Episode 31: A residential indoor wood stove proposal

Ignition Interlock devices and residential indoor wood stove door automated locks (Electronic Control Units, or ECUs) on wood supply doors on residential indoor wood stoves mandated by court of the Environmental Protection Agency (E P A) or local municipal Health Departments

Voluntary residential indoor wood stove breathalyzers (ignition interlock devices) can be Bluetooth devices or other internet-enabled devices which connect to the PurpleAir website and specifically monitor a near neighbor of the wood burner's PurpleAir PM 2.5 monitor continuously, beginning upon opening the wood stove door or turning an ignition on the wood stove. Ignition interlock devices and wood stove door automated locks are connected devices which monitor PurpleAir PM 2.5 particulate air quality monitors installed in any near neighbor's yard to prevent particulate pollution of 2.5 micrometer size above the level of 8 micrograms per cubic meter from entering that neighbor's yard. The devices don't need to be monitored by the state if not required by a court of EPA or local municipal Health Department.

A PM 2.5 ignition interlock is a breath-test device connected outdoors to the eaves of a house of a near neighbor of a wood burner. The wood stove will not start unless the level of PM 2.5 in the neighbor's yard which blows into the neighbor's PurpleAir PM 2.5 monitor has a PM 2.5 concentration below a pre-set low limit, usually 8 micrograms per cubic meter. The interlock is connected by the internet to the PurpleAir map location of the near neighbor's PM 2.5 monitor, which collects PM 2.5 data every ten minutes.

The most common cause of an ignition interlock lockout or wood stove door lockout is a **failed PM 2.5 level test**. While ignition interlock laws vary from state to state, most states set the PM 2.5 level at which the device will lock you out at 8 micrograms per meter cubed. Most people can have that PM 2.5 level from their wood stoves in less than 10 minutes.

If the device detects even the smallest amount of PM 2.5 on the neighbor's PurpleAir PM 2.5 monitor, the ECUs prevent you from starting the wood stove. Ignition interlock devices today use a PurpleAir PM 2.5 sensor to provide the precision and accuracy required by the Environmental Protection Agency (EPA) model specifications for PurpleAir PM 2.5 air quality sensors found on EPA AirNow Fire and Smoke Maps.

This wood stove proposal is modeled on the IID for Cars (below)

Ignition Interlock devices in Cars mandated by court of the Department of Motor Vehicles (D M V)

Voluntary car breathalyzers (ignition interlock devices) can be installed in any vehicle to prevent drunk driving. The devices don't need to be monitored by the state if not required by a court of D M V.

An alcohol ignition interlock is a breath-test device connected to a vehicle's ignition. The vehicle will not start unless the driver blows into the interlock and has a blood alcohol concentration (B A C) below a pre-set low limit, usually .02 BAC.

The most common cause of an ignition interlock lockout is a **failed breath test**. While ignition interlock laws vary from state to state, most states set the blood alcohol content (B A C) level at which the device will lock you out at .02-.025. Most people can have that BAC after one drink.

If the device detects even the smallest amount of alcohol on your breath, the Electronic Control Unit (ECU) prevents you from starting the car. Ignition interlock devices today use an ethanol fuel cell sensor to provide the precision and accuracy required by the National Highway Transportation Safety Administration's (N H T S A) model specifications for breath alcohol IIDs.