

When Transpower is your work, your mahi, Aotearoa is powered by you.

Associate Grid Investment Modeller

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| Team and Division Grid Investment; Grid Development | Reports to Grid Investment Modelling Manager | Location Wellington | Date July 2025 |
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OUR PURPOSE

Whakamana i te mauri hiko tū mai Aotearoa – Empowering the energy future for New Zealand.

TEAM PURPOSE

The Grid Investment and Modelling Team undertakes economic and electricity market modelling and analysis to help inform Transpower’s expenditure and strategy decisions. This includes:

- producing electricity demand forecasts
- undertaking generation dispatch and expansion modelling
- reviewing and developing future scenarios of demand and generation growth
- undertaking economic analysis relating to grid expenditure
- applying the regulated Investment Test
- drafting consultation and regulatory proposal documents
- playing a role in producing benefit-based charge allocations consistent with the Transmission Pricing Methodology (TPM).

The team partners with other teams across the business to help Transpower to make smart decisions for the benefit of all New Zealanders. It also has a vital role in engaging with external stakeholders, such as our regulators, the Commerce Commission and Electricity Authority, and Government bodies such as the Ministry of Business, Innovation and Employment, as well as other industry participants and stakeholders.

ROLE PURPOSE

The Associate Grid Investment Modeller supports the production of high-quality economic and quantitative analysis to support Transpower’s expenditure and strategic decision making. This includes:

- helping to produce fit-for-purpose electricity demand forecasts, generation dispatch and expansion modelling, and/or economic analysis to support Transpower’s investment and expenditure decision making
- helping to derive benefit-based charging allocations for use in applying the Transmission Pricing Methodology (TPM).

The Associate Grid Investment Modeller engages with a range of stakeholders. The role collaborates with a range of staff to complete analysis as well as document and communicate assumptions, methodology and findings in a manner that is easy to understand. The role also helps prepare external consultation documents and engage with the industry, our customers, and other interested stakeholders relating to the analysis which has been completed.

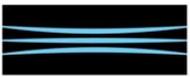
The Associate Grid Investment Modeller ensures Transpower’s assessments align with the Centre of Excellence Guidelines and processes as well as external regulatory requirements.

The Associate Grid Investment Modeller is supported by senior members of the team who will provide mentoring and support.

KEY CUSTOMERS AND STAKEHOLDERS

Internally you will work with a range of other teams such as:

- System Planning Engineers who undertake technical load flow studies of the grid to provide direction over development options, and technical information about the performance of the grid.
- Regulatory Economists and Pricing Advisers that manage our regulatory interfaces and determine transmission prices under the TPM.
- Strategy Advisers that undertake research and analysis to inform our strategic direction.
- Tactical Engineers that provide advice over the design of options and the scope of work required.
- Cost Estimators that provide advice over the cost of upgrade options.



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- Project Managers that manage tasks undertaken on grid investigations.

Externally you will work with a range of key stakeholders such as:

- Commerce Commission which regulates grid expenditure through a range of input methodologies and through approval of our applications and proposals.
- Electricity Authority which regulates and defines the Electricity Industry Participation Code, including the TPM.
- Ministry of Business, Innovation and Employment which develops policy and defines the Electricity Demand and Generation Scenarios that are a key input into the application of the Investment Test and TPM assumption book.
- Pricing Auditors and Assurance Experts who will provide third party assurance that our models and prices are consistent with regulatory requirements, the Investment Test, TPM and our internal processes.
- Other industry businesses and customers such as electricity lines businesses, generators, and retailers.
- Industry groups such as the Major Electricity Users Group and the BusinessNZ Energy Council.

WHAT YOU ARE EXPECTED TO DELIVER

Undertake demand forecasting, generation expansion and dispatch modelling, and other economic analysis and modelling.

- Undertake (with support) economic analysis to inform Transpower's expenditure and strategic decisions by amongst other things:
 - managing input data and its manipulation in our modelling.
 - undertaking and overseeing electricity market modelling using tools such as OptGen, SDDP, Plexos, vSFD, and GAMS.
 - undertaking and overseeing the production of electricity demand forecasts which are currently produced using MATLAB.
 - developing and using economic models to assess the economic benefits related to Transpower's expenditure decisions.
 - considering the impact of future developments such as the uptake of electric vehicles, battery storage, photovoltaic panels, and new generation.
 - collaborating with other analysts, including input from consulting economists, modellers, and contractors
- Undertake (with support) quantitative analysis to support the derivation of benefit-based allocations under the TPM.
- Explain findings in a manner that provides the business with a good understanding of what the data/analysis means and the business implications, thus enabling good commercial and investment decision-making.
- Produce high quality documentation that aligns with our modelling and investment centre of excellence framework, explains the analysis undertaken and the outcome of the analysis, and supports decision making.

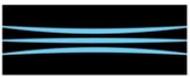
Ensure our analysis is high quality

- Ensure analysis undertaken is accurate, dependable, timely and fit-for-purpose.
- Take time to understand industry trends in technology as they relate to and inform quantitative analysis.
- Take time to be up to date with quantitative techniques and their application to informing our commercial and strategic decisions.
- Contribute to the process of auditing the models and business processes used to produce benefit-based allocations in accordance with the TPM.

Ensure our analysis complies with regulatory requirements

- Help ensure Transpower's analysis, documentation and supporting information is compliant with internal guidelines, and regulatory obligations including (but not limited to) the Capex IM, Individual Price Path Regulations, and the Electricity Industry Participation Code including the TPM.
- Help engagement with regulators and other stakeholders as the team undertakes its work.
- Have a good understanding of regulatory requirements, including the TPM.

Positive Team Contribution



When Transpower is your work, your mahi, Aotearoa is powered by you.

- Consistently demonstrate Transpower's behaviours.
- Encourage and support the immediate and wider team and divisions to deliver our strategic priorities.
- Proactively identify and drive continuous business improvement.
- Seize on the job learning opportunities.
- Team-up to build enterprise-wide knowledge, cohesion, and appreciation.
- Be part of creating a culture of constructive feedback across all levels.
- Perform other duties as required.

Maintain Transpower's Health and Safety Culture

- Knowledgeable about Transpower's Health and Safety policies and procedures
- Know how to apply Health and Safety principles to achieve a safe and positive working environment.
- Take personal responsibility for one's own health and safety and that of other employees and relevant stakeholders.
- Take appropriate action to deal with workplace hazards and incidents in ways that comply with Health and Safety policies, procedures, systems, and best practice.
- Strive for continual improvement in Health and Safety performance.
- Positively contribute to delivering a safe, zero harm workplace.

KNOWLEDGE, SKILLS, EXPERIENCE

Essential

- Experience undertaking complex quantitative analysis.
- The ability to explain complex ideas clearly, both verbally and in writing.
- The ability to show initiative and think through problems unaided.

Desirable

- Experience within the energy or electricity industry.
- Experience in electricity market modelling using programmes such as: OptGen, SDDP, PLEXOS, and vSPD.
- Experience in undertaking complex modelling and data analysis, using a variety of programs such as MATLAB, GAMS, Python, Julia, and SQL.
- Experience in forecasting.
- Experience working within a regulatory environment.
- Experience working in a pricing environment.
- A diligent attitude.

EDUCATION/QUALIFICATIONS

Essential

- An Honours, Master's or PhD degree in a quantitative field such as economics, finance, operations research, engineering, mathematics, physics, or another relevant subject

Desirable

- Accreditation in finance and economics related courses e.g. Chartered Financial Analyst
- Accreditation in business case and project management e.g. Better Business Cases
- Accreditation in use of analytical software programmes.

LIVING OUR BEHAVIOURS

The behaviours we exhibit at Transpower have a direct impact on our ability to achieve our goals. As with all roles at Transpower, you'll live and breathe our Behaviours. Our behaviours are that when we work with each other, our customers, communities, and the land we are ***Nimble and Considered, Inclusive and Decisive, Courageous and Caring*** to keep the lights on, and empower our energy future, for New Zealand.