CIGRE 2024 Canada (draft) WORKSHOPS MONDAY OCTOBER 28

		Workshop Session 1	Abstract			Workshop Session 2	Abstract		Workshop Session 2	Abstract
	09:00 - 10:30	Workshop 1 Advancements in Live Line Maintenance Techniques: A Case Study of Manitoba Hydro's Innovations and Insights Jeff Laninga, Transmission Live Line & Electric Effects Section Head Manitoba Hydro	This presentation explores the advantages of live line working methodologies for transmission line maintenance, highlighting advancements achieved by Manitoba Hydro since live line accidents in 1997 and 2002 at 500 kV AC. Drawing from industry incidents and insights, research, and empirical findings, this session sheds light on the evolution of live line maintenance practices. Specifically, it unveils the cutting-edge developments in Class D Helicopter and Rope access techniques, showcasing their enhanced efficiency and environmental considerations. Additionally, Manitoba Hydro's unique experience with HVDC live working methods is examined, providing valuable insights into novel approaches for high-voltage maintenance.		09:00 - 10:30	Workshop 5 Transition towards non-SF6 electrical products. Regulatory and technical updates, and solutions. Siemens Energy	With the move towards regulating the use of SF6 in different jurisdictions, we want to give a general update on the evolution of the landscape in the near-term and our Siemens Energy solutions.	09:00 - 10:30	Workshop 9 TBD Siemens Canada	TBD (Siemens Canada wants to have a longer workshop so maybe extend it for another hour)
	10:30-11:00	Break			10:30-11:00	Break		10:30-11:00	Break	
	11:00 - 12:30	Workshop 2 CIGRE JWG B2/C4.76 Lightning & Grounding Consideration for Overhead Line Rebuilding and Refurbishing Projects, AC and DC Dr. William Chisholm, Converner of CIGRE JWG B2/C4.76	Overhead T&D lines age naturally or may reach premature end-of-life from aggressive operation, neglected maintenance or unexpected climate stresses. Rebuilding provide a headstart of many years over acquisition of new right-of-way. The objective of Joint Working Group B2/C4.76 is add value to the redesign process of these replacement / reconductor / refurbishment projects. Technical options may change structure inductance, affect insulation level, re-use existing short span lengths, make tower heads compact with V strings, apply underbuilt groundwires or protect energized phases with line surge arresters. Synergies among disciplines, such as interphase spacers or arrester mass as detuning pendulums, facilitate the use of rebuilding options that improve lightning and grounding performance while satisfying other objectives.		11:00 - 12:30	Workshop 6 Inverter Based Resource Integration and Performing Dynamic Response Verification Studies Jordan Larosa MHI - PSCAD	The discussions in this workshop will focus on modern grid connection requirements and challenges in IBR dominant grids. This course will address relevant engineering principles and practical applications for utility, consultant, and R&D engineers. Examples based on practical real world case studies will be used to demonstrate and analyze challenges and solutions for the modern electric grid. The discussions will be complemented by PSCAD based simulation example demonstrations.	11:00 - 12:30		
	12:30 - 14:00	Break			12:30 - 14:00	Break				
	14:00 - 15: 30	Workshop 3 CIGRE WG B2/C4.76 Development and Application of the System Reliability/Risk Model Dr. Dange Huang, Senior Reliability Studies Engineer Manitoba Hydro	An efficient tool referred to as the System Reliability and Risk Model (SRRM) for probabilistic assessment of power system reliability and risk was developed. The SRRM tool employs a subsystem-based technique and takes advantage of the calculation accuracy of widely used commercial program for power flow analysis. The equipment failure probability, variation in bus load, outage consequences and other system specific characteristics such as remedial action plan, specific operating procedures, tapped line and common mode failures are taken into consideration in the evaluation. The SRRM can be applied to quantify the reliability impact. The results of the SRRM model can help evaluating and selecting alternatives as well as determining the priority of capital projects identified through various processes and/or studies.		14:00 - 15: 30	Workshop 7 TBD Hitachi Energy	TBD			
	15:30 - 16:00	Break			15:30 - 16:00	Break				
	16:00 - 17:30	Workshop 4 CIGRE JWG C4/B4.52 VSC HVDC systems connected to weak or isolated grids Dr. Chandana Karawita, Converner of CIGRE JWG C4/B4.52	The technical requirements of the MMC VSC HVDC systems connected to weak or isolated systems will be discussed. The control requirements of HVDC systems such as grid following and grid forming, short circuit contributions, requirement of additional equipment such as AC/DC choppers for energy balancing during disturbances, synchronous condensers for system strength and STATCOMS for additional reactive power compensation will be discussed. Special applications such as offshore energy islands will be presented.		16:00 - 17:30	Workshop 8 Applying smart sensors and AI/ML Analytics in the future of asset management Nathan Jacob,	This tutorial will cover topics related to condition monitoring and the utilization of modern online sensors in advanced analytics, digital twin models, and AI/ML. Modern state-of-the-art technologies used in online monitoring of major power system assets: power transformers, generators, and breakers, will be detailed along with real case studies of early fault detection and prevented in-service failures. Considerations for leveraging modern online monitoring data in advanced analytics for anomaly detection, system optimization, and condition assessment will be described. Furthermore, asset management strategy for integrating online monitoring data with conventional maintenance and diagnostic testing data, for improved holistic condition assessment, will be covered.			