CYME Users Group Meeting 2023

Agenda

Tuesday, June 6, 2023 – Le Westin Montreal

New Features Presentations

Fortifications room (9th floor)

7:00 am – 8:00 am	Registration *Full breakfast buffet - Ville-Marie room*

8:00 am – 9:00 am	Opening remarks and introduction
9:00 am – 10:00 am	CYME long-term planning solution – Demonstration of new features
10:00 am – 10:30 am	*Refreshment break*
10:30 am – 12:00 pm	CYME long-term planning solution – Demonstration of new features (cont'd)
12:00 pm – 1:00 pm	*Lunch - Ville-Marie room*
1:00 pm – 2:30 pm	CYME power system analysis – Demonstration of new features
2:30 pm – 3:00 pm	*Refreshment break*
3:00 pm – 4:00 pm	CYME power system analysis – Demonstration of new features (cont'd)
4:00 pm – 4:45 pm	CYMCAP power cable ampacity – Demonstration of new features
4:45 pm – 5:00 pm	Closing remarks and conclusion

6:30 pm	*Dinner at Gibbys (see map on page 8)*

CYME Users Group Meeting 2023
Agenda

Wednesday, June 7, 2023 – Le Westin Montreal

Open Forum, Utility Presentations & 1:1 Meetings

Fortifications room (9th floor)

7:30 am – 8:30 am		*Full breakfast buffet - Ville-Marie room*

8:30 am – 10:00 am		Open forum and user requests discussion
10:00 am – 10:30 am		*Refreshment break*
10:30 am – 12:00 pm		Open forum and user requests discussion
12:00 pm – 1:00 pm		*Lunch - Ville-Marie room*
1:00 pm – 1:45 pm		Pacific Gas & Electric – Implementing the Forecast Integration Tool (FIT)
1:45 pm – 2:00 pm		*Refreshment break*
2:00 pm – 2:45 pm		Duke Energy – Automated Input Data Quality Corrections for Time-series Powerflow
2:45 pm – 3:00 pm		*Refreshment break*
3:00 pm – 3:45 pm		EPRI – Advancing Distribution Planning Assessing Non-Wires Alternatives for Visualizing New Business Models
3:45 pm – 4:00 pm		*Refreshment break*
4:00 pm – 4:45 pm		Alabama Power – My Journey with CYME (1999 – 2023)

5:30 pm		*Happy hour at Pointe-à-Callière Museum (see map on page 9)*

Wednesday, June 7, 2023 – Le Westin Montreal

Utility Presentations

Fortifications room (9th floor)

1:00 pm – 1:45 pm	**Implementing the Forecast Integration Tool (FIT)** *Presenters: Ken Hoffman and Vishal Singh, Pacific Gas & Electric* Pacific Gas and Electric's (PG&E) Distribution Engineers spend a significant portion of their year supporting the capacity planning process. The FIT webapp tool was developed to help integrate the data from PG&E's various software platforms, automate manual processes, and allow the results of the capacity planning process to be visible across the organization. We will show how the FIT webapp is helping us achieve these goals, demo the webapp tool, and discuss the future plans for further expanding the FIT webapp to meet our future needs. *Ken Huffman is a Senior Consulting Engineer with Pacific Gas and Electric's (PG&E's) Area Planning and Tools team. As PG&E's application owner for CYME software he is currently leading multiple projects which will enhance the engineering tools for capacity planning, reliability planning, and distributed generation interconnections. He has 22 years of experience at PG&E with the majority of that time spent in the planning, and design of the electric distribution system.* *Vishal Singh is Distribution Planning Supervisor at Pacific Gas and Electric (PG&E) and leads a team of distribution engineers who are responsible for area capacity planning and reliability. Prior to his current role he was Lead Distribution Operations Engineer at PG&E and dedicated his skills to special projects, such as advanced distribution management system (ADMS); distribution microgrids; distribution system protection methodology along with patrol and restoration processes for high fire threat areas, etc. He has 7 years of experience in industrial power systems design, maintenance, and operation; distribution planning and operations; and data integration for power systems modelling.*
2:00 pm – 2:45 pm	**Automated Input Data Quality Corrections for Time-series Powerflow** *Presenter: Tyler W. Price, Duke Energy* This presentation will discuss the implementation of automated input data quality corrections for successful implementation of time-series powerflow for Advanced Distribution Planning (ADP) projects. The speaker will discuss the identification of patterns of input data issues that resulted in CYME simulation convergence issues. The presentation will cover the upstream data corrections made by Duke Energy's Grid Data Quality (GDQ) group and ADP blanket data corrections applied to remediate these issues, including the use of AMI data and the CYME Gateway. Additionally, attendees will learn how and where in the data stream the corrections are applied. *Tyler W. Price is a Lead Engineer and Product Owner with the Advanced Distribution Planning (ADP) business team at Duke Energy, where he leads multiple efforts aimed at automating time-series powerflow analyses using a 10-year hourly (8760) load forecast. Recently, the results of his team's work have been utilized by Duke Energy to plan projects for future EV and DER growth in the Carolinas. Mr. Price holds an M.S. and B.S. in Electrical Engineering from the University of South Carolina, and his graduate thesis work focused on automating energy control systems for DER management. He has over a decade of experience in Distribution and Transmission, with expertise in Planning, Protection, and Powerflow Automation.*

Wednesday, June 7, 2023 – Le Westin Montreal

Utility presentations (cont.)

Fortifications room (9th floor)

3:00 pm – 3:45 pm	**Advancing Distribution Planning Assessing Non-Wires Alternatives for Visualizing New Business Models** *Presenter: Davis Montenegro-Martinez Ph.D., EPRI* Planning tools have been evolving to efficiently perform strategic and system-wide studies to support today's integrated resource planning objectives, however, new capabilities must be developed to comprehensively plan and design a system, factoring in all these complexities efficiently. This presentation presents a framework designed by EPRI for advancing distribution planning by integrating non-wires alternatives. The concepts presented are applied to a proposed test case for describing the benefits and challenges a utility can identify when using this type of analysis on a power distribution simulation model. *Davis Montenegro-Martinez serves as technical leader with Electric Power Research Institute (EPRI) in the areas of power system modeling, analysis, and high-performance computing in Knoxville, TN, USA. His expertise in parallel computing techniques is being used at EPRI for incorporating multicore processing to power system analysis methods such as QSTS, reducing the computational time required to perform these analyses using standard computing architectures. His research interests include power system modeling, analysis and high-performance computing applied to power system studies.*
4:00 pm – 4:45 pm	**My Journey with Cyme 1999 – 2023** *Presenter: John W. Bowen, Alabama Power* Alabama Power implemented the CYME software in 1999 and has been a major contributor to the evolution of the software capability and usability in the utility context. Beyond this, Alabama Power has driven the creation of the North American Users Group through the leadership of John W. Bowen back in 2001. The group has kept growing over the years and today includes over 60 organizations members from investor owned, coops, and municipal electric utilities from every geographic region in North America. Over 2000 suggestions of improvements to the CYME software products have been put together over the years to help CYME prioritize investments and develop the best power system analysis software for the utility industry. *Education:* • *Bachelor of Electrical Engineering from Auburn University 1976* • *Master of Science in Electrical Engineering from the University of Alabama in Birmingham 1984* • *Professional Engineering License 1985* • *Master of Business Administration Samford University 1996* *Work:* • *Distribution Engineer 1976 to 1991* • *Distribution Planning Engineer 1991 to 1994* • *Distribution Field Engineer 1994 to 1999* • *Power Delivery / Distribution Engineer Responsible for Cyme Software 1999 to present.* *Cyme:* • *Attended all in-person meetings but 3 since 1999 and all virtual meetings of the Cyme Users Group.* • *Presented over 10 presentations during this time.*

Thursday, June 8, 2023 – Le Westin Montreal

Breakout Sessions (8th floor)

7:30 am – 8:30 am		*Full breakfast buffet - Grande Place (8th floor)*

		Training 1 *Ste-Hélène room*	**Training 2** *Beaver Hall Room*	**Innovation** *Palais Room*	**Promotion** *Ramezay Room*
Session 1 8:30 am – 10:00 am		Load Modeling & Estimation (Part 1)	DER Studies	CYME 9.3 Technical Deep Dive	Data Integration Solutions
10:00 am – 10:30 am		*Refreshment break*			
Session 2 10:30 am – 12:00 pm		Load Modeling & Estimation (Part 2)	Load Flow and Automation with Python	Voice of Customer/ Engineering Consulting Services	Low-Voltage Design and Analysis Tool
12:00 pm – 1:00 pm		*Lunch (Grande Place (8th floor)*			
Session 3 1:00 pm – 2:30 pm		Long-Term Capacity Planning Using LTPS (Part 1)	Fault Analysis	Sneak Peek / EVC Deployment Planning	Advanced Distribution Planning System
2:30 pm – 3:00 pm		*Refreshment break*			
Session 4 3:00 pm – 4:30 pm		Long-Term Capacity Using LTPS (Part 2)	Time-Series Analyses with Energy Storage	Engineering Data Management & Hosting Capacity	Cable Thermal Rating

Training: hands-on course on the use of CYME software. A computer is provided for each participant.

Promotion / Innovation: presentation on different topics related to the CYME software and solution portfolio. The use of a computer is not encouraged.

CYME Users Group Meeting 2023
Agenda

Thursday, June 8, 2023 – Le Westin Montreal

Breakout Sessions (8th floor)

Session 1 – 8:30 am to 10:00 am

Ste-Hélène room	**Load Modeling & Estimation: What's Behind This Spot Load Symbol? (Part 1)**
Training 1 CYME 9.3	Various load estimation techniques are possible depending on the available data: field measurements, transformer size, AMR data, etc. Which one(s) to use and how? Is a primary model still sufficient? How to handle DG beyond the meter? *This is a two-part session. Be sure to select Part 2 in Session 2 at 10:30 am.*
Beaver Hall room	**DER Studies: Determining Capacity, Analyzing Impact and Verifying Islanding**
Training 2 CYME 9.3	In the context of the ever-increasing DER penetration level and general popularity, discover how CYME analysis modules help assess the hosting capacity of your system. The deployment of new technology on the distribution grid, such as generation, storage, and demand-side management, brings new possibilities of capacity issue mitigation and increased reliability with microgrids.
Palais room	**Under the hood: A deep dive into the CYME Software's modelling and analysis improvements**
Innovation	Our Power Systems Engineering (PSE) team continuously works on analyses, device models, and calculation engines to improve their efficiency, extend their capabilities, and support new components. Several improvements that were made in the last few years and more that are planned in the near future are discussed in this session by members of the PSE team.
Ramezay room	**CYME Data Integration Solutions – Beyond the Creation and Update of Your Network Model**
Promotion	Electrical network model accuracy is crucial to your system planning. The CYME Gateway solution enables utilities to automatically create and maintain the engineering model up to date. Learn about additional features offered by the CYME Gateway, such as integration with multiple enterprise systems, automated calculations, advanced validation, etc.

Session 2 – 10:30 am to 12:00 pm

Ste-Hélène room	**Load Modeling & Estimation: What's Behind This Spot Load Symbol? (Part 2)**
Training 1 CYME 9.3	*Part 2 – Two-part session continued from Part 1 in Session 1 at 8:30 am.*
Beaver Hall room	**Load flow and automation with Python**
Training 2 CYME 9.3	The load flow is the main analysis tool for the design, planning and operation of electrical power systems. Together, we will explore the simulation parameters, calculation options and equipment modeling. Then we'll see how to use the cympy library to get results and reports in an automated manner.
Palais room	**Voice Of Customer / Power Systems Analysis for Utilities**
Innovation	Whether engineering resource constraints is a current struggle or near-term reality, Eaton's Power Systems Engineering team is one of the largest engineering service organizations in our industry, providing thousands of studies to our customers each year. We have supported many utilities by serving as a trusted advisor and/or valuable extension of the internal engineering staff to achieve their goals on grid modernization, wildfire mitigation, smart grids, and other advanced grid initiatives. Please come share your thoughts on the current state of the CYME power systems analysis capabilities of Eaton's Power Systems Engineering group.
Ramezay room	**CYME Low-Voltage Design and Analysis Tool**
Promotion	The CYME low-voltage design and analysis tool (LVDAT) is a web application that supports efficiency, accuracy, and standardization of analysis work in an easy-to-use interface by extending the existing CYME engineering model for use across the distribution utility planning and estimation teams. Discover how this new class of solution can drive operational efficiency within your utility.

Thursday, June 8, 2023 – Le Westin Montreal

Breakout Sessions (8th floor)

Session 3 – 1:00 pm to 2:30 pm

| Ste-Hélène room	**Long-Term Planning: Next Generation Planning Tools (Part 1)**
Training 1 CYME 9.3	CYME's Long-Term Planning Solution is developed for utilities along with utility partners to modernize their planning framework and enable them to address challenges due to the energy transition. In this 3-hour class, we dive into the LTPS user journey and discover how its CYME ingredients, such as Advanced Project Manager and time-series load flow, work together to simplify the planning process for utilities.
Beaver Hall room	**Fault Analysis – Beyond the Conventional Short-Circuit**
Training 2 CYME 9.3	Want to deepen your knowledge of short-circuit analysis? This workshop will review the analysis parameters and present useful tools such as device monitoring, fault locator, series and simultaneous faults, analysis templates, batch analysis, etc.
Palais room	**Sneak peek / EVC deployment planning**
Innovation	To plan for behind-the-meter technology deployments such as EV, demand response, etc. can be very challenging using traditional methods. CYME has been working with a utility partner on the development of a stochastic analysis that leverages AMI data, socio economic data, technology profiles and load profiles to produce risk-based grid KPIs on asset loading and system voltage.
Ramezay room	**CYME Advanced Distribution Planning Solution - Next-Gen Grid Planning**
Promotion	Several distribution utilities have embarked on a planning framework modernization effort to cope with the challenges of the energy transition. The CYME Advanced Distribution Planning Solution (ADPS) is the first and only planning solution that bridges the gap between the traditional peak planning approach and the essential requirements of modern power grids. With the development of a comprehensive time-series-based grid planning solution, CYME aims at supporting utilities in their journey towards a carbon-neutral energy system.

Session 4 – 3:00 pm to 4:30 pm

Ste-Hélène room	**Long-Term Planning: Next Generation Planning Tools (Part 2)**
Training 1 CYME 9.3	*Part 2 – Two-part session continued from Part 1 in Session 3 at 1:00 pm.*
Beaver Hall room	**Time-Series Analyses with Energy Storage**
Training 2 CYME 9.3	Energy storage can act as a load or a generator on the system, so how should you consider it in your studies? See how CYME software can analyze both charging and discharging states as well as optimize energy storage usage using time-series analyses.
Palais room	**Voice of Customer / Engineering Data Management and Hosting Capacity Analysis**
Innovation	Hosting capacity analysis is now a must in the context of the energy transition. While distribution grids are integrating more and more distributed energy resources, the nascent electrification of transportation reinforces the need for load hosting capacity analysis. High-quality engineering data, robust automation and reliable, up-to-date results are key to success. Please join the discussion on the current and future states of the CYME hosting capacity analysis tools and on your utility's data strategy.
Ramezay room	**CYME Cable Thermal Rating - When CYMCAP meets CYMDIST**
Promotion	Power cable installations play a crucial role in today's electrical grid. Join us for this presentation to learn about how you can use our powerful CYME Cable Thermal Rating add-on module to optimize typical underground cable installations. Discover how to use your load flow results to evaluate temperature rise scenarios and understand the key factors that influence your underground cable installations directly in the CYME software.

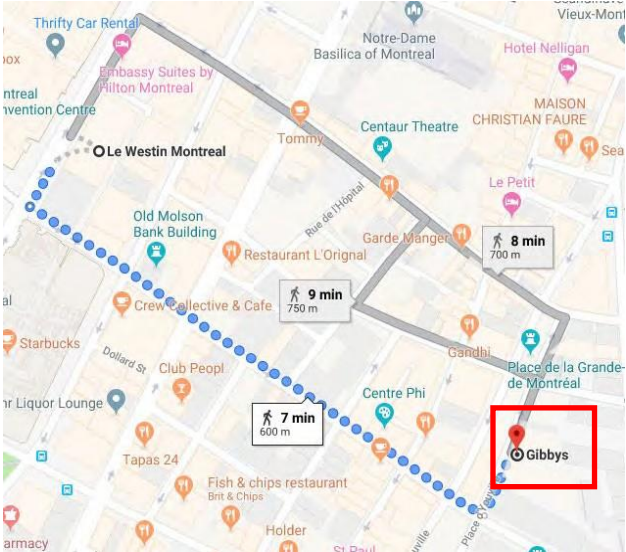## Monday, June 5 to Friday, June 9

Le Westin Montreal

270 Saint-Antoine Street West
Montreal, QC
H2Y 0A3
Tel.: 514-380-3333
Toll-Free: 1-877-837-4262
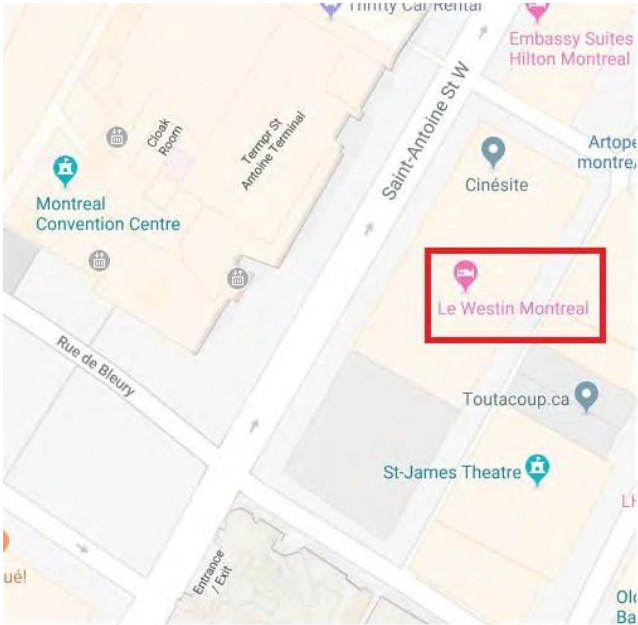
Gibbys Restaurant

298 Place D'Youville
Montreal, QC
Tel.: 514-282-1837
H2Y 2B6

7-minute walk from the hotel
Valet parking available

Pointe-à-Callière Museum

350 Place Royale
Montreal, QC
H2Y 3Y5
Tel.: 514-872-9150

8-minute walk from the hotel