Canadian Engineering
Competition 2021
Compétition Canadienne
d'Ingénierie 2021

Programming
Cheat Sheet

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1. Problem Goals

Level	Objective
1	Provincial Power Trend
2	Provincial Power Optimization

2. Class of Power Generations

	Renewable	**Non-Renewable**
Emitting		Thermal Combustion Turbine
Non-Emitting	Wind Hydroelectric	Nuclear

3. Definition of Zone Acronyms

Zone	**Acronym**	**Name**
Zone 1 – Zone 7	Z1 – Z7	New Brunswick, Canada
Zone 8	ME	Maine, USA
Zone 9	NS	Nova Scotia, Canada
Zone 10	PEI	Prince Edward Island, Canada
Zone 11	QC	Quebec, Canada

4. Given Files and Properties

Filename	Units	File Size (rows, columns)
IncentiveRates.csv	$/kWh	(1, 2)
PlantProductionRates.csv	MW	(7, 5)
PenaltyValues.csv	$/kWh	(11,11)
NBTrend2018.csv NBTrend2017.csv NBTrend2016.csv NBTrend2015.csv	GWh	(12, 7)

5. Level 1: Desired Output (CSV File)

- Make sure to note the extrapolation method used in your presentation.

	For Each Zone
For Each Month	Predicted Power (GWh)

6. Level 2: Desired Output (CSV File)

	For the Province
For Each Month	Cost ($) Consumed Power (GWh) Renewable Power Used (%)