Dear: Catherine McKenna, Minister of Environment and Climate Change.

cc: Honourable Justin Trudeau, Prime Minister
Honourable Jim Carr, Minister of Natural Resources
Honourable Jody Wilson-Raybould, Minister of Justice and Attorney General of Canada
Canadian Environmental Assessment Agency

From: International Climate Change Scientists and Climate Policy Experts

Date: May 26, 2016

Re: Unjustified adverse greenhouse gas impacts of the Pacific Northwest LNG proposal.

We the undersigned scientists and climate experts request that you reject the proposed Pacific Northwest (PNW) LNG project due its significant adverse environmental effects from greenhouse gas (GHG) emissions. PNW LNG would be one of the single largest point source emitters in Canada. When upstream emissions[1] are added to facility emissions[2], the project would add between 18.5 and 22.5% to British Columbia's (BC) total GHG emissions. This would make it virtually impossible for BC to meet its GHG emission reduction targets, and would undermine Canada's international climate change commitments. As scientists and climate experts, we are deeply concerned about the effects of climate change in this country and abroad. We conclude:

- **The project poses serious risks to climate change targets.** The GHG emissions from the project and the associated upstream activities (fracking, processing, transport, etc.) are significant and represent material challenges to BC and Canada towards meeting their climate change targets. The challenges to BC and Canada's efforts to reduce GHG emissions will be exacerbated because of two issues: 1) the international agreement on climate change reached in Paris will require Canada to increase its ambition to reduce GHG emissions over time (and this requirement is embedded within the Vancouver Declaration signed by the Prime Minister and the premiers on March 3); and 2) the methane emissions from upstream gas included in the draft Environmental Assessment report likely underestimate the true contribution of emissions from the project (see below). Importantly, the Proponent's analysis of the Canadian environmental policy context is no longer accurate; Canada has renewed its commitment to reducing GHG emissions to 200 million tonnes below current levels by 2030.

- **GHG emissions from the project are likely underestimated.** The GHG emissions reported by PNW LNG and included in CEAA's draft assessment[2] underestimate the total emissions released over the full life cycle of the project. For example, the quantification of methane emissions from upstream extraction and transportation activities included in the draft Environmental Assessment report are predicated based on a leakage rate of ~ 0.28%, which has not been verified by field studies. In contrast, the U.S. Environmental Protection Agency uses a methane emissions rate of 1.33% for comparable processes of the supply chain (i.e., production, processing, and transmission)[3]. A more conservative estimate of methane leakage should have been included in the proponent's impact assessment, and serves to grossly underestimate the total GHG emissions from the project.

- **There is inadequate climate policy to reduce impacts for the project.** The climate change policies currently in place are not adequate to require better practices and get BC and Canada

on track for their climate change commitments. The ongoing freeze in BC's carbon tax and exemptions in carbon tax coverage for non-combustion emissions, such as methane venting and leakage, fundamentally undermine the province's ability to encourage reductions in GHG emissions from the project and associated extraction activities.

- **There is no evidence that LNG from the project will replace coal in Asia.** The Canadian Environmental Assessment Agency (CEAA) acknowledged that the use of natural gas could potentially reduce GHG emissions internationally if it replaces the consumption of coal and oil. The Agency, however, ultimately rejected this argument because it was "beyond the scope of the EA for the Project". LNG will also likely displace nuclear power, renewables, and natural gas from other sources in many importing countries. There are many locations where LNG consumption would be additional to coal consumption, instead of replacing it[4]. Importantly, GHG emissions from fracking, transport, liquefaction, and regasification significantly reduce LNG's GHG benefits over coal[5,6].

The Canadian Environmental Assessment Agency has found that the carbon emissions of the proposed PNW LNG terminal and associated upstream natural gas development would be "high in magnitude, continuous, irreversible and global in extent." (p.39)[2]. Their research finds the project will emit at least 11.5 million tonnes of CO_2 per year, not including downstream emissions when the gas is burned in Asia.

Honouring the commitment Canada made in Paris to limit global warming to well below 2.0 degrees above pre-industrial levels will require a massive effort to reduce emissions. We must begin by rejecting plans that would increase GHG emissions and lock us in fossil fuel extraction for decades to come.

We therefore request that you withhold the environmental assessment certificate for PNW LNG, and take urgent action to reduce our greenhouse gas emissions.

Sincerely,

Signed (institutional affiliations are provided for identification purposes only):

Kathryn Harrison, Ph.D., Professor, University of British Columbia (Canada).

Kirsten Zickfeld, Ph.D., Associate Professor, Simon Fraser University (Canada).

James E. Hansen, Ph.D., Professor, Columbia University (United States).

William Rees, Ph.D., Professor Emeritus, University of British Columbia (Canada).

Danielle Potocek, Ph.D., University of Southern California (United States).

Jeremy G. Fyke, Ph.D., Research Scientist, Los Alamos National Laboratory (United States).

David Suzuki, Ph.D., Professor Emeritus, University of British Columbia (Canada).

Alan C. Mix, Ph.D., Professor, Oregon State University (United States).

Peter U. Clark, Ph.D., Professor, Oregon State University (United States).

Slobodan P. Simonovic, Ph.D., Professor, University of Western Ontario (Canada).

John M. Wallace, Ph.D., Professor Emeritus, University of Washington (United States).

Patrick von Aderkas, Ph.D., Professor, University of Victoria (Canada).

Paola Malanotte-Rizzoli, Ph.D., Professor, Massachusetts Institute of Technology (United States).

John B. Walsh, Ph.D., Fellow of the Royal Society of Canada, Professor Emeritus, University of British Columbia (Canada).

Tom M.L. Wigley, Ph.D., Climate scientist, University of Adelaide (Australia).

Martin Sharp Ph.D., Fellow of the Royal Society of Canada, Professor, University of Alberta (Canada).

Tim Barnett, Ph.D., Professor Emeritus, Scripps Institution of Oceanography (United States).

Paul Spence, Ph.D., Research Associate, University of New South Wales (Australia).

Matthew England, Ph.D., Professor, University of New South Wales (Australia).

Katrin Meissner, Ph.D., Associate Professor, University of New South Wales (Australia), University of Victoria (Canada).

John Church, Ph.D., Author, Intergovernmental Panel on Climate Change (Australia).

Wenju Cai, Ph.D., Chief Research Scientist, Commonwealth Scientific and Industrial Research Organization (Australia).

Naomi Oreskes, Ph.D., Professor, Harvard University (United States).

Ken Caldeira, Ph.D., Climate Scientist, Carnegie Institution for Science (United States).

Roger G. Barry, Ph.D., Professor Emeritus, University of Colorado (United States).

Richard C.J. Somerville, Ph.D., Professor Emeritus, University of California (United States).

James Tully, Ph.D., Fellow of the Royal Society of Canada, Professor Emeritus, University of Victoria (Canada).

Lynne Quarmby, Ph.D., Professor, Simon Fraser University (Canada).

Trevor Hancock, Ph.D., Professor, University of Victoria (Canada).

George Hoberg, Ph.D., Professor, University of British Columbia (Canada).

Howard Frumkin, Ph.D., Dean, School of Public Health, University of Washington (United States).

Robin Russell-Jones, Ph.D., Chair, Help Rescue the Planet (United Kingdom).

Neena L. Chappell, Ph.D., Fellow of the Royal Society of Canada, Canada Research Chair in Social Gerontology, University of Victoria (Canada).

Nathan Mantua, Ph.D., Research Scientist, National Oceanographic and Atmospheric Administration (United States).

Gwenn E. Flowers, Ph.D., Associate Professor, Simon Fraser University (Canada).

Steven W. Running, Ph.D., Professor, University of Montana (United States).

Garry Clarke, Ph.D., Professor Emeritus, University of British Columbia (Canada).

Steven Sherwood, Ph.D., Professor, Director, Climate Change Research Centre
University of New South Wales (Australia).

David M. Farmer, Ph.D., Fellow of the Royal Society of Canada, Adjunct Professor, University of Victoria (Canada).

Sally Aitken, Ph.D., Professor, University of British Columbia (Canada).

Arne Mooers, Ph.D., Professor, Simon Fraser University (Canada).

Brian Menounos, Ph.D., Professor and Canada Research Chair in Glacier Change, University of Northern British Columbia (Canada).

Jay R. Malcolm, Ph.D., Professor, University of Toronto (Canada).

Arthur L. Fredeen, Ph.D., Professor, University of Northern British Columbia (Canada).

Patricia Chow-Fraser, Ph.D., Professor, McMaster University (Canada).

Keith N. Egger, Ph.D., Professor, University of Northern British Columbia (Canada).

Lev Tarasov, Ph.D., Associate Professor and Canada Research Chair in Glacial Dynamics Modelling, Memorial University of Newfoundland (Canada).

Stephen Déry, Ph.D., Professor, University of Northern British Columbia (Canada).

Joyce Penner, Ph.D., Distinguished Professor of Atmospheric Science, University of Michigan (United States).

Kerry Delaney, Ph.D., Professor, University of Victoria (Canada).

Colin Goldblatt, Ph.D., Assistant Professor, University of Victoria (Canada).

Lawrence Mysak, Ph.D., Fellow of the Royal Society of Canada, Professor, McGill University (Canada).

Eric D. Galbraith, Ph.D., Adjunct Professor, McGill University (Canada), and Research Professor, Catalan Institute for Advanced Research (Spain).

W.R. Peltier, Ph.D., Professor and Director of the Centre for Global Change Science, University of Toronto (Canada).

Robert Kowalewski, Ph.D., Professor, University of Victoria (Canada).

Michel Lefebvre, Ph.D., Professor, University of Victoria (Canada).

Christian Schoof, Ph.D., Associate Professor, University of British Columbia (Canada).

Diana E. Varela, Ph.D., Associate Professor, University of Victoria (Canada).

Noah Enelow, Ph.D., Senior Economist, Ecotrust (United States).

Karl E. Taylor, Ph.D., Research Scientist, Lawrence Livermore National Laboratory (United States).

Anne V. Whyte, Ph.D., Fellow of the Royal Society of Canada, Co-Chair of Millennium Ecosystem Assessment Review Board (Canada).

Warren M. Washington, Ph.D., Senior Scientist, National Center for Atmospheric Research, Penn State University (United States).

Verena Tunnicliffe, Ph.D., Professor, University of Victoria (Canada).

Maximilian Auffhammer, Ph.D., Professor, University of California, Berkeley (United States).

Stephen Pond, Ph.D., Professor Emeritus, University of British Columbia (Canada).

Damon Matthews, Ph.D., Associate Professor and Canada Research Chair in Climate Science and Sustainability, Concordia University (Canada).

Adam H. Monaham, Ph.D., Professor, University of Victoria (Canada).

Christopher R. Barnes, Ph.D., Fellow of the Royal Society of Canada, Professor Emeritus, University of Victoria (Canada).

N. Ross Chapman, Ph.D., Professor Emeritus, University of Victoria (Canada).

Lucie Sauvé, Ph.D., Université du Québec à Montréal (Canada).

Frédéric Fabry, Ph.D., Director, Radar Observatory, and Associate Professor, McGill University (Canada).

Thomas J. Duck, Ph.D., Associate Professor, Dalhousie University (Canada).

C. Thomas (Tom) McElroy, Ph.D., Professor, York University (Canada).

Paul Beckwith, Ph.D., Professor, University of Ottawa (Canada).

Danny Harvey, Ph.D., Professor, University of Toronto (Canada).

Tim Flannery, Ph.D., Chief Councilor, Climate Council of Australia (Australia).

John England, Ph.D., Professor Emeritus, University of Alberta (Canada).

Catherine La Farge, Ph.D., Professor, University of Alberta (Canada).

Peter A. Victor, Ph.D., Fellow of the Royal Society of Canada, Professor, York University (Canada).

Danny Blair, Ph.D., Professor and Scientific Director of the Prairie Climate Centre, University of Winnipeg (Canada).

Andrew B.G. Bush, Ph.D., Professor, University of Alberta (Canada).

Markus Kienast, Ph.D., Professor, Dalhousie University (Canada).

Ian Stewart, Ph.D., Assistant Professor, University of King's College, Halifax (Canada).

Tim K. Takaro, Ph.D., Professor, Simon Fraser University (Canada).

Alana Westwood, Ph.D., Research Coordinator, Evidence for Democracy, and Instructor, Dalhousie University (Canada).

Alejandro Frid, Ph.D., Science Coordinator/Ecologist, Central Coast Indigenous Resource Alliance, and adjunct assistant professor, University of Victoria (Canada).

Martin Sharp, Ph.D., Professor, University of Alberta (Canada).

Paul Beckwith, Ph.D., Part-time Professor, University of Ottawa (Canada).

Konrad Gajewski, Ph.D., Professor, University of Ottawa (Canada).

Lionel Pandolfo, Ph.D., Adjunct Professor, University of the Fraser Valley (Canada).

Citations

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