

Team 4 Collaborative Engineering Design Executive Summary

Engineering education and the profession in Ontario emphasize the importance of the legal obligations of the engineer; our duty to the safekeeping of the public, both through the Iron Ring Ceremony and in the PEO Code of Conduct. Many engineers interpret this duty through the narrow lens of ensuring a design is safe from a physical safety perspective, while also meeting the capitalist objectives set by the employer to meet the project's primary goal (e.g. make money, fastest mode of transit, etc.). In this narrow interpretation, it is easy for engineers to be blind to alternative or additional objectives of other stakeholders. While this may be an oversight of individual engineers, when it becomes a cultural norm within the profession, it can also be perceived by the public as arrogance or paternalism. One possible remedy is meaningful public consultation. However, Ontario engineers generally don't often engage in meaningful consultation to identify needs and develop engineering solutions.

In the case of the Caledonia power line, failure to conduct a meaningful consultation of all stakeholders resulted in a failure of the project - not only did Hydro One fail to obtain a social license, but the project itself has been incomplete for years as a result of protests. On the other hand, incremental housing projects with meaningful engagement have resulted in designs that are not only safe, but allow the community to thrive.

Looking forward, engineers can and should make use best practices from around the world to 'catch up' on consultation skills. Some of these best practices include:

- Understanding the stance and biases of stakeholders
- Approaching the objectives of consultation as more than meeting a legal duty
- Recognizing that the benefits of consultation include reducing project risks such as delay or cancellation due to local opposition.
- Treating the design of consultation as a project in itself
- Committing to transparent information sharing throughout the consultation process
- Continuing the consultation process throughout the engineering lifecycle