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Auxiliary Power Units (APU)

Inputs

(Enter data in grey cells only)

Steps

1	Cost per unit: purchase and installation cost per tractor	P	$8,500	
2	Annual APU repair and maintenance cost	M	$1,000	
3	Annual tractor maintenance benefit from reduced engine wear	E	$100	
4	Annual tractor operating days	K	200	days / year
5	Average idle hours per day	S	6	h
6	APU fuel consumption	F	1	L/h
7	Fuel price (¢/L)	X	110	1.1 $/L
8	Tractor idle fuel consumption	Y	3.5	L/h

Results

Annual fuel savings per tractor	A = K x S x (Y - F)	3000	litres
Annual GHG emission reduction per tractor	G = A x 2.7	8100	kg
Annual savings per tractor	B =A x X - M + E	$2,400	
Payback period per tractor	C = P / B	43	months or 3.54 years

Disclaimer

The purpose of these simplified models are to demonstrate the cost saving opportunities avaliable for the fleet owners through best practices and fuel saving devices.

The model can be refined further based on the customer's requirements.

The user is responsible for verifying the accuracy of the results.

In no event shall Transport Canada be liable to any direct, consequential, incidental, special, punitive or other damages.

Reference

Anti-Idling Technologies Fact Sheet, Transport Canada 2011