National Operational Guidance

Hazard

Live utilities

NFCC
Fire Central
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Contents

Hazard - Live utilities

Hazard Knowledge

At operational incidents, live utility services present a number of significant hazards to firefighter safety and to the effective resolution of the incident. Gas, oil and solid fuels have the potential to accelerate the development of the fire, potentially suddenly and with little or no warning. Renewable energy generators can continue to supply live electricity after incoming mains supply has been isolated and therefore continue to present a risk of electrocution.

Utilities include:

- Electricity and renewable energy generation (such as solar, wind and water)
- Gas
- Water
- Domestic heating oil
- Solid fuel or biomass

See National Operational Guidance: Utilities and fuel

Identifying and isolating utilities should be made a priority to:

- Support firefighter safety
- Reduce further damage to the property
- Prevent the uncontrolled release of flammable or toxic gas
- Reduce the possibility of electrocution
- Reduce the possibility of further ignition sources and firespread

The location of utility points can vary enormously and should be ascertained by the incident commander or nominated safety officer at an early stage of the incident.

Significant hazards may exist where fire has started inside underground utility distribution ducting. Fire development and subsequent firespread can lead to pressurisation of the underground system, which can cause pavement level inspection covers to be blown off with an explosive effect. Additionally, fire can travel significant distances underground, spread to buildings and affect other utilities such as high-voltage electricity, gas and water. Underground cable fires can produce large volumes of carbon monoxide and other toxic gases which can travel to nearby premises.

Control measure - Consider isolating utilities

Control measure knowledge

The decision to isolate the utility should be balanced with the need for that utility, which may or may not assist firefighters. For example, isolating the electrical supply that fire-engineered solutions rely on, such as smoke extraction, may be a detrimental rather than a positive action.

It is an incident command decision whether or not to isolate the utilities in a building. This should be documented in the dynamic and analytical risk assessments, stating what has and has not been isolated. This should be kept as part of the incident risk assessment and decision-making log.

Strategic actions

Fire and rescue services should:

- Make appropriate arrangements with utility suppliers for representatives to attend at incidents
- Develop tactical guidance and support arrangements for the hazards that may be encountered and the actions to be taken to isolate utility supplies

Tactical actions

Incident commanders should:

- Isolate utilities that may impact fire development and secure against reconnection
- Identify utilities, including renewable energy supplies and locate isolation points
- Consider isolating the electricity supply to reduce the risk of electrocution
- Request utilities representative where isolation is required or illegal extraction evident
- Inform the National Inter-agency Liaison Officer (NILO), police and utility provider where illegal extraction of utilities is evident
- Establish an exclusion zone around inspection covers, where the fire involves underground services