Chris Herman

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ENERGY AND ENVIRONMENTAL ECONOMICS, INC.   Calgary, AB
Managing Consultant

Chris Herman supports a broad array of E3 work as a project manager and analyst with a focus on asset valuation and markets projects as well as Canadian markets. His contributions include asset diligences and price forecasting in Alberta, decarbonization pathways in British Columbia and projects applying E3's RESERVE model in Ontario, as well as utility diligences and resource adequacy analysis in CAISO. He has more than 15 years of experience in the energy industry during which he has led and supported financial modeling, electricity price forecasting, load prediction with machine learning, and project valuation. He has worked on projects including carbon policy economics, load forecasting, coal to gas conversion, business development for upstream and midstream projects, and data warehousing and transformation. He joined E3 from Heartland Generation where he provided leadership with economic outlooks for the Alberta electricity market, focusing on evaluating the operational and financial impacts of a broad range of potential carbon policy outcomes. Chris earned a B.A. from the University of Calgary in Applied Energy Economics.

Select E3 projects include:

British Columbia Ministry of Energy, Mines, and Low Carbon Initiatives (EMLI) (2023 – 2024). Managed an E3 project supporting EMLI's investigation and analysis of potential pathways for deep decarbonization of the province and the integrated impact of those scenarios on public electric generation and private natural gas businesses. E3's work includes scenario design, stakeholder engagement, and detailed load modeling to support the provincial government's vision and policy toward decarbonization.

Ontario IESO and Arizona Public Service Reserves Integration Analysis (2022 – 2023). Managed and supported two E3 projects with clients in Canada and the Southwest US that quantified the flexibility reserves to maintain long-term system reliability as well as the integration costs associated with holding those reserves. The projects supported the utilities' long term decarbonization goals as they integrated significant capacities of future solar and wind resources.

Confidential Client, Diligences in Alberta (2022). Completed diligences of three different distributed solar projects in Alberta, through PPA review and financial model assessment. The projects also included revision of the price forecasts to reflect increased solar integration and the associated impact on the value of the projects.

HEARTLAND GENERATION   Calgary, AB
Senior Analyst, Forecasting   January 2018 – October 2022

- o   Advised Senior Leadership on trends in market fundamentals including carbon policy, load growth, transmission, renewable integration, and long-term supply.
- o   Stood up the market price forecasting team and led the development of a long-term Alberta price forecast using Aurora and EDC's HELP models.

- o Developed long-term price forecasts for the Alberta electricity market with focus on federal and provincial carbon policy (TIER, OBPS, hybrid systems) to support the corporate budgeting and business development functions.
- o Developed Python-based machine learning load forecasting models to predict residential, commercial, and industrial loads and weather impacts.
- o Transformed and warehoused historical market data using SQL Server to enable advanced analytics of the Alberta electricity market.

ATCOenergy / ATCO Power   Calgary, AB
Senior Analyst – Business Intelligence & Competition   June 2015 – January 2018

- o Led a team of analysts responsible for operations reporting, marketing/competitive intelligence and pricing.
- o Prepared and presented daily and monthly operations reports to senior leadership to keep the team current on customer activity, sales trends and competitor activity.
- o Prepared analyses to identify demographics of existing and potential customer base used to create targeted marketing campaigns.
- o Enhanced, maintained, and developed asset optimization tools in Excel/VBA for the real-time trading desk.

ENCANA CORPORATION   Calgary, AB
Energy Policy Analyst - Strategy and Planning   June 2011 – February 2015

- o Provided economic valuation as well as presentation materials to communicate project economics for LNG and CNG conversion in various high-horsepower applications including power generation, long haul trucking, rail, marine and mining.
- o Performed in-depth market and spatial analysis in ArcGIS to identify regions in Canada and the US with potential for development of LNG and CNG facilities.
- o Developed coal-to-gas switching models using FERC filings and Ventyx data to estimate the levelized cost of generation for all operational coal-fired generation facilities in the United States

ALTAGAS LTD.   Calgary, AB
Business Development Analyst – Field Gathering & Processing   April 2008 – June 2011

- o Completed economic evaluation of new midstream and downstream capital projects as well as analytical support for current facility modifications, created and maintained AFEs along with cost tracking for new projects during construction.

Education

University of Calgary   Calgary, AB
B.A., Applied Energy Economics   2008