

PIEVC



CVIIP

CLIMATE CHANGE: A PUBLIC CONCERN



Climate change is exposing Canada's infrastructure to conditions it was not originally designed to withstand. This can reduce its useable lifespan and may expose Canadians to disruptions to their lives and daily routines, and increase risks to public health, safety, the environment and result in economic loss. Engineers have a professional responsibility to minimize such disruptions and reduce risks by designing, building and maintaining resilient infrastructure that can adapt to the impacts of a changing climate.

WHAT IS THE ENGINEERING PROFESSION DOING?

Engineers have traditionally relied upon historical data to design long-lasting, safe and reliable infrastructure, but now they must develop new design and operational practices to accommodate increased uncertainties because of the changing climate. As a first step, engineers must evaluate the vulnerability of Canada's infrastructure to the impacts of climate change; the findings will then be the basis for a formal review of design, operation and maintenance codes, standards and practices.

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To do this, Engineers Canada and its partners have established the Public Infrastructure Engineering Vulnerability Committee (PIEVC). Co-funded by Natural Resources Canada (NRCan), PIEVC is a major Canadian initiative involving all three levels of government and non-governmental organizations (NGOs). Its first mandate is to look broadly and systematically at infrastructure vulnerability to climate change from an engineering perspective. The Committee's initial work will result in the First National Engineering Vulnerability Assessment (NEVA.)

INFRASTRUCTURE VULNERABILITY ASSESSMENT

PIEVC is evaluating four categories of public infrastructure: **Buildings; Roads and Associated Structures; Storm water and Wastewater Systems; and Water Resources.** Initial "scoping" studies are underway to further classify the infrastructure into representative categories, examine past and present work on climate impacts on infrastructure, determine the availability of climatic and infrastructure data, and define adaptive capacity indicators. A draft engineering protocol to conduct the vulnerability assessment will be tested through pilot projects in each infrastructure category. These results will be used to apply the protocol to a Canada-wide assessment of each category. These assessments will be assembled into the first National Engineering Vulnerability Assessment Report with completion expected by March 31, 2008.

TO LEARN MORE ABOUT PIEVC, PLEASE VISIT OUR WEBSITE AT WWW.ENGINEERSCANADA.CA/PIEVC

