



BULLER
DISTRICT COUNCIL

AGENDA:

Meeting of the Economic Development Committee

**Thursday 8 December 2016
Commencing at 4:00pm**

at the Clocktower Chambers

Members:

His Worship the Mayor Garry Howard (Chair)
Cr Phil Rutherford
Cr Shayne Barry
Cr Greg Hart
Cr Martin Hill
Cr Emily Miazga
Cr Robyn Nahr

Terms of Reference

Economic Development Committee

PURPOSE:

The Economic Development Committee will focus on assisting the delivery of sustainable long-term economic growth, increased employment, promotion of the district’s visitor attractions, delivery of high-quality events and support for the development of both existing and new businesses in the district.

The Economic Development Committee will also work to build Buller’s unique identity, bolster business confidence, and raise the district’s profile.

The Economic Development Committee will replace the current “EDM” working group.

The Economic Development Committee will:

- foster the development of industry “clusters” within the district and/or the West Coast region
- following consideration of applications supported by appropriate business cases, make recommendations to Council, for the provision of assistance by way of staff time and/or cash grants, towards economic development projects, sector working group activities, and events.

DELEGATED POWERS:

The Economic Development Committee has authority to make distributions of staff time and/or cash grants within the limits of an annual budget provision for economic development established by Council.

FREQUENCY OF MEETINGS:

Quarterly or as requested

REPORTING TO:

Council

REPORTING TIMELINE:

As and when required

- MEMBERSHIP:**
- | | |
|---------|---|
| Chair | - Garry Howard |
| Members | - Shayne Barry
- Greg Hart
- Martin Hill
- Emily Miazga
- Robyn Nahr
- Phil Rutherford |

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Meeting of Economic Development Committee

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ECONOMIC DEVELOPMENT COMMITTEE

8 DECEMBER 2016

Report for Agenda Item No 1

Prepared by - Andy Gowland-Douglas
- Chief Executive

MEMBERS INTEREST

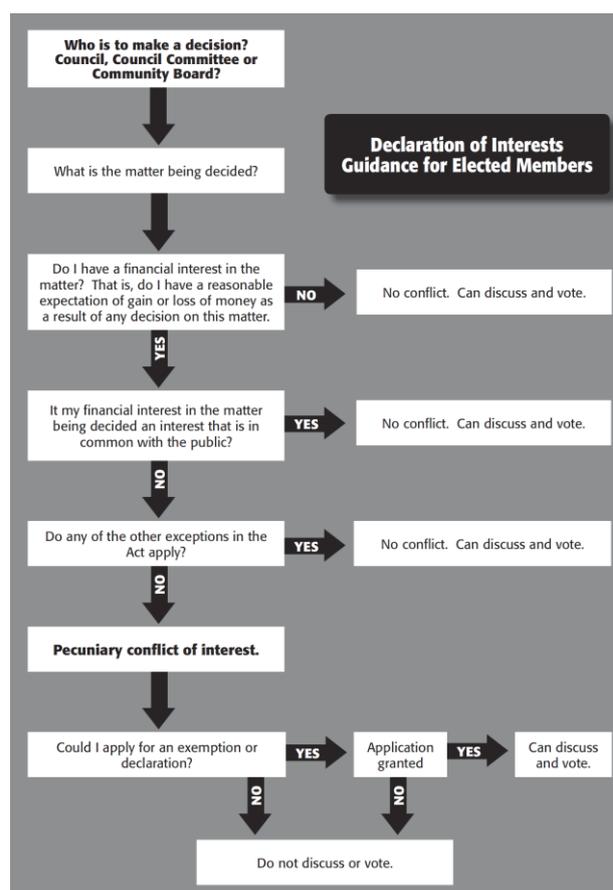
Members are encouraged to consider the items on the agenda and disclose whether they believe they have a financial or non-financial interest in any of the items in terms of Council's Code of Conduct.

Councillors are encouraged to advise the Personal Assistant, Corporate Services, of any changes required to their declared Members Interest Register.

The attached flowchart may assist members in making that determination (Appendix A from Code of Conduct).

DRAFT RECOMMENDATION:

That Members disclose any financial or non-financial interest in any of the agenda items.



ECONOMIC DEVELOPMENT COMMITTEE

8 DECEMBER 2016

Report for Agenda Item No 2

**Prepared by - Mayor Garry Howard
- Chairperson**

CONFIRMATION OF MINUTES

Minutes from the Economic Development Committee meeting held on 5 July 2016.

DRAFT RECOMMENDATION:

That the minutes from the meeting held on 5 July 2016 be confirmed.

**MINUTES OF THE MEETING OF THE ECONOMIC DEVELOPMENT COMMITTEE
HELD AT THE CLOCKTOWER CHAMBERS, PALMERSTON STREET, WESTPORT,
ON TUESDAY 5 JULY 2016 COMMENCING AT 5.30PM**

PRESENT:

Cr PJ Rutherford (Chairperson), GT Neylon, and His Worship the Mayor Garry C Howard.

IN ATTENDANCE:

Crs LM Brooks and SP Roche, Acting Chief Executive (CM Scanlon).

APOLOGIES:

An apology on behalf of Cr Basher was received.

1 MEMBERS INTEREST

Nil.

2 CONFIRMATION OF MINUTES

RESOLVED that the minutes of the 17 June 2015 meeting be confirmed.

**GT Neylon/Garry C Howard
CARRIED UNANIMOUSLY**

3 ECONOMIC DEVELOPMENT WORKING PARTY ACTIVITY

A general discussion took place around activity, in particular Southwell and the funding conditions imposed.

RESOLVED that the report be received for information.

**Garry C Howard/GT Neylon
CARRIED UNANIMOUSLY**

4 BUDGET 2016/2017

RESOLVED that the report be received for information.

**Garry C Howard/GT Neylon
CARRIED UNANIMOUSLY**

RESOLVED That the Mayor and Acting Chief Executive approach Development West Coast to discuss options to assist small business operators.

**Garry C Howard/PJ Rutherford
CARRIED UNANIMOUSLY**

5 BULLER DISTRICT ECONOMIC STIMULUS FUND

RESOLVED that a letter be sent to the remaining applicants, approximately 18, regarding the distribution of the remaining \$121,000 from the Buller District Economic Stimulus Fund.

**Garry C Howard/GT Neylon
CARRIED UNANIMOUSLY**

6 EMPLOYMENT INITIATIVE

RESOLVED that the report be received for information.

**GT Neylon/Garry C Howard
CARRIED UNANIMOUSLY**

There being no further business the meeting concluded at 6.30pm

Confirmed Date

ECONOMIC DEVELOPMENT COMMITTEE

8 DECEMBER 2016

Report for Agenda Item No 3

Prepared by - Mayor Garry Howard
- Chairperson

CHAIRPERSON'S REPORT

1. REPORT SUMMARY

The purpose of this report is to provide Economic Development Committee members with an overview of various issues in the Buller District.

2. DRAFT RECOMMENDATION

1. That the report be received for information.
2. Request Ministry of Social Development to update employment initiative status confirming the number of positions retained.
3. Economic Development Committee confirm monitoring of KPIs and updates for successful applicants of Buller District Economic Stimulus Fund.

3. ISSUES

3.1 Employment Initiative

As per letter, attached Buller District Council has applied for a further \$300,000 to establish another 20 new employment positions. The application was given consideration on 5th December and the outcome should be known at the time of this meeting.

As per Accountability Report 22 positions approved with prior funding. At present xx employers are yet to fill xxx positions. While the positions will be monitored for payment by Ministry of Social Development, I feel Council requires a six-monthly update as to the status of jobs created.

3.2 Buller Economic Stimulus Fund

Buller District Council has applied for a further \$500,000 to assist new and established businesses create employment opportunities. The application given

consideration on 5th December and outcome should be known at the time of this meeting.

It is extremely important that we monitor the outcome of the business assistance provided to thirteen business and two initiatives being Co-Starters and Employment Initiative. The thirteen businesses have KPI's and these are being tabled with time of occurrence. A spreadsheet is being repaired. We need to confirm what further updates appropriate, who will undertake and reporting to Economic Development Committee (EDC). A regular three monthly or six monthly as contact with successful applicants recommended with a very short update provided to EDC.

3.3 Co-Starters

A report contained in the Accountability Report. The 35 participants need to have various levels of contact and possibly assistance to enhance the program. Establishing how this may be facilitated should be confirmed as Buller District Council, Development West Coast and Community Development Facilitator has a stake in ensuring participants are provided opportunity to succeed.

Peter Howard, Community Development Facilitator is preparing applications to fund the 2017 program. Does the EDC need to make submission to 2017/18 Annual Plan?

3.4 Economic Development Facilitator

The EDC needs to confirm the work plan and expectations for the John Hill, Economic Development Facilitator. John will be providing written reports detailing work undertaken and going forward to each EDC meeting and provide bullet points that he will speak to at Economic Development Working Group meetings. John's time is limited to twenty hour per week position.

3.5 Economic Development Working Group

A copy of the terms of reference for the ED Working Group attached. The focus of work undertaken by the Working Group may be influenced by the outcomes of funding applications to DWC. Prior to DWC providing funding the working group looked at business opportunities to see where we could assist. With the BDESf in place, work of the group focussed on the application and recommendation process associated with the fund. The terms of reference for the ED Working Group should be circulated to the participants with any alterations being taken to Council for approval.

3.6 West Coast Growth Study and Action Plan

A report is being prepared for Council updating Council on progress. It is hoped that Natasha Barnes-Dellaca will be present at the EDC meeting as a member of West Coast Growth Study Governance Group to provide information.

ECONOMIC DEVELOPMENT COMMITTEE

8 DECEMBER 2016

Report for Agenda Item No 4

Prepared by - Peter Howard
- Buller Community Development Facilitator

REPORT

1. REPORT SUMMARY

The purpose of this report is to provide Economic Development members with an overview of progress to date by Peter Howard, Buller Community Development Facilitator.

2. DRAFT RECOMMENDATION

That the report be received for information.

3. ISSUES

Co.Starters

We have now completed our final Co.Starters co-hort for 2016, having successfully had 34 graduates throughout 2016. We are putting in place an Advocates/Advisory panel to assist with further strengthening of the programme and to assist in developing and providing support post-Co.Starters.

We are currently in the process of generating a funding report for the year and preparing a funding application to Development West Coast (DWC) for continuation of the programme in 2017 (this will be on a West Coast-wide basis). Initial discussions with DWC indicate that they may still only partially fund the programme.

Youth Co.Generator Programme

As an extension of the Co.Starters programme we are aiming to run the youth focused Co.Generator programme in 2017. This will be focused on developing

youth entrepreneurship skills, while focusing on the development of social enterprise initiatives and community projects.

In conjunction with the Buller Youth Council we have placed a funding application into the Ministry of Youth Development – Local Government Projects fund to assist with running the programme in Westport for 20 youth.

We also have demand from Karamea and Reefton schools to run the programme with support from Community & Public Health, with further partners/funding required.

Ākina Foundation: Social Enterprise Development

The West Coast Regional Growth Study identified an economic opportunity in developing a food co-operative in the Karamea region under a social enterprise-based model. Support for this and incubating other business ideas based on social and environmental outcomes in Buller District has been offered by the Ākina Foundation. (This could also be of interest in Grey and Westland.)

I can confirm from my experience with the Co.Starters programme that there is ripe ground for the development of a secondary food processing co-op, with horticulture producers in the region keen to co-operate.

An initial proposal has been developed looking at the development of this co-operative and broader social enterprise scoping/capability building over a three year period. If the district/region puts forward a business case through the Regional Economic Action Plan (currently under development) and there is funding from the district/region I understand that Central Government (MBIE) will consider co-funding it. How this co-funding might be structured is open for discussion. DWC will not look at becoming involved in this until potentially year two.

Ignite Breakfasts – Business Networking Events

The Ignite business breakfasts have proved to be a useful and informative networking event throughout 2016. At present we have the following guest speakers linedup:

- Friday 9 December – Jim Little, CEO – Tourism Our Icons: Tourism Strategy Development as part of the Regional Growth Study
- Friday 24 February (exact date tbc) – Stephen Knuckey, Martin & Jenkins – Economic Growth Study – opportunities for the Buller region.

Other potential speakers for 2017:

- Patrice Feary – KPMG – Critical Success Factors of Small/Medium sized businesses.
- Mia Hansson – NZTE – Customer Manager / Brand and Marketing Manager

Business Development workshops and networking events

Following on from the Co.Starters programme there is significant need to enhance the business development and support ecosystem for small and medium-sized businesses that are between the start-up and export stages of business development.

So far we have identified three key activities that can help achieve this:

1. Stronger mentor networks
2. Capability building workshops
3. Regular informal networking events

We are currently working alongside EPIC Westport in looking to address the development of regular workshops and networking events. The Co.Starters Advocates Panel will hopefully work alongside DWC/Business Mentors NZ in strengthening mentor network and engagement.

One informal evening networking event per month is ideal.

Approx. one capability building workshop per month surrounding core business needs ie. marketing, business strategy development tools, design-based thinking etc.

Opportunities exist to host a range of workshops including:

- Mia Hansson – NZTE – Branding and Marketing
- KPMG – Be Retail Ready – Food and Beverage program
- Anna Guenther – Pledge Me – Crowdfunding / Equity Crowdfunding
- Kevin Stratful – Six C Business Strategy Development Model

Funding is a key problem, expertise and knowledge generally need to be brought in to the region. While the Regional Business Partner coupons can be applied to many potential workshop providers cost are generally still prohibitive for local business owners.

ECONOMIC DEVELOPMENT COMMITTEE

8 DECEMBER 2016

Report for Agenda Item No 5

Prepared by - John Hill
- Business Development Facilitator

REPORT

1. REPORT SUMMARY

The purpose of this report is to provide Economic Development members with an overview of progress to date by John Hill in the role of Business Development Facilitator.

2. DRAFT RECOMMENDATION

That the report be received for information.

3. ISSUES

Background

Having completed 15 months in the role of Business Development Facilitator it is an opportune time to review and report upon progress. During my interview I presented my plan for the first 90 days, which was to meet with and familiarise myself with as many influential people as possible in the limited timeframe. This strategy targeted a 'top down' approach to business development. This has been successful and therefore extended. The 'bottom up' approach is also important but requires greater resources and support from ED organisations, social enterprises, DWC, mentors etc, that may access large numbers of people, with the resources and time available to support these many small businesses. With limited time available in a part time role, top down is the most efficient model to fast track high impact economic development. This is working successfully during my first 15 months in the position.

The Top Down approach

In business, the Pareto rule dictates where to focus effort. Applied to Buller's ED, it simply states that 80% of Buller's business, GDP, employment and productivity will come from 20% of its business base. Regardless of the number and diversity

of businesses operating, the Pareto rule always applies. The large number of small businesses providing 20% of output should not be ignored however. Focus on the top 20% of businesses, will provide the most efficient use of the Business Development Facilitator's limited time. In order to connect with the large number of smaller businesses this is best achieved by using organisations, associations, clubs and enterprises. As an example, the great work of REAP has successfully attracted a healthy number of new start-up companies and it is logical that these start-ups would be followed up by REAP through to completion.

Contrary to popular belief a large scale project can progress as rapidly as a small scale start up. 'Buy in' from organisations such as DWC, NZT&E, BDC and government departments is needed to speed up large projects. The loss of Holcim Cement, OceanaGold and Solid Energy may paradoxically provide opportunities to fast track very large alternative projects.

The economic survival of Buller relies heavily upon the survival of the river port and the Kiwirail Midland Line. Only large businesses producing large volumes of freight in and freight out will ensure the economic survival of Buller. The nurturing of many small diverse businesses, although important, will not result in the retention of the port and the Midland Line. For smaller businesses to succeed, the \$5.5 million lost from our economy due to job losses from Holcim, Solid Energy and OceanaGold must be replaced by similar-sized companies moving into Buller.

The New Business Base

Discussions with large companies in the clean technology sector indicate that there are strong drivers in favour of large businesses moving to Buller. Although CleanTech, these businesses may still remain stigmatised by NIMBY opposition. Buller is not a NIMBY restricted town. The three large projects currently under development are:

1. Ngakawau Restoration Scheme

This scheme has lost and regained momentum several times over 10 years. I have followed its progress and offered support over the 10 years. Anthony Black has brought it back to the attention of Treasury/Government. Simply put, it involves redirecting acid mine drainage (AMD) to a common point where a hydro turbine is deployed to generate 25MW of electricity. The 'spent' AMD is then sent to a 1.5km ocean outfall.

It has been suggested from two independent sources that AMD may be processed to extract value-added chemicals prior to ocean outfall and this option is under consideration.

2. Waste to Energy (WtE)

This project has progressed with over 10 years of involvement from myself. The initial Veolia proposal was treated with some derision and opposition, however in recent weeks, with full support it has progressed to the point where it only requires signed waste supply contracts to ensure that it proceeds.

The proposal involves using rail freight to bring 600,000tpa MSW to Westport for controlled combustion. The plant will generate 68MW of electricity following 5MW of parasitic consumption. Waste will be processed through Multi Recycling Facilities (MRFs) to remove maximum recyclables and only the residual 40% will be shredded and bailed for rail freight to Westport on backloaded rail carriages.

The 600,000tpa (tonnes per annum) of MSW is reduced to 120,000tpa during the controlled combustion process. This bottom ash will be extracted for retrieval and recycling of materials such as glass, iron, aluminium, zinc and gold.

The plant will operate to NZ environmental standards.

The plant will involve \$600 million of capital investment in Buller. It is claimed that the project will employ several hundred FTEs during the three year build followed by 50 qualified FTEs and 50 indirect FTEs post commissioning.

3. *Timber to diesel*

This project involves conversion of 300,000tpa (tonnes per annum) of timber biomass to 50 million lpa (litres per annum) of high grade “drop in” transport fuel. The west coast consumes 45 million litres per annum of fleet transport fuel. Like WtE, the success of the project relies upon securing supply of feedstock. Guaranteed annual tonnages of timber may be from forest floor waste, post-earthquake treated timber, DOC’s No. 1 noxious weed – wilding pine etc. Long term feedstock will be provided from growing short rotation crops (eg pine, eucalypt, willow) on marginal land with a 10 year harvest cycle, thereby restoring sustainable forestry to the West Coast.

The project will involve \$200 million of capital investment in Buller and create 40-50 FTE positions.

The West Coast Tai Poutini Growth Study (WCTPGS) has identified that

- a. Marginal land must be identified on the West Coast for commercial development
- b. That we must collaborate more closely with iwi
- c. That we must engage the social enterprise organisation Akina Foundation to develop social enterprise opportunities.

These WCTPGS identifiers inextricably link the timber to diesel project with the WCTPGS as follows.

The project will require access to significant areas of marginal land. The directors of Akina Foundation, Nick Gerritsen and Anake Goodall are also directors of the Akina Foundation and Anake Goodall is one of New Zealand’s highest profile Moari dignitaries and former CEO of Ngai Tahu.

This project requires further advocacy and high level support from BDC, WCRC, NZTE, MBIE, WCTPGS, the governance group etc.

Other Projects

High Value Oil extraction

The feasibility of a timber to diesel refinery in Buller may be enhanced by extraction of high value added chemicals and essential oils prior to processing of the bulk biomass into diesel. Talks are underway with the Wilding Pine Company in Queenstown (an exemplar Akina Foundation Company). This company extracts essential oils from wilding pine and has signed an agreement with the US company doTerra to supply wilding pine oil extract and is now in expansion mode. The opportunity exists to establish a commercial scale supercritical CO² extraction facility to commercialise this and other extraction opportunities. The start-up company West Coast Natural Oils has been formed to progress this opportunity.

Regional Research Institute

In early 2016 I made a submission to MBIE in support of government funding of an RRI on the West Coast. Grey District and Westland District had declined to make a submission on the basis of having no exemplar research projects available. With assistance from Bill Lee and Eamon Ginley, a submission was made by myself.

There were 42 submissions from New Zealand regions, including very detailed and comprehensive submissions supported by consultants such as Martin Jenkins (WCTPGS consultant). My submission was rejected along with 39 others.

Only two submissions were successful. At least one of those successful submissions was made by the consultant Dr Jane Shearer. Kevin Stratful has brought together senior management of TPP and CRL to collaborate on a submission to the 2017 round of funding. CRL has appointed Jane to spearhead this submission that is scheduled for February 2017.

Coal to Value Added Products

Previously I have engaged with a company that specialises in production of Value Added Products (VAPs) from coal. Previous negotiations have broken down due to non-disclosure issues and lack of proof of concept. Negotiations have resumed under a revised structure but strict non-disclosure conditions prevent any further description of this potentially large project.

Cableski/Aquaculture

I have been in discussion with NZ largest aquaculture consultancy with regard to interest expressed by a large national aquaculture company to farm big fin fish on the vacated Holcim Quarry site. Cr M. Hill has been in discussion with the German company Rixen who have developed 60 cableski parks in Germany one of which is on a vacated Holcim quarry site. Cr. Hill has written up a modus operandi of a proposed cableski park. Rixen regularly requests updates on the Holcim sale process, with a view to progressing this opportunity.

Horticulture

The West Coast grows many plant species four times faster than other parts of New Zealand, yet horticulture remains a relatively small part of the economy. The key to success according to Lincoln University is scaling up to a level that ensures commercial feasibility.

The proposed WtE project is a combined heat and power (CHP) plant that will produce significant quantities of heat, carbon dioxide, and water from the controlled combustion process. The Engineering, Procurement and Construction (EPC) contractor for the project, Hitachi Zosen Inova, collaborates with an Australian company Nectar, that supplies horticultural tunnel houses in 10 hectare modules. The supply of heat and carbon dioxide to tunnel houses allows significant increase in production over 12 months per year and organic based crops. The writer will be engaging with large scale growers to present a plan for establishing production in Buller.

An opportunity not receiving sufficient attention on the WCTPGS is horticulture in general and manuka in particular.

There is also potential, as previously mentioned, to extract high value oils such as manuka, kanuka, pink pine, totara, beech, indigenous nettle, horopito, koromiko etc.

Infrastructure/Special Economic Zoning

The Northern Link Road and 2 proposed north/ south island ferry options are under discussion. MBIE under the direction of the government are investigating models to establish special economic zoning (SEZ) in regional NZ and particularly in Buller. The road and ferry options, have acquired urgent status due to recent earthquake events and together with SEZ, will involve discussion with government at the highest level.

Project Priority Matrix

Fifteen months ago I established a spreadsheet project priority matrix. I recognise that it is not possible to engage with all new ideas. The matrix attempts to list approximately 40 of the best projects. By applying a graded assessment of the projects under five different headings, a weighting may be calculated that may be used to provide a more accurate estimate of new jobs created. The above report includes some of the higher priority projects. An update matrix is attached to this report.

The proposed Buller ED economy

The three large, umbrella projects described in this report will provide significant quantities of electricity, transport fuels, heat, LPG, hydrogen etc as required. More importantly they will provide for self-sufficiency on the West Coast for electricity and diesel. Self-sufficiency in these two commodities will form the basis of an ED economy. A separate document is attached to this report.

BULLER PRIORITY PROJECT MATRIX

	Drivers	Employment	Time scale	\$ generated	Likelihood	Total	% weighting	No Employed	Employment realistic
Waste to energy(N2ENZ)	4	5	5	5	4	23	92	100	92
EPIC Centre/collective	4	3	5	3	5	20	80	20	16
Kiwi Rail -ML Consolidation	5	3	3	4	3	18	72	10	7
BHL-Port Consolidation	5	3	3	4	3	18	72	10	7
Essential oil extraction(manuka)	5	2	5	2	4	18	72	10	7
Ngakawau Restoration	5	2	4	4	3	18	72	10	7
Stevenson Mining	4	4	3	3	3	17	68	40	27
Timber to diesel(NXT Fuel)	4	4	2	4	3	17	68	100	68
Charleston Cape Foulwind Cycleway	4	1	4	2	5	16	64	5	3
Tapawera/Wankapeka Road	5	3	1	5	2	16	64	20	13
Southwell/agrichemicals	3	3	4	2	4	16	64	2	1
Horticulture Tunnel Houses	4	4	2	3	3	16	64	60	38
Regional Research Institute	4	3	4	3	2	16	64	10	6
Ultra Fast Broad Band	5	3	2	3	2	15	60	20	12
Honey proessing	3	2	5	2	3	15	60	10	6
Hardie Garnet	2	1	4	2	4	13	52	20	10
Advance Northern West Coast	4	3	2	2	2	13	52	20	10
West coast brewery upgrade	1	1	5	1	5	13	52	4	2
Quarry Aquaculture	4	2	1	4	2	13	52	10	5
Bottled Water	3	2	2	2	3	12	48	12	6
Powerhouse trust	1	1	4	1	5	12	48	2	1
Tai Poutini Poly. Expansion	4	1	3	1	3	12	48	10	5
Move to Westport	1	1	4	2	4	12	48	0	0
Quarry Leisure	3	3	1	4	1	12	48	20	10

Eden Project	2	3	1	4	1	11	44	40	18
Laboratory Testing expansion	2	2	2	2	3	11	44	8	4
Activated carbon manufacture	3	3	1	2	1	10	40	10	4
Shop West Coast	1	2	2	2	2	9	36	10	4
River Gravel/Aggregate	3	1	2	2	1	9	36	5	2
Coal to VAP's	3	2	1	2	1	9	36	5	2
Korean Fishing Boats	2	1	2	1	2	8	32	5	2
Electric car charging station	4	1	1	1	1	8	32	1	0
Railway Tourism	2	1	1	3	1	8	32	5	2
Oceana Gold Hydro	2	1	1	2	1	7	28	10	3
Boatbuilding	1	2	1	1	1	6	24	15	4
Windfarm	1	1	1	1	1	5	20	2	0
Nitric Acid manufacture	1	1	1	1	1	5	20	4	1
Magnesium from Seawater	1	1	1	1	1	5	20	6	1
Titanium processing	1	1	1	1	1	5	20	6	1
Coke manufacture	1	1	1	1	1	5	20	3	1
Organic Waste Treatment						0	0		0
Reefton Website/Events Calender						0	0		0
4 star hotel						0	0		0
Timberstakes/coal Distribution						0	0		0
Torrefied Wood Manufacture						0	0		0
								608	395

West Coast – The case for an ED economy

Background

The West Coast economy suffers from 'end of supply line' syndrome in relation to energy supply. Electricity is supplied from the Manapouri Hydro scheme via the Islington exchange and due to transmission losses the West coast is said to be in a transmission constrained region ⁽¹⁾. The Electricity Commission has recently concluded that wholesale electricity prices will increase, proportionate to distance from point of generation, and cost of maintenance and voltage upgrades by Transpower.

Fossil based fleet fuel and petrol are freighted from Marsden Point refinery, Whangarei and the West Coast typically pays a 10% premium for fuel, at the retail pump and commercial consumers are unable to secure long term supply contracts without escalation clauses based upon international crude prices.

High energy costs and supply insecurity place downward pressure on the West Coast economy.

Accordingly the West Coast must develop an energy economy that ensures self-sufficiency in electricity and liquid transport fuels.

I advocate that the most appropriate model for the West Coast, from an economic development (ED) viewpoint, is an electricity, diesel (ED) economy.

The Proposed West Coast ED economy

Energy self-sufficiency in the form of an ED economy may be achieved in the following way.

The Ngakawau Restoration (Hydro) scheme (25MW) and a South Island Waste to Energy (WtE) project (70MW) would provide 45MW of self-sufficient power, for the West Coast and 50MW of excess power.

A 300,000tpa timber/biomass to diesel refinery would provide 50 million litres per annum of drop in transport fuel. It is estimated that 50 million lpa transport fuel equates to self-sufficiency for the coast.

Excess energy and heat from the WtE plant may be deployed as process heat for adjacent industries that may create parasitic consumption of combined Heat and Power (CHP), thereby providing added revenue streams for the WtE plant and low price readily, available CHP to newly established industries. Large scale horticultural tunnel houses are being considered as a suitable parasitic consumer of heat, power and CO₂.

The timber to diesel refinery would be a significant consumer of hydrogen gas which is readily available by hydrolysis of water using excess electricity. This availability of hydrogen for the catalytic hydrogenation process may save \$50 million in capex needed for a hydrogen generation plant. Excess hydrogen may be deployed in hydrogen fuel cells to provide electricity to remote communities such as Karamea, Punakaiki and Reefton thereby avoiding costly transmitted generation of power as well as mitigation of power outages during natural disasters such as earthquake, storm and landslip. This option is a reality. A hydrogen economy was investigated in 2008 by the New Zealand Government based upon coal to hydrogen.⁽²⁾

The Buller Projects

1 *The Ngakawau Restoration scheme*

This scheme will divert acid mine drainage (AMD) from Stockton plateau mines to ocean outfall via a hydro turbine that will produce 25MW of generated electricity. This project remains under discussion with treasury pending the sale of Solid Energy, and pending the availability of funds from the remediation indemnity.

2 *The Waste to Energy project/hydrogen generation*

The writer has progressed discussion with the technology provider and EPC contractor Hitachi Zosen Innova (HZI) in relation to a proposed south island waste to energy facility. Depending upon long term guaranteed feedstock supplies of municipal solid waste and commercial waste, the plant may be between 250,000 and 600,000tpa producing between 40 and 70MW of electricity. HZI has recently acquired ETO gas in Germany and offers the technology to convert excess electricity to hydrogen gas or methane, for storage and transportation. The WtE facility will also produce excess heat that may be used for district heating or high energy consuming industries, such as horticultural tunnel houses.

The impending removal of Avoidance of Cost On Transmission (ACOT) by the Electricity Commission, favours embedded local electricity generation and even hydrogen/HFC generation which by definition avoids the need for transmitted generation.

Upon securing feedstock supply contracts and contracts for sale of electricity, heat, hydrogen and methane this project may be included in the Tai Poutini regional growth study.

3 *The Timber to Diesel project*

The writer is in discussion with NXT Fuel in relation to establishing a 300,000tpa timber to diesel refinery, producing in excess of 50million lpa of drop in transport fuel. It is estimated that this represents self-sufficiency in transport fuel for the west coast. The catalytic hydrogenation process is a net consumer of hydrogen gas which may be supplied by the WtE facility thereby negating the need for a 50 million capex hydrogen production plant.

Feedstock for this project will initially be from waste such as forest floor residues, wilding pine and post-earthquake treated timber, and long term from purpose grown short rotation crops. Energy crops will be grown on marginal land thereby avoiding land use change (LUC) and iLUC.

This process produces B100 biodiesel deploying IH₂, catalytic hydrogenation technology. Accordingly the product is ASTM approved drop in fleet fuel and SPK – A1 jet fuel. This is the preferred option of the PCE Jan Wright⁽³⁾. Although NZ research favours growing short rotation timber crops on marginal land⁽⁴⁾ it appears that NZ research is limited to inefficient technologies that cannot produce fleet fuel from biomass viably at the current international oil price⁽⁵⁾. Fischer Tropsch based technology and fast pyrolysis is unlikely to present a long term option for NZ, as they cannot produce drop in fuel viably at the present international oil price. So the NXT Fuel technology license is vital for near term deployment of timber to diesel production, due to its capability of producing drop in fuel at half the cost of these other processes.

The NXT Fuel project is inextricably linked to the Tai Poutini West Coast growth study as follows:

- The study recognises the need to identify marginal land/stewardship land – Such land would be entirely suitable for energy crops and feedstock for the project.
- The study recognises the need to collaborate with iwi – Anake Goodall is a director of NXT Fuels, a well-connected Maori dignitary and former CEO of Ngai Tahu.
- The study recognises the need to progress social enterprise based business opportunities using the Ākina Foundation. The directors of Ākina Foundation, Nick Gerritsen and Anake Goodall are also directors NXT Fuels and view this opportunity for a new sustainable forestry industry on the coast, as potential for social enterprise on a significant scale.

CONCLUSION

The West Coast of the South Island is remote and the economy suffers as a consequence of this remoteness. This report presents a model that may provide energy self-sufficiency and negate high energy costs and supply insecurity as economic inhibitors.

The generation of an embedded electricity supply with production of hydrogen, transport fuel, and heat will provide a complete energy model in which diesel may be used by cars and transport fleet, hydrogen may be used to generate electricity via HFC technology in remote rural towns thereby avoiding associated line maintenance costs of a reticulated supply and transmitted electricity may continue to be the main supply to the larger towns. It should be noted that hydrogen and HFC technology may be used by individual households for 'off the grid' electricity supply.

This ED model for Buller and the broader west coast presents a model for other regions of NZ that suffer from economic barriers associated with energy supplies.

References:

- (1) Andrew Selley Economic Consulting 2014. "The effect of Pulse Energy on retail electricity prices in Buller"
- (2) CRL08/11029 November 2008"Transitioning to a hydrogen economy in NZ"
- (3) PCE Jan Wright "Some biofuels are better than others. Thinking strategically about biofuels" 2014
- (4) Ian Suckling (Scion) et al. "Opportunities for biofuel in NZ" 2015

ECONOMIC DEVELOPMENT COMMITTEE

8 DECEMBER 2016

Report for Agenda Item No 6

**Prepared by - Mayor Garry Howard
- Chairperson**

OUTWARDS CORRESPONDENCE

1. Letter to Development West Coast

DRAFT RECOMMENDATION

That the report be received for information.

24 November 2016

OFFICE OF THE MAYOR
Garry Howard

Mr Chris Mackenzie
Chief Executive
Development West Coast
PO Box 451
GREYMOUTH 7805

Dear Chris

RE: BULLER DISTRICT ECONOMIC STIMULUS FUND

Council passed the following resolution at Wednesday 23rd November Council meeting –

1. *That Council receives the report for information.*
2. *That Council applies to Development West Coast and the Ministry of Social Development to extend the employment initiative by \$300,000*
3. *That Council applies to Development West Coast for the extension of the Economic Stimulus Fund by \$500,000. (Total application \$800,000)*

We have received further applications from employers looking to create new jobs, and as per prior correspondence, we have had favourable response but no commitment as yet from the Ministry of Social Development in regards to continuing the Employment Initiative.

Further to this we have the demand to continue the business growth initiative that assisted 14 businesses and the Co-Starters training programme. Through the process, we have learnt a considerable amount in regards to reviewing applications, looking at tangible outcomes and working with applicants. As per the report the approval process could be reviewed and streamlined for more timely outcomes. Council's Economic Working Group benefited from the inclusion of business people from throughout the community. This was of great assistance in the process and provided a very positive community – Council – Development West Coast linkage.

The total amount of funding being applied for is \$800,000. Please forward this request for consideration by the Development West Coast Board.

Best wishes



Garry Howard
BULLER DISTRICT MAYOR

ECONOMIC DEVELOPMENT COMMITTEE

8 DECEMBER 2016

Report for Agenda Item No 7

**Prepared by - Mayor Garry Howard
- Chairperson**

RESPONSE TO PUBLIC FORUM

DRAFT RECOMMENDATION

That the Economic Development Committee advise of any response to the public forum.