

Enabling participation in a competitive wholesale and renewable electricity market



Author & Presenter: Hugo Stappers – Global Sales Leader Energy Portfolio Management of Hitachi Energy

1. Introduction

Today, the 3Ds of energy, Decarbonization, Decentralization and Digitalization, are driving the energy transition and the new energy sources and market participants that go along with it. Centralized generation is being replaced by distributed renewable energy sources, battery storage and more localized generation at homes and businesses.

2. Challenge

This introduces increased complexity and data volumes, as well as new responsibilities for electricity providers who now must engage in sophisticated energy contracting and trading transactions to serve their load efficiently, profitably and in a balanced fashion on a near real-time basis.

Managing a portfolio of demand- and supply-side resources is complex. As the share of renewables dramatically increases, wholesale market participants are challenged by the complexity to effectively forecast demand and resource availability while managing their positions, mitigating exposure to market risk complying with regulations, and meeting financial targets.

3. Path forward

Municipal Utilities will need to develop their own capabilities for participating in, and procuring from, the wholesale electricity market. This includes wheeling, procure from IPPs, build/own generation, trading with Small-Scale Embedded Generation (SSEG).

The energy transition cannot be realized without digitalization of systems and processes that provide the flexibility to manage renewables, manage distributed generation and serve customers.

Energy Trading and Risk Management (ETRM) systems have a strong role to play in bringing each of the 3Ds to fruition. In order to automate the end-to-end process from deal entry and risk management to settlement, this shift from legacy energy commodities to next generation renewables requires functionality that supports near real-time operations through advanced integration with optimization tools, trading venues, automated trading solutions, market operations, as well digitalization of back-office functionality.