To Idle or Not To Idle...

Automobiles are significant sources of Volatile Organic Carbon (VOC) Oxides of Nitrogen (NO$_x$) and Carbon Monoxide (CO)

**Question 1:** How long does my engine need to warm up after a “cold start” (engine off for more than 12 hours)?

**Warming up the engine by idling for more than 2-3 minutes IS NOT needed. After start, warm up the engine by driving it normally.**

**Question 2:** During short stops, is it better to let my engine idle or shut off and restart it?

*Always turn off your engine when the vehicle’s transmission is in the “Park Position”. When the engine is warm, idling for 5 minutes produces...*

- 4 times more VOC
- 3 times more NO$_x$ and
- 10 times more CO

than restarting the engine and the differences become even greater for longer time periods

Study funded by the Utah Department of Environmental Quality and the Utah State Legislature and conducted at Utah State University (UWRL/CEE) and Weber State University (NCAST)