

BC's Green Economy Update:
GROWING GREEN JOBS



Ministry of
Environment



Message from the **Premier**

Protecting BC's environment is a guiding value for our government, businesses and citizens. BC has worked hard to become a worldwide leader on environmental regulation, responsible resource development, clean technology and green jobs.

BC's green economy does more than just protect our planet - it also gives us a competitive advantage that helps secure investments and create jobs. As we move forward, we will continue to demonstrate leadership on climate action, while supporting innovations that are helping businesses save money and become more sustainable, both here in BC and across the globe.

A handwritten signature in cursive script that reads "Christy Clark".

The Honourable Christy Clark
Premier



Message from the **Minister**

A year ago, BC's Ministry of Environment released BC's Green Economy, which outlined the actions we are taking across sectors to support the green economy as part of the BC Jobs Plan. Now I am pleased to present this update on our progress.

While providing a lower carbon form of fuel to Asia, BC's Liquefied Natural Gas industry is committed to leading the world in sustainability. LNG is driving clean tech innovations across BC, as companies find new ways to use this cleaner burning fuel. BC has also made progress reducing our greenhouse gas emissions, with levels falling 4.5% from 2007 to 2010.

BC's green economy is proof that we can grow the economy while protecting and enhancing the environment.

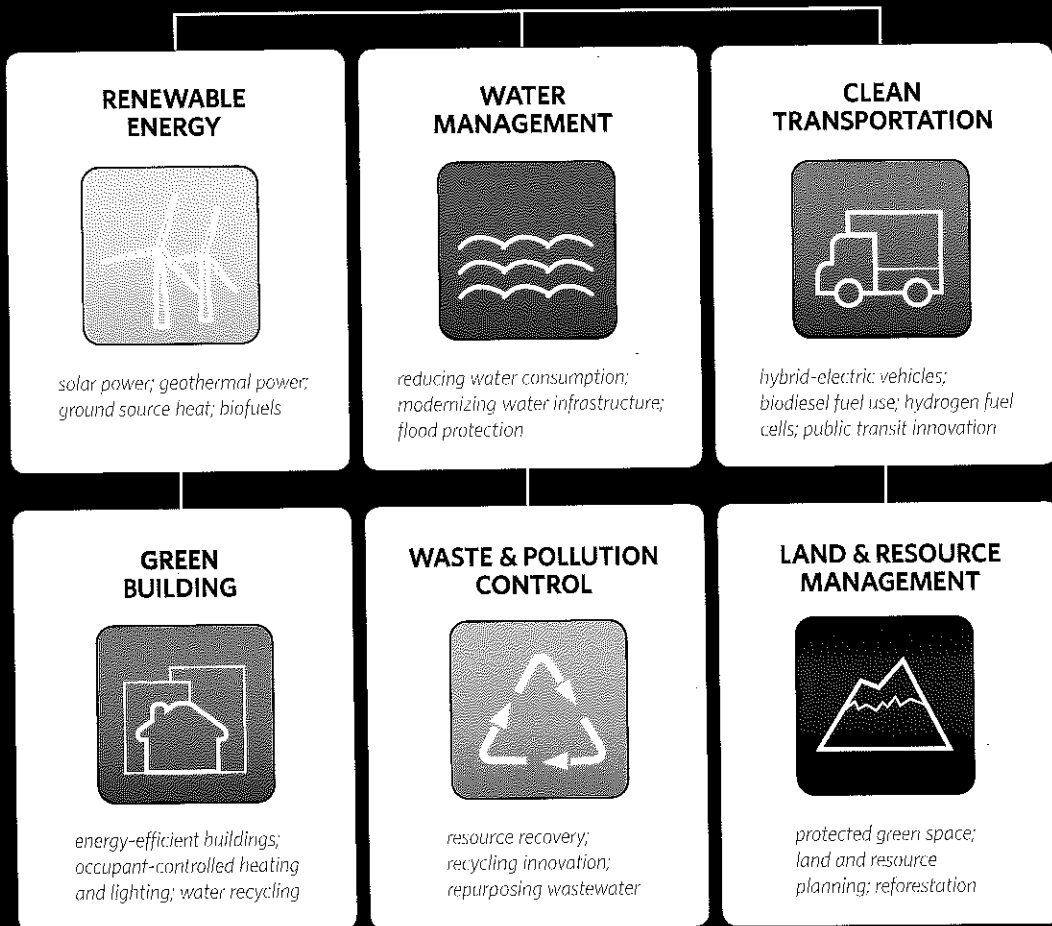
A handwritten signature in cursive script that reads "Terry Lake".

The Honourable Terry Lake
Minister of Environment

INTRODUCTION

A year ago, at the GLOBE 2012 conference, the province released *BC's Green Economy*, which presented a vision for how BC's green economy can play a critical part in the BC Jobs Plan. Since March 2012, industry, communities and the clean tech sector have come together to embrace opportunities for early adoption of innovations that are changing the way we live and do business, and are embracing new ideas about ecology, culture and economics. Along the way we have been creating jobs, enhancing economic competitiveness, and addressing the major climate and environmental issues of our time.

Key Elements of the Green Economy

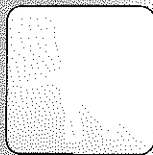
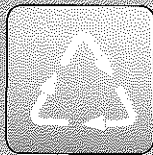


CLEAN TECHNOLOGY

'Clean tech' continues to foster the innovations that have allowed us to become world leaders in using technology to fight climate change, while helping businesses save money and be more competitive.



THE GREEN ECONOMY IS



Moving Transportation Forward

FORTISBC AND VEDDER TRUCK FLEET

FortisBC and Vedder Transport worked together to construct Western Canada's first large-scale Liquefied Natural Gas (LNG) fueling station. The fueling station helps Vedder Transport's truck fleet stay competitive and reduces their emissions by 27% below their diesel equivalent. Vedder Transport will now help reduce BC's greenhouse gas (GHG) emissions by over 3,500 tonnes and will displace 3.6 million litres of diesel fuel per year.

BC FERRIES

Using LNG to power BC Ferries' fleet of 35 vessels would reduce GHG emissions and be 50% cheaper than marine diesel. This initiative could significantly reduce fuel costs for BC Ferries. LNG is being considered for major retrofits of existing ferries as early as 2015 and for new vessels after 2016.

ON THE MOVE



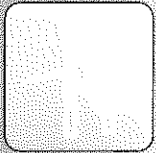
CEV FOR BC

BC'S LEG OF THE GREEN HIGHWAY COMPLETED

394 NEW CLEAN ENERGY VEHICLES ON THE ROAD - ONE OF THE HIGHEST CEV ADOPTION RATES IN CANADA

CHARGING STATIONS: 562 STANDARD PUBLIC; 17 FAST-CHARGE PUBLIC; 90 RESIDENTIAL

THE GREEN ECONOMY IS



Building Green Communities

BUILDING WITH CONTEMPRA

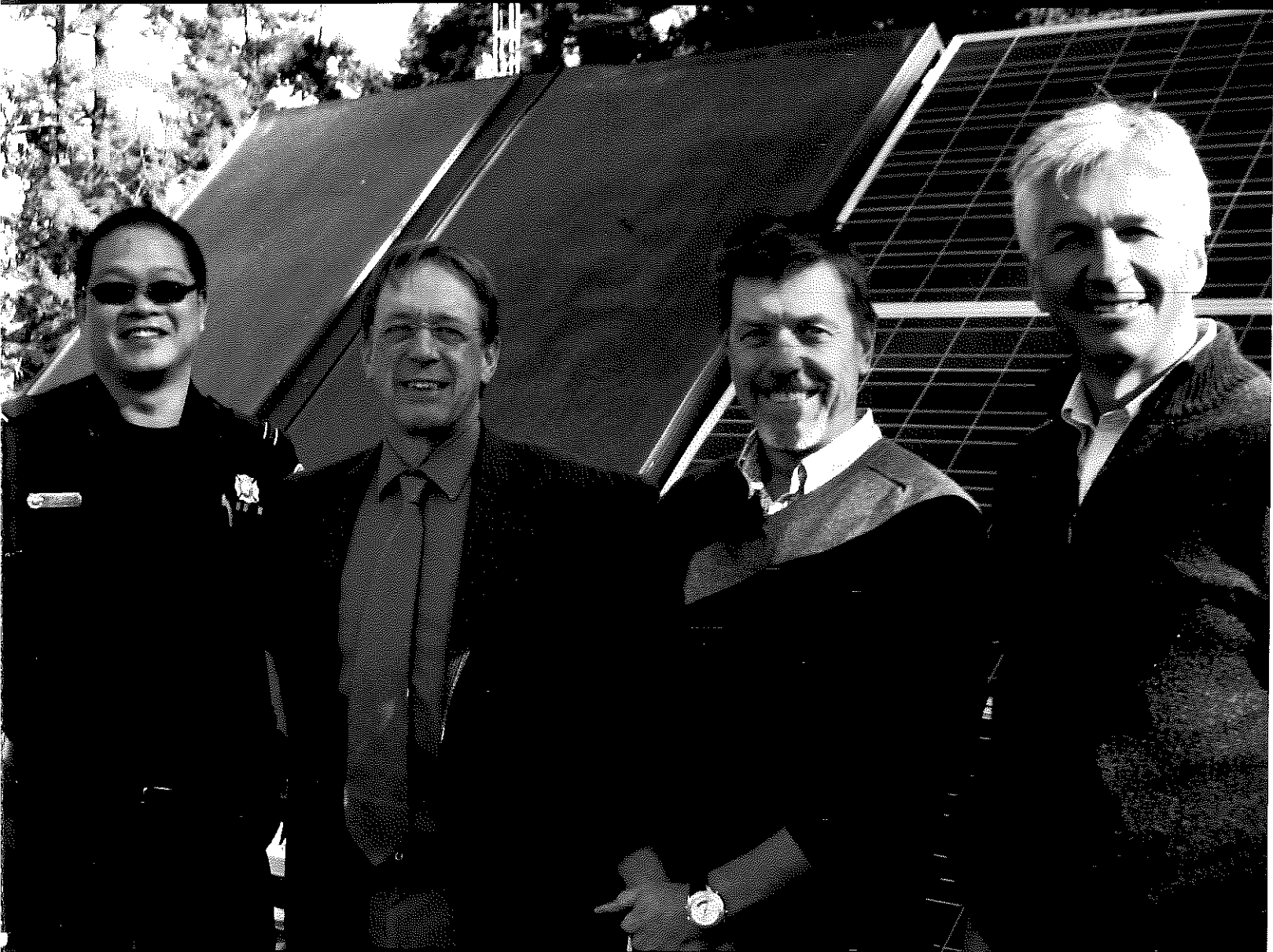
British Columbia advanced the Building Code to advance BC's sustainable construction industry. Contempra cement will reduce GHG emissions by 10%. By using less clinker in manufacturing cement, the process naturally reduces the amount of energy used and emissions produced at the largest cement plants in British Columbia.

BRITISH COLUMBIA'S SOLAR CITY

BC communities are being recognized both at home and internationally for their achievements in using renewable energy. Dawson Creek was named Canada's first Solar City for their solar thermal installations in municipal buildings, purchasing hybrids for their city fleet and converting to LED street lights.

The T'souke First Nation's success from their clean energy solar project has allowed ten T'Sou-ke First Nations members to become certified solar installers. The T'Sou-ke First Nation is now in a three year, \$12 million partnership with the City of Colwood. They have employed their certified solar installers to retrofit conservation measures and energy saving devices in 1,000 houses, helping Colwood become net zero energy users.

BUILDING THE PROVINCE



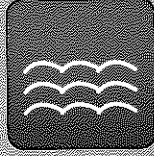
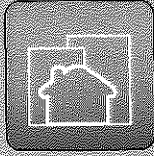
**DELTA SCHOOL
GEOEXCHANGE**

**19 BUILDINGS WITH HIGH EFFICIENCY
NATURAL GAS BOILERS**

**\$180,000 PER YEAR SAVINGS TO THE
DELTA SCHOOL DISTRICT**

**45% REDUCTION IN ENERGY USAGE;
70% DROP IN GHG EMISSIONS**

THE GREEN ECONOMY IS



Generating Green Energy

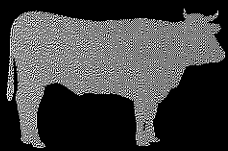
QUADROGEN POWER SYSTEMS

Quadrogen's Integrated Landfill Gas Clean Up System (ILCS) will be used to clean landfill gas (a form of biogas) derived from the Vancouver Landfill in Delta. The ILCS will improve savings and reduce the environmental impact of waste-to-energy production by removing contaminants from the landfill gas. The clean biogas will then be used to generate renewable electricity, heat, and hydrogen with a power plant that is equipped with a system for low-cost, on-site, and on-demand hydrogen co-production. The exhaust from this system is ultraclean and rich in the CO₂ that is used in greenhouses to help plants grow. By using this exhaust in greenhouses instead of imported CO₂, BC can reduce up to 733 tonnes of GHG's per year.

BIOMASS DISTRICT ENERGY

The City of Enderby is now using the first small business funded biomass district energy system operating in Western Canada. The Fink Enderby District Energy System currently serves 11 commercial, institutional and residential customers and has the capacity for future growth in the district. In 2012, the biomass system displaced 145 tonnes of annual GHG emissions. Once fully operational, the system is expected to consume 800 tonnes of the district's carbon neutral, renewable wood fuel annually, while displacing 425 tonnes of GHG emissions per year.

FUELING CHANGE



**FORTISBC
BIOGAS**

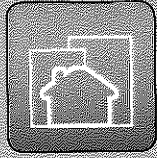
**5,500 TONNES OF GREENHOUSE
GAS EMISSION REDUCTIONS**

UP TO 132,000 GJ OF RENEWABLE NATURAL GAS

5000 CUSTOMERS IN 2012

**550,000 GJ'S NATURAL GAS PER YEAR
AT FULL PRODUCTION**

THE GREEN ECONOMY IS



Growing The Green Economy

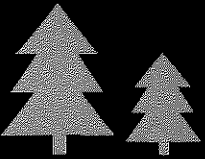
BLUE CARBON

In Comox, a local group has proposed a project with global implications. They are working with local First Nations to restore one of BC's most productive river estuaries, the Comox Estuary, in the hopes of developing 'Blue Carbon' offsets. Blue Carbon is the carbon stored in the marine environment - shellfish, plants and sediment. Estuaries remove and store carbon dioxide that causes climate change, possibly even more effectively than plants on land. The research project will support community-based efforts to create climate change solutions at home, and will help create cultural, economic and environmental benefits that can be transferred to BC's 422 other estuaries in coastal communities.

GREENHOUSE GROWERS PROTOCOL

BC's greenhouse industry is an important part of the province's agricultural sector, producing high value vegetables and a wide range of quality ornamental plants and cut flowers. The Pacific Carbon Trust has invested in offsets across the greenhouse sector to undertake energy efficiency and fuel switching activities that will both improve economic competitiveness and reduce GHG's from greenhouse operations. The Government of BC has developed the British Columbia Greenhouse Growers Offset Protocol to further help growers access new revenue through sales of high quality offsets from the BC greenhouse sector that will help other businesses lower their net environmental impact.

ALIVE AND GROWING

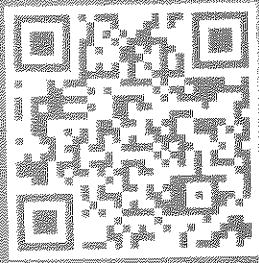


**GREAT BEAR
RAINFOREST**

47 NEW FOREST MANAGEMENT JOBS
AND GUARDIANS OF BC'S COAST

STORING 2 MILLION OF CO₂ IN BC TREES
MORE THAN 100,000 TONNES

\$15-20 MILLION IN REVENUE EACH
YEAR TO CREATE NEW JOBS



www.bcjobsplan.ca



**THE BC
JOBS PLAN**