



List of Renewable Energy Technology Items Eligible for Florida Sales Tax Refund

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CONTENTS:

- Page 1: Biodiesel Distribution Materials
- Page 2: Ethanol Distribution Materials
- Page 3: Hydrogen Fueling Stations
- Page 4: Hydrogen Fuel Cells and Hydrogen Powered Vehicles

The Governor's Energy Office certifies the following list to the Department of Revenue, pursuant to Section 212.08(7)(ccc), Florida Statutes.

For the purpose of this document, the term "biodiesel" refers to blends of pure biodiesel and diesel in concentrations of 10 percent biodiesel or greater (B10-B100), and the term "ethanol" refers to blends of fuel ethanol and gasoline in concentrations of 10 percent ethanol or greater (E10-E100).

BIODIESEL DISTRIBUTION COMPONENTS

TRANSPORTATION: The equipment, machinery and other materials which serve to move biodiesel: a) from a production facility to offsite storage or a retail fuel station, or b) from central storage to a retail fuel station. Biodiesel can be transported via ship, barge, railcar, truck or pipeline which has been manufactured or retrofitted to be compatible with biodiesel.

ELIGIBLE MATERIALS: Ship, barge, railcar, truck or pipeline manufactured or retrofitted to be compatible with biodiesel. Materials used in retrofits of existing equipment may include: tank; insulation; heating system; piping; pump system; vapor recovery system; dispenser pump; seal cap; vapor vent; valves; liquid level gauge; drop tube; interstitial leak detection; spill containment; sensors; and hoses.

STORAGE: The equipment, machinery and other materials which serve to store biodiesel offsite from a production facility. Bulk storage systems must be manufactured or retrofitted to be compatible with biodiesel.

ELIGIBLE MATERIALS: Tank; insulation; heating system; piping; pump system; vapor recovery system; dispenser pump; seal cap; vapor vent; valves; liquid level gauge; drop tube; interstitial leak detection; spill containment; sensors; adaptors; fill caps; vapor caps; overfill valve for gravity systems or pressure systems; shear valves; extractors; anti-siphon valves; tank gauge; tank alarm; sumps; fittings; balance vapor recovery breakaway; drain valve; emergency vent; emergency valve; fill adaptors; liquid level

alarm; locking ball valve; overfill alarm; pressure vacuum vent; swing check valve; vapor swivel adaptors; and hoses.

FUELING INFRASTRUCTURE: The equipment, machinery and other materials which serve to store and dispense biodiesel at retail or private fleet stations. Fueling station equipment must be manufactured or retrofitted to be compatible with biodiesel.

ELIGIBLE MATERIALS: Dispensers; metering system; jumper hose; hose breakaway; hose swivel dispenser hose; whip hose; vapor recovery line; fuel supply line; emergency shut off valve; dispenser filter; splitter fitting; nozzles; piping; tank; insulation; pump system; vapor recovery system; seal cap; vapor vent; valves; liquid level gauge; drop tube; interstitial leak detection; spill containment; sensors; hose retractor; tank manholes; valves, fittings and couplings.

NOTE: As with petroleum-based fuels, it is important that biodiesel be distributed in a way that does not lead to contamination. If existing equipment or engine components are not compatible with biodiesel, they should be replaced with those that are. Certain blends of biodiesel will degrade, soften, or seep through some hoses, gaskets, seals, elastomers, glues, and plastics with prolonged exposure.

ETHANOL DISTRIBUTION COMPONENTS

TRANSPORTATION: The equipment, machinery and other materials which serve to move ethanol: a) from a production facility to offsite storage or a retail fuel station, or b) from central storage to a retail fuel station. Ethanol can be transported via ship, barge, railcar, truck or pipeline which has been manufactured or retrofitted to be compatible with ethanol fuel.

ELIGIBLE MATERIALS: Ship, barge, railcar, truck or pipeline manufactured or retrofitted to be compatible with ethanol fuel. Materials used in retrofits of existing equipment may include: tank; insulation; heating system; piping; pump system; vapor recovery system; dispenser pump; seal cap; vapor vent; valves; liquid level gauge; drop tube; interstitial leak detection; spill containment; sensors; and hoses.

STORAGE: The equipment, machinery and other materials which serve to store ethanol offsite from a production facility. Bulk storage systems must be manufactured or retrofitted to be compatible with ethanol.

ELIGIBLE MATERIALS: Tank; insulation; heating system; piping; pump system; vapor recovery system; dispenser pump; seal cap; vapor vent; valves; liquid level gauge; drop tube; interstitial leak detection; spill containment; sensors; adaptors; fill caps; vapor caps; overfill valve for gravity systems or pressure systems; shear valves; extractors; anti-siphon valves; tank gauge; tank alarm; sumps; fittings; balance vapor recovery breakaway; drain valve; emergency vent; emergency valve; fill adaptors; liquid level alarm; locking ball valve; overfill alarm; pressure vacuum vent; swing check valve; vapor swivel adaptors; and hoses.

FUELING INFRASTRUCTURE: The equipment, machinery and other materials which serve to store and dispense ethanol at retail or private fleet stations. Fueling station equipment must be manufactured or retrofitted to be compatible with ethanol.

ELIGIBLE MATERIALS: Dispensers; metering system; jumper hose; hose breakaway; hose swivel dispenser hose; whip hose; vapor recovery line; fuel supply line; emergency shut off valve; dispenser filter; splitter fitting; nozzles; piping; tank; insulation; pump system; vapor recovery system; seal cap; vapor vent; valves; liquid level gauge; drop tube; interstitial leak detection; spill containment; sensors; hose retractor; tank manholes; valves, fittings and couplings.

NOTE: As with petroleum-based fuels, it is important that ethanol be distributed in a way that does not lead to contamination. All fittings and connectors in contact with E85 fuel should be made of compatible materials that not only lead to no deterioration in the equipment, but also no deterioration in the fuel quality.

HYDROGEN-FUELING STATIONS

Hydrogen-fueling stations can generate hydrogen on-site or utilize hydrogen generated at a central facility. Additionally, hydrogen-fueling stations can be permanent or temporary. Regardless of the fueling station type, the equipment comprising a hydrogen-fueling station can be separated into the following: generation, compression, storage and dispensing. The fueling stations components are described in more detail below.

GENERATION: The equipment, machinery and other materials which serve to generate hydrogen either at a centralized facility or at the point of use. The hydrogen generation unit is typically sold as a package and not individual components.

ELIGIBLE MATERIALS: hydrogen generator (reformer, electrolyzer, cracker, etc.), hardware (bolts, straps, supports, etc.), control system, valves (ball, butterfly, 3-way, etc.), sensors, leak and flame detectors, digital communications, piping, enclosure/housing (to provide weather protection).

COMPRESSION: The equipment, machinery and other materials which serve to compress the hydrogen from the generation pressure to the required pressure for use. The compression unit is typically sold as a package and not individual components.

ELIGIBLE MATERIALS: inert gas compressor, hardware (bolts, straps, supports, etc.), control system (programmable logic controllers, sensors, actuators, etc.), valves (ball, butterfly, 3-way, etc.), sensors, leak and flame detectors, digital communications, piping, enclosure/housing (to provide weather protection).

STORAGE: The equipment, machinery and other materials which serve to store hydrogen. The storage unit is typically sold as a package and not individual components.

ELIGIBLE MATERIALS: certified storage tanks (typically stainless steel or carbon fiber), mounting hardware (bolts, straps, supports, etc.), control system (programmable logic controllers, sensors, actuators, etc.), valves (ball, butterfly, 3-way, etc.), sensors, leak and flame detectors, digital communications, piping, enclosure/housing (to provide weather protection).

DISPENSING: The equipment, machinery and other materials which serve to dispense hydrogen into vehicles. The dispensing unit is typically sold as a package and not individual components.

ELIGIBLE MATERIALS: certified dispenser, nozzle, hoses, ground wire, telecommunications, user identification panel, hardware, control system (programmable logic controllers, sensors, actuators, etc.), valves, sensors, leak and flame detectors, digital communications, piping, enclosure/housing, dispenser casing, canopy/housing (to provide weather protection).

HYDROGEN FUEL CELLS

For the purpose of this document, the term “hydrogen fuel cells” means equipment using hydrogen or a hydrogen-rich fuel in an electrochemical process to generate energy, electricity or the transfer of heat.

Hydrogen fuel cells are usually sold as a package/skid. Hydrogen fuel cell components include the materials that comprise the fuel cell system. These components enable the system to monitor, generate, compress, store and convert the hydrogen into energy or heat.

ELIGIBLE MATERIALS: fuel cell system package/skid, hydrogen generation module, compressor, hydrogen storage tanks, fuel cell stack, sensors, flame detectors, cabinet/casing, stainless steel piping, digital communications, voltage sensors, utility connections, transfer switch, associated hardware (bolts, straps, supports, etc.).

HYDROGEN-POWERED VEHICLES

Hydrogen-powered vehicles utilize hydrogen as their primary fuel. Hydrogen-powered vehicles can utilize fuel cell, internal combustion engine and hybrid technologies. The vehicles can be new or retrofits of conventional fuel vehicles. Hydrogen vehicles are usually sold as a complete package.

ELIGIBLE MATERIALS: new and retrofitted hydrogen fuel cell vehicles, new and retrofitted hydrogen internal combustion engine vehicles, new and retrofitted hydrogen hybrid vehicles. See list:

MATERIALS INCORPORATED INTO HYDROGEN-POWERED VEHICLES

BODY GENERAL

- Hardware
- Hinges
- Concealed drip rails
- Roof/body joint molding
- Doors
- Side impact door beams
- Gas struts opening assist on lift gate/decklid
- VIN labeling
- Load tie-down loops
- Underbody PVC coating for paint and corrosion protection

EXTERIOR

BUMPERS/TRIM

- Bumpers
- Body side moldings
- Trim
- Logo plates
- Alternative fuel vehicle graphics
- Required DOT badges (hydrogen, compressed gas, etc.)

GLASS AND WASH / WIPE

- Tinted glass/polycarbonate qtr window
- Windshield
- Backlite
- Front door glass
- Rear door glass
- Rear quarter window panel
- Windshield interlinked wash/wipe
- Backlite

EXTERIOR REAR VIEW MIRRORS

- Adjustable outside mirrors and housing

CLOSURES

- Locks
- Steering column lock (combined with ignition)
- Rear side child locks

- Door handles
- Deck lid handle
- Exterior deck lid lock with key release

EXTERIOR LIGHTING

- Headlamps
- Front turn indicators (in front fascia)
- Front side reflector (in front fascia)
- Two rear reversing lamps
- High mounted stop light

CHASSIS/MECHANICAL

WHEELS/COVERS

- Tires
- Wheels

SUSPENSION

- Independent suspension
- Front anti-roll bar

BRAKES

- Front discbrakes
- Rear disc brakes
- Parking brake
- 4 wheel anti-lock brakes (ABS)
- Regenerative braking

FUEL SYSTEM

- Hydrogen fuel tank
- In-tank shut-off valve with an external regulator
- Fuel cut-off inertia switch
- Fuel filler
- Refueling wake up switch on fuel filler door

STEERING

- Electro hydraulic power assisted steering
- Rigid steering column with ignition key access and vehicle security

DRIVETRAIN

- Motor
- Fuel cell or internal combustion engine

HYBRID BATTERY SYSTEM

- NiMH hybrid battery

SAFETY

- Hydrogen safety system with sensors
- High voltage interlocks

INTERIOR

FRONT SEATS

- Fabric
- Seats
- Fore and aft adjustment
- Outboard seat back recliner lever
- Head restraints integrated with the seat back

REAR SEATS

- Fabric
- Seats
- Center armrest

DOORS

- Doors
- Vinyl wrapped insert on front and rear door trims
- Soft feel paint on front door release bezel
- Door pull handles

FLOOR AND COWL SIDE TRIM

- Passenger compartment carpet
- Cowl side trim
- Interior hood release lever

ROOF

- Molded modular headlining
- Swiveling sun visors
- Driver/passenger side vanity mirrors with flap closing
- Front driver and passenger folding grab handles
- Front interior light (front header courtesy light)
- Interior dipping rear view mirror

PILLAR AND DECKLID TRIM

- Molded trim

LOAD COMPARTMENT TRIM

- Load floor carpet
- Molded side and wheel arch trim
- Molded back panel and sides scuff trim
- Molded scuff plate trim
- Molded side and bottom close-out panel in trim color

HEATER AND AIR CONDITIONING

- Heater
- Air conditioning
- Manual air distribution and temperature controls
- 4 speed blower switch with off position
- Air re-circulation button
- Max Heat button for accelerated cabin heating

INSTRUMENT PANEL

- Injection molded monotone IP, glove box with lid
- Four face level registers, dedicated side window demist and windshield defrost vents
- Switches located on outboard side of steering wheel on IP include - headlamp, dimmer switch and interior power (electronic) release for deck lid
- In Car Entertainment (ICE) controls in center stack
- Climate controls and heated backlight switches housed in center stack bezel (single color black)
- Powerpoint plug storage tray and coin storage pocket in center stack

CENTER CONSOLE

- Front center console
- Cup holders

OCCUPANT RESTRAINTS

- Front seat belts
- Rear seat belts
- Seat belt height adjustment
- Driver's airbag
- Passenger's airbag

STEERING WHEEL/COLUMN

- Steering wheel
- Steering column shroud
- Rigid steering column

INSTRUMENT CLUSTER

- Speedometer
- Vehicle Condition gauge, Odometer, fuel level and coolant temp gauges
- Lamps and gauges
- Warning lamps

CONTROLS AND SWITCHES

- Steering column switches, direction indication stalk and wiper controls
- Hazard warning switch on IP

- Rotary type headlamp and parking light switch

OTHER FEATURES

- Theater dimming and courtesy light delay
- Battery saver (switches off interior lights - time delay)
- Single tone horn
- Power locks
- Load compartment illumination
- Headlamp on warning chime
- Integrated CD radio and two speakers
- Remote tire pressure monitoring
- Winter Mode feature for improved drivability on snow, ice and low friction surfaces