



Regional Growth Initiatives Multi Year Appropriation Business Case

Clean Energy Development Centre - Taranaki

Tapuae Roa – Taranaki Regional Economic Development Strategy

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Name	Role	Sign-off date

Checklist and other annexes

Executive summary	
Strategic case	
Economic evaluation	
Project plan	
	<i>Operational budget</i>
Management plan	
Next steps	

You should also attach any supporting documents. This must include evidence of endorsement by the regional lead which will be responsible for the relevant project, and could also include letters of support from regional stakeholders, governance documents, designs/concept development, feasibility studies, economic or risk evaluations or any document which supports assumptions, measurements or judgements made in the business case. Please list these in order below, and reference each document.

	Document (title)	Purpose
1	Energy Futures Action Plan	Regional Strategy Action Plan relating to this funding request – contained detailed background information on this proposal.
2		
3		
4		

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EXECUTIVE SUMMARY

This business case sets out the rationale for a financial contribution of up to [Commercial Information] towards a feasibility investigation into the establishment of a Clean Energy Development Centre in Taranaki.

Government funding of [Commercial Information] + GST is sought towards this investigation. [Commercial Information] is already committed by the Taranaki region as well as an additional [Commercial Information] in-kind contribution. These costs exclude the governance commitment of stakeholders and the contribution of industry leaders.

The focus of the Clean Energy Development Centre will be to develop, demonstrate, test and pilot clean energy technologies and models, thus assisting with their commercialisation, with the aim of building an international reputation and attracting projects to the region.

The primary objective of this application: is to commission expertise to undertake feasibility analysis/initial business case development, including assessing the costs and benefits of establishing the Centre, its activities and strategic fit (regionally and nationally), indicative operating budget and structure, and recommendations concerning whether or not there is a case for further development of the proposal, and if so, the next steps towards establishment.

Time-frame: [Commercial Information] months duration commencing first half of 2018.

This proposal gives effect to a key recommendation in the Tapuae Roa, Make Way For Taranaki, Action Plan - in particular the Energy Futures component, which focuses on the pathway to a sustainable energy and a low emissions future, building on existing regional strengths.

Taranaki has an extensive track record as New Zealand's hub for the oil and gas industry. Domiciled in the region are all the nation's commercially discovered and producing fields, associated infrastructure and majority of oil and gas industry expertise and supply chain. While oil and gas will remain an important component of the nation's energy mix, the future outlook is one of declining oil and gas reserves and an increasing shift towards clean, renewable energy and a low carbon preference.

Establishment of the Clean Energy Development Centre creates an opportunity for Taranaki's extensive energy industry to refocus, retool and reposition for this energy future.

Taranaki is well placed to utilise its infrastructure and capability to develop a number of clean technologies, taking them out of the lab, upscaling to demonstration and pilot scale, and ultimately commerciality. This in turn would create an enhanced, more robust technical capability for the region.

Companies within the region are already becoming increasingly involved in leading edge energy developments. Establishment of the Centre would fast-track this transition and capitalise to greater effect on Taranaki's world class specialist energy capability, engineering, design, construction and project management skills. The region has an existing track record of innovating and adopting new energy technologies. It can harness and expand that capability with a focus on the application of research and commercialisation and establish "Taranaki as a Testbed". This would utilise the current talent base (thus retain jobs), extend their capability, and attract new jobs as well as business and investment to the region.

The Centre would create the pathway for Taranaki to become a leader in the demonstration and commercialisation of clean energy technologies, and would showcase how a region can transition to this new energy future. This would progress the Government's coalition agreement (relating to its zero carbon goal and addressing climate change) as well as advancing its standing on the international arena as a progressive energy nation.

Imagine, for example, the Centre tapping into our nation's renewable energy potential, and mobilizing our hydrocarbon expertise (coupled with leading research and international energy connections) to create a new form of (renewable) synthetic fuel, or to design and build a facility or process that could make ultra-low carbon methanol, instead of its (higher carbon) equivalent currently used in a multitude of products, globally.

These types of developments would shift Taranaki from a region at risk of losing capability and being highly exposed to the global transition to renewable low and zero emission energy forms, to one which is placed in a strong position to “ride the wave” of the global transition to low emission energy.

The financial contribution within this proposal will be used: to fund a consulting project to assess its feasibility and initial business case.

Future Steps: The project outputs would be used to progress the project to full business case and investment proposition, with subsequent development, establishment and operationalising of the Clean Energy Development Centre. It is estimated that a new Centre could require approximately \$^{Commercial Information} regional growth funding to establish over a 5-year period.

PROACTIVELY RELEASED

STRATEGIC CASE

Investment objectives

<i>Project Objective One</i>	Identify if there is a business case for the establishment of a clean energy centre in Taranaki.
Existing arrangement	<p>The oil and gas industry represents almost 30% of the Taranaki regional economy, provides high income jobs, and supports a significant portion of the engineering and construction activity based in the region, as well as indirectly, many jobs in accommodation and service industry (over 7,000 jobs). All of New Zealand's commercially developed oil and gas fields are domiciled in Taranaki. While the oil and gas industry is envisaged to remain an important component of New Zealand's energy mix, the world is also changing.</p> <p>There is a global transition to renewable, low emission energy forms underway, coupled with a decline in the price of oil. This is creating a threat and reduction in exploration investment and loss of jobs. It is also an opportunity and strong driver for Taranaki to become a leader in future energy technologies and their adoption</p> <p>Taranaki has significant water, wind and solar resources that create a natural competitive advantage compared to other regions in NZ. It has a deep water port and geographic position that provides access to Australian and Asian export markets.</p> <p>The region has:</p> <ul style="list-style-type: none"> • Established energy generation and distribution infrastructure • World class engineering design and project management • Manufacturing, on and off-shore fabrication and construction expertise; including operations & maintenance skills • A leading safety culture with experience of working safely with hazardous materials, gases, drilling for oil and gas, and high voltage power • Highly skilled energy sector employees and specialist businesses with strong international connections • The skills and capability to support new energy technology, and infrastructure development that could be increasingly re-directed, retrained and re-tooled for future energy industries <p>Taranaki is in a strong position to "ride the wave" of the global transition to low emission energy. On the other hand, Taranaki also risks being caught by the breaking wave of disruption of the conventional energy economy. Without action, the region's economy is at risk with significant implications for New Zealand's economy and energy security. There is a strong impetus for Taranaki to demonstrate leadership in future energy technologies and their adoption in order to future proof and enhance the regional (and national) economy.</p>

<p>Business need/scope</p>	<p>The Energy sector is a key part of Taranaki's economic prosperity. The region has world class capabilities in existing energy technologies, engineering, operations and maintenance. Maintaining this prosperity and capability will be dependent on future-proofing the region's existing industry and developing new capabilities and energy industries as the world transitions to a lower carbon future. The region is highly exposed to the global transition to renewable low and zero emission energy forms, and risks losing capability if new clean energy industries aren't developed in the region.</p> <p>Establishment of the Clean Energy Development Centre creates the opportunity for Taranaki refocus, retool and reposition for this energy future. Taranaki is well placed to utilise its infrastructure and capability to develop a number of clean technologies, taking them out of the lab, upscaling to demonstration and pilot scale, and ultimately demonstrating commerciality. This in turn would create an enhanced, more robust technical capability for the region.</p> <p>The Clean Energy Development Centre will:</p> <ul style="list-style-type: none"> • Leverage strengths to actively contribute to the energy transition • Future proof the existing industry • Create new energy job opportunities and exports • Develop and attract new clean technology businesses <p>The focus of the Clean Energy Development Centre will be to develop, demonstrate, test and pilot clean technologies.</p> <p>Aims of the Centre:</p> <ul style="list-style-type: none"> • Build an international reputation for development, demonstration, piloting, testing and commercialisation of clean energy technologies and models • Create a focal point for clean energy projects in the region and establish "Taranaki as a Testbed" • Attract new clean energy projects and investment to the region <p>The Centre will:</p> <ul style="list-style-type: none"> • Boost commercialisation through the capability to quickly and efficiently develop, evaluate and demonstrate products and services. • Link Taranaki companies to leading national and international research capability and funding sources. • Identify and resource regional competence gaps for development projects. Plan, fund and deliver an integrated technology development program to mature researched technology into pilot/full scale development. • Leverage existing skills, capabilities, installed infrastructure and existing industrial facilities to develop and demonstrate new clean technologies and support new clean technology companies. <p>There is strong support by stakeholders and industry leaders to investigate the establishment of such a Centre in Taranaki.</p>
<p>How will the project meet this need?</p>	<p>This proposal will provide the resourcing to engage expertise to assess whether there is a business case for the establishment of such a Clean Energy Development Centre in Taranaki, including costs and benefits, operational framework, regional and national strategic fit and commercial factors critical for sustainable success.</p>

Key strategic risks

Risk	Responsible party	Risk treatment (by applicant)
High Risk – uncertain outcome	Mayoral Forum/Project Lead Team/Venture Taranaki (VT)	All key stakeholders will be engaged in preparing the scope of work so as to secure their involvement and the resulting assessment will robustly and independently analyse its potential for success. Learnings from successes and failures of similar facilities (nationally/internationally) will be obtained.
Risks of duplication with other centres	Project Lead Team/VT	Review of proposed activities of the Clean Energy Development Centre relative to other aligned centres/departments/agencies will be entailed in the business case.
Inertia to change. Potential to be perceived as potential risk or threat to existing energy/oil and gas industry	Project Lead Team/VT	Key industry leaders and stakeholders will be briefed on the project and targeted to champion the project. Industry will be included in the preparation of the scope of work so as to secure their involvement at an early stage. A communications strategy will be developed explaining rationale as well as the potential gains from the establishment of the Centre, and risks of non-change.
Broader economic, financial, environmental and social benefits are not captured in the analysis	Mayoral Forum/ Project Lead Team/VT	The scope of work will require the involvement of an appropriately experienced economist and business adviser/analyst to ensure benefits are identified. Economic evaluation criteria will be workshopped with key stakeholders.
Requisite skills and experience are not available in the market at the level of investment desired	VT	The scope of work will encourage collaborative proposals between consulting firms to ensure skills are matched to requirements. Technical elements will be peer reviewed by industry to ensure robustness.
Taranaki not perceived as appropriate place for the Clean Energy Development Centre	Mayoral Forum/ Project Lead Team/VT	A communications strategy will be developed which highlights the rationale for Taranaki, and the benefits regionally and nationally.

High level objectives alignment

Stakeholder	Relevant high level objective(s)	Explain contribution/alignment
<p>Mayoral Forum/Taranaki Region</p>	<p>Tapuae Roa – Taranaki Regional Economic Development Strategy - Energy Futures.</p> <p>Connections with other Action areas within the Regional Strategy e.g. Māori Economy, Innovation and Skills, Food Futures etc.</p>	<p>Energy Futures is identified as one of the four futures and regional growth sectors. A detailed Energy Future’s Action Plan has been developed.</p> <p>Creation of the Clean Energy Centre is one of the two key actions defined and detailed within the Energy Futures Action Plan.</p>
<p>New Zealand/Labour Green Party</p>	<p>Coalition Agreement states ambition to:</p> <ul style="list-style-type: none"> • Generate 100% of the nation’s electricity from renewable sources by 2035 • Achieve net zero carbon emissions by 2050 <p>Make the government’s vehicle fleet emissions free by 2025/26</p>	<p>Consistent with this aspiration is the shift towards more renewable energy future, retooling of skills, capabilities and technologies traditionally aligned with fossil fuels, and progress towards a lower emission future.</p>
<p>MFE</p>	<p>New Zealand’s Climate Change Programme:</p> <p>Under the Paris Agreement, New Zealand has set a target to reduce greenhouse gas emissions by 11% below 1990 levels by 2030 (the 2030 target)</p> <p>Initiatives to help reduce emissions, adapt to climate change effects and transition to a low emissions and resilient economy.</p> <p>Includes:</p> <ul style="list-style-type: none"> • The Zero Carbon Bill • Establishment of the Interim Climate Change Committee to progress key issues. <p>The transition to a low emissions and resilient economy.</p> <p>Furthermore, transitioning to a low emissions economy aligns with a global shift and growing economy that pursuing low-carbon, climate resilient growth can be progressed alongside other socio-cultural, environmental and economic goals.</p>	<p>Consistent with, and helps to advance such endeavours.</p> <p>The establishment of this Centre will retool Taranaki’s regional economy and capability centred predominantly on fossil fuels exploration and the adoption of a leadership position to ‘ride the wave’ of global transition to low emission energy.</p> <p>In doing so, it will play a key role in the future proofing of its regional future and enhancing the economy reaffirming the positive adaption of change and building a more resilient economy.</p>

MBIE	<p>New Zealand Energy Strategy – 2011 – 2021</p> <ul style="list-style-type: none"> The key energy strategy which emphasises the need to make the most of the nation’s energy potential including the diversity of resource development (petroleum, renewables and embracing new technologies), being environmentally responsible, ensuring efficient use of energy and secure, affordable energy. 	<p>Establishment of the Clean Energy Development Centre fosters the extension of Taranaki’s energy expertise into opportunities broader than petroleum. It capitalises and extends to a much greater extent into renewables and the development of technologies associated with clean energy. This includes harnessing skills and capabilities, and utilising Taranaki as a testbed for new developments.</p>
MBIE/EECA	<p>Energy Efficiency and Conservation Strategy (NZECS).</p> <p>The goal of this strategy is for New Zealand to have an energy productive and low emissions economy. It encourages businesses, individuals and public sector agencies to take actions to unlock our renewable energy, and energy efficiency and productivity potential. This includes, reducing emissions and switching to renewables, as well as embracing technology and innovation.</p>	<p>Development of the Centre focuses on actions which will support these activities and goals. Emphasizes capitalising on and retooling of capability and the development, testing and deployment of new technologies.</p>
MBIE	<p>Energy and Regional Growth – focuses on development of export markets, GDP growth, productivity and competitiveness.</p>	<p>The Clean Energy Development Centre focuses on retooling capability to ensure resilience and the development of regional growth with an export focus.</p> <p>It will enhance reputational benefits from reduced environmental impacts as well as technological, smart technology leadership and enhanced, repositioned global energy connections.</p> <p>Helps Taranaki to retain jobs, competitiveness and economic resilience and growth.</p>
MOT/Infrastructure	<p>Low emissions transport; other infrastructure</p>	<p>Clean energy developments and opportunities to testbed, pilot such technologies are included within the Centre. The potential for hydrogen technologies to be developed will be of particular relevance to heavy transport.</p>
Callaghan Innovation	<p>Callaghan Innovation’s Purpose – to help New Zealand businesses succeed through technology.</p>	<p>Key focus of the Centre is on technology development, transferability of skills to accelerate new technology development, piloting projects with the aim of establishing a test bed. Connections with Callaghan Innovation are viewed as critical for the Centre, as are international research expertise.</p>

Venture Taranaki (Regional Development Agency for Taranaki)	2017/2018 Business Plan Energy Futures	Planning for the region's 'energy future' acknowledged and already included in current regional economic development business plan objectives and activities.
Local authorities/Taranaki Councils	District and regional Plans and associated policy statements.	Consistent with RMA and aligned plans and activities.

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ECONOMIC EVALUATION

Cost/benefit breakdown

	PREFERRED OPTION <i>Requested investment</i>	<i>EXISTING SITUATION</i>
Period of expected economic benefits from project (years)	None directly from business case stage. If a service were implemented, benefits would be ongoing and intergenerational.	There is no service and latent benefits are untapped.
<i>Capital/whole of life costs</i>	<p>Commercial Information for initial business case (of which Commercial Information is sought from Government).</p> <p>Additional regional resourcing will be provided in-kind.</p>	There is no service currently and therefore no costs.
Cost-benefit analysis of monetary costs and benefits		
Present value of monetary benefits	<p>This project relates to an indicative business case process. That process would begin to explore NPV of costs and benefits and BCR of any service. It is not practical to estimate the monetary benefits of a \$ Commercial Information investment in the indicative business case itself.</p>	There no benefits to measure as the service is not operational.
Present value of costs		There no costs to measure as the service is not operational.
Net present value		Not calculated - benefits cannot be quantified at this stage.
Benefit/cost ratio		Not calculated - benefits cannot be quantified at this stage.

PROJECT PLAN

Outline the procurement process used/to be followed
<p>On completion and agreement of the final scope of work, a request for proposals will be made. At least three firms with known skills and experience would be approached directly to provide proposals. A preferred respondent will then be selected based on quality of proposal and ability to undertake work within budget and timeframe, with Venture Taranaki and NPDC/Taranaki Councils working with the preferred respondent/s to formalise the arrangement e.g. within a short form ACENZ/IPENZ contract for service, or similar, and commence the work.</p>
Outline the key project requirements, used/to be used in procurement
<p>The successful respondent will be engaged to produce a business case document and assessment outlining the description of, and all relevant costs and benefits associated with a proposal to develop a Clean Energy Development Centre with content and of a form consistent with Government regional economic development strategy and Treasury requirements for indicative business cases.</p>

Project timeline

DATE	Project milestone	Associated payment	Evidence/reporting required
Commercial Information	RGI funding released	Commercial Information	Funding agreement with MBIE
	Stakeholders/Project Team/VT agreed outline scope		Outline scope of work
	Procurement process complete and successful applicant appointed		Signed contract for service
	Draft report		Draft report
	Final report		Final report

*Payments and milestones will be subject to contractual requirements, and so may vary from the outline above.

Key project risks

Risk	Responsible party	Risk treatment (by applicant)
Calibre of skills for business case analysis, given business and technical understanding, is found to be lacking.	VT/Taranaki Councils	The scope of work will encourage collaborative proposals between consulting firms to ensure skills are matched to requirements. Guidance and technical support from industry leaders, clusters and Venture Taranaki regional development staff will be made available to successful applicant.
Failure to meet timelines and outcomes	VT/Taranaki Councils	Good Project Management is critical and selection of an effective, committed working party prepared to dedicate and prioritise time to the task at hand.
Estimated Project costs are significantly greater than initially estimated	VT/Taranaki Councils	Fixed term project costings to be agreed.

Operating budget

Applicant and project name					
Preferred option	Year 0	Year 1	Year	Total
<u>Expenditure</u>					
<u>Capital expenditure</u>	Commercial Information				
TOTAL					
<u>Operating expenditure</u>					
Supplier fees (excl. GST)					
TOTAL					
<u>Co-funding secured, source</u>					
Commercial Information					

Commercial Information	Commercial Information
Commercial Information	
TOTAL	
Capital funding required	
Operating funding required	
Funding shortfall (if any)	

Commercial Information

MANAGEMENT PLAN

Venture Taranaki will provide governance oversight of this project on behalf of New Plymouth District Council and other stakeholders including Stratford District Council and South Taranaki District Council.

Venture Taranaki, as the regional development agency and with its experience in project management and direction, will be the fund holder for the project and will contract with the suppliers. Project management will be based at Venture Taranaki, and appropriate project management tools used to ensure the smooth-running of the project.

A project evaluation will be undertaken at the conclusion of the project, as will reviews as the project progresses.

NEXT STEPS

As per the proposed timeline, if funding is approved, the proposed next steps are to confirm project management, establish a stakeholder/industry working group, develop and agree the project scope of work, issue RFP, secure the preferred supplier, with project work commencement in Commercial Information and conclusion in Commercial Information.

This proposal is for the initial business case/feasibility study stage only. The establishment of the Clean Energy Development Centre is a long-term project, and subject to the outcomes of this initial feasibility/business case, there is likely to be further funding commitment sought to progress detailed investment case associated with establishment.