

Regulatory Approval for Heat and Steam Recovery Technologies

Issue

Lack of consistency and collaboration between provincial governments are inhibiting the entrance of innovative technologies and lucrative business opportunities in the steam and heating recovery market. To attract new steam and heating technology into Alberta and to the rest of Canada, streamlining the provincial regulations around heat recovery steam generation is necessary.

Background

The global heat recovery steam generator market is projected to reach USD 1.2 billion by 2026, with North America expected to hold the largest market share¹. Deployment of heat recovery steam generation provides opportunities for clean energy initiatives within the power industry, oil, and gas industry, chemical, and paper and pulp industries and others. Canada's significantly smaller market in comparison to the United States demands that the country be proactive in reducing barriers to new investments. Each province currently has separate approval mechanisms in place for the regulation of technology within the steam and heating industry. The differing safety codes regulations that exist within each province prevent technology from moving freely across the nation without rigorous and costly inspections and authorizations.

The Alberta Safety Codes Council² is "an independent regulatory body made up of industry stakeholders and staff." Formed in 1993 through the adoption of the Alberta Safety Codes Act, the organization delivers programs on behalf of the Government of Alberta and oversight is divided into unique authorities to guide specific industries. The Alberta Boilers Safety Association (ABSA)³ is the pressure equipment safety authority for Alberta. The mandate of the Association is "to administer the Safety Codes Act and regulations and to deliver safety programs, as they relate to pressure equipment." ABSA's key activities include reviewing, accepting, and registering pressure equipment designs and construction procedures that relate to pressure equipment. ABSA is also responsible for issuing inspection permits and certification and authorizing and monitoring organizations that have been permitted to conduct activities that are subject to the Regulations.

Each province has similar legislation and authority bodies, and any modern technologies must apply to each province for consideration and approval before receiving the appropriate approvals to move products to market. The bureaucracy and red tape present in the compliance process is overwhelming. The investment to meet differing regulations is a substantial cost barrier for companies that have already met regulatory considerations for their own countries.

In contrast to the provincial regulatory bodies across Canada, the Health, and Safety Executive (HSE)⁴ is Britain's national regulator for workplace health and safety. Within Britain, technology is

¹ Fortune Business Insights. 2020. [Heat Recovery Steam Generator Market Size, Share & Growth | Analysis Report \[2030\]](https://fortunebusinessinsights.com/2030) (fortunebusinessinsights.com)

² Alberta Government. https://kings-printer.alberta.ca/1266.cfm?page=S01.cfm&leg_type=Acts&isbncln=9780779723652&CFID=191258327&CFTOKEN=17fb1d6430789b3e-EB638CE4-9E12-B81B-EF62EC7EF6350EE9

³ Alberta Boilers Safety Association. 2022. <https://www.absa.ca/about-absa/mandate/>

⁴ Health and Safety Executive. <https://www.hse.gov.uk/aboutus/our-mission-and-priorities.htm>

approved by the HSE and can move freely around the country. Technologies that are widely used across Europe and that meet or exceed Canadian safety requirements should undergo a regulatory process that accounts for the compliance measures already met to support expedient investment.

The opportunity for both clean energy alternatives and economic development across Alberta and the rest of Canada is hindered by onerous requirements to re-establish proof of compliance with safety regulations across national and provincial borders. The absence of a coordinated regulatory approval process also greatly hinders the development and use of advanced technologies that could improve our environment. The Government of Alberta's plan¹ to achieve carbon neutrality by 2050 by attracting "investment by creating a regulatory and investment climate that is predictable, agile and certain", should include steam and heat technology advancements. Streamlining Canadian safety compliance regulations within the industry should be included as a priority. Provincial leadership in the removal of government red tape would help to implement technology already widely used across Europe and the rest of the world and decrease reliance on non-renewable forms of energy. The Canadian bureaucratic approval process must have a greater focus on efficiency and effectiveness to support the import of overseas technologies.

The Alberta Chambers of Commerce recommends the Government of Alberta moves quickly to start:

1. With consultation from stakeholders, develop requirements that are supportive of the adoption of wet steam and waste heat conversion technologies for regulations within the steam and heating sector;
2. Ensure that the regulations apply to any new products, processes, and technologies, as well as all existing products, processes, and technologies;
3. Work to ensure that regulations provincially and federally are streamlined, consistently applied, and have a coordinated regulatory approval process;
4. Implement a product-review standard between the various regulators. If the product or technology meets the criteria, then it passes for all the regulators; and,
5. Allow for a streamlined process for exemption approval as modern technologies are introduced.

¹ Alberta Government. [Emissions Reduction and Energy Development Plan | Alberta.ca](https://www.alberta.ca/emissions-reduction-and-energy-development-plan.aspx)