

Environmental Tools:

Technology Specifications

What are technology specifications?

Technology specifications prescribe a particular technology or equipment that a regulated party must use to control emissions/effluent levels. The requirement or standard is typically applied to all parties within a sector without freedom to choose alternate means of control. Specifications are most often used in pollution control technology.

Where are they used?

Explicit technology specifications in environmental regulation, for example through approvals, permits or Codes, are quite rare across most jurisdictions. This approach works best where there is a single applicable technology or where the need for certainty in environmental control is immediate, and administrative ease is desirable.

When Alberta Environment sets sulphur recovery levels, there may only be one commercially available technology. While the department's sulphur recovery guideline does not specify a required technology, its use is implied and this represents a "de facto" technology specification. Approvals issued by the department may mention the technology for clarity purposes.

Tool performance:

Pros

- Provides a high level of certainty that the desired performance will be achieved, assuming the operation and maintenance of the technology is continued.
- Compliance is straightforward as it is focused on whether the specific technology or equipment is installed and operating to specifications.
- Treats all entities within a sector equally, when applied uniformly.
- Relatively simple for the department to administer. Emissions standards do not have to be set, and the regulator does not need to consider the adequacy of alternative technologies proposed by the regulated parties.

Cons

- Specified technologies may not be adequate to achieve long-term outcomes.
- Regulated parties cannot pursue other control technologies or methods that might be less costly.
- Can fail to consider the different circumstance of each effected regulated party.
- Requires specific operating standards and monitoring to ensure the specified technology is being used and maintained appropriately.
- Discourages innovation amongst those firms that already are proactive and innovative in applying the best available technologies to enhance environmental performance.