# Requiring the Installation of Onsite Temporary Emergency Electrical Power Sources for Assisted Living Facilities

Joint Commission on Health Care October 15, 2018 Meeting

Stephen Weiss Senior Health Policy Analyst

# Study as Approved

- HJR 123 (Delegate Hope) requested that JCHC study the feasibility of requiring an
  onsite temporary emergency electrical power source for licensed assisted living
  facilities (ALFs) and study the services that ALFs should be required to provide or
  continue to provide during an emergency, with consideration given to the costs that
  would be incurred for such services.
- HJR 123 was tabled in House Rules committee with the understanding that the study would be considered for the JCHC's 2018 work plan. It was approved by JCHC members at the June 15, 2018 planning meeting with the following instructions:

The study should be limited to determining the number/percent and size of ALF facilities that do not currently have a generator and an estimate of cost based on facility size.

# Assisted Living Facility (ALF) Virginia Licensing Code (22 VAC 40-73-10; § 63.2-100 of the Code of Virginia)

- Residential setting of 4 or more adults who are aged, infirm, or disabled that provides or coordinates the maintenance or care in a primarily residential setting.
- Two Licenses are available for ALFs

assisted living
personal and health care service
1 24 hour supervision

☐ Assistance - scheduled and unscheduled - that may include:

- ✓ medication administration
- $\checkmark$  protection
- ✓ general supervision, and ✓ oversight of physical and mental well-being

- "residential living care"
  - ☐ serves people in need of minimal assistance
- Required disclosure about the facility (e.g. a description of all accommodations, services, and care) to prospective residents and/or legal representatives
  - in advance of admission,
  - ☐ prior to signing an agreement or contract (22 VAC 40-73-50)

#### **EMERGENCY PREPAREDNESS**

(22 VAC 40-73-950)

- ALF shall develop a written emergency preparedness and response plan that includes such things as:
  - Analysis of potential hazards
    - ☐ Loss of utilities
    - ☐ Emergencies that would disrupt normal operation of the facility
  - Written policies, procedures and supporting documents
    - ☐ Life safety of residents, staff, volunteers, and visitors
    - ☐ Property protection
    - ☐ Continued services to residents
    - ☐ Conducting evacuations and sheltering in place, as appropriate
    - ☐ Locating and shutting off utilities when necessary
    - ☐ List of major resources such as suppliers of emergency equipment

# Virginia Administrative Code (VAC) ALF Emergency Equipment and Supplies

- 13VAC5-63-300; 2701.1.3 (Virginia Uniform Statewide Building Code, Electrical)
  - ☐ Generators installed to comply with regulations for assisted living facilities licensed by the Virginia Department of Social Services shall be permitted to be optional standby systems.
- 22 VAC 40-73-980 (Emergency Equipment and Supplies)
  - ☐ Each facility with <u>six or more</u> residents shall be equipped with:
    - ✓ a permanent <u>connection</u> to a temporary emergency electrical power source approved by the local building official
    - ✓ installation for temporary electric power shall be in compliance with the Virginia Uniform Statewide Building Code (13 VAC 5-63) or
    - ✓ a permanent emergency power system in compliance with the Uniform Statewide Building Code
  - ☐ Emergency lighting in the form of <u>flashlights or battery lanterns</u> shall be available
    - ✓ for employees on duty and directly responsible for resident care between 5 p.m. and 7 a.m.
    - ✓ in each resident bedroom, and
    - ✓ in living and dining area unless emergency lighting is in the adjoining hallways
  - ☐ The facility shall ensure a 96-hour supply of emergency food and drinking water ✓ at least 48 hours of the supply must be on site at any given time
- 22 VAC 40-73-700. (Oxygen therapy)
  - check list of information to be included in disaster preparedness plan
    - ✓ whether the ALF has residents requiring oxygen therapy and, if yes
    - ✓ whether there is an on-site emergency generator that can safely operate oxygen concentrators
    - ✓ or agreements with vendors for emergency generators that can support oxygen concentrators

# Background

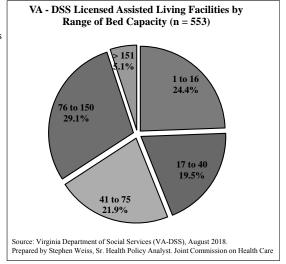
- Under the current ALF rules the only thing required for emergency electrical power is a hookup or ability to connect a generator
  - ✓ In a flood or hazardous weather emergency generators may not be available due to demand or may not be transported to ALFs due to weather/road conditions \*
- Generators that exist are not routinely checked or tested
  - ✓ concern is that many are not operational \*
- ALFs can be added to utility company emergency call list for warnings and notifications of hazardous weather or emergencies in order to implement emergency plans
  - no guarantee that electricity will be restored any faster unless the ALF is located on a main "trunk" line \*\*
- A statutory code change in 2004 required ALFs with six or more residents to "be able to connect to a temporary emergency electrical power source" during an electric power interruption, by July 1, 2007 \*\*\*
- DSS changed the administrative code to require ALFs to install backup generators effective
  December 28, 2006. The administrative code change was repealed November 1, 2007 after
  "JLARC clarified that the legislation related only to the ability to connect to a power source,
  not to actually having a power source on site." \*\*\*\*
- \* Meeting at Bay Diesel & Generator Office. July 10, 2018.
- \*\*\* Phone conversation. Tim Faherty, Division of Energy Regulation. Virginia State Corporation Commission. June 6, 2018.

  \*\*\* Interim & Final Reports: Impact of Assisted Living Facility Regulations. Joint Legislative Audit and Review Commission. 2006
- \*\*\* Interim & Final Reports: Impact of Assisted Living Facility Regulations. Joint Legislative Audit and Review Commission. 2006 and 2007.
- \*\*\*\*\* Currier, Melissa. Re: 2007 Regulations on Generators Repealed. Email to Stephen Weiss. October 3, 2018; and 22VAC40-72. Standards for Licensed Assisted Living Facilities. Volume 24, Issue 1. Virginia Register of Regulations. September 17, 2007.

# Licensed ALFs in Virginia

- ☐ 553 licensed ALFs Capacity Range:
  - 51% are between 41 and 150 beds (282)
  - 44% are 40 beds or less (243)
  - 5% are over 150 beds
- ☐ 31% of ALFs (169) are located in the DSS central licensing region
- ☐ 69% of ALFs are spread out over the other 7 DSS licensing regions:

Fairfax	69	12.5%
Northern	40	7.2%
Piedmont	79	14.3%
Valley	52	9.4%
Western	42	7.6%
Eastern	65	11.8%
Peninsula	37	6.7%



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## Survey of ALFs Concerning Backup Generators

- DSS distributed an electronic survey using "Survey Monkey" to ALFs in May of this year and kept the survey instrument open through August 10, 2018 (see appendix for survey questions)
- 295 of the 553 licensed ALFs responded, a 53% response rate. Responses were as follows:
  - ✓ 161 reported backup generator on site with full facility coverage (54.6%)
  - ✓ 134 reported no generator or partial/limited facility coverage (45.4%)
    - o 27 reported no backup generator on site (9.2%)
    - o 107 reported backup generator on site with partial/limited facility coverage (36.3%)
- 152 of the 268 reporting a generator onsite knew the size (56.7%)
- The following slide displays the number of survey responses by the DSS licensing region, range of licensed bed capacity and the percent of responses compared to the total number of licensed ALFs in each region/capacity category

#### Number of Assisted Living Facilities in Virginia Who Responded to Survey (Out of Total Number of ALFS) By Region and Licensed Bed Capacity

		Licensed Capacity				
Region	1 to 16	17 to 40	41 to 75	76 to 150	151 to 350	Total
Central	17 (66)	14 (24)	28 (28)	26 (43)	2 (8)	87 (169)
Eastern	4 (10)	7 (13)	19 (19)	21 (21)	0 (2)	51 (65)
Fairfax	5 (22)	4 (5)	8 (8)	13 (25)	2 (9)	32 (69)
Northern	2 (7)	3 (8)	16 (12)	9 (9)	2 (4)	34 (40)
Peninsula	3 (10)	0 (3)	3 (11)	7 (12)	1(1)	14 (37)
Piedmont	0 (15)	6 (17)	12 (18)	11 (25)	0 (4)	29 (79)
Valley	2 (2)	9 (22)	9 (16)	8 (12)	0 (0)	28 (52)
Western	1 (3)	9 (16)	7 (9)	5 (14)	0 (0)	22 (42)
Grand Total	34 (135)	52 (108)	101 (121)	100 (161)	7 (28)	295 (553)
% Responding of (Total Licensed)	25.9%	48.1%	84.3%	62.1%	25.0%	53.3%

Source: Virginia Assisted Living Facility Survey, 2018 Prepared by Stephen Weiss, Sr. Health Policy Analyst, Joint Commission on Health Care

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Estimated Cost to Install Backup Emergency Electrical Power By Licensed Bed Capacity of ALFs									
Licensed Bed Capacity Range	Generator Size (water cooled - commercial)	Equipment & Auto Transfer Switch	Installation	Engineering	Minimum Cost Per Facility	Maximum Cost Per Facility			
7 to 13	25kw	\$9,500	\$12,393	\$1,559	\$23,452	\$51,013			
14 to 24	45kw	\$14,399	\$18,783	\$2,363	\$35,545	\$60,711			
25 to 59	60kw	\$25,000	\$32,612	\$4,102	\$61,715	\$145,646			
60 to 89	130kw	\$41,800	\$54,528	\$6,859	\$103,187	\$153,060			
90 to 129	175kw	\$60,000	\$78,270	\$9,845	\$148,115	\$212,298			
130 to 199	250kw	\$71,661	\$93,482	\$11,758	\$176,901	\$270,795			
200 to 349	400kw	\$100,000	\$130,450	\$16,408	\$246,858	\$430,767			
350	750kw	\$240,000	\$313,080	\$39,380	\$592,459				

Engineering costs include written plans required to meet local building and fire codes for commercial building. Minimum and Maximum costs calculated based on licensed bed ranges. Prices based on industrial standby generator, meeting life and safety code – National Fire Protection Association (NFPA) 110-1

Sources: a) Newton, Lee, VP; Bay Diesel; Generator for Assisted Living. Email to Stephen Weiss, July 18, 2018 10 and b) Sharpe, John; Power Solutions Manager; Generac Industrial Power. Meeting October 4, 2018.

NFPA 110-1 standards cover installation, maintenance, operation, and testing requirements; including power source, transfer equipment, controls, supervisory equipment, as well as electrical, mechanical auxiliary and accessory equipment

Estimated Number of Licensed ALFs by Region and Size Impacted by Requiring Onsite Temporary Emergency Electrical Power (i.e. Generator) and Estimated Costs

Generator Size	25kw	45kw	60kw	130kw	175kw	250kw	400kw	
Capacity Range	7 to 13	14 to 24	25 to 59	60 to 89	90 to 129	130 to 199	200 to 349	Grand
/ Region								Total
Central	23	12	13	11	8	6	5	78
Fairfax	13	0	3	3	6	5	5	35
Northern	2	3	3	4	2	4	1	19
Piedmont	6	4	11	7	5	2	3	38
Valley	1	5	11	4	2	0	0	23
Western	1	4	6	4	3	0	0	18
Eastern	3	3	6	10	3	3	0	28
Peninsula	2	1	4	2	3	1	1	14
Total	51	32	57	45	32	21	15	253
Cost Estimate:								
Minimum Cost /								
Facility	\$23,452	\$35,545	\$61,715	\$103,187	\$148,115	\$176,901	\$246,858	
Maximum Cost /								
Facility	\$51,013	\$60,711	\$145,646	\$153,060	\$212,298	\$270,795	\$430,767	

#### Assumptions:

- 1. responses to the survey are representative of conditions for all licensed ALFs
- 2. ALFs reporting only partial facility coverage will require new backup generators there is no way to know how many are functioning/operational and able to satisfy requirements regarding all of the facility items that must maintain electricity during an outage

#### Cost Factors and Other Considerations

- Actual costs may be less or more depends on conditions of facility and fuel sources
- Standby backup generators
  - ✓ may be installed permanently with uninterrupted backup service
  - ✓ connect directly to electrical panel
  - ✓ are powered by an external fuel supply (e.g. natural gas, liquid propane, or diesel) if not powered by natural gas, require fuel to be stored and maintained
  - ✓ that are commercial-grade are liquid-cooled
  - ✓ include an automatic transfer switch providing seamless on-off ability
  - ✓ size (of generator) is determined by standards and facility needs
- Building code and life safety standards established by the National Electric Code (NEC) and National fire Protection Association (NFPA)
  - standards cover installation, maintenance, operation, and testing requirements; including power source, transfer equipment, controls, supervisory equipment, as well as electrical, mechanical auxiliary, accessory equipment, and fuel storage requirements
- Facility and load management varies depending on circumstances and requirements
  - ✓ residential converted house can be less costly depending on generator and load management
  - ✓ commercial building design may require more costly system
  - ✓ load management:
    - o whole facility (house) load powers all electricity at same time when running
    - o managed load powers different areas (zones) or delays power to areas to manage load
- Installation includes:
  - ✓ permits, set up "pad" and hookups, and filled fuel tanks if needed
  - ✓ automatic transfer switch with testing built into system automatic and recorded

# **Exemptions and Other Considerations**

- Possible exemptions from requirements
  - ✓ ALFs under a certain number of licensed beds, i.e. the 2007 administrative code excluded ALFs with 6 or less residents (13 ALFs)
  - ✓ ALFs licensed as "residential living care only" facilities (59 ALFs)
    - This exemption may cause some ALFs to change their license which has the potential of creating a shortage of ALFs that provide more comprehensive services for those in need
- Encourage ALFs to apply for Community Development Block Grant (CDBG) Assistance funds if located in non-entitlement areas (see appendix for map. Entitlement communities receive direct allocations of HOME and/or CDBG funds.)
  - ✓ the Virginia Department of Housing and Community Development indicated that the CDBG program has been used in the past to provide funding for ALFs that can meet the criteria of the program
- Provide for state tax exemptions for all costs associated with the installation of backup generators pursuant to the creation of any requirements

 $Source: Matt Weaver, Associate \ Director. \ Department \ of \ Housing \ and \ Community \ Development. \ July \ 31, \ 2018. \ \ ^{13}$ 

# **Examples of Other Requirements**

Maryland

Florida

**CMS** 

## Maryland

(Code of Maryland: Sec. 10.07.14.46. Emergency Preparedness)

- Maryland Backup Emergency Generator Requirement for ALFS
  - ☐ Required for programs serving 50 or more individuals (ALFs had 36 months after passage in 2009 to comply)
  - ☐ Coverage areas specified in rule and law (see appendix)
  - ☐ System tests are required once a month generators must be at full speed within 10 seconds of activation
  - ☐ Exemptions granted if the program can safely transfer residents through an enclosed corridor to a building that is equipped with an electrical power generator that satisfies the requirements of the regulation
  - Year-to-year waiver from the requirements if the program can demonstrate financial hardship that would adversely affect the program's viability
    - waivers must be disclosed in writing to current and prospective residents that the program does not have an emergency generator; and
    - ✓ a plan to follow in the event of a loss of electrical power must be developed
    - According to the Office of Health Care Quality within the Maryland Department of Health, no facilities are currently exempt from the generator requirements

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#### Florida

- Emergency plans require methods to secure and maintain electricity for up to 96 hours
- Plans must include methods to maintain ambient air temperature of 81°F for 96 hours in designated areas of the ALF. The size of the areas must be no less than 20 square feet per resident; calculation of area can be based on 80% of licensed bed capacity
- Requirements regarding onsite fuel source during emergency based on facility size, location and subject to local fire and safety storage ordinances:
  - 16 beds or less = 48 hours of fuel stored
  - 17 or more beds = 72 hours of fuel stored
  - may use portable fuel containers in certain situations
  - natural gas is allowable to meet fuel storage requirements
- Plans must be submitted within 30 days of rule, extensions may be granted to January 1, 2019
- Estimated total one-time cost of \$250 to \$280 million for 2,951 to 3,111 licensed ALFs; recurring annual costs, \$3.6 million (Cost estimates provided March 1 and 28, 2018)
- As of September 2018, 42.4% of the 3,077 licensed ALFS received an extension

## Federal Centers for Medicare and Medicaid Services (CSM) Emergency Preparedness Regulation

- Federal rules do not apply to ALFs
  - Medicare and Virginia Medicaid do not provide coverage for ALFs
- For facilities that are covered (e.g. nursing facilities), they are required to have policies
  and procedures that address alternate sources of energy during emergencies to maintain
  temperatures that protect resident health and safety, and for the safe and sanitary storage
  of provisions
- CMS does not recommend what type of alternative source a facility uses e.g. battery packs, permanent generators or mobile generators, solar power, natural gas, propane, diesel
- The source must be in full compliance with all other CMS Medicare and Medicaid requirements – facilities must meet the National Electric Code (NEC) and the NFPA 110 standards
- If a generator is used then it must be able to run a HVAC system and be in compliance with nationally recognized standards
  - Generators are not required to power an entire facility

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	Policy Options	<b>Explanatory Notes</b>
Option 1	Take no action	
Option 2	Introduce legislation to amend the Code of Virginia by adding in § 63.2-1732 that the Virginia Department of Social Services require all licensed assisted living facilities to have Back Up Emergency Generators onsite and in operating order pursuant to the appropriate standards established by the NFPA 110-1 taking into consideration the requirements, exemptions and extensions contained within the laws of Maryland.	Includes all licensed ALFs, no exclusions.
Option 3	Introduce legislation to amend the Code of Virginia by adding in § 63.2-1732 that the Virginia Department of Social Services require all licensed assisted living facilities with a capacity of seven (7) beds or more to have Back Up Emergency Generators onsite and in operating order pursuant to the appropriate standards established by the NFPA 110-1 taking into consideration the requirements, exemptions and extensions contained within the laws of Maryland.	Excludes licensed ALFs with 6 beds or less
	1	18

	Policy Options	Explanatory Notes
Option 4	Introduce legislation to amend the Code of Virginia by adding in § 63.2-1732 that the Virginia Department of Social Services require all licensed assisted living facilities to have Back Up Emergency Generators onsite and in	Includes all licensed ALFs, no exclusions.
	operating order pursuant to the appropriate standards established by the NFPA 110-1 taking into consideration the requirements, exemptions and extensions contained within the laws of Maryland.  AND	Provides for sales tax exemption.
	Introduce legislation to amend the Code of Virginia by adding in § 58.1 a tax exemption for all costs associated with the purchase and installation of Back Up Emergency Generators by Assisted Living Facilities. (This should not have a fiscal impact since it is future revenue not current revenue).	

	<b>Policy Options</b>	Explanatory Notes
Option 5	Introduce legislation to amend the Code of Virginia by adding in § 63.2-1732 that the Virginia Department of Social Services require all licensed assisted living facilities with a capacity of seven (7) beds or more to have Back Up Emergency Generators onsite and in operating order pursuant to the appropriate standards established by the NFPA 110-1 taking into consideration the requirements and exemptions and extensions contained within the laws of Maryland.	Excludes licensed ALFs with 6 beds or less Provides for sales tax exemption.
	Introduce legislation to amend the Code of Virginia by adding in § 58.1 a tax exemption for all costs associated with the purchase and installation of Back Up Emergency Generators by Assisted Living Facilities. (This should not have a fiscal impact since it is future revenue not current revenue).	

# **Public Comment Slide**

Written public comments on the proposed options may be submitted to JCHC by close of business on October 26, 2018.

Comments may be submitted via:

E-mail: jchcpubliccomments@jchc.virginia.gov

**❖**Fax:804-786-5538

❖Mail: Joint Commission on Health Care

P.O. Box 1322

Richmond, Virginia 23218

Comments will be provided to Commission members and summarized during the JCHC November decision matrix meeting.

(All public comments are subject to FOIA release of records)

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## **APPENDIX**

#### VA Department of Social Services Assisted Living Facility Licensing Regions

#### CENTRAL LICENSING OFFICE

Counties: Albemarle, Amelia, Brunswick, Caroline, Chesterfield, Cumberland, Dinwiddie, Essex, Fluvanna Goochland, Hanover, Henrico, King & Queen, King George, King William, Lancaster, Louisa, Lunenburg, Mecklenburg, Northumberland, Nottaway, Powhatan, Richmond, Westmoreland.

Cities: Blackstone, Charlottesville, Colonial Heights, Farmville, Lawrenceville, Hopewell, Petersburg, Richmond, Westpoint.

#### EASTERN LICENSING OFFICE

Counties: Accomack, Greensville, Isle of Wight, Northampton, Southampton.

9!ilE. Chesapeake, Emporia, Franklin, Norfolk, Portsmouth, Suffolk, Virginia Beach.

# FAIRFAX LICENSING OFFICE Counties: Arlington, Loudon, Fairfax.

Cities: Alexandria, Annandale, Centreville, Fairfax, Falls Church, Herndon.

#### NORTHERN LICENSING OFFICE

Counties: Culpepper, Fauquier, Prince William, Rappahannock, Spotsylvania, Stafford. Cities: Fredericksburg, Manassas, Manassas Park, Woodbridge, Dale City.

#### PENINSULA LICENSING OFFICE

Counties: Charles City, Gloucester, James City, Mathews, Middlesex, New Kent, Prince George, Surry, Sussex, York. Cities: Hampton, Newport News, Poquoson, Williamsburg.

#### PIEDMONT LICENSING OFFICE

Counties: Alleghany, Amherst, Appomattox, Bath, Bedford, Botetourt, Buckingham, Campbell, Charlotte, Craig, Franklin, Halifax, Henry, Nelson, Patrick, Pittsylvania, Prince Edward, Roanoke, Rockbridge.

Cities: Buena Vista, Covington, Danville, Lexington, Lynchburg, Martinsville, Roanoke, Salem.

#### VALLEY LICENSING OFFICE

Counties: Augusta, Clarke, Frederick, Greene, Highland, Madison, Orange, Page, Rockingham, Shenandoah, Warren. Cities: Harrisonburg, Staunton, Waynesboro, Winchester.

#### WESTERN LICENSING OFFICE

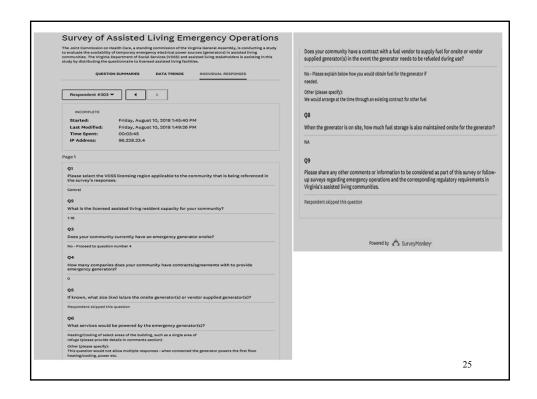
Counties: Bland, Buchanan, Carroll, Dickenson, Floyd, Giles, Grayson, Lee, Montgomery, Pulaski, Russell, Scott, Smyth, Tazewell, Washington, Wise, Wythe.

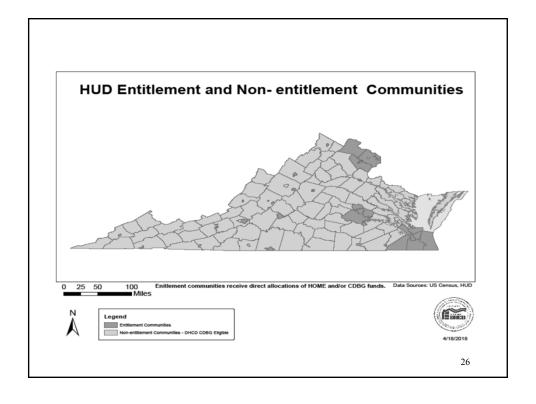
Cities: Bristol, Galax, Norton, Radford.

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# Maryland Required Coverage for Back Up Generator in Assisted Living Facilities

Areas of egress and protection as required by the State Fire Prevention Code and Life Safety Code 101 (as adopted by State Fire Prevention Commission)	Nurses' station and call system	Drug distribution station or unit dose storage
Heating equipment - minimum temperature of 70°F (24°C) in all common areas or areas of refuge	Elevator: if operable on emergency power; if required for evacuation purposes	Sewerage pump and sump pump
Fire pump	Well pump	Life support equipment
Area for emergency telephone use with at least one telephone to make and receive calls	Emergency generator location and switch gear location	Nonflammable medical gas systems
If applicable, toilet rooms of common areas or areas of refuge	Kitchen	Areas where life support equipment is used
Boiler or mechanical room		





## Sources

Standards for Licensed Assisted Living Facilities. Department of Social Services Commonwealth of Virginia. Effective February 1, 2018.

Code of Maryland Regulations, Title 10. Department of Health & Mental Hygiene. Part 1. Subtitle 07. Hospitals; Chapter 10.07.14. Assisted Living Programs (<a href="http://mdrules.elaws.us/comar/10.07.14.46">http://mdrules.elaws.us/comar/10.07.14.46</a>)

Agency for Health Care Administration. Emergency Power Plan Rules, 58A-5.036. Emergency Environmental Control for Assisted Living Facilities (<a href="http://ahca.myflorida.com/MCHQ/Emergency\_Activities/EPP.shtml">http://ahca.myflorida.com/MCHQ/Emergency\_Activities/EPP.shtml</a>)
Florida House Of Representatives - Final Bill Analysis, Bill #: SB 7028. Ratification of Department of Elderly Affairs Rules. March 28, 2018.

National Center for Assisted Living. 2017 Assisted Living State Regulatory Review (https://www.ahcancal.org/ncal/advocacy/regs/Documents/2017\_reg\_review.pdf)

Centers for Medicare and Medicaid Services (CMS). Survey & Certification Group Frequently Asked Questions (FAQs) Emergency Preparedness Regulation. As of November 2016, Revised 6-1-2017. (https://www.cms.gov/Medicare/Provider-Enrollment-and-Certification/SurveyCertEmergPrep/Downloads/FAQs-Round-Two.pdf)

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