintenance schedule require prior consultation with the ISO.
- The ISO, and the SC in Real Time, may postpone an approved outage at any time, in the event of a real and imminent threat to the reliability of supply to firm load or to System Security. In this event, the ISO will indemnify the GFO in accordance with Article 11.1(d) of the applicable LBC SO Contract.
- The GFO will take all reasonable precautions, through its maintenance practices, to guard against unscheduled interruptions or unavailability of generation due to failure of the facility and will make reasonable efforts to minimize the duration of such unplanned outages.

4. Responsibilities

4.1 ISO

- The ISO will coordinate approved outages with the GFOs, as described in [Section 3.3](#).
- The ISO will review, on an ongoing basis, the requirements for utilization of the LBC SO generators for maintaining transmission reliability and will revise this and other related Operating Policy and Procedures as required.

System Controller

- The SC will dispatch the LBC SO generation units in a manner that is consistent with the basic principles of [Section 3.1](#) and the LBC SO Generator performance requirements of [Section 3.2](#).
- The SC will dispatch the Valleyview LBC SO unit as specified in [OPP 501](#).

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- The SC will dispatch the Bear Creek LBC SO unit as will be specified in a future revision of [OPP 501](#).
- The SC will dispatch the Calgary Energy Centre LBC SO units as will be specified in the future [OPP 510](#).
- The SC will coordinate approved outages, in Real Time, with the GFOs, as described in [Section 3.3](#).

4.2 Generation Facility Owner (GFO)

- GFOs will respond to TMR dispatches from the SC, as set out in [Section 3.2](#).
- GFOs will submit maintenance schedules for their generation units, as described in [OPP 601](#) and in [Section 3.3](#) of this OPP.
- GFOs will obtain approval for, and coordinate, approved outages as described in [OPP 601](#) and in [Section 3.3](#) of this OPP.

5. System Controller Procedures

None specified.

6. Figures and Tables

Table 1

Maximum Time to Full LBC SO Output

Facility Generator Type	LBC SO Plant	Maximum Time to Have Facility at Full LBC SO Output after TMR Dispatch (in hours)
Combined Cycle Gas Turbine Plant and Reciprocating Engine in Combined Cycle Mode (includes Natural Gas Fired Cogeneration)	Calgary Energy Centre Bear Creek EnCana Medicine Hat	4 hours
Simple Cycle Gas Turbine Plant and Reciprocating Engine in Simple Cycle Mode	Valleyview	1 hour

7. Revision History

Issued	Description
2003-07-28	Revised to ISO Operating Policies and Procedures