

## **Stephen Nusbaum - Director, Market Renewal Program Implementation**

### **Summary**

Mr. Nusbaum has 20+ years of experience in the energy sector, including the last 15 with the IESO/OPA where he has held a variety of roles focused on market and policy development, generation procurement, and operations integration. He currently is the Director of MRP Implementation, where he is accountable for ensuring the IESO has the necessary updated tools, processes, and governing documents in place to allow for the launch of the renewed market.

### **Professional History**

Independent Electricity System Operator (2015 - Present)

Ontario Power Authority (2009 - 2015)

Imperial Oil Limited (2002 - 2007)

### **Education**

University of Waterloo, B.A.Sc. – Chemical Engineering, 2002

York University, Schulich School of Business, MBA, 2009

### **Relevant Professional Experience**

#### **Director – MRP Implementation (IESO, 2023 – present)**

Leader for Market Renewal Program's implementation activities. Leveraging a broad understanding of all aspects of the IESO's core business and processes, Mr. Nusbaum is responsible for directing a team of subject matter experts to ensure the design of the new market is accurately represented in the applicable governing documents (e.g. market rules, market manuals, internal manuals) and that required enhancements to tools, systems and processes are reliably delivered in a timely manner. As part of this role Mr. Nusbaum was accountable for leading extensive consultation and collaboration with both internal and external stakeholders, including advancing the MRP market rule amendments through the Technical Panel and IESO Board approval process.

#### **Senior Manager – Performance, Applications & Integration (IESO, 2020 - 2023)**

Responsible for managing a large team of highly technical staff that are tasked with ensuring changes to the Ontario grid are integrated into the IESO's tools and processes in a reliable and efficient manner. This includes validating resources' performance, building the online and offline models needed to operate and plan the Ontario power grid, and confirming that all relevant internal stakeholders are prepared for new or modified equipment to come into service.

#### **Senior Manager - Capacity (IESO, 2017 – 2020)**

Accountable to develop a capacity auction design that would efficiently and flexibly maintain resource adequacy in Ontario. High profile project was part of a proposed fundamental shift in the sector to increase reliance on market mechanisms and as such required extensive consultation with both internal and external stakeholders. Resulted in the issuance of the Incremental Capacity Auction (ICA) high-level

design that was able to leverage best practices from other jurisdictions, while also including a number of features to address Ontario's unique circumstances. While the ICA was not ultimately implemented, many of the key design elements have served as the basis for continued evolution of the IESO's current capacity auction mechanism.

### **Manager – Clean Energy Procurement (OPA/IESO, 2011 – 2017)**

Led the procurement of new and existing generation resources in Ontario. Designed and negotiated contracts to maximize ratepayer value and meet system needs. This included developing and implementing a procurement process for the re-contracting of Non-Utility Generators that resulted in securing 550 MW of capacity under improved rates and contract structures. Also led a cross-functional team to enable generation in Ontario to export capacity to neighbouring jurisdictions, which for the first time established capacity as a tradeable product in Ontario, informing future auction efforts. Designed and launched "Industrial Electricity Incentive" program to stimulate industrial activity via contracts for discounted electricity.

### **Business Analyst – Policy & Analysis (OPA, 2009 – 2011)**

Provided policy guidance and analysis on a diverse range of issues related to Ontario's electricity sector. This included working with the IESO towards ensuring the Renewables Integration (SE-91) initiative resulted in contract amendments and Market Rule amendments that yielded optimal outcomes for ratepayers given OPA contractual obligations. Modelled cost of curtailing wind generation facilities under various scenarios. Developed policy position and contract structures related to ownership and accounting of "environmental attributes".