Ocean Energy - Feature Count

description

One of the goals of BC Marine Conservation Analysis (BCMCA) is to collaboratively identify marine areas of high conservation value and areas important to human use in Canada's Pacific Ocean, and to make these products available for use in marine planning. In order to identify areas important to human use the BCMCA ran individual Marxan analyses for each of six sectors of marine use (commercial fishing, ocean energy, shipping and transport, sport fishing, tenures and recreation and tourism). The features used in these analyses are illustrated in the *Marine Atlas of Pacific Canada* and represent where and how each sector uses the marine resources of the Canadian Pacific.

Generally speaking there are two types of ocean energy: renewable and non-renewable. Offshore oil and gas comprise the non-renewable ocean energy sources. Although there is currently a moratorium on offshore oil and gas exploration and development, subsurface hydrocarbon reserves have been documented in offshore sedimentary basins. Renewable ocean energy refers to the energy that can be harnessed from the ocean's tides, currents and waves or from winds generated by the uneven heating of the earth's surface by the sun. These "green" sources of energy are in various stages of development and implementation.

This map was generated by overlaying all the ocean energy features that the BCMCA collated to go into the Marxan analysis. The map illustrates the number of different ocean energy features that inform each 2 kilometre by 2 kilometre planning unit. There were a total of 20 ocean energy features used in the Marxan analysis. One is offshore exploratory wells, three are investigative permits for renewable energy and associated transmission lines, three are provincial tenures issued to individual companies for oil exploration, five are federal tenures issued to individual companies for oil exploration, four are areas of interest for tidal and wave power, two are potential for renewable energy and two are for oil and gas prospectivity. As the facing map shows, up to six of them overlapped in some of the planning units.

Twenty ocean energy features were included in this tally:

- Federal Tenure - Canadian Forest Oil
- Federal Tenure - Chevron
- Federal Tenure - Exxon/Mobil
- Federal Tenure - Shell
- Federal Tenure - Suncor (formerly Petro-Canada)
- Ocean Energy Investigative Permits
- Offshore Exploratory Wells
- Prospectivity - More Prospective
- Prospectivity - Prospective
- Provincial Tenure - Conoco Phillips/Dynamic Oil
- Provincial Tenure - Haida Resources Ltd
- Provincial Tenure - Offshore Oil & Gas Corp.
- Tidal Areas of Interest - High
- Tidal Areas of Interest - Moderate
- Transmission Lines
- Wave Energy Areas of Interest - High
- Wave Energy Areas of Interest - Moderate
- Wind Energy Investigative Permits
- Wind Energy Potential - High
- Wind Energy Potential - Moderate

data sources

- Chevron Canada
- British Columbia Marine Conservation Analysis (BCMCA)
- Environment Canada, Canadian Wind Energy Atlas
- Expert Knowledge
- Natural Resources Canada
- Province of British Columbia, Ministry of Energy, Mines and Petroleum Resources, Offshore Oil and Gas Branch (BC Ministry of Energy and Mines as of 2011)
- Province of British Columbia, Ministry of Forests, Lands and Natural Resource Operations, GeoBC
- Triton Consultants Ltd., for Canadian Hydraulics Centre of the National Research Council, Natural Resources Canada (funded by BC Hydro and Natural Resources Canada)

(Note: Please see individual feature atlas pages and/or metadata for feature specific data sources.)

data resolution

- Features were tallied by their presence in 2 kilometre by 2 kilometre planning units.

date compiled

- 2010

reviewers

- Not reviewed.

reviewer comments

- None provided.

caveats of use

- The map includes a mix of existing and future potential ocean energy information. Not all future potential will be economically feasible.
- This map includes data that represent tenures. Tenures are issued and expire over time – the latest release of this data from the BC Land and Resource Data Warehouse should be gathered before use.
- Not all sites where tenures are issued are active at any given time.
- Tenures, even within the same purposes, each have a different economic value. Areas over which tenures have been issued should not be considered to have a similar economic value.
- Please see individual feature atlas pages and metadata for feature or ocean energy specific caveats.
- The data overlayed for this map are generally accurate for 2010-2011, but some, especially transmission tenures and investigative permits may not reflect current or future reality.
- Recommended date of expiry for use of these data in a Marine Planning context: information should be verified against up-to-date information, especially if petroleum exploration recommences or if renewable energy sources are developed.

map, feature data and metadata access

- Visit *www.bcmca.ca/data* for more information.

BCMCA Atlas

Ocean Energy

Feature Count

Legend

Feature count
(by planning unit)

- 1
- 2
- 3
- 4
- 5
- 6

Note:
- Classification based on 6 quantiles.

Data Sources:
Canadian Hydraulics Centre
of the National Research Council,
Chevron Canada, Environment Canada,
Expert Knowledge,
Natural Resources Canada,
Province of British Columbia,
Triton Consultants Ltd.

Base Data:
ESRI Base Data, GeoBase, GeoBC,
NOAA, Natural Resources Canada,
USGS, Washington State Government

Thematic Data:
For more information on data sources
and methods please refer to the
facing page to this map

Projection: BC Albers NAD83

0 25 50 75 100 125 150
Kilometres
0 25 50 75
Nautical Miles

1:4,250,000 *
* Written scales are approximate and
are based on a 11 x 17 inch paper size.

Prepared for:

BC Marine Conservation Analysis

Map template by Caslys Consulting Ltd.
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Inset Map 1:500,000*

Note: The inset has been provided to illustrate the level of detail available in the data. The inset is for illustrative purposes only and does not imply any significance to this region.