COURSE TITLE	Advanced WESM Training on Pricing
COURSE REQUIREMENT	This course serves as a higher-level training for all qualified participants. To enroll, the Basic WESM training shall have been completed.
DURATION	1 day (comprised of pre-lecture introductions and lecture proper; there may be post-lecture exams/exercises)

I.COURSE DESCRIPTION

This course will equip the participants with the essential knowledge on the operations of WESM, in greater detail. This is aimed at providing a deeper understanding of the background, concepts and scope of the price determination in the WESM by employing in-depth discussions and/or sample simulations using real market data and case studies, if applicable.

II.COURSE OUTLINE

#	TOPIC/S	DESCRIPTION	APPROX. LENGTH
I	**Market Dispatch Optimization Model (MDOM)**		**3 hours**
I-1 I-2 I-3 I-4 I-5	-Optimization -Economic Gain -Constraint Violation Coefficients (CVCs) -Locational Marginal Pricing (LMP) -Energy and Reserve Co-optimization	Overview of optimization, background and process by which energy is priced in the WESM, the MDOM objective function and its constraints; Details of the CVCs and its priority order including automatic pricing re-run process; Details of the formulae for locational marginal prices, system marginal price, cost of loss, and transmission congestion cost; Pricing and scheduling in a co-optimized energy and reserve market	
II	**Post Market Run Calculations**		**3.5 hours**
II-1 II-2 II-3 II-4 II-5	-Pricing Error Notice -Price Substitution Methodology -Secondary Price Cap -Administered Price -Hierarchy of Prices	Background on pricing error notice and market re-run; Overview, sample calculations and system interface for Price Substitution Methodology, Secondary Price Cap and Administered Price Determination Methodology; Hierarchy of pricing mechanisms	