COURSE OVERVIEW EE1142
Power Sector Regulation & Commercial Frameworks

Course Title
Power Sector Regulation & Commercial Frameworks

Course Date/Venue
July 28-August 01, 2025/Glasshouse Meeting Room, Grand Millennium Al Wahda Hotel, Abu Dhabi, UAE

Course Reference
EE1142

Course Duration/Credits
Five days/3.0 CEUs/30 PDHs

Course Description

This practical and highly-interactive course includes various practical sessions and exercises. Theory learnt will be applied using our state-of-the-art simulators.

This course is designed to provide participants with a detailed and up-to-date overview of Power Sector Regulation & Commercial Frameworks. It covers the power sector structure, purpose and principles of regulation and types of regulatory models; the key regulatory agencies and jurisdictions, commercial contracts in power sector and stakeholder engagement in regulatory environment; the principles of tariff design, cost recovery mechanisms, transmission tariffs and pricing mechanisms; the commercial losses and revenue protection as well as regulatory reporting and compliance; and the basics of regulatory economics, electricity market structures, transmission access and open access policies.

During this interactive course, participants will learn the market monitoring and surveillance, incentive regulation and performance indicators; the regulation and renewable integration, power purchase agreements (PPAs), transmission services and contracts; the risk management in commercial transactions, financial evaluation and regulatory accounting; the contract negotiation and legal considerations as well as revenue forecasting and business planning; the regulatory strategy and policy planning, evolving regulatory challenges and regulatory impact assessment (RIA); and the commercial innovation, regulatory sandboxes and international regulatory benchmarking.

Course Objectives

Upon the successful completion of this course, each participant will be able to:-

- Apply and gain a comprehensive knowledge on power sector regulation and commercial frameworks
- Discuss power sector structure, purpose and principles of regulation and types of regulatory models
- Recognize key regulatory agencies and jurisdictions, commercial contracts in power sector and stakeholder engagement in regulatory environment
- Explain the principles of tariff design, cost recovery mechanisms, transmission tariffs and pricing mechanisms
- Identify commercial losses and revenue protection as well as apply regulatory reporting and compliance
- Discuss the basics of regulatory economics, electricity market structures, transmission access and open access policies
- Carryout market monitoring and surveillance, incentive regulation and performance indicators
- Apply regulation and renewable integration and discuss power purchase agreements (PPAs), transmission services and contracts
- Employ risk management in commercial transactions, financial evaluation and regulatory accounting
- Carryout contract negotiation and legal considerations as well as revenue forecasting and business planning
- Apply regulatory strategy and policy planning and recognize evolving regulatory challenges and regulatory impact assessment (RIA)
- Determine commercial innovation, regulatory sandboxes and international regulatory benchmarking

Exclusive Smart Training Kit - H-STK®

*Participants of this course will receive the exclusive "Haward Smart Training Kit" (**H-STK®**). The **H-STK®** consists of a comprehensive set of technical content which includes **electronic version** of the course materials conveniently saved in a **Tablet PC**.*

Who Should Attend

This course provides an overview of all significant aspects and considerations of power sector regulation & commercial frameworks for electrical engineers, power system operators, maintenance technicians, project managers and those who are responsible for ensuring the reliable and efficient operation of a power system and those who work with high-voltage power systems, as series reactors.

Course Certificate(s)
Internationally recognized certificates will be issued to all participants of the course who completed a minimum of 80% of the total tuition hours

Certificate Accreditations
Haward's Certificates are accredited by the following international accreditation organizations:

- British Accreditation Council (BAC)

  Haward Technology is accredited by the **British Accreditation Council** for **Independent Further and Higher Education** as an **International Centre**. Haward's certificates are internationally recognized and accredited by the British Accreditation Council (BAC). BAC is the British accrediting body responsible for setting standards within independent further and higher education sector in the UK and overseas. As a BAC-accredited international centre, Haward Technology meets all of the international higher education criteria and standards set by BAC.

- The International Accreditors for Continuing Education and Training (IACET - USA)

  Haward Technology is an Authorized Training Provider by the International Accreditors for Continuing Education and Training (IACET), 2201 Cooperative Way, Suite 600, Herndon, VA 20171, USA. In obtaining this authority, Haward Technology has demonstrated that it complies with the **ANSI/IACET 2018-1 Standard** which is widely recognized as the standard of good practice internationally. As a result of our Authorized Provider membership status, Haward Technology is authorized to offer IACET CEUs for its programs that qualify under the **ANSI/IACET 2018-1 Standard**.

  Haward Technology's courses meet the professional certification and continuing education requirements for participants seeking **Continuing Education Units** (CEUs) in accordance with the rules & regulations of the International Accreditors for Continuing Education & Training (IACET). IACET is an international authority that evaluates programs according to strict, research-based criteria and guidelines. The CEU is an internationally accepted uniform unit of measurement in qualified courses of continuing education.

  Haward Technology Middle East will award **3.0 CEUs** (Continuing Education Units) or **30 PDHs** (Professional Development Hours) for participants who completed the total tuition hours of this program. One CEU is equivalent to ten Professional Development Hours (PDHs) or ten contact hours of the participation in and completion of Haward Technology programs. A permanent record of a participant's involvement and awarding of CEU will be maintained by Haward Technology. Haward Technology will provide a copy of the participant's CEU and PDH Transcript of Records upon request.

Course Fee
US$ 5,500 per Delegate + **VAT**. This rate includes H-STK® (Haward Smart Training Kit), buffet lunch, coffee/tea on arrival, morning & afternoon of each day.

Course Instructor(s)

This course will be conducted by the following instructor(s). However, we have the right to change the course instructor(s) prior to the course date and inform participants accordingly:

Mr. Pan Marave, PE, MSc, BEng, is a **Senior Electrical & Instrumentation Engineer** with over **30 years** of extensive experience in **Oil**, **Gas**, **Petrochemical**, **Refinery** & **Power** industries. His expertise includes **CEMS** Operations and Maintenance, **ABB 11KV Distribution Switchgear**, Operation & Maintenance of **Rotork make MOVS**, **Maintaining Instrument Air Compressors**, **Circuit Breaker**, **HV Switchgear Maintenance**, **HV/LV Electrical** Authorisation, Basic **Electricity**, **Electrical & Special Hazards**, **Personnel Protection**, **HV/LV Equipment**, **Motor Controllers**, **Electrical Switching** Practices, **Emergency Planning**, **Safety Management**, Safety Instrumented Systems (**SIS**), Safety Integrity Level (**SIL**), Emergency Shutdown (**ESD**); **DCS**, **SCADA** & **PLC**; **Measurement** (**Flow**, **Temperature**, **Pressure**); **Process Analyzers** & **Analytical Instrumentation**; **Process Control**, **Instrumentation** & **Safeguarding**; **Process Controller**, **Control Loop & Valve Tuning**; Industrial **Distribution Systems**; Industrial **Control & Control Systems**, Power Systems **Protection & Relaying**; **Earthing**, **Bonding**, **Grounding**, **Lightning & Surge Protection**; Electric Power **Substation** & **Systems**; Electrical Engineering Principles; **Motor Control Circuit**; **Electrical Fault Analysis**; Electrical Networks & Distribution **Cables**; **Circuit Breakers**, **Switchgears**, **Transformers**, **Hazardous Areas Classification** and **Detailed Engineering Drawings**, **Codes** & **Standards**. Furthermore, he is also well-versed in Microprocessors Structure, Lead Auditor (**ISO 9000:2000**), **ISO 9002**, Quality Assurance and Projects & Contracts Management.

Presently, Mr. Marave is the **Technical Advisor** of **Chamber of Industry & Commerce** in Greece. Prior to this, he gained his thorough practical experience through several positions as the **Technical Instructor**, **Engineering Manager**, **Electronics & Instruments Head**, **Electrical**, **Electronics & Instruments Maintenance Superintendent**, **Assistant General Technical Manager** and **Engineering Supervisor** of various international companies such as the **Alumil** Mylonas, **Athens Papermill**, **Astropol** and the **Science Technical Education**.

Mr. Marave is a **Registered Professional Engineer** and has **Master's** and **Bachelor's** degrees in **Electrical Engineering** from the **Polytechnic Institute of New York** and **Pratt Institute of New York** (**USA**) respectively. Further, he is a **Certified Instructor/Trainer**, a **Certified Internal Verifier/Assessor/Trainer** by the **Institute of Leadership & Management** (**ILM**) and an active member of the **Technical Chamber** and the Institute of Electrical and Electronics Engineer (**IEEE**) in Greece. He has presented and delivered **numerous international** courses, conferences, trainings and workshops worldwide.

Accommodation

Accommodation is not included in the course fees. However, any accommodation required can be arranged at the time of booking.

Training Methodology

All our Courses are including **Hands-on Practical Sessions** using equipment, State-of-the-Art Simulators, Drawings, Case Studies, Videos and Exercises. The courses include the following training methodologies as a percentage of the total tuition hours:-

30% Lectures
20% Practical Workshops & Work Presentations
30% Hands-on Practical Exercises & Case Studies
20% Simulators (Hardware & Software) & Videos

In an unlikely event, the course instructor may modify the above training methodology before or during the course for technical reasons.

Course Program

The following program is planned for this course. However, the course instructor(s) may modify this program before or during the workshop for technical reasons with no prior notice to participants. Nevertheless, the course objectives will always be met:

Day 1: ***Monday, 28th of July 2025***

0730 – 0800	*Registration & Coffee*
0800 – 0815	*Welcome & Introduction*
0815 – 0830	***PRE-TEST***
0830 – 0930	***Overview of Power Sector Structure*** *Generation, Transmission, Distribution Overview • Role of Regulatory Bodies • Market Participants and Stakeholders • Monopoly versus Competition Models*
0930 – 0945	*Break*
0945 – 1030	***Purpose & Principles of Regulation*** *Why Regulation is Necessary • Economic versus Technical Regulation • Regulatory Objectives: Fairness, Efficiency, Reliability • Legal and Institutional Frameworks*
1030 – 1130	***Types of Regulatory Models*** *Cost-of-Service Regulation • Incentive-Based Regulation • Performance-Based Regulation • Hybrid Regulatory Approaches*
1130 – 1215	***Key Regulatory Agencies & Jurisdictions*** *UAE Power Regulation: DoE, ADPower, EWEC, etc. • International Comparisons: Ofgem, FERC, AER • Roles and Responsibilities of Regulators • Coordination Among Agencies*
1215 – 1230	*Break*
1230 – 1330	***Commercial Contracts in Power Sector*** *Power Purchase Agreements (PPA) Basics • Transmission Service Agreements (TSA) • Connection and Use-of-System Agreements • Tariff-Based Bidding*
1330 – 1420	***Stakeholder Engagement in Regulatory Environment*** *Role of Stakeholders in Regulation • Public Consultation and Transparency • Conflict Resolution and Regulatory Appeals • Impact on Commercial Decisions*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day One*

Day 2: Tuesday, 29th of July 2025

0730 – 0830	***Principles of Tariff Design*** *Cost-Reflective Tariffs • Fixed versus Variable Charges • Time-of-Use Pricing • Tariff Design Challenges*
0830 – 0930	***Cost Recovery Mechanisms*** *Allowed Revenue Frameworks • Rate Base and Return Calculation • Depreciation and Asset Valuation • Revenue Decoupling Mechanisms*
0930 – 0945	*Break*
0945 – 1100	***Transmission Tariffs & Pricing Mechanisms*** *Cost Allocation Methodologies • Locational Marginal Pricing (LMP) • Wheeling Charges and Access Fees • Cross-Border Transmission Pricing*
1100 – 1215	***Commercial Losses & Revenue Protection*** *Types of Losses: Technical versus Non-Technical • Revenue Leakage Management • Advanced Metering Infrastructure (AMI) • Enforcement and Legal Remedies*
1215 – 1230	*Break*
1230 – 1330	***Regulatory Reporting & Compliance*** *Key Regulatory Filings and Timelines • Performance Reports and Benchmarking • Penalties and Incentive Structures • Internal Audits and Compliance Units*
1330 – 1420	***Case Studies: Tariff Reforms*** *GCC Tariff Evolution • India's Tariff Rationalization • EU Electricity Pricing Models*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Two*

Day 3: Wednesday, 30th of July 2025

0730 – 0830	***Basics of Regulatory Economics*** *Natural Monopolies in Transmission • Externalities and Market Failures • Price Elasticity and Demand Forecasting • Regulatory Risk Management*
0830 – 0930	***Electricity Market Structures*** *Regulated versus Deregulated Markets • Day-Ahead and Real-Time Markets • Ancillary Services and Capacity Markets • Balancing and Settlement Systems*
0930 – 0945	*Break*
0945 – 1100	***Transmission Access & Open Access Policies*** *Open Access Regulation in Power Markets • Grid Codes and Access Rules • Priority Dispatch and Curtailment • Interconnection Standards*
1100 – 1215	***Market Monitoring & Surveillance*** *Anti-Competitive Behavior Detection • Market Manipulation and Abuse • Independent Market Operator Role • Transparency and Data Reporting*
1215 – 1230	*Break*
1230 – 1330	***Incentive Regulation & Performance Indicators*** *Output-Based Regulation • Quality-of-Service Indicators • Loss Reduction Incentives • Customer Satisfaction Indexes*

1330 – 1420	***Regulation & Renewable Integration*** *Regulatory Tools for Renewable Promotion • Grid Integration of Intermittent Resources • Feed-in Tariffs and Auctions • Capacity Firming and Flexibility Needs*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Three*

Day 4: ***Thursday, 31st of July 2025***

0730 – 0830	***Power Purchase Agreements (PPAs)*** *Components of a PPA • Pricing Mechanisms: Fixed, Variable, Indexed • Risk Allocation and Force Majeure • Termination Clauses and Penalties*
0830 – 0930	***Transmission Services & Contracts*** *Transmission Connection Agreements • Ancillary Services Agreements • Interconnection Contracts • Grid Code Compliance Terms*
0930 – 0945	*Break*
0945 – 1100	***Risk Management in Commercial Transactions*** *Contractual Risk Allocation • Hedging Mechanisms (Fuel, Currency, etc.) • Insurance and Credit Enhancement • Contingency Planning*
1100 – 1215	***Financial Evaluation & Regulatory Accounting*** *Regulatory Asset Base (RAB) Modeling • Net Present Value (NPV) and IRR • Weighted Average Cost of Capital (WACC) • Return on Capital Employed (ROCE)*
1215 – 1230	*Break*
1230 – 1330	***Contract Negotiation & Legal Considerations*** *Tendering and Bid Evaluation • Legal Reviews and Contract Enforceability • Dispute Resolution Methods • Confidentiality and Intellectual Property*
1330 – 1420	***Revenue Forecasting & Business Planning*** *Load Forecasting and Growth Modeling • Revenue Estimation Under Regulatory Caps • Business Plan Alignment with Regulation • Performance Scenarios and Stress Testing*
1420 – 1430	***Recap*** *Using this Course Overview, the Instructor(s) will Brief Participants about the Topics that were Discussed Today and Advise Them of the Topics to be Discussed Tomorrow*
1430	*Lunch & End of Day Four*

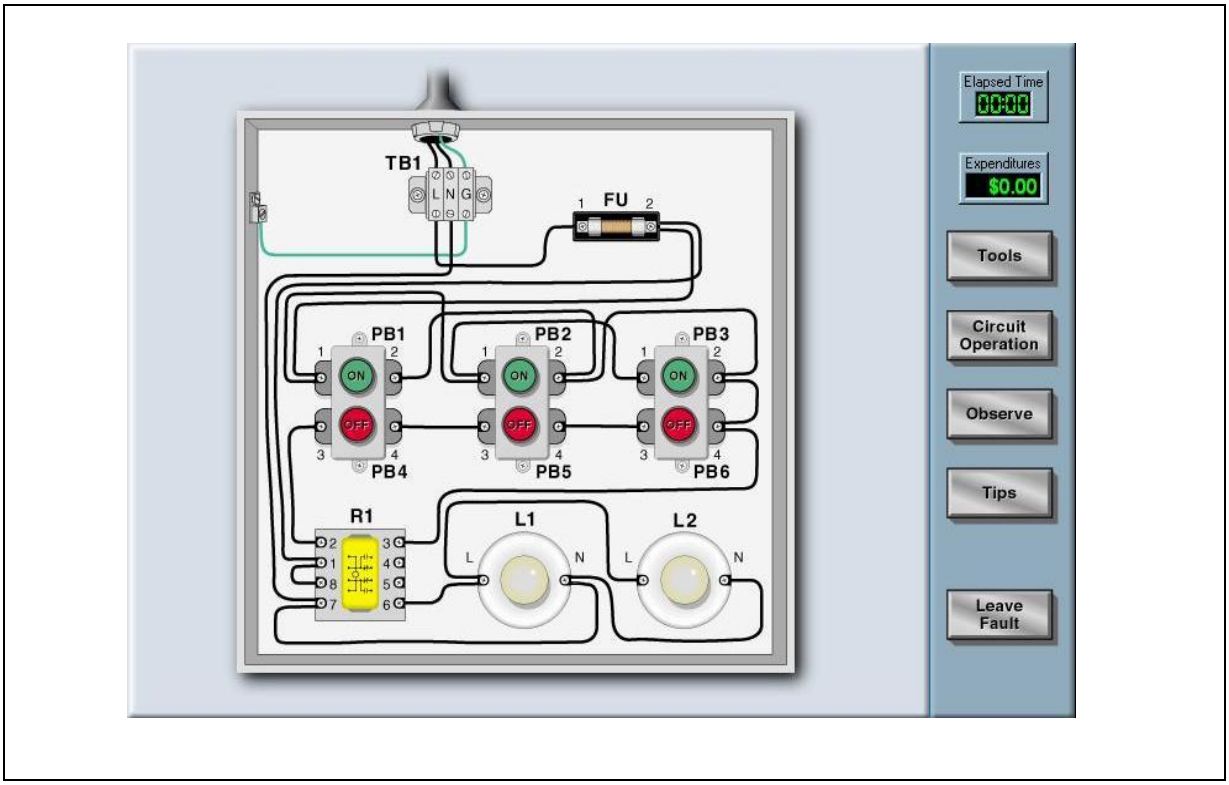
Day 5: ***Friday, 01st of August 2025***

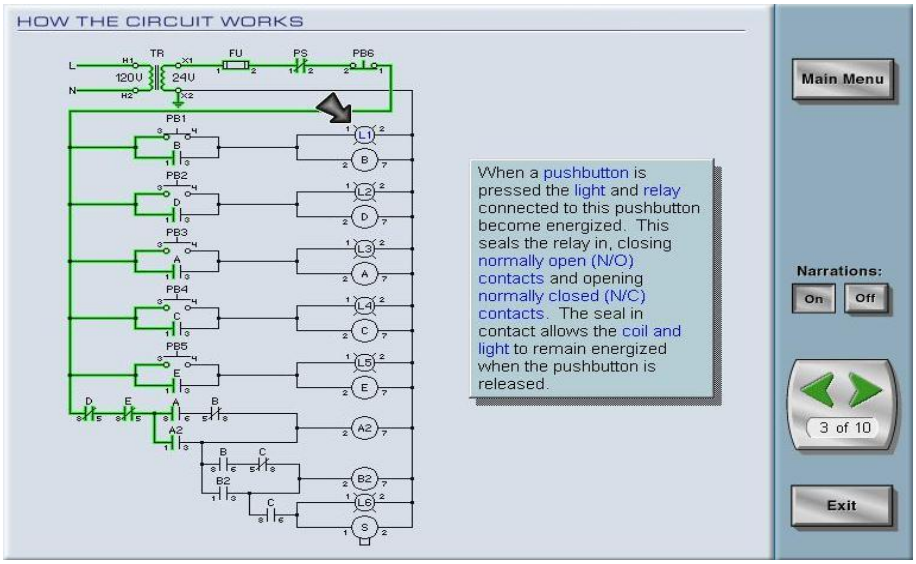
0730 – 0830	***Regulatory Strategy & Policy Planning*** *Long-Term Regulatory Vision • Aligning Commercial Goals with Regulatory Frameworks • Stakeholder Alignment and Buy-In • Internal Capacity Building*
0830 – 0930	***Evolving Regulatory Challenges*** *Decarbonization and Net-Zero Targets • Electrification of Transport and Industry • Digitalization and Smart Grids • Resilience and Cybersecurity*
0930 – 0945	*Break*
0945 – 1100	***Regulatory Impact Assessment (RIA)*** *Methodologies for RIA • Cost-Benefit Analysis • Social and Environmental Considerations • Case Studies and Applications*

1100 – 1215	***Commercial Innovation & Regulatory Sandboxes*** *Pilot Programs and Sandbox Models • Demand Response and Peer-to-Peer Trading • Blockchain in Energy Contracts • Distributed Energy Regulation*
1215 – 1230	*Break*
1230 – 1345	***International Regulatory Benchmarking*** *Global Best Practices and Standards • World Bank and IEA Benchmarking Reports • Regulatory Maturity Models • Lessons for GCC and TRANSCO*
1345 – 1400	***Course Conclusion*** *Using this Course Overview, the Instructor(s) will Brief Participants about t Topics that were Covered During the Course*
1400 – 1415	***POST-TEST***
1415 – 1430	*Presentation of Course Certificates*
1430	*Lunch & End of Course*

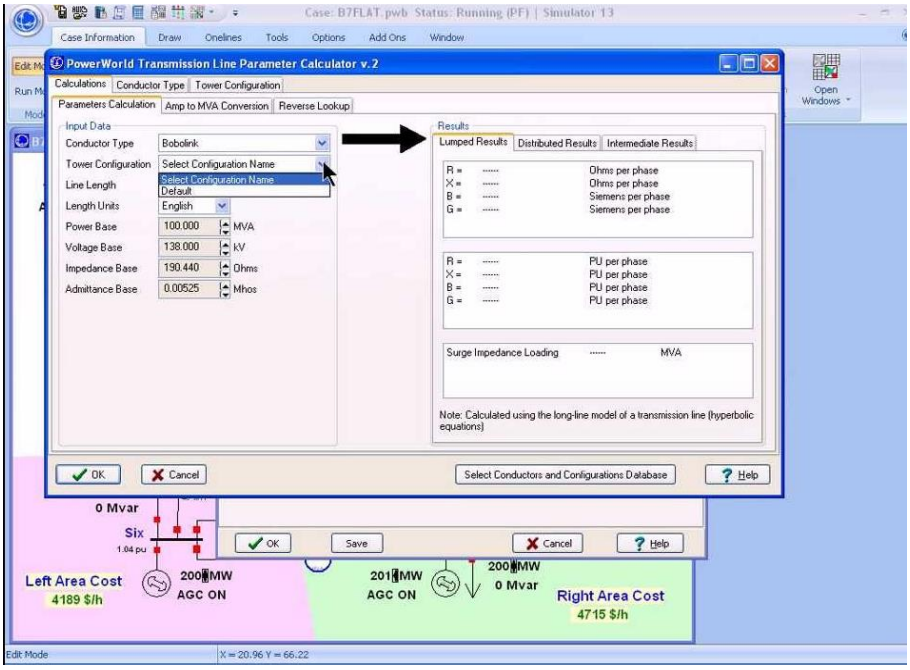
Simulator (Hands-on Practical Sessions)

Practical sessions will be organized during the course for delegates to practice the theory learnt. Delegates will be provided with an opportunity to carryout various exercises using our state-of-the-art simulator "Simutech Troubleshooting Electrical Circuits V4.1", Power World" and "ETAP software".

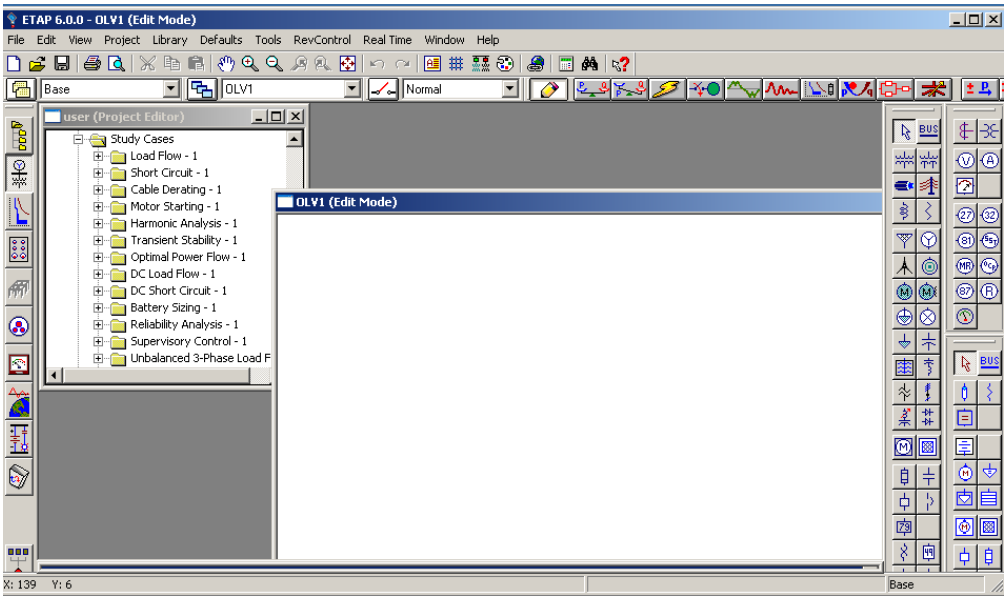




Simutech Troubleshooting Electrical Circuits V4.1



Power World Simulator



ETAP Software Simulator

Course Coordinator
Mari Nakintu, Tel: +971 2 30 91 714, Email: mari1@haward.org