



Updates on RICE & Stage II Vapor Recovery Rules

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RICE: BASICS

- RICE – Reciprocating Internal Combustion Engine (“Backup generator”)
- Emergency electricity generation on high electricity demand days
- Used at power and manufacturing plants to generate electricity
- Emit NO_x, VOC, CO, PM, Air Toxics



RICE REGULATIONS

- New Source Performance Standards (NSPS) –
 - Spark Ignition Internal Combustion Engines - NO_x, VOC, CO
 - Compression Ignition Internal Combustion Engines – NO_x, HC, CO, PM
- National Emission Standard for Hazardous Air Pollutants (NESHAP) or "the Rice rule"
 - CO, Air Toxics for all engine sizes covered
 - **Exemption – Existing emergency engines**

PROPOSED RICE REGULATION & AIR QUALITY CONCERNS

- May 22, 2012 : EPA proposed following amendments to NESHAP rule, which can affect air quality adversely
 - Increase the hours (up to 100 hours per year) that stationary emergency engines may be used for emergency demand response and for voltage support
 - Adding a limited temporary allowance for existing stationary emergency area source engines located at area sources of HAP to be used for up to 50 hours per year for any non-emergency purpose, including peak shaving

PROPOSED RICE REGULATION & AIR QUALITY CONCERNS

- High electricity demand days (HEDD) - high temperature days, conducive to ozone and fine particle formation
- Allowing increased operation of backup generators (RICE) during HEDDs will increase emissions of VOC, NO_x, and PM_{2.5}
- This will cause more production of ozone and fine particles on those days making the already bad situation worse

STAGE II VAPOR RECOVERY WAIVER RULE

- Clean Air Act required many ozone nonattainment areas to adopt Stage II systems, which apply to service stations, in the early 1990's
- Stage II systems are vapor control devices that control VOC vapor releases during the refueling of motor vehicles
- As a serious ozone nonattainment area, Washington region was required to install Stage II vapor recovery systems at gas pumps



STAGE II VAPOR RECOVERY WAIVER RULE

- District of Columbia –
 - Stage II nozzles available since 1977
- Maryland & Virginia –
 - Adopted stage II regulations as a part of their November 15, 1992 SIP revisions

Affects gasoline service stations with a throughput of at least 10,000 gallons per month
- CAA stipulates that once ORVR systems are in widespread use,” the requirement to implement Stage 2 at retail would be eliminated
- 70 percent of all vehicles now have Onboard Refueling Vapor Recovery (ORVR) systems that capture these vapors (started in 1998). Since 2006, all new automobiles and light and medium duty cars, vans and trucks are equipped with ORVR

STAGE II VAPOR RECOVERY WAIVER RULE

- EPA Rule (May 2012) –
 - ORVR vehicles are in “widespread use”, eliminates the federal requirement for retailers to install and operate Stage 2 vapor recovery systems
- Designation takes effect immediately
- Q. to EPA – Still need to amend 1-hour Severe ozone SIP (125 ppb) or revise area source inventories in 84 ppb plan, which included Stage II benefits in BY 2002 to get rid of Stage II requirement?